Fukushima-is-still-news

- vol. 3 -

Radioactive Fallout And Waste, No.4 Fuel Removal, Nuclear Workers, and UN Conference

Odile Girard

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INTRODUCTION

J'ai « découvert » l'écologie au début des années 70, croisant dans le même temps la pollution, les luttes paysannes et la malbouffe, la médecine qui avait (déjà) perdu son âme, les mouvements sociaux et bien sûr le nucléaire qui a occupé une grande partie de ma vie.

Après la catastrophe de mars 2011 au Japon, j'ai suivi chaque jour une partie des grands journaux japonais anglophones pour essayer de sauvegarder un maximum d'articles ayant trait à Fukushima. L'idée était de conserver une sorte d'archive accessible à tous, qu'ils soient écrivains, journalistes ou tout simplement intéressés.

Le blog « Fukushima-is-still-news » a été poursuivi jusqu'en 2019. Ci-dessous, la conclusion parue le jour où j'ai décidé d'arrêter mon blog.

End of March 2019: Time to stop this blog

29 Mars 2019

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End of March 2019: Time to stop this blog

I have been collecting and spreading information on the Fukushima disaster for more than 8 years.

More than ever I am convinced that the name of my blog « Fukushima-is-still-news » was aptly chosen. Or perhaps i should have called it « Fukushima should still be news ». What i'm getting at is that i know the disaster is going on and we cannot simply forget Fukushima and turn the page. But the mode of action I chose 8 years ago has its limits and it is time for me to stop this blog.

I don't want the contents to be lost, so I will try and publish the lot with the Éditions de Fukushima so that the information remains available online.

Good bye for now. I am not doing a disappearing act. I'm still there tracking what's going on in the world of nukes.

C'est maintenant chose faite. Le blog fukushima-is-still-news est désormais disponible aux Éditions de Fukushima. Une fois de plus merci à mon ami Pierre, qui m'a convaincue à l'époque de tenir ce blog et m'a aidée à le lancer.

Odile Girard

Le présent volume est le troisième d'une collection de 16 ouvrages qui sont édités petit à petit.

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and Decommissioning

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Radioactive Fallout And Waste

January 28, 2012

Less polluted areas to come 1st / Govt releases decontamination schedule for Fukushima Prefecture

http://www.yomiuri.co.jp/dy/national/T120127006480.htm

The government will prioritize decontamination work in areas of Fukushima Prefecture where the annual level of radiation exposure is 20 millisieverts or less, as part of efforts to allow residents of those areas to return home as soon as possible, according to a timetable released by the Environment Ministry.

The ministry on Thursday unveiled its timetable for decontamination operations in the no-entry and expanded evacuation zones in the prefecture. Entry is limited in these areas following the outbreak of the nuclear crisis at Tokyo Electric Power Co.'s Fukushima No. 1 nuclear power plant.

The no-entry and expanded evacuation zones have been deemed "decontamination special zones" to be decontaminated under the government's direct control. They are to be reorganized into three zones as of April 1 in accordance with their annual levels of radiation exposure.

The new categories will be:

-- Zones being prepared for residents' return. Annual radiation exposure is 20 millisieverts or lower, and residents are expected to be able to return following the completion of decontamination.

-- Zones with restricted residency. Annual radiation exposure is 20 millisieverts to 50 millisieverts, and residents are expected to be able to return in a few years.

-- Zones where residency is prohibited for an extended period. Annual radiation exposure is more than 50 millisieverts and it is expected to be more than five years before residents can return home.

The government plans to complete decontamination work in areas with annual radiation exposure of 20 millisieverts to 50 millisieverts by lowering the level to 20 millisieverts or less--a level at which residence is allowed--by March 2014.

However, the ministry did not present a concrete plan for the zones with annual radiation levels of more than 50 millisieverts.

Regarding the zones being prepared for residents' return, the government plans to proceed with decontaminating the areas with higher levels of radiation exposure. It will start decontaminating areas with the highest levels of radiation exposure, from 10 millisieverts to 20 millisieverts, starting around March and aims to complete the operation by the end of this year.

The government will start work in areas with annual radiation exposure of 5 millisieverts to 10 millisieverts once a number of conditions are fulfilled, such as gaining approval from residents. It plans to launch these operations on a full-scale basis around June, and continue through March 2013, according to the timetable.

Regarding the areas with the lowest levels of radiation--from 1 millisievert to 5 millisieverts--full-scale decontamination work will start from around summer, and is scheduled to be completed at the end of March 2014.

However, the government will prioritize decontamination at schools, parks and other places where children gather, and densely populated urban districts and hospitals.

Regarding the zones being prepared for residents' return, the government plans to urge people to return after lowering the radiation level as much as possible.

Meanwhile, the government plans to begin a full-scale decontamination operation in the zones with restricted residency starting around autumn and finish at the end of March 2014.

Based on the outcome of decontamination work conducted at the end of last year by the Self-Defense Forces, the government believes it is possible to reduce annual radiation exposure in the zones to 20 millisieverts or lower, according to the ministry.

However, the timetable did not indicate final target levels of radiation in the zones.

"We're conducting a model project to verify the effect of decontamination. After seeing the results, we plan to incorporate a target level of radiation in the timetable by March this year," an official of the ministry's Environmental Management Bureau said.

Regarding the zones where residency is prohibited for extended periods, the government said it plans to study decontamination measures and other steps.

"By conducting a model project for decontamination, we plan to establish efficient and effective decontamination technologies and measures to ensure safety of workers," the official said.

Carrying out decontamination operations in the zones is expected to be extremely difficult. The government is considering buying or leasing land from residents of these areas.

"A project to have residents return home following a nuclear crisis of this magnitude is unprecedented in the world, so we have to overcome quite high hurdles. We'll make a careful judgment about the timing for residents to return home after considering the opinions of local government heads and residents," Environment Minister Goshi Hosono said.

January 31, 2012

Govt plans Fukushima decontamination test-run

NHK World English

Japan's Environment Ministry has unveiled a model project designed to decontaminate areas with high levels of radiation around the crippled Fukushima Daiichi nuclear plant.

In a test-run for a wider clean-up, the ministry will first try to decontaminate 3 closed sections of a national expressway running through the no-entry zone near the plant.

The ministry last week announced a 2-year plan to decontaminate by March 2014 some evacuation zones where radiation levels have dropped below 50 millisieverts per year.

Radiation levels over a total 5 kilometers of expressway slated for the new project have ranged from a little to substantially above 50 millisieverts a year.

The ministry plans to assess the project's effectiveness in a test-run from the middle of March through July.

February 04, 2012

Tokyo gov't unveils transport of incinerated radioactive sludge from sewage plant

http://mdn.mainichi.jp/mdnnews/news/20120204p2a00m0na006000c.html

Tokyo on Feb. 2 invited reporters to see how ash from incinerated sludge -- including some contaminated with radioactive substances -- is shipped from a sewage plant to be buried at a disposal site outside a breakwater in Tokyo Bay.

The Tokyo Metropolitan Government started burying ash from the incinerator at Akishima in the Tama region of suburban Tokyo in late October last year. In December, it procured gear to separate air from the incinerated sludge and load it into tanker trucks. The Bureau of Sewerage then started transporting the ash from the Tamagawa Joryu Water Reclamation Center to the disposal site.

During the press tour, journalists watched the material being loaded onto the tankers. Radioactive cesium levels in the ash are apparently far below national standards at 1,000 to 2,000 becquerels per kilogram.

The Akishima sewage plant stopped shipping the ash out in May last year and subsequently built up as much as some 420 metric tons of it. The plant will be completely rid of the ash by mid-February.

A total of about 2,600 tons of incinerated sludge are held at six other sewage plants in the Tama region, and the metropolitan government will send the separation gear to those plants to move the ash to the disposal site.

February 06, 2012

Govt to create more decontamination bases

http://www3.nhk.or.jp/daily/english/20120206_11.html

The Environment Ministry plans to decontaminate more public facilities in Fukushima Prefecture to use them as bases for cleaning up radioactive substances.

The government wants to decontaminate no-entry and evacuation zones around the damaged Fukushima Daiichi plant. It hopes to create a safe environment so that residents can return to the area.

The ministry has designated 16 facilities, including schools and assembly halls, as bases for decontamination. Four municipal offices were cleaned up in December.

The operation is to be completed next month.

The government plans to begin radiation monitoring in these zones in a few months, and begin the decontamination process this summer.

February 08, 2012

Nuke dangers nowhere near resolved: Kan's crisis adviser

http//www.japantimes.co.jp/text/nn20120208f1.html

By REIJI YOSHIDA

In December, Prime Minister Yoshihiko Noda announced the "conclusion" of the meltdown crisis at the Fukushima No. 1 nuclear plant, saying Tokyo Electric Power Co. was managing to keep the three crippled reactors cool, as well as the facility's spent fuel pools.

But a former special adviser to Naoto Kan, who was prime minister when the crisis started, warned that the situation is far from resolved and said Fukushima has exposed a raft of serious nuclear problems that Japan will have to confront for years.

"**I would say (the crisis) just opened Pandora's box**," Hiroshi Tasaka, who has a doctorate in nuclear engineering and is now a professor at Tama University, said in a recent interview with The Japan Times.

He was one of a select group who glimpsed the secret worst-case scenario document written up by the Japan Atomic Energy Commission on March 25 that was later reportedly quashed by the government.

According to the scenario, the biggest risk during the meltdown crisis wasn't the reactors themselves but the spent fuel pools sitting atop them, particularly the one above reactor 4, which still contains about 1,500 nuclear fuel assemblies, Tasaka said.

Unlike reactors 1, 2 and 3, the No. 4 unit was offline for regular checks when disaster struck on March 11 and thus didn't suffer a meltdown. But its fuel rods were in the pool outside the reactor, and its coolant water fell dangerously low.

Adding to the danger is that the fuel pool is now directly exposed to the outside environment after a hydrogen explosion blew off the upper part of the reactor building on March 15, Tasaka noted.

The potential heat from the pool was also much higher than other pools because 204 of the 1,535 assemblies were still "new ones" that had been temporarily removed from reactor 4 for regular checks.

The Fukushima crisis has highlighted the dangers of spent fuel pools, which are outside the robust primary containment vessels of the reactors themselves, Tasaka said.

Under the current circumstances, the nation has no prospect of starting up the experimental high-level nuclear waste processing facility in Rokkasho, Aomori Prefecture, because of both technical difficulties and the sentiments of antinuclear activists.

This means utilities must store their spent fuel assemblies in cooling pools at their respective reactor sites as a "temporary measure." This situation greatly increased the danger at Fukushima No. 1 on March 11.

"The storage capacities of the spent fuel pools at the nation's nuclear power plants are reaching their limits," Tasaka wrote in a new book, "Kantei Kara Mita Genpatsu Jiko No Shinjitu" ("The Truth About the Nuclear Accident as Viewed From the Prime Minister's Office").

According to Tasaka, the utilities' fuel pools were about 70 percent full on average in 2010, but the figure was 80 percent at Fukushima No. 1.

The makeshift cooling systems set up at Fukushima No. 1 to stabilize the stricken reactors and fuel pools have greatly reduced the possibility of another catastrophe, Tasaka said, but the ad hoc system for decontaminating the coolant water is nevertheless **generating large amounts of highly contaminated waste every day.**

Making matters worse, **the government doesn't have any place to permanently store it,** he wrote.

Tasaka is also deeply concerned about the "groundless optimism" displayed by bureaucrats and business leaders as they rush to restart dozens of reactors that remain halted for safety checks since March 11.

"I understand quite well the intentions of the government, which now wants to send out a message of hope. But at this stage, all the risks should be put on the table," he said.

The nation's nuclear regulators must carry out drastic reforms to regain the people's trust. This is an imperative for the government if it wants to keep pushing nuclear power, Tasaka said.

He recalled viewing the government's worst-case scenario in late March. He was officially appointed special adviser to the prime minister on March 29.

The document detailed a hypothetical Fukushima crisis worst case: Eventual contamination from the plant would require the government to assist residents in the Tokyo area to evacuate if they wanted to voluntarily "migrate," based on the same evacuation protocols adopted for the 1986 Chernobyl accident.

The scenario assumed another hydrogen explosion would occur in the reactor 1 building and radiation would force all of the workers at the plant to evacuate.

All of the pools storing hundreds of nuclear fuel assemblies would eventually lose their cooling ability and the assemblies would melt down and breach the pools.

According to Kyodo News, **the simulation was "so shocking" that top government officials decided to keep the paper secret** by treating it as a mere personal document of Japan Atomic Energy Commission Chairman Shunsuke Kondo, who compiled the simulation. The government only gave it official recognition at the end of December, according to Kyodo.

More than 10 months after he saw the worst-case scenario paper, Tasaka is still not sure if such scary information should immediately be made public during a nuclear plant crisis.

The assumed worst case was extreme and people did not need to immediately flee the Tokyo area even in March or April, Tasaka said. Disclosing the simulation could have caused panic in the capital, he said.

Tasaka was obliged to keep secret what he learned through his work at the prime minister's office and was not in a position to decide what information was to be made public during the crisis.

He said he decided to start talking about the worse-case scenario only after Kan mentioned some of its highlights during an interview with the media in September.

Tasaka believes the media and government should lay some ground rules in advance on what sensitive information should be made clear in a nuclear crisis.

February 09, 2012

Radioactive waste disposal site unveiled to reporters

http://mdn.mainichi.jp/mdnnews/news/20120209p2a00m0na013000c.html

A temporary storage site for radioactive waste generated under a model decontamination project around the disaster-struck Fukushima No. 1 nuclear plant was unveiled to reporters on Feb. 9.

To prevent radioactive materials from contaminating groundwater, temporary disposal sites are lined with waterproof sheets. Materials produced in the decontamination operation -- including earth and plant matter -- are categorized, packed into thick bags and lifted into the disposal site by crane.

"We are building these (temporary disposal) sites in such a way that, even when full of waste, radiation levels won't rise in the surrounding area," a Japan Atomic Energy Agency official in charge of the operation stated.

The model decontamination project started in November last year in 12 municipalities in and around the exclusion zone to find the most effective decontamination and disposal techniques.
Click here for the original Japanese story

February 11, 2012

Radioactive waste site opened to media in Okuma

http://www.yomiuri.co.jp/dy/national/T120210006056.htm

OKUMA, Fukushima--The government, for the first time, has allowed the media to cover operations to move waste contaminated by radioactive substances to a baseball stadium being used for temporary storage in the Ottozawa district in Okuma, Fukushima Prefecture.
The contaminated waste was collected in the government-led model decontamination project conducted in the town.
On Thursday, the bags containing the waste were moved to the site and piled in two designated areas at the town-run stadium, about three kilometers away from the power plant.
Radiation levels exceeded 70 microsieverts per hour in certain areas of the Ottozawa district, the highest level among the government-monitored locations.
Workers in protective clothing and masks used cranes to pile up bags with the contaminated soil and grass, each weighing about a ton.
A worker said, "Protective clothing hampers our breathing and it's tough to work because my hands are freezing in these rubber gloves."
Before placing the bags, four layers of sheeting, including a water-resistant sheet, were spread on the ground to block radiation leaks. [since when has water-resistant material been able to block radiation ?]
Later, the pile will be covered by three layers of sheets and soil.
An official at the Japan Atomic Energy Agency, which handled the operation, said, "It's possible to block 98 percent of radiation [using this system]."

February 16, 2012

Storage facilities

Naraha mayor opens N-waste dialogue

http://www.yomiuri.co.jp/dy/national/T120215006014.htm

Mayor Takashi Kusano of Naraha, Fukushima Prefecture, has told Reconstruction Minister Tatsuo Hirano about conditions under which his town might accept planned intermediate storage facilities for soil and other waste contaminated with radioactive substances, according to the mayor.
The town is near Tokyo Electric Power Co.'s Fukushima No. 1 nuclear power plant and has been affected by the nuclear disaster there.

The mayor told the minister he would set some conditions, such as siting the storage facilities in two different locations, before agreeing to accommodate the facilities.

The mayor said he made the comments on Sunday, when Hirano visited the town government's temporary office in Iwaki, Fukushima Prefecture.

The mayor also told Hirano that an intermediate storage facility the government is now considering may not have sufficient capacity.

The mayor proposed that two storage facilities be built in different locations somewhere in the following four towns: Futaba and Okuma, which share the site of the Fukushima No. 1 plant, and Tomioka and Naraha, which share the site of the Fukushima No. 2 nuclear plant.

Hirano declined to give any immediate reply, the mayor said.

The central government has asked the Fukushima prefectural government and other municipal governments to agree to the building of an intermediate storage facility in Futaba County, which comprises eight towns and villages and where the two nuclear plants are located.

Kusano is the first local government head in the county to mention detailed points about accepting the storage facility.

On Wednesday, Kusano told The Yomiuri Shimbun: "It doesn't mean the town of Naraha has decided to accept a storage facility. I meant by the remarks that we want intermediate storage facilities to be built as quickly as possible."

The mayor added, "If the central government officially requests it, we will have to discuss whether to accommodate such a facility."

Regarding the mayor's remark, an official of the central government's Nuclear Emergency Response Headquarters in the prefecture said, "We'll proceed with the plan while hearing opinions through dialogue between the central government and the nearby local governments."

Massive levels of radioactive cesium detected at quarry near Fukushima plant

http://mdn.mainichi.jp/mdnnews/news/20120216p2a00m0na006000c.html

FUKUSHIMA -- Massive levels of radioactive cesium have been detected from gravel at a quarry near the crippled Fukushima nuclear plant, after high radiation was detected at buildings using gravel from the same quarry, prefectural officials said.

The Fukushima Prefectural Government examined samples of the gravel from the quarry in the town of Namie after inspecting the site on Jan. 20.

Tests detected up to 214,200 becquerels of radioactive cesium per kilogram of gravel, far above the levels at other quarries operating in the evacuation zones around the Fukushima No. 1 nuclear plant. About 60,000-210,000 becquerels of cesium was found in most of the gravel that had been kept outdoors at the quarry since the disaster.

High radiation levels have been detected at apartment blocks and other construction projects built with gravel from the Namie quarry, and the findings lend further backing to the theory that this gravel was seriously contaminated with large amounts of cesium.

Among 25 quarries in the evacuation zones, up to 122,400 becquerels of radioactive cesium was found at one that has been closed since the nuclear crisis broke out on March 11, 2011. A high of 5,170 becquerels was found at one of 14 operational quarries within the evacuation zones.

The national and prefectural governments have done spot inspections of about 150 of some 1,100 construction sites where gravel from the Namie quarry is believed to have been used.

Higher levels of radiation than surrounding areas were detected at 27 locations in five towns and cities, including Nihonmatsu and the city of Fukushima. Of these, 22 were residences. The central and prefectural authorities are expected to finish their inspections by the end of March.

In a related development, the Economy, Trade and Industry Ministry held an expert panel meeting to consider standards for shipping gravel from quarries in the prefecture.

Noting that extraordinarily high levels of radiation were detected from only the Namie quarry, the experts said they recommended that the ministry only set standards for areas in Fukushima Prefecture where radiation levels remain high.

The ministry will work out the standards in March.

Mayor of Fukushima town proposes split storage of tainted soil

http://mdn.mainichi.jp/mdnnews/news/20120216p2a00m0na002000c.html

NARAHA, Fukushima -- Naraha Mayor Takashi Kusano has suggested building two intermediate storage facilities for radiation-tainted soil and other waste instead of one as the government had requested, it has been learned.

The idea was put forward out of fear that municipalities' opposition to construction of a single facility could delay decontamination efforts and people's return to their homes, sources say.

According to Naraha municipal officials, Mayor Kusano on Feb. 12 spoke with reconstruction minister Tatsuo Hirano, who was visiting the area, and suggested that dividing contaminated soil storage into two facilities instead of one as previously suggested could lessen each municipality's burden of accepting a storage facility.

Kusano further suggested that one of the two facilities could be built near Okuma or Futaba, two towns located near the Fukushima No. 1 Nuclear Power Plant, while the second could be set up near the towns of Naraha or Tomioka, near the Fukushima No. 2 Nuclear Power Plant.

Hirano refrained from responding to the proposal on the grounds that negotiations on setting up the facility are currently taking place between the central and prefectural and municipal governments, sources said.

The government last year proposed an intermediate storage facility for radiation-tainted soil and other waste from Fukushima Prefecture at a location falling within the eight Futaba county municipalities near the crippled Fukushima No. 1 Nuclear Power Plant.

However, the plan has been fiercely opposed by Katsutaka Idogawa, the mayor of Futaba -- the home town of the Fukushima No. 1 Nuclear Power plant -- and negotiations within the county have been delayed as a result.

The Ministry of the Environment has said that an intermediate storage facility would be used for 30 years or less.

City in Shizuoka Pref. begins trial burning of debris from Iwate

http://mdn.mainichi.jp/mdnnews/news/20120216p2g00m0dm018000c.html

SHIZUOKA (Kyodo) -- Shimada city in Shizuoka Prefecture, southwest of Tokyo, began Thursday a trial incineration of debris from the March 2011 earthquake and tsunami disaster that it has accepted from a town in Iwate Prefecture to confirm the safety of the operation.

If it finds little danger from radiation and formalizes its plan to accept debris from Iwate's Yamada town next month, it will be only the second local government after Tokyo to dispose of rubble from disaster areas. While a number of other local governments have indicated similar plans, they face opposition from local residents.

The city government will burn 10 tons of debris transported from Yamada in five containers from Wednesday to Thursday morning. The debris will be mixed with 56 tons of local household garbage and burned at two furnaces at a waste incinerator plant through Friday.

Shimada Mayor Katsuro Sakurai, Shizuoka Gov. Heita Kawakatsu and nuclear disaster minister Goshi Hosono witnessed the 8:46 a.m. start of incineration at the plant.

Hosono, concurrently environment minister, called for cooperation from local government heads in accepting debris from the disaster for incineration.

About 30 people including local residents gathered outside the plant in protest against the incineration of such debris.

To address concerns about radioactive fallout from the disaster-triggered nuclear crisis in Fukushima Prefecture, the city plans to not only check the levels of radioactive cesium in gas emissions and ash at the plant but also radiation levels in the air at nearby elementary schools.

Provided that the cesium concentration in incinerated ash is up to 500 becquerels per kilogram and other standards are met, Sakurai will announce by the end of March whether to formally accept the debris from Yamada. The results of the trial are due out by March 24.

But it has yet to decide when to actually start accepting the debris if it gives the go-ahead in light of the tea picking season in April and May. Green tea is a signature product of the area.

To help alleviate public concerns, it will display the ash at seven locations including the plant and its office, some with dosimeters available so residents can measure radiation levels in the air.

The trial incineration is based on notes the city exchanged Feb. 1 with the Iwate and Shizuoka prefectural governments, after Sakurai expressed his city's readiness to accept such debris in December and explained the plan to residents.

Citizens wary of accepting disaster debris

http://www.yomiuri.co.jp/dy/national/T120215005365.htm

Little progress has been made on local government plans to accept debris from areas hit by the Great East Japan Earthquake due to objections from local residents.

In many cases, tensions have run high during negotiations between local governments that initially expressed their intention to accept the debris, and their residents.

Prime Minister Yoshihiko Noda plans to ask local governments outside the devastated areas for their cooperation, saying, "It's inevitable that local governments nationwide will have to share the burden of disposing of the debris."

To do so, many local governments need to tackle the difficult task of obtaining the consent of local residents, who fear the debris may be contaminated with radioactive substances.

Kanagawa Gov. Yuji Kuroiwa has held three explanatory town meetings for Yokosuka residents in January and February, in which he asked for their understanding as they live near the prefecture's final disposal site.

However, residents opposing the project were enraged during the meetings.

"Nuclear power plants have been considered safe. Nevertheless, a major accident [in Fukushima Prefecture] broke out. We can't believe the central government's safety standards," one resident said.

Kuroiwa has stressed the safety of the debris since December, when he announced his intention to accept it. However, there still remains a difference in views between the prefecture and its residents.

The Shimada municipal government in Shizuoka Prefecture said in December it would accept debris from the towns of Yamada and Otsuchi in Iwate Prefecture.

However, residents have continued to voice concerns over health risks posed by the potentially contaminated debris and the possible impact that safety worries may have on demand for locally produced tea, the prefecture's principal export.

After hearing their concerns, the municipal government decided to postpone an official announcement on accepting the debris.

Shimada Mayor Katsuro Sakurai said the city plans to incinerate disaster debris on a trial basis on Thursday and Friday to test safety.

Yet, some prefectures have already begun accepting debris from affected areas.

Tokyo Gov. Shintaro Ishihara said in May that Tokyo would accept disaster debris.

The Tokyo metropolitan government announced in May that it would accept debris from quake-hit areas. About 2,400 tons of debris have already been sent to private dealers and others in Tokyo. The Tokyo government plans to dispose of a total of about 500,000 tons of debris from Iwate and Miyagi prefectures by fiscal 2013.

The Yamagata prefectural government has disposed of 48,520 tons of debris so far.

The Environment Ministry created a brochure that said residents will be exposed to radiation dosages of 0.01 millisievert or less per year. The figure is one one-hundredth of the annual dose limit for the general public, even for residents living near a disposal site where ashes from incinerated debris are buried.

"There's no other way but to obtain [residents'] understanding by showing objective data," a senior ministry official said.

Naraha mayor opens N-waste dialogue

http://www.yomiuri.co.jp/dy/national/T120215006014.htm

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The mayor also told Hirano that an intermediate storage facility the government is now considering may not have sufficient capacity.

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The mayor added, "If the central government officially requests it, we will have to discuss whether to accommodate such a facility."

Regarding the mayor's remark, an official of the central government's Nuclear Emergency Response Headquarters in the prefecture said, "We'll proceed with the plan while hearing opinions through dialogue between the central government and the nearby local governments."

February 17, 2012

Ministries to measure radiation in Tokyo Bay

http://www.yomiuri.co.jp/dy/national/T120216006199.htm

The Environment Ministry will begin Friday checking the levels of radioactive substances in the water and bottom sediment near the mouths of the Sumidagawa and Arakawa rivers that run into Tokyo Bay, sources have said.

The Education, Culture, Sports, Science and Technology Ministry also plans to study water, bottom mud and Tokyo Bay organisms from April, according to the sources.

The ministries are hoping to clarify the situation as inquiries from residents have been increasing.

For example, residents are asking, "Is it safe to eat fish from Tokyo Bay?" or "I'm worried about the safety of children playing near the water."

The Environment Ministry will check radiation levels near Ryogokubashi bridge on the Sumidagawa and the Arakawa's Kasaibashi bridge. It will release initial findings by the end of March.

The education ministry will take samples of surface water and bottom mud near the mouths of major rivers running into Tokyo Bay, points near the shore and at the bay's center. The ministry will also check radiation levels in marine animals in the bay in cooperation with surrounding municipalities.

According to the Environment Ministry and other sources, airborne radioactive material from the crippled Fukushima No.1 nuclear power plant fall on the Kanto Plain with rain and enter rivers. Some experts have pointed out the possibility of radioactive materials accumulating on the sea bottom after entering the bay via rivers.

Many edible fish live in the rivers and the bay and there are concerns radioactive material may enter the food chain. Therefore, the Tokyo metropolitan government asked the Environment Ministry to measure radiation levels in the rivers on Feb. 1.

Similar investigations by the central government have been done in Fukushima, Ibaraki, Gunma, Chiba and other prefectures, but these will be the first surveys of the Arakawa and Sumidagawa rivers in Tokyo.

Many people have voiced their worries to the Environment Ministry and Tokyo metropolitan government about radiation levels since the beginning of the year.

An Environment Ministry official said that because water blocks a large portion of radiation, there is little danger to people spending time near the water even if radiation levels on the river bottom are high.

"However, we will continuously monitor [the situation] since we don't know about how much radioactive material is transferred [from water to fish]," the official added.

Who wants radioactive waste in their backyards?

Only 10 prefectural governments willing to accept quake rubble

http://mdn.mainichi.jp/mdnnews/news/20120217p2a00m0na019000c.html

Only 10 prefectural governments are actively considering accepting rubble from earthquake- and tsunami-ravaged areas of northeastern Honshu, while 26 others are unwilling, a Mainichi Shimbun survey has found.

The Mainichi surveyed 43 prefectural governments across the country -- excluding disaster-hit Miyagi, Iwate and Fukushima prefectures, and Okinawa Prefecture, which has not been asked by the national government to accept rubble -- between late January and early February.

The 10 prefectural governments responded that they have asked municipalities under their jurisdiction as well as private companies to accept and dispose of rubble from Miyagi, Iwate and Fukushima prefectures. Of them, Aomori and Yamagata prefectures as well as Tokyo have already accepted rubble generated by the quake and tsunami.

Five of the 10 prefectural governments -- Akita, Saitama, Kanagawa, Shizuoka and Osaka -- have taken specific measures to dispose of rubble, such as setting maximum levels of radioactive substances in rubble they will accept. Seven others answered that they are considering such measures.

Thirteen other prefectural governments replied that they are not even considering asking municipalities under their jurisdiction or businesses to dispose of rubble generated by the disasters.

The number rises to 26 if those that are only reluctantly considering accepting rubble are included. One of them, the Kagoshima Prefectural Government, said, "We're cooperating in efforts to dispose of rubble by transferring relevant documents supplied by the national government to municipalities under our jurisdiction. But we're not actively asking them to accept rubble."

Garbage containing up to 100 becquerels of radiation per kilogram is legally treated as ordinary waste instead of radioactive waste. Following the March 11, 2011 disasters, however, the national government released guidelines which state that waste incinerator ash contaminated with up to 8,000 becquerels of radiation can be buried.

Many of the prefectural governments that are reluctant to accept quake debris are skeptical of the safety of rubble tainted with radioactive substances from the Fukushima No. 1 nuclear plant.

"It's questionable whether the national government's standards can guarantee safety. We can't win understanding from local residents, which is a stumbling block to accepting quake rubble," the Nagano Prefectural Government pointed out.

"We'd like the central governments to clearly explain why there are different standards for handling radioactive substances," the Fukui Prefectural Government said.

In October last year, the Environment Ministry asked the 43 prefectures to accept 3.95 million metric tons out of approximately 20 million tons of disaster rubble from Iwate and Miyagi prefectures -- one pillar of an effort to ensure the entire amount is disposed of by 2014.

Five prefectures -- the three prefectures that have already begun to accept quake rubble along with Kanagawa and Saitama, which have specific plans to accept the waste -- are expected to dispose of some 710,000 tons of rubble total, including amounts already processed. The volume accounts for approximately 18 percent of the rubble that the national government has asked the 43 prefectures to deal with.

A disposal facility in Shimada, Shizuoka Prefecture, began on Feb. 16 to incinerate debris from the Iwate Prefecture town of Yamada on a trial basis.

February 23, 2012

It is all rather confusing

Ministry tackles disaster debris fears / Public relations campaign launched to speed up the disposal of March 11 waste

http://www.yomiuri.co.jp/dy/national/T120222005753.htm

The Environment Ministry has launched a public relations campaign to ease concerns about radiation and win wider public support for debris-disposal efforts, as only 5 percent of the waste left by the March 11 disaster has been disposed of so far.

The ministry on Tuesday released its latest report on the progress in incinerating and disposing about 22.53 million tons of debris from the Great East Japan Earthquake in Miyagi, Iwate and Fukushima prefectures. The report showed there has been little progress because local governments outside the disaster-hit prefectures have not been stepping forward to accept debris, partly due to opposition from residents worried it might be contaminated with radiation.

The ministry has begun an unusual national drive because it is worried that delays in removing debris could hamper the entire reconstruction process.

"The media have huge influence on the whole of society," Environment Minister Goshi Hosono said at a press conference Friday. "I don't think anyone would oppose the idea that reconstruction in the disaster-hit areas is vital. If so, I want people who think that waste [from the disaster] should be treated in the disaster-struck areas to understand that things aren't so simple."

Hosono hit back at a Feb. 15 media report that raised questions about the ministry's claim that mountains of debris are impeding reconstruction efforts.

The March 11 disaster generated a massive amount of debris, equivalent to about 11 years of garbage normally generated by Iwate Prefecture and about 19 years of Miyagi Prefecture's garbage.It would take a great deal of time for the prefectures to clear the debris on their own, and there is also limited space to bury the waste. Mountains of debris in coastal areas have been a barrier to rebuilding efforts and resulted in dust that in one instance caused a fire.

An official of the Iwate prefectural government said, "Some people affected by the disaster say they don't want to see the debris any longer."

Hosono has been alarmed by stagnation in the cleaning effort among local governments from outside the three Tohoku prefectures. Throughout Japan, some people have been voicing opposition to the acceptance of debris by their local governments, arguing that the waste is contaminated by radiation and poses a risk to the health of children.

Despite this, the Tokyo metropolitan government has been accepting disaster waste from Miyako in Iwate Prefecture since November. Other local leaders, including the Kanagawa and Osaka governors, have expressed intention to accept debris, but only Tokyo has taken action so far.

The ministry has set a goal of clearing the debris by March 2014.

Hosono said at a press conference after a Cabinet meeting Tuesday, "If the situation remains unchanged, [achieving the 2014 goal] is extremely difficult."

To counter this, the ministry launched a campaign this month, which includes full-page newspaper advertisements and a video clip posted on its website showing Hosono's visit to a temporary debris storage site in Ishinomaki, Miyagi Prefecture. The ministry also created a slogan, "Minna no Chikara de Gareki Shori" (Debris disposal with effort from all).

The ministry said it plans to use outdoor TV monitors in Tokyo and Internet advertisements to create better public understanding of its debris clearing efforts.

The ministry says the disaster left behind about 4.76 million tons of debris in Iwate Prefecture, about 15.69 million tons in Miyagi Prefecture and about 2.08 million tons in Fukushima Prefecture. Iwate has cleaned 8 percent of its waste, Miyagi 5 percent and Fukushima 4 percent. The ministry is asking local governments across Japan to accept and treat waste from Iwate and Miyagi. Debris in Fukushima is being treated within the prefecture due to radiation concerns.

"The nature, strength and generosity of Japanese society is being tested on the issue of whether the debris can really be treated in other prefectures," Hosono said at Friday's press conference.

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Confusion over radioactive ash

Ash generated when incinerating debris contaminated with radioactive cesium can be buried without special treatment under a government-set standard, if the radiation level is less than 8,000 becquerels per kilogram.

The ministry says people who live close to ash buried under 50 centimeters of clay would be exposed to 0.01 millisievert a year. This is significantly less than 1 millisievert, the annual limit for most people set by the International Commission on Radiological Protection.

But one resident said, "There's a government-set limit of less than 100 becquerels, so I don't know what to trust."

It seems that people are being confused by varying regulations. One hundred becquerels is the limit for the reuse of waste set under the Nuclear Reactor Regulation Law. This means that waste generated by nuclear power plants can be reused as building materials or for other purposes if it contains less than 100 becquerels of radiation.

February 24, 2012

A new way to remove cesium ?

New technology can remove 99.9 percent of radioactive cesium in soil

http://mdn.mainichi.jp/mdnnews/news/20120224p2a00m0na022000c.html

New technology that can remove up to 99.9 percent of radioactive cesium in contaminated soil has been developed, raising hopes for reducing radioactive waste in areas affected by the Fukushima nuclear disaster, it has been learned.

Taiheiyo Cement Corp. and the National Agricultural Research Center in Tsukuba, Ibaraki Prefecture, devised the groundbreaking technique to drastically cut cesium in contaminated soil. The soil left after the decontamination process can be used as construction materials for the recovery of disaster-stricken areas, such as aggregate concrete, according to the developers.

The method employs a small rotating furnace, in which cesium-tainted soil is mixed with calcium compounds to promote a reaction before the materials are heated at 1,350 degrees Celsius. The cesium separated from the tainted soil is then captured by filters.

When tested on contaminated soil in Fukushima Prefecture, the levels of radioactive cesium in the soil decreased from 67,300 becquerels per kilogram to 29 becquerels. Although the filters, tainted with cesium after the process, need careful handling, the method is expected to contribute to reducing the amount of radioactive waste.

If heavy oil is used as the heating source for the furnace, it will cost 50,000 yen to 60,000 yen per metric ton of contaminated soil for the operation, the developers said.

"We hope to contribute to minimizing the disposal sites for contaminated soil through such cost-cutting efforts as utilizing existing furnaces," said an official with the National Agricultural Research Center. "The method could also be applied to the disposal of fallen leaves and rice straw."

February 25, 2012

Advice on decontamination provided in Fukushima

Decontamination info center opens in Fukushima

http://www3.nhk.or.jp/daily/english/20120225_14.html

The Environment Ministry and Fukushima Prefecture have begun to provide people concerned about radiation with information on how to clean up contaminated property.

Officials at an information center which opened last month in Fukushima City began to assist local residents on Saturday.

They offer information about decontamination steps and giving advice on how to do the work.

At the center, radiation counters and high-pressure sprays that are needed to remove radioactive substances from houses are on display.

People who are planning to decontaminate their houses by themselves can seek advice from experts.

Visitors are taking a look at booklets published by the central and prefectural governments on effective ways to remove such substances.

A visitor said he wants to learn about cleanup work and what methods public offices are using as he lives in a contaminated area.

Masaru Moriya, who leads a task force of the environment ministry, says he hopes the center will help people in Fukushima to obtain appropriate knowledge on dealing with radiation.

February 28, 2012

Government not trusted - waste disposal

Futaba mayor declares distrust of govt / Boycotts meeting over report of planned purchase for Fukushima waste sites

http://www.yomiuri.co.jp/dy/national/T120227005177.htm

The Yomiuri Shimbun

Futaba Mayor Katsutaka Idogawa, who boycotted a meeting between the central government and municipalities near the Fukushima No. 1 nuclear power plant on Sunday, said he strongly mistrusts the government regarding the planned construction of intermediate storage facilities for contaminated soil.

Sunday's meeting between the government and eight towns and villages in Fukushima Prefecture's Futaba County was canceled after the mayors of Futaba, Hirono and Namie refused to attend.

Environment Minister Goshi Hosono and Tatsuo Hirano, state minister for disaster reconstruction, were scheduled to explain at the meeting about the government's policy concerning the location and conditions of the planned intermediate storage facilities.

Construction of the intermediate storage facilities remains uncertain with the eight municipalities divided over the plan.

"The government lies all the time," Idogawa reportedly told Hirano when Idogawa telephoned him at about 10 a.m. Sunday. "I don't know what to believe."

Idogawa told Hirano he would boycott the meeting scheduled for later Sunday. He said the reason was that the local newspaper reported earlier on the day that the government would explain during the meeting about the purchase of sites for intermediate storage facilities, a topic that was not originally included in the agenda of the meeting.

Idogawa opposes the construction of intermediate storage facilities in Futaba County.

In contrast, Naraha Mayor Takashi Kusano said there is no choice but to accept the facilities to help bring about residents' early return.

The meeting to be attended by eight town and village mayors was to have been the first venue for the government and the municipalities to exchange opinions. It was meant to discuss residents' return to their homes as well as the order of decontamination work.

In April, the government will reorganize the 20-kilometer no-entry zone and expanded evacuation zone into three areas on the basis of estimated annual levels of radiation exposure. Decontamination work will then start from areas with low radiation levels.

However, without intermediate storage facilities for contaminated soil, it is impossible to proceed with decontamination. This could delay residents' return.

The Environment Ministry therefore plans, acting upon a request from local municipalities, to construct four intermediate storage facilities instead of one as previously considered. The ministry has already prepared schematics for them.

The ministry estimated the maximum amount of contaminated soil in Fukushima Prefecture at 28 million cubic meters. As a result of its survey on characteristics of the terrain and ground of Futaba County, the ministry concluded it would be difficult to construct a single intermediate storage facility that could hold such a large amount of contaminated soil.

However, opinions were divided within the ministry whether to present the plan to construct four intermediate storage facilities at the meeting.

"If we talk about the intermediate storage facilities, the meeting will stop because the Futaba mayor will likely leave the room," said a ministry official who was reluctant to discuss the facilities at the meeting.

Another official said, "Choosing locations for the facilities has to come first [before anything else can be done], so we should present the plan [to construct facilities at the meeting]."

A senior Environment Ministry official said, "Eventually, we made reconstruction the major agenda at the meeting because it would be attended by Hirano, the state minister for disaster reconstruction, and decided to explain [about the facilities] if the mayors asked."

Tomioka Mayor Katsuya Endo, who came to the venue, said, "It's regrettable [it was canceled] because we were to start discussions with the government on all the problems."

Hirono Mayor Motohoshi Yamada, who boycotted the meeting, said: "If Mayor Idogawa, chairman of the Futaba mayors group, decided not to attend, I had to refuse as deputy chairman.

"I also was mistrustful of the government."

Namie Mayor Tamotsu Baba said, "I want the government to explain how to solve problems and understand our requests."

Hosono said: "I'd like to apologize to those who did not attend the meeting. It's entirely our responsibility."

A new way to remove radiation ?

METI to introduce equipment to remove most radioactive materials at Fukushima plant

http://mdn.mainichi.jp/mdnnews/news/20120228p2a00m0na007000c.html

The Ministry of Economy, Trade and Industry (METI) said on Feb. 27 that it would introduce equipment in the first half of next fiscal year that is capable of removing almost all kinds of radioactive substances from contaminated water piled up or stored on the premises of the Fukushima No. 1 Nuclear Power Plant.

METI made the decision when it held a meeting to discuss medium- and long-term measures toward the decommissioning of the crippled Fukushima nuclear power station.

The work to purify water contaminated with high levels of radiation has so far been carried out mainly to remove cesium-137, which has a long half-life and constitutes a great risk to health. Under the plan for Tokyo Electric Power Co. (TEPCO), the operator of the Fukushima nuclear plant, new equipment designed to have radioactive substances absorbed into activated charcoal to further reduce the levels of radiation will be introduced to remove not only cesium-137 but also other radioactive substances.

When 62 kinds of radioactive substances that measured more than one hundredth of the legal limit of radiation in contaminated water were tested, it was confirmed that the equipment was capable at present of removing 57 kinds of radioactive substances and reducing their levels of radiation below their detection limits.

The equipment will be used to remove and reduce the concentrations of radioactive substances contained in water below the legal limit for releasing it into the ocean, but METI said, "We will discuss with local governments, people and others whether to actually release it into the ocean."

March 1, 2012

Is this supposed to be reassuring?

Cesium released from Fukushima possibly equals 20-30% of Chernobyl

http://mdn.mainichi.jp/mdnnews/news/20120301p2g00m0dm031000c.html

TOKYO (Kyodo) -- Radioactive cesium released into the atmosphere in the disaster at the Fukushima Daiichi nuclear power plant amounted to between 30,000 and 40,000 terabecquerels, possibly equal to 20 to 30 percent of the isotope released in the 1986 Chernobyl disaster, a study showed Wednesday.

The study was compiled by a team of researchers from the Meteorological Research Institute of the Japan Meteorological Agency and the Central Research Institute of Electric Power Industry.

According to one estimate, a total of 137,000 terabecquerels of radioactive cesium were released into the atmosphere in the Chernobyl accident.

Researchers at the institutes analyzed the amount of cesium in seawater collected at 79 spots in the Northern Pacific between April and May last year. They then estimated how much cesium-134 and cesium-137 were released between mid-March and early April with the help of a computer model that analyzed how radioactive materials dispersed in the air and sea.

Most of the releases up until early April were into the atmosphere, the study said, consisting of between 15,000 and 20,000 terabecquerels of both cesium-134 and cesium-137.

March 2, 2012

The waste nobody wants

ONE YEAR AFTER THE DISASTER / Quake-hit areas still struggling with debris

http://www.yomiuri.co.jp/dy/national/T120302005492.htm

"'Completely'? Don't lie!"

"How will you take responsibility if radioactive substances affect our health?"

Participants cried out in indignation and jeered at Kanagawa Gov. Yuji Kuroiwa when he met with residents of the prefecture at the Kanagawa prefectural government office in January. The meeting was held to discuss the prefecture's plan to accept debris from areas affected by the Great East Japan Earthquake, including Iwate Prefecture.

Kuroiwa is willing to accept debris from quake-hit areas, but some residents alleged that it contained radioactive materials emitted from the crippled Fukushima No. 1 nuclear power plant.

Some of the 200 participants at the meeting howled at the Kanagawa governor when he explained how the incinerated ashes of debris would be stored.

"In this way, incinerated ash will be completely contained," Kuroiwa said, writing his explanation on a board.

Takao Kudo, head of the environment and livelihood department of the Iwate prefectural government, accompanied Kuroiwa to the meeting and bowed his head as he heard residents' cries.

"The radiation level of the debris is less than 100 becquerels per kilogram," Kudo told them. "We hate to worry you, but we ask for your kind cooperation."

A huge amount of debris left by tsunami following the March 11 earthquake remains in quake-hit areas. Removal has progressed slowly.

The disaster created 22.53 million tons of debris in Iwate, Miyagi and Fukushima prefectures, but only 5.6 percent has so far been disposed of permanently.

The prefectural governments of Iwate and Miyagi are asking other prefectures across the nation to accept about 4 million tons of debris.

At a temporary storage site in the Kawaguchicho district of Ishinomaki, Miyagi Prefecture, a mountain of debris stands like a pyramid. In about one year, it has reached four layers and 20 meters high.

To remove methane gas from inside the debris mountain, an excavator recently dug holes and inserted pipes into the mountain. Hot white vapor rose up from the trash.

"We don't want to create such tall debris mountains, due to the risk of fire. But there was no other place," said a man assigned to supervise the temporary storage by the Ishinomaki city government.

Ishinomaki's central area was almost submerged by tsunami, and the amount of debris there reached 6.16 million tons. That was nearly 30 percent of the total amount in the three prefectures hit hardest by the disaster, and equal to the city's normal trash production for 106 years.

Mitsuo Murakami, head of the city's disaster waste disposal department, said, "We hope people living in other areas of the country will understand our predicament."

The Environment Ministry has not actively explained in detail about debris from quake-hit areas because it did not want to agitate residents who oppose accepting the debris.

"The ministry will decide on a guideline and then let people at the working level handle the rest," an Environment Ministry official said critically of his government body, which has fewer staff than other ministries.

The official added, "The ministry thinks it better to leave things to mayors of concerned municipalities, who have political power."

However, public fears of radiation were more serious and stronger than ministry officials expected.

Environment Minister Goshi Hosono has become increasingly frustrated with the slow progress ahead of the first anniversary of the March 11 earthquake and tsunami. Hosono has called employees of large advertising agencies to his office almost every day to discuss strategy to appeal to the public directly.

In Fukushima Prefecture, a project to decontaminate areas tainted with radioactive substances is set to start on a scale unprecedented in the world.

The no-entry and expanded evacuation zones around the crippled nuclear power plant, in which the central government is in charge of decontamination, will be reorganized in April into three new zones depending on their radiation levels.

The government will start decontamination from areas where radiation levels are low, to help realize residents' early return.

However, locations have still not been chosen for intermediate storage facilities to hold up to 28 million cubic meters of contaminated soil.

The government intends to decide on locations for temporary storage facilities by the end of March 2013 and bring contaminated soil there from 2015.

However, opinion is divided among eight municipal governments in Futaba County near the power plant, among whom there is strong distrust of the central government.

The delay in building the storage facilities threatens to drag down restoration efforts.

March 3, 2012

Contaminated rice straw gallore

Local gov'ts, farmers struggle with hundreds of tons of radiation-tainted rice straw

http://mdn.mainichi.jp/mdnnews/news/20120303p2a00m0na012000c.html

A "pipe house" built by cattle farmer Junichi Sasaki in Ichinoseki, Miyagi Prefecture, is seen in this photo taken on Feb. 26, 2012. (Mainichi)

Local governments and farmers in Iwate and Miyagi prefectures have been struggling unsuccessfully to dispose of hundreds of metric tons of rice straw, sewage sludge and ash tainted with radiation from the crippled Fukushima No. 1 Nuclear Power Plant.

The central government has been trying to take steps to deal with the problem, which was largely unexpected before the outbreak of the nuclear crisis caused by the March 11, 2011 Great East Japan Earthquake and tsunami, but there are no signs yet of the problem being solved anytime soon.

Junichi Sasaki, a 61-year-old cattle farmer in Ichinoseki, Iwate Prefecture, has been working tirelessly to move radiation-tainted rice straw into a "pipe house" he recently built.

"At long last, I've moved a step forward. But this is just the beginning," he said.

Sasaki has about seven tons of rice straw to dispose of. He recently built a snow-resistant "pipe house" near his livestock barn far from town so that he can keep rice straw there temporarily in collaboration with other farmers in the neighborhood. Prefectural and local governments are supposed to check the radiation levels of the rice straw there every three months.

Sasaki also has about 140 tons of barnyard manure from his cattle, which were fed tainted rice straw. But he has not been able to dispose of it because the central government has not come up with a clear policy.

"If the situation goes on like this, it will discourage young successors and the local cattle industry will collapse," he said.

Roughly 600 tons of tainted rice straw remains in Iwate Prefecture, about 400 tons of which is in Ichinoseki. The Ichinoseki Municipal Government tried to a build a temporary storage facility in a mountainous area on city-owned land, but the plan drew strong opposition from people living near the planned site, who questioned whether it would be 100 percent safe. The local government then proposed to build four smaller disposal facilities spread across the city, but that idea was not accepted either. Farmers have accordingly been unable to get rid of their tainted rice straw.

Ichinoseki Mayor Osamu Katsube commented: "The government showed Fukushima Prefecture its plan to build a temporary storage facility, but it hasn't shown anything to local municipalities around Fukushima Prefecture. Yet radiation doesn't have boundaries."

Miyagi Prefecture faces a similar problem. On the evening of Jan. 31, the prefectural and municipal governments held a briefing in Kurihara on storing of tainted rice straw for local residents. About 70 local residents who attended the briefing session reluctantly accepted the plan, saying, "We don't agree but it can't be helped." A temporary storage facility is scheduled to be built within the city's Tsukidate district, and rice straw is expected to be brought into the facility in March. It is only the Tsukidate district in the city which has accepted the city's plan to build storage facilities. Three other districts in the city stand firm against the plan to build storage facilities there, and therefore the prefectural and city governments are planning to hold another briefing sometime after mid-March.

According to the Miyagi Prefectural Government, about 4,800 tons of tainted rice straw remains in the prefecture, and only about 2,880 tons of it can be stored temporarily in the foreseeable future. Cattle farmers who cannot dispose of tainted rice straw in temporary storage facilities are worried, saying, "It will affect our cultivation work starting this spring."

Miyagi Gov. Yoshihiro Murai told a news conference in January, "The government should take responsibility for securing temporary storage facilities, disposing of tainted rice straw and formulating health-hazard standards, and explain the situation to prefectural residents." He insisted that the prefectural government would take action only after the central government makes a decision.

6,800 tons of radiation-tainted rice straw left lying in 8 prefectures

http://mdn.mainichi.jp/mdnnews/news/20120303p2a00m0na010000c.html

Packed rice straw is laid on an idle rice paddy in Ichinoseki, Iwate Prefecture on Dec. 13, 2011. (Mainichi)

Some 6,800 metric tons of rice straw contaminated with radioactive substances leaked from the crippled Fukushima No. 1 Nuclear Power Plant remains in eight prefectures with no immediate prospect of disposal, the Mainichi has learned.

Moreover, sludge generated from radiation-contaminated waste water as well as ash tainted with radioactive materials amounts to some 97,000 tons in 12 prefectures -- 3.6 times the figure as of July last year, according to the Land, Infrastructure, Transport and Tourism Ministry.

Even though waste containing up to 8,000 becquerels of radiation per kilogram can be buried under national government standards, efforts to dispose of such waste have made little progress, showing that the government's countermeasures have not been properly implemented.

"Local bodies haven't been able to dispose of such waste partly because residents worried about contamination have voiced opposition to disposal of such waste in their own prefectures," a ministry official commented.

Tainted rice straw used as feed for beef cattle has proven to have contaminated the animals with radiation.

Miyagi Prefecture has the largest store of tainted rice straw, with 4,800 metric tons, followed by Fukushima with 1,100 tons, Iwate with 600 tons and Tochigi with 320 tons.

Fukushima Prefecture also had 30,000 tons of sludge and ash tainted with radioactive cesium at its sewage treatment facilities as of Feb. 3 -- the largest amount among Japan's prefectures and 25,220 tons more than in July last year. It was followed by Miyagi Prefecture with 22,000 tons (up 19,900 tons from July), Kanagawa with 19,000 tons (an increase of 14,690 tons), and 9,500 tons in Saitama (6,790 tons more than in July).

Same old story: Nobody wants that waste

Disposal sites refuse to accept 140,000 tons of tainted waste

http://www.yomiuri.co.jp/dy/national/T120303003721.htm

The Yomiuri Shimbun

At least 140,000 tons of sewage sludge, ash and soil contaminated with radioactive materials has yet to be disposed of in Tokyo and six prefectures in the Kanto region following the crisis at the crippled Fukushima No. 1 nuclear power plant, it has been learned.

Under the central government-set criteria regarding radioactive materials, sewage sludge and ash with radiation levels up to 8,000 becquerels per kilogram can be put in landfills. But an increasing number of final disposal sites refuse to accept contaminated sludge and ash even if it meets the criteria, according to a survey by The Yomiuri Shimbun. In other situations, soil removed during decontamination work has been left at the original sites.

When The Yomiuri Shimbun asked local governments in Tokyo and six other prefectures with waste water processing facilities how they have handled sewage sludge, it found a total of 103,100 tons of sludge--including that which has been incinerated and reduced--was still at the facilities. Of that, about 52,700 tons was in Saitama Prefecture, the most among the seven prefectures.

The Yomiuri Shimbun surveyed 24 facilities in Tokyo and four other prefectures where radioactive cesium above 8,000 becquerels had been detected in ash.

The survey revealed about 6,500 tons of ash from general waste was still kept at the facilities. Of that, about 2,200 tons were in Ibaraki Prefecture and about 1,900 tons in Chiba Prefecture.

As for polluted soil removed in decontamination work, The Yomiuri Shimbun looked at 51 municipalities in five prefectures, which have been designated by the central government as areas for close contamination inspections, and found about 30,400 tons of polluted soil was temporarily stored there.

Many local governments in the Tokyo metropolitan area do not have their own final disposal sites for sewage sludge and ash.

The Nagareyama municipal government in Chiba Prefecture has about 750 tons of ash. The city previously sent ash to facilities outside the prefecture, such as one in Kosaka, Akita Prefecture, for final disposal.

However, since a maximum of 28,100 becquerels of radioactive materials per kilogram were detected in ash in July, such final disposal sites refused to accept ash from Nagareyama. Even ash en route to the disposal sites was returned to the city.

About 350 kilograms of the ash in the city meets the central government's standard, but the city is not hopeful of finding a final disposal site.

"The central government's criteria doesn't do anything to gain understanding from residents around final disposal sites. Unless something is done, we'll be forced to stop incinerating garbage," a city official said.

In Nasu and Nasu-Shiobara in Tochigi Prefecture, where decontamination work was carried out at primary and middle schools, **about 11,800 tons of soil has been left in school compounds.**

March 4, 2012

Waste - again... What's to be done ?

86% of municipalities reluctant to accept debris from March disasters

http://mdn.mainichi.jp/mdnnews/news/20120304p2a00m0na009000c.html

TOKYO (Kyodo) -- A total of 86 percent of municipalities in Japan responding to a survey said they are reluctant to accept debris from Iwate and Miyagi prefectures, which were severely hit by the March 2011 earthquake and tsunami, partly due to fears it may contain radioactive substances resulting from the nuclear crisis at the Fukushima Daiichi power plant, the poll showed Saturday.

The survey, conducted by Kyodo News in February, covered 1,789 municipalities and prefectural governments. On the issue of disposal of debris, 1,422 of Japan's 1,742 municipalities, or 82 percent, responded.

In the survey, 33 percent of responding municipalities said it would be difficult for them to accept debris from the prefectures now, while 53 percent said they have no plans to accept such waste.

The result indicates that achieving the central government's goal of completing the disposal of debris generated by the disasters by the end of March 2014 may be difficult.

Twenty-seven municipalities in Aomori and Chiba prefectures as well as Hokkaido and Tokyo said they have already decided to accept debris while 127 municipalities in 34 prefectures said they are considering cooperating in the disposal, according to the survey.

But 466 municipalities said it is difficult to accept waste now and 753 said they have no plans, it showed.

Aomori and Yamagata prefectures and Tokyo have already accepted debris from the disasters, while Shimada city in Shizuoka Prefecture began a trial incineration of debris from a town of Iwate.

In multiple responses to a question to municipalities and prefectural governments on obstacles to accepting debris, 53 percent of respondents said they have no facilities for disposal, 41 percent cited fears of radioactive substances, 24 percent pointed to the geographical distance for transportation and 20 percent cited opposition by local residents who fear radioactive contamination.

The Environment Ministry estimates a total of 20.45 million tons of waste have been generated in Iwate and Miyagi prefectures, but only about 1.17 million tons, or 6 percent, had been disposed of as of Feb. 27.

As for Fukushima Prefecture, which hosts the Fukushima Daiichi plant, a total of 2.08 million tons of debris are estimated to have been generated, and about 95,000 tons, or 5 percent, have been disposed of. Debris in Fukushima will be disposed of within the prefecture.

March 5, 2012

People can be enthusiastic about decontamination

Fukushima village comes together for radioactive cleanup and recovery project

http://mdn.mainichi.jp/mdnnews/news/20120305p2a00m0na007000c.html

IITATE, Fukushima -- The people of this village are all gone, ordered to leave last year due to radioactive contamination. The citizens of Iitate, however, are working for the day they might return, as dump trucks rumble through the abandoned center loaded with soil and other materials for disposal -- part of a government model decontamination operation.

The villagers were told in April 2011 that they would have to evacuate Iitate by June the same year after a plume of radioactive fallout from the Fukushima No. 1 nuclear plant washed over the community. A 320-billion-yen cleanup operation is now under way under the slogan, "Let's everyone go home together," while the village's recovery plan -- finalized on Dec. 16 last year -- calls for reducing contamination to the point that voluntary returns can begin in five years.

The village's decontamination plan, however, does not entirely jibe with the central government's. Announced at the end of January, the village work schedule calls for decontamination to start with areas at high elevations -- at odds with the central government's orders that the worst-contaminated sites be given priority. The village administration made the decision based on experiments that showed rain water was washing radioactive materials from the high ground into low-lying areas.

"The plan the government drew up on some desk somewhere is very different from the thinking of those of us actually here," says Iitate Mayor Norio Kanno.

Meanwhile, by providing local jobs, the decontamination effort is also a major link in maintaining village bonds and preventing villagers from moving away. To boost the local nature of the decontamination drive,

Iitate businesses and the local forestry cooperative will join forces under the village promotion organization to create a decontamination cooperative within this fiscal year.

Using money from an emergency job creation fund, the village already has a 350-strong "guardian unit" to watch over the homes and businesses in the no-go zone while their owners are gone. Also, a temporary Iitate kindergarten as well as a primary and junior high school are under construction in the Iino district of Fukushima city and the town of Kawamata where most of the evacuees from the village now live, with classes set to start sometime in the 2012 school year.

Despite the village government's enthusiasm for decontamination and eventual recovery, there are some who doubt the expensive effort will be effective, while others are calling for increased support for evacuees.

"We don't know what results we'll get until we try," says Mayor Kanno, "but we can't just abandon our homes to the fallout."

More promises about waste disposal

Noda vows to accelerate disposal of debris generated in March disaster

http://mdn.mainichi.jp/mdnnews/news/20120305p2g00m0dm025000c.html

TOKYO (Kyodo) -- Prime Minister Yoshihiko Noda pledged Sunday to accelerate the disposal of debris generated by the March 11 earthquake and tsunami last year by offering financial assistance to municipalities that accept the waste and conducting radiation tests to ease concerns among local residents.

On a Nippon Television Network program, Noda said the central government will strengthen its direct efforts to speed up the debris disposal, whose progress has been slow due to fears it may contain radioactive substances resulting from the nuclear crisis at the Fukushima Daiichi power plant.

"If people who live near waste disposal sites are concerned, we can go there and explain to them," Noda said. The government will offer subsidies to help waste-recipient municipalities newly build or expand disposal sites and examine radiation levels of the debris, the premier added.

The state will also consider conducting radiation tests on its own to alleviate fear of local residents, he said.

As of late February, only 5 percent of 22.53 million tons of waste estimated to have been generated in Iwate, Miyagi and Fukushima prefectures had been incinerated or otherwise disposed of, according to the Environment Ministry.

Some local governments have announced their intention to cooperate, but outside the northeastern region, only the Tokyo metropolitan government has actually begun accepting waste amid lingering radiation fears. The waste does not include debris from Fukushima, home to the crisis-hit nuclear plant.

A Kyodo News survey conducted in February has showed that 86 percent of municipalities responding to the poll are reluctant to accept debris from Iwate and Miyagi. The central government aims to complete the debris disposal by the end of March 2014.

Meanwhile, the premier also indicated on the TV program the possibility of dissolving the House of Representatives for a general election before bills to increase the nation's consumption tax clear the Diet.

"We will carry out (the tax hike) with an unwavering resolve. Having a strong determination, I have various options," Noda said when asked about whether he has an intention to dissolve the lower house.

Referring to some members of the ruling Democratic Party of Japan, including former party leader Ichiro Ozawa, who are reluctant to boost the sales tax, Noda said he is confident of winning their support as the party decided last December to uphold the tax increase.
"I will talk to whoever needs explanation (about the tax hike plan)," said Noda, who doubles as the DPJ leader.

March 8, 2012

Let's clean the roads first

Decontamination starts at Fukushima main roads

http://www3.nhk.or.jp/daily/english/20120308_24.html

Work has started to reduce levels of radiation on roads inside some evacuation zones around the troubled Fukushima Daiichi nuclear plant. The work is part of government efforts to allow some evacuees to return home in the near future.

Media were invited to watch the work being carried out by the government on a road around the Naraha Town Hall on Thursday. They saw workers using water jets managing to reduce radiation levels by about 80 percent.

Later this month, the government is due to review the zoning of evacuation areas. The review will be based on the latest radiation levels inside the government's exclusion zone and another mandatory evacuation zone which covers 11 municipalities. Naraha Town has one of the lowest radiation readings among them.

In Tomioka Town, the media could see workers checking radiation levels every 10 meters along a closed section of the Joban Expressway in preparation for decontamination operations. The readings were taken one meter above the surface and measured between 4 to 5 micro-sieverts per hour.

The government will start decontamination work in 6 other municipalities this month, focusing on roads and other facilities that are essential for everyday life.

Restoring water and electricity services to those areas is expected to take time due to the extensive damage caused by the earthquake and tsunami.

The government may have to wait until this summer to start the decontamination of private homes, which requires the approval of their owners.

March 9, 2012

Decontamination ? Not that easy

High levels of cesium found at former nuclear lab outside L.A.

http://mdn.mainichi.jp/mdnnews/international/news/20120309p2g00m0in144000c.html

LOS ANGELES (Kyodo) -- High levels of radioactive cesium have been detected on the ground of a former nuclear facility in the suburbs of Los Angeles called the Santa Susana Field Laboratory, where an experimental nuclear reactor suffered fuel melting in 1959, according to U.S. government data obtained Thursday.

The data, provided to local residents in February as an interim report by the Environmental Protection Agency, which is examining the extent of contamination in the area, show that radioactive cesium measured up to about 7,300 becquerels per kilogram of soil, or nearly 1,000 times the benchmark used by the agency.

The area was decontaminated after the nuclear accident, and the U.S. Department of Energy, which was dealing with research there, declared in the 1980s that the land could now be used as farmland or for residential purposes.

The decision to conduct a detailed study was made in December 2010 after strong demands were lodged by local residents who have expressed health concerns for a long time.

The findings suggest that **the Department of Energy had grossly underestimated the level of contamination in the area and have shown the difficulty of cleaning up soil contaminated with radioactive materials.**

In Japan, which was hit by meltdowns at a nuclear power plant last March and the subsequent release of massive amounts of radioactive materials, rice cannot be grown in paddies if radioactive cesium detected there measures more than 5,000 becquerels per kg of soil.

The EPA sampled soil at 437 spots near the area where the troubled reactor used to be, and found higher levels of radioactive materials than normal at 75 of them. At seven spots, cesium measured over 100 times the standard, with the maximum reading of 957 times the standard.

The agency is expected to announce its results by the end of this year, with plans to finish decontamination work by 2017.

In the July 1959 accident, 13 of the 43 fuel rods partially melted after an experimental sodium coolant reactor suffered malfunctions. No one is believed to have died directly from the accident, which was the first fuel melting at a facility in the United States that provided electricity to the private sector.

The lab has also been known for its sloppy management of hazardous materials, having incinerated radioactive waste in an open yard at the site for two decades.

Accidents have periodically occurred at nuclear facilities in the United States, which has large nuclear weapons stockpiles and many nuclear reactors, but no accident or contamination as serious as the one at

the Santa Susana Field Laboratory has occurred near a city as populous as Los Angeles, the second largest city in the country.

Mountains of unwanted ash

http://mdn.mainichi.jp/mdnnews/news/20120309p2a00m0na018000c.html

One year on, Chiba Prefecture faces mountain of problems including incinerated ash

Incinerated ash wrapped in tarps fills a parking lot at the Matsudo Clean Center in Chiba Prefecture. (Mainichi)

CHIBA -- Chiba Prefecture was overwhelmed with a wide variety of misfortunes and problems in the last year.

Fifteen people in the city of Asahi were killed or are still unaccounted for following the huge tsunami triggered by the magnitude 9.0 earthquake, and about 70,000 households along the Tokyo waterfront and Tone River took the brunt of liquefaction.

Then, hot spots or points of relatively intense radiation spewing from the disaster at the Fukushima No. 1 Nuclear Power Plant were found in large numbers in northwestern Chiba Prefecture due to wind and rain shortly after the natural disasters and the nuclear crisis. An exodus of residents ensued, and the prefecture's population suffered its first drop since the end of World War II.

Alarmed by the unexpected drop in the prefecture's population, Gov. Kensaku Morita vows to quickly study measures, including creating a new entity within the prefectural government, to arrest the decline.

Chiba, endowed with a coastline extending some 500 kilometers, has suffered damage from tsunami over the years. But the March 11, 2011 tsunami, its arrival along the Chiba coastline and its stretch were beyond the scope of ordinary residents' imagination. For example, the tsunami reaching Asahi's Iioka district was the third wave and came over two hours after the killer earthquake struck. Some residents were swept up by the tsunami after returning to their neighborhoods.

The Iioka district and other communities along the Kujukuri coast do not have many buildings and higher ground. A prefectural study panel composed of officials and experts proposed raising the levees from the current 4 to 5 meters to 6 to 6.5 meters. Asahi Mayor Tadanao Akechi proposes expanding forest reserves to help curb tsunami's speed and energy.

The Tokyo waterfront also experienced tsunami as high as 1 to 2 meters about three to five hours after the quake. Rafts for seaweed cultivation were washed away and officials could not close floodgates in time, causing some households to be submerged. Some local governments along Tokyo Bay are hurrying to designate buildings that should be fled from in the case of future tsunami.

Chiba's population increase, ranked third in the nation in terms of the number of people and the ratio of increase, has been driven by the prefecture's northwestern region where the Tsukuba Express Line linking Akihabara in Tokyo and Tsukuba in Ibaraki Prefecture has been in operation since 2005. The region has developed into a major bedroom town in the greater metropolitan area.

But nine cities in the region were designated by the central government as areas subject to strict monitoring of radioactive contamination. As some areas logged higher levels of radioactive contamination than other areas amid heightened anxiety among residents, the cesium concentration in incinerated ash at an incineration plant in Kashiwa reached over 70,000 becquerels per kilogram in June last year.

Similar findings were reported in neighboring cities, causing a shortage of storage facilities for incinerated ash and forcing some incineration plants to repeatedly suspend operations. Massive amounts of incinerated ash were sent back to Nagareyama and other Chiba municipal governments from outside the prefecture.

While many cities were reluctant to implement measures against radiation contamination, parents and others rose to the occasion. A group of housewives and other residents in Kashiwa collected over 10,000 signatures and delivered them to Mayor Hiroyasu Akiyama. These cities came under criticism, changed course and started taking measures including decontaminating day-care centers and kindergartens and extending subsidies for the decontamination drive.

While the prefectural government is taking the initiative in trying to resolve the incinerated ash issue, local governments involved are having trouble reconciling with one another, leaving the issue unresolved.

March 10, 2012

Rubble - again

Disaster debris presents continuing barrier to recovery of devastated areas

http://mdn.mainichi.jp/mdnnews/news/20120310p2a00m0na014000c.html

Some 22 million metric tons of debris generated by the March 11, 2011 Great East Japan Earthquake and tsunami continues to be a barrier to recovery in disaster-hit communities.

Local bodies in disaster-ravaged areas as well as the Environment Ministry are urging other prefectural governments to help dispose of the rubble. Residents outside the disaster areas are reluctant to accept it, however, with many worried that the rubble may be contaminated with radiation leaking from the Fukushima No. 1 nuclear plant.

In central Ishinomaki, Miyagi Prefecture -- badly mauled by the March 2011 disasters -- ordinary houses are joined by temporary dwellings along a riverbank. Next to the residential area is a giant pile of disaster debris -- a dull brown and gray mountain of broken concrete, splintered wood and rusting metal. Schoolchildren at play or in sports club training run along the riverbank, only meters away from the rubble.

"The rubble always reminds me of the tsunami," says one middle-aged woman as she passes the debris pile while on a walk through her neighborhood. "I also worry that it may absorb heat and catch fire, and that it may start to smell when summer comes."

The Miyagi Prefecture town of Onagawa has an estimated 444,000 metric tons of debris, or more than 100 times the municipality's annual disposal capacity. Forest covers 87 percent of the town's area, and the remaining flatland -- where homes and shops had stood until the disasters -- is now filled with rubble.

"We're leading our daily lives amidst disaster rubble," says Mayor Yoshiaki Suda. "The flatland has sunk and needs to be raised and leveled. But those mountains of rubble have prevented us from moving ahead with the work. It's been a real stumbling block to our restoration efforts."

Full-scale work got under way on March 1 to transport disaster debris from Onagawa to Tokyo. The metropolitan government is prepared to accept and dispose of approximately 100,000 tons.

The rubble consists of a wide variety of materials, ranging from wood, tatami mats, cloth, plastics and concrete chunks to stone. Workers do a rough sort of the debris before moving it to a temporary storage facility, where it is divided by hand or by machine into combustibles and incombustibles. Wood is chipped before being sent outside the disaster areas for disposal.

Airborne radiation levels are measured every hour after debris is sorted, and sampling surveys are conducted before the debris is loaded into containers. Before being shipped, radiation levels on both sides of the containers are measured.

When this reporter visited the site, tests confirmed that radiation doses were below the safety standards set by the Tokyo Metropolitan Government. A truck carrying two containers left the site, headed for a rail freight depot and an eventual train ride to Tokyo.

The Onagawa municipal government knows the shipments are not always welcome, as it occasionally gets anonymous phone calls protesting the operation.

"Don't bring materials contaminated with radiation to our neighborhood," one said.

"Dispatch a town official to our city and apologize," said another.

However Onagawa officials, faced with the massive scale of the cleanup, have no emotional capacity to seriously consider such complaints.
"We'd like to express our gratitude to Tokyo residents for accepting our debris," one official said. "Even though the town is filled with rubble, we really feel that restoration efforts are finally under way."

Radioactive waste to stay in Fukushima?

Gov't to build interim storage facilities for radiation-tainted waste

http://mdn.mainichi.jp/mdnnews/news/20120310p2g00m0dm015000c.html

TOKYO (Kyodo) -- The government will ask local municipalities to host interim storage facilities for radiation-contaminated soil and other waste at several locations in Fukushima Prefecture near the crisis-hit nuclear power plant, reconstruction minister Tatsuo Hirano said Friday.

The government is expected to make the request at a meeting to be held in Koriyama, Fukushima, on Saturday with the eight towns and villages comprising the prefecture's Futaba district as well as the prefectural government.

In December's meeting with the local leaders, Environment Minister Goshi Hosono formally asked that an interim storage facility be built somewhere in the district where Tokyo Electric Power Co.'s stricken Fukushima Daiichi plant is located.
Hirano, minister in charge of reconstruction from the March 2011 earthquake and tsunami, told a press conference that Hosono will ask the local governments at Saturday's meeting to host several facilities in the area.

Hirano also said the government plans to give a briefing at Saturday's meeting on its survey of the conditions of local infrastructure such as roads, water supply and sewerage since the disaster and how to conduct radiation monitoring in the area.

Kitakyushu to help with the waste

Kitakyushu assembly adopts resolution on tsunami debris assistance

http://mdn.mainichi.jp/mdnnews/news/20120312p2a00m0na011000c.html

KITAKYUSHU -- The Kitakyushu Municipal Assembly unanimously passed a resolution March 12 calling for the city to help in the disposal of debris left in Iwate and Miyagi prefectures in the wake of the March 2011 Great East Japan Earthquake and tsunami.

City officials have been cautious about accepting debris, with Mayor Kenji Kitahashi saying the city would wait to see how other cities and the central government acted. However, Prime Minister Yoshihiko Noda stated March 11 that he would send written requests to prefectures asking them to accept debris, turning the public spotlight on the city's response.

Residents outside the disaster areas have been reluctant to accept debris, with many worried that the rubble may be contaminated with radiation leaking from the Fukushima No. 1 nuclear plant, which was crippled by the March 2011 quake and tsunami.

Kitakyushu's resolution was jointly submitted to the assembly by the four main factions representing the Liberal Democratic Party; the Democratic Party of Japan and the Social Democratic Party; New Komeito; and the Japanese Communist Party, comprising a total of 58 assembly members. Three remaining assembly members in single-member factions were not involved in the submission of the resolution.

The resolution states that the huge amount of debris has formed a major obstacle in recovery and restoration efforts, and adds: "Its disposal is sought as quickly as possible with cooperation from the whole nation."

On condition that a proper system is adopted, with radiation measurements and other measures implemented, the resolution says the city will be asked to accept waste that has been deemed regular waste.

March 11, 2012

A mixed response

Mixed reaction over plan for Fukushima county to store radioactive waste

http://mdn.mainichi.jp/mdnnews/news/20120312p2a00m0na014000c.html

FUKUSHIMA -- The mayors of towns and villages in the Futaba county of Fukushima Prefecture have shown mixed responses to the central government's request that three of the eight municipalities in the county host temporary storage facilities for radioactive soil and waste emanating from the nuclear crisis at the Fukushima No. 1 nuclear power plant

"What's the rationale for us to have to host such facilities?" one of the mayors questioned, while another said in defense of the plan, "Decontamination work will not progress unless those storage facilities are installed at an early date."

The central government requested on March 10 that the towns of Futaba, Naraha and Okuma in the county host interim storage facilities for contaminated soil and waste, pressing the towns' mayors to make a difficult decision and accept the proposal.

After exchanging opinions with central government officials, Futaba Town Mayor Katsutaka Idogawa said, "I will discuss the matter with the municipal assembly and townspeople." However, he questioned, "Is there a reason for us to host such a facility?"

Referring to the controversial assertions by Tokyo Electric Power Co. (TEPCO), the operator of the crippled nuclear plant, that the radioactive materials that were once scattered outside the plant compounds are "ownerless," Mayor Idogawa stressed, "Unless we know who the owner (of the contaminated soil) is, there is no room to talk about it."

Okuma Town Mayor Toshitsuna Watanabe said, "It is disgusting that the government started narrowing down candidate host towns from the really early stages. It's not about hosting such a facility because of money. ... We want the central government to fulfill its accountability to our residents and municipal assembly."

Naraha Town Mayor Takashi Kusano, meanwhile, welcomed the government's request, saying, "We have no choice but to cooperate."

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In this photo taken Monday, Feb. 20, 2012, workers place a bag of radiation contaminated soil in a dumping ground in Hirono, outside Japan's nuclear exclusion zone. (AP Photo/Greg Baker)

Residents evacuating from the areas around the troubled nuclear complex have also expressed mixed emotions.

"I don't want our town to host such a facility, but I've half given up. Unless a direction is determined at an early date, residents' return to the town would be delayed and the town of Okuma will vanish," said the 74-year-old head of the Ottozawa district.

A 43-year-old farmer in the town of Naraha said, "Hosting such a facility would discourage many residents from coming back to the town. The burden shouldn't be inflicted on Fukushima alone, the pain should be shared by the entire nation."

March 13, 2012

A hasty conclusion?

Reach of soil contamination from Fukushima nuke disaster less than half Chernobyl's

http://mdn.mainichi.jp/mdnnews/news/20120313p2a00m0na010000c.html

Soil contamination stemming from the Fukushima No. 1 nuclear plant extends less than half as far from the plant as equivalent contamination from the 1986 Chernobyl accident, it has been learned.

The Education, Culture, Sports, Science and Technology Ministry has announced results of a survey on the distribution of cesium-137 and other radioactive materials in soil following the outbreak of the Fukushima nuclear crisis, and its comparison with figures from Chernobyl.

After the Chernobyl explosion, soil containing over 1,480 kilobecquerels of cesium-137 per square meter was detected in a 30-kilometer radius from the plant, and was further found in a range extending 160 to 250 kilometers north-northeast from the power station.

In comparison, such high levels of cesium-137 were found only in about a 30-kilometer-long swathe extending northwest from the Fukushima No. 1 plant, with the highest concentration found 32.5 kilometers away in the town of Namie.

The ministry, however, has not yet been able to confirm the total land area contaminated with radioactive substances from Fukushima or Chernobyl.

Ask the US about soil contamination after 50 yrs

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Entire country must help with debris

http://www.yomiuri.co.jp/dy/national/T120313005359.htm

Yoshihiro Kiyonaga / Yomiuri Shimbun Staff Writer

The following is an excerpt of a recent Yomiuri Shimbun interview with Goshi Hosono, environment minister who also serves as state minister in charge of nuclear power policy. In the interview, Hosono stressed the urgent need for creating a nationwide framework to address the challenge of clearing huge piles of debris from regions struck by the Great East Japan Earthquake.

The Yomiuri Shimbun: The government has come under severe criticism for its slow response to the crisis at Tokyo Electric Power Co.'s Fukushima No. 1 nuclear power plant. How do you respond to the criticism?

Goshi Hosono: Given the gravity of the situation, the government can never be free from blame. I'm no exception [as Hosono was a special adviser to the prime minister at the start of the nuclear crisis], and I must take this criticism seriously.

In hindsight, I can't help but feel the readiness and arrangements [at the time of the disaster] were lacking between the government and relevant organizations for quickly assessing and effectively dealing with the worst-case scenario of the unfolding crisis.

Q: Based on those reflections, has the government drawn up a bill for new nuclear safety legislation centered on establishing a nuclear regulatory agency, while limiting reactor operations to, in principle, a maximum of 40 years?

A: The nuclear safety administration lacks legal measures regarding the backfit rule [a system making it obligatory for nuclear power plants to use the latest safety technology at their reactors] and clear-cut mandatory countermeasures against a serious accident.

I believe this is one of the most important lessons from the disaster.

As for reactor life spans, applications submitted to the government for new plant construction had previously set the typical length of operations at 40 years.

The 40-year operation limit, therefore, is nothing new.

There have been instances, however, of some old reactors continuing operation beyond 40 years without sufficient justification due mainly to costs involved. From now on, that way of doing things cannot be allowed.

Q: There has been little progress on large-scale disposal of debris in Iwate and Miyagi prefectures. What is the government doing about that?

A: The government is to blame for that, as trust in the government has been shaken because of the nuclear crisis.

It's worth noting, however, that both Iwate and Miyagi prefectures have no radiation contamination problems. We are determined to continue doing our best to convey accurate information on that matter.

One idea may be for residents of the two prefectures to measure radioactivity themselves to prove and publicize the safety of their areas.

When it comes to the problem of debris disposal in Fukushima Prefecture, there is no choice but to establish a system to aggressively manage the debris within the prefecture.

As far as debris in Iwate and Miyagi is concerned, however, the country as a whole must extend help to clear it. Otherwise, the prefectures will be left helpless.

The government is eager to do whatever it takes to handle the situation, which has left disaster victims in Iwate and Miyagi speechless in front of mountains of debris.

Q: How does the government plan to push ahead with the task of having nuclear accident victims in Fukushima Prefecture return to their hometowns?

A: In some areas of the prefecture the government has announced that victims can return home and local governments have restored services.

The government has now decided there is no longer any risk of radioactive substances leaking from the nuclear plant to the extent that it would be necessary for the government to again evacuate the residents.

We believe the government must continue its unerring support of the victims, particularly in such areas as medical services, employment and living environment.

Q: Completion of decommissioning of the reactors is expected to take more than 30 years. How, as a politician, will you involve yourself in addressing the problem?

A: One of my regrets centers on the Great Hanshin Earthquake. When the disaster occurred, I was a fourth-year university student, and volunteered to help victims immediately after the 1995 disaster. However, I found a job in Tokyo shortly after, and had to end my volunteer work in April that year.

This time, I mustn't let anything stand in the way. Instead, I am determined to steadfastly devote myself to the task of helping people recover from the March 11 disaster.

Solution, anybody?

474,000 tons of disaster rubble remains piled up in nuke crisis no-go zone

http://mdn.mainichi.jp/mdnnews/news/20120313p2a00m0na004000c.html

There is still some 474,000 metric tons of earthquake and tsunami debris piled up in coastal areas of the Fukushima nuclear disaster no-go zone, the Environment Ministry announced on March 12.

The debris is contaminated with radioactive cesium from the crippled Fukushima No. 1 nuclear plant, with concentrations reaching as high as 58,700 becquerels per kilogram in the town of Okuma, where some of the No. 1 plant's reactors are located. As the toxic debris is inside the nuclear crisis exclusion zone, its disposal is up to the central government, which is moving ahead with plans for sorting facilities and temporary incinerators.

The single largest amount of debris in six coastal municipalities covered in whole or in part by the no-entry zone was in the city of Minamisoma, where some 183,000 tons of rubble remains to be dealt with.

The lowest cesium concentrations in burnable debris were detected in the town of Namie, at 1,300 becquerels per kilogram. The highest level for non-burnable debris was found in Okuma at 11,600 becquerels, and the lowest in Minamisoma and Namie at 200 becquerels.

March 14, 2012

Let's get on with the debris, says Govt.

Govt to ramp up debris disposal / Noda to make formal request for prefectures to accept March 11 rubbish

http://www.yomiuri.co.jp/dy/national/T120313005030.htm

The Yomiuri Shimbun

The government decided Tuesday to officially ask prefectures and major cities this week to accept debris from the Great East Japan Earthquake.

During their first meeting on disaster debris disposal, concerned ministers agreed to send a written request to government-ordinance-designated cities and 44 prefectures. The request excluded the three Tohoku prefectures of Iwate, Miyagi and Fukushima, which were badly affected by the disaster.

The government also decided to use the debris to build coastal forests, which may be able to reduce the force of high waves, and parks in the damaged prefectures.

Among the seven ministers who attended the meeting were Prime Minister Yoshihiko Noda, Chief Cabinet Secretary Osamu Fujimura, Environment Minister Goshi Hosono and Tatsuo Hirano, state minister in charge of reconstruction.

About 22 million tons of debris in the three Tohoku prefectures was generated by the disaster. The government's goal is to completely dispose of this by March 2014.

As a result of the crisis at the Fukushima No. 1 nuclear power plant, debris in Fukushima Prefecture will not be sent to other prefectures.

But the government wants the rest of Japan to help dispose of about 4 million tons of debris with no significant contamination from Iwate and Miyagi prefectures. The government request, made to local governments in Noda's name, is based on a special disaster waste disposal law that took effect in August.

However, the request is not legally binding.

Complying local governments will be told in writing about the specific amount and type of debris that the central government wants them to accept.

The government is apparently acting over alarm at the delay of debris disposal, which is likely to hamper reconstruction efforts.

As of Monday, a mere 6.7 percent of the disaster debris had been disposed of. Only Aomori and Yamagata prefectures and Tokyo have so far accepted debris.

Ministers at the meeting also agreed to provide local governments with financial support for building or expanding waste disposal facilities. The government also plans to ask private facilities, such as cement and paper factories, for their cooperation in treating combustible waste.

Noda said at the meeting, "I hope disaster debris will be recycled boldly and made good use of."

In addition to the creation of coastal forests to reduce the force of tsunami, the government hopes to use the disaster waste to create higher evacuation areas for residents to escape to in the event of future tsunami. It also plans to build a national park along Miyagi Prefecture's Sanriku coast.

Not so surprising

Radioactive materials may have sunk 30 cm into ground

http://mdn.mainichi.jp/mdnnews/news/20120314p2g00m0dm016000c.html

TOKYO (Kyodo) -- Radioactive materials released from the crippled Fukushima Daiichi power plant into the atmosphere were found 5 centimeters beneath the ground three months after the breakout of the nuclear crisis last March, but are now believed to have sunk 10 to 30 cm deep, a study by a research institution showed Wednesday.

The hazardous materials must have seeped into the land with rain, according to the Japan Atomic Energy Agency.

"Further delay in decontamination works will make the radioactive materials sink into the ground deeper, and it will impose more burdens on those involved in the decontamination," said Haruo Sato, researcher at the agency's Horonobe Underground Research Center in Hokkaido.

A group of researchers of the agency examined the penetration of four radioactive materials, including cesium 137, at 11 points in Nihonmatsu, Kawamata and Namie in Fukushima Prefecture, which are within a radius 20 to 60-kilometers from the Fukushima complex, in June.

Most of the materials remained within 5-cm of the surface of the ground at that time, but more recent estimates indicate they have seeped deeper into the ground, probably washed down by rain, according to the agency.

Under the current situation, the materials must be dispersed at least at 10 to 30-cm depth from the land surface one year after the accident, and the spot at which their highest density is observed is estimated to come down to 4 to 8-cm from within 2-cm seen in June, according to the agency.

The group is now examining the soil collected at the 11 points earlier this month to determine how heavy rains caused by typhoons since June have affected the infiltration of the radioactive materials.

The nuclear accident was triggered by the massive earthquake and tsunami that hit the northeastern Japan on March 11 last year.

Contaminated mud

High cesium levels detected in mud at Fukushima dam lake

http://mdn.mainichi.jp/mdnnews/news/20120314p2a00m0na003000c.html

Mud at the bottom of a dam lake near the crippled Fukushima No. 1 nuclear plant is heavily contaminated with radioactive cesium, government research has shown.

Tsukuba University professor Yuichi Onda, commissioned by the Ministry of Education, Culture, Sports, Science and Technology to conduct the survey, released the findings at a symposium on March 13.

Onda's team detected radioactive cesium of some 3 million becquerels per square meter at the bottom of the Horai Dam lake, about 60 kilometers west-northwest of the nuclear plant, along the Abukuma River in Nihonmatsu, Fukushima Prefecture. The level was 10 times higher than those of nearby reservoirs, and was roughly equivalent to soil contamination levels in the 20-kilometer radius exclusion zone around the Fukushima nuclear plant.

From July to August last year, Onda took samples from the 20-centimeter-deep mud on the bottom of the dam lake, dried them and compared them with mud samples from four nearby reservoirs registering contamination in the 200,000 to 400,000 becquerels per square meter range. Cesium from the crippled power station is believed to have condensed in the mud on the bottom of the Horai Dam after flowing into the river with soil and rainwater.

According to professor Onda, cesium contained in soil does not easily dissolve in water, and therefore water downstream is safe for drinking. However, he added that "it could affect fish and other fauna and flora in the dam lake," and said that he would continue his research.

An official of the Tohoku Regional Bureau of the Ministry of Land, Infrastructure, Transport and Tourism, in charge of managing the Horai Dam and the Abukuma River, said, "When a flood occurs, soil could flow downstream from the dam. To prevent this from happening, we will have to decontaminate the soil at some point. But we haven't considered that yet."

March 15, 2012

Worries about waste

Fukushima town council approves opposition to radioactive waste storage facilities

The municipal assembly of Naraha in Fukushima Prefecture, a town which has been completely evacuated due to the Fukushima No. 1 Nuclear Power Plant disaster, on March 15 unanimously approved a motion that opposed setting up midterm radioactive waste storage facilities in the town.

The assembly says that there were concerns from residents that midterm radioactive waste storage facilities would, by concentrating large amounts of radioactive waste, endanger the very existence of the town, and says there were requests for an opposition motion.

Mayor Takashi Kusano said, "Currently we are at the stage of waiting for an explanation from the national government, so it is unfortunate that the motion was passed."

March 16, 2012

Will it help?

Govt. makes formal request for debris disposal

http://www3.nhk.or.jp/daily/english/20120316_29.html

Prime Minister Yoshihiko Noda has officially asked regional authorities to help dispose of the huge quantity of debris from last year's earthquake and tsunami.

The prime minister on Friday sent a letter based on a special law to 35 prefectures and 10 major cities.

He says debris disposal is the very first step toward reconstruction. He also says authorities in disaster-hit areas are making all-out efforts to clear the rubble, but are overwhelmed by the task.

The disaster created more than 22 million tons of rubble in the 3 worst-hit prefectures of Iwate, Miyagi and Fukushima alone. Only around 7 percent of it has been incinerated or buried.

Tokyo and 8 other prefectures as well as some major cities have either begun or agreed to assist in disposal efforts. The government will now notify them of how much and what types of rubble they will be asked to dispose of.

Some local authorities are asking the central government to act more assertively to address residents' concerns over contamination from the Fukushima nuclear accident.

Decontamination plans leaves many doubts

Holes in radiation decontamination law leave some Fukushima residents in doubt

http://mdn.mainichi.jp/mdnnews/news/20120316p2a00m0na017000c.html

Local bodies in Fukushima are quickly drawing up decontamination plans under a new law as the government embarks on a full-scale cleanup in the wake of the disaster at the Fukushima No. 1 nuclear plant. Yet some residents have voiced doubts about the decontamination work, which is overshadowed by a mountain of issues not envisaged under the law.

The Ministry of the Environment has drawn up guidelines based on the new law on special measures for the handling of radioactive contamination, but these guidelines do not take indoor decontamination into account. The reason for this, a ministry representative explains, is because the special measures law was drafted with "environmental" contamination in mind.

However, one worker in the prefecture who has been involved in the decontamination of public facilities says that a considerable amount of indoor decontamination work needs to be done. He says that when readings are taken on top of lockers, near carpets and in other places where it is easy for dust to gather, tens of thousands of counts per minute (cpm) are sometimes measured. This is far above the government standard for decontaminating humans or objects, which stands at 13,000 counts per minute (a dosage of about 0.1 microsieverts per hour).

"Any places connected with the air outside, such as ventilators or the cracks between windows will contain radioactive materials, without fail," the worker says. "If these materials are left there, it could result in internal radiation exposure. Indoor decontamination should be made compulsory."

Some issues connected with outdoor radiation have also yet to be resolved.

During a meeting of the Dispute Reconciliation Committee for Nuclear Damage Compensation in the Fukushima Prefecture city of Koriyama in January, Kawauchi village mayor Yuko Endo pointed out that decontamination measures were not effective unless the trees around homes were removed, and asked,

"What's going to be done about compensation?" Many residents say forests near their homes cannot be cut down because guidelines for property compensation have not been decided on.

In mountain areas, meanwhile, it is common for residents to use streams as water sources. One resident whose home is within a restricted area around the Fukushima No. 1 plant commented, "Even if the area around my home is decontaminated, I still worry about water. Can they decontaminate the whole mountain?"

Keisuke Ishii, a 69-year-old farmer who also manages a store in the Akougi Shiobide district of the town of Namie, has given up on having his home decontaminated. When he returned once for a brief visit, a radiation level of 3 microsieverts per hour was recorded inside his house. In one place near a gutter, the reading was 30 microsieverts per hour. There is a high possibility that most of the district will be officially designated as a "difficult to return" zone.

One settlement in the area has low radiation readings and looks likely to be covered by decontamination work, but that would cover only about 30 homes.

"Even if just that place is decontaminated, there will be no other people around so residents won't be able to live there. There are many people saying 'Forget about decontamination,'" Ishii says.

Officials have been mulling buying land in the area, but Ishii would rather rent it.

"If I sell it, that's the end of the story. It may be a few decades down the track, but I want to leave it for my children and grandchildren."

March 17, 2012

[It's everywhere but apparently] not on pollen

Radioactive material not detected on pollen: researcher

Radioactive cesium from the crippled Fukushima No. 1 Nuclear Power Plant was not detected on pollen in a recent study, an assistant professor of the University of Tokyo said on March 16.

From Feb. 19 to 25, assistant professor Shogo Higaki of the University of Tokyo's Radioisotope Center, had a total of 20 people in Fukushima Prefecture and Tokyo wear cotton masks, and then had their radioactive material and pollen levels checked.

The results showed that in Fukushima, a maximum of 4.3 becquerels of radiation, and in Tokyo, a maximum of 0.6 becquerels of radiation, were detected. However, this radiation was determined to come not from pollen, but from dust. The reading of 4.3 becquerels is equivalent to 0.082 microsieverts, or the amount from being outside for around an hour in Tokyo.

"By ingesting dust, though it is a small amount, there is a possibility of internal radiation exposure, but it can be lessened by wearing a mask," said Higaki. He added: "Currently, radioactive material (on pollen) has not been detected, but it is necessary to continue monitoring changes. People who are worried should wear masks."

March 18, 2012

One yes

Aichi Pref. eyes thermal plant premises to accept quake debris

http://mdn.mainichi.jp/mdnnews/news/20120318p2g00m0dm018000c.html

NAGOYA (Kyodo) -- Aichi Gov. Hideaki Omura said Sunday he is making final arrangements with Chubu Electric Power Co. to build an incinerator and waste disposal site for debris from the March 2011 earthquake and tsunami at a local thermal power plant.

Omura told Kyodo News that he decided in late February to help disaster-hit areas in northeastern Japan dispose of the massive amounts of debris still piling up, and has asked the local utility serving central Japan about borrowing part of the premises in Hekinan.

The firm admitted having received such a request from the governor, without elaborating, saying the prefecture is still considering the idea.

If realized, **the prefectural government will set up its own safety standards** and release results of radiation monitoring during a test run, along with other data, to help win acceptance from the local government and residents, the officials said.
The prefecture has opted to build its own facilities as none of the 54 local municipalities have offered to accept such debris when asked.

The roughly 2.08 million square meter Hekinan plant premises include landfill to dispose of ash from coal burned for power generation

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In a related development, Environment Minister Goshi Hosono told Miyagi Gov. Yoshihiro Murai during their talks in Sendai, the capital of the hardest-hit prefecture, that the central government plans to make a disaster-prevention forest on Sendai Plain after reclamation using disaster debris.

The Forestry Agency is considering banking debris for the forest for dozens of kilometers possibly from June, he said.

Will Aichi say yes?

Aichi Pref. eyes thermal plant premises to accept quake debris

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March 19, 2012

A solution?

Town asked to accept debris ash / Govt wants Tomioka to bury radioactive residue in private landfill

http://www.yomiuri.co.jp/dy/national/T120318002791.htm

The government has asked a town in Fukushima Prefecture to accept ash from incinerated debris contaminated by radioactive substances from the Fukushima No. 1 nuclear power plant.

According to sources, the central government called on the Tomioka town government to bury the ash at a privately run disposal site in the town.

The sources said the central government informed the town the density of radioactive cesium in the ash was "up to 100,000 becquerels per kilogram."

However, Tomioka Mayor Katsuya Endo said: "Nothing has been decided. It's not a good time to discuss it."

According to the town government, the proposal was presented during a meeting among the central, prefectural and eight municipal governments in Futaba County on March 10. The meeting was not open to the public.

Town government officials said the central government proposed that temporary incineration facilities would be built at two sites in the northern and southern parts of the county, and ash would be buried at the town's private waste disposal site.

The disposal site is a landfill for sludge and other types of waste that may pollute underground water. It is about 13 kilometers from the nuclear plant, within the no-entry zone.

The 960,000-cubic-meter site began operation in 2001, and 760,000 cubic meters is still available. Since the start of the nuclear crisis, the site has suspended operations.

The industrial waste disposal service company that owns the site has already been approached by the central government.

"We'll watch how the talks turn out among the prefectural, central and Futaba County governments," a company official said. "If we can cooperate in the reconstruction, we will."

An official of the Policy Planning Division of the Environment Ministry's Waste Management and Recycling Department said, "We'll proceed with the talks while trying to obtain the understanding of local authorities and residents."

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Town wants to relocate

Members of the town assembly of Futaba, Fukushima Prefecture, plan to submit a motion calling for the town government's functions to be moved somewhere else in the prefecture.

The entire town is inside the no-entry zone, and the town government carries out its functions in Kazo, Saitama Prefecture.

The motion will be submitted to the assembly Monday, the final day of its regular session in March, together with another proposal to set up a special committee to determine what the residents want to do.

Both motions are expected to be approved, town assembly sources said.

In late March last year, the town government moved its functions to a former prefectural high school, Kisai High School, in Kazo, about 210 kilometers from the town.

Many of the town's residents evacuated to a building at the former high school.
The town government said the number of evacuees in the school building had fallen to 398 as of March 12 this year, compared to more than 1,400 in early April last year.
Of the town's residents, 3,545 evacuated outside Fukushima Prefecture, while 3,467 still live in the prefecture.
Many residents have asked that the town government's functions be returned to Fukushima Prefecture. During the town assembly's session, many members expressed the same sentiment.
"We'll make a decision after the start of the fiscal year, but first we will listen to what the residents have to say," Futaba Mayor Katsutaka Idogawa said.

Contaminated ash in Tomioka ?

Town asked to accept debris ash / Govt wants Tomioka to bury radioactive residue in private landfill

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Town government officials said the central government proposed that temporary incineration facilities would be built at two sites in the northern and southern parts of the county, and ash would be buried at the town's private waste disposal site.

The disposal site is a landfill for sludge and other types of waste that may pollute underground water. It is about 13 kilometers from the nuclear plant, within the no-entry zone.

The 960,000-cubic-meter site began operation in 2001, and 760,000 cubic meters is still available. Since the start of the nuclear crisis, the site has suspended operations.

The industrial waste disposal service company that owns the site has already been approached by the central government.

"We'll watch how the talks turn out among the prefectural, central and Futaba County governments," a company official said. "If we can cooperate in the reconstruction, we will."

An official of the Policy Planning Division of the Environment Ministry's Waste Management and Recycling Department said, "We'll proceed with the talks while trying to obtain the understanding of local authorities and residents."

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Town wants to relocate

Members of the town assembly of Futaba, Fukushima Prefecture, plan to submit a motion calling for the town government's functions to be moved somewhere else in the prefecture.

The entire town is inside the no-entry zone, and the town government carries out its functions in Kazo, Saitama Prefecture.

The motion will be submitted to the assembly Monday, the final day of its regular session in March, together with another proposal to set up a special committee to determine what the residents want to do.

Both motions are expected to be approved, town assembly sources said.

In late March last year, the town government moved its functions to a former prefectural high school, Kisai High School, in Kazo, about 210 kilometers from the town.

Many of the town's residents evacuated to a building at the former high school.

The town government said the number of evacuees in the school building had fallen to 398 as of March 12 this year, compared to more than 1,400 in early April last year.

Of the town's residents, 3,545 evacuated outside Fukushima Prefecture, while 3,467 still live in the prefecture.

Many residents have asked that the town government's functions be returned to Fukushima Prefecture. During the town assembly's session, many members expressed the same sentiment.

"We'll make a decision after the start of the fiscal year, but first we will listen to what the residents have to say," Futaba Mayor Katsutaka Idogawa said.

March 20, 2012

Survey on cesium in water and soil

High-level cesium logged in soil near Fukushima power plant: gov't survey

http://mdn.mainichi.jp/mdnnews/news/20120320p2g00m0dm016000c.html

TOKYO (Kyodo) -- A recent government survey showed a reading of 154,000 becquerels of radioactive cesium per kilogram in soil in the village of Iitate near the crippled Fukushima Daiichi nuclear power plant, **the highest level yet recorded**, the Environment Ministry said Monday.

The high-level cesium was logged in soil on the bank of the Niida River in Iitate in evacuation zones around the power plant which was crippled by earthquake and tsunami last March, the ministry said.

The figure topped the level that requires ash from incinerated debris showing more than 100,000 becquerels of cesium to be buried at disposal sites with ferroconcrete partitions.

The ministry conducted its third such survey from Jan. 5 through Jan. 27 to measure the density of cesium contained in water and soil at 179 points across the prefecture.

In the water survey, 8 becquerels of cesium per liter were detected in the Hirose River in the city of Date but no cesium was detected at most points surveyed, the ministry said.

March 22, 2012

Radioactive leak at Chiba ?

Chloride ion detected at radioactive waste disposal site in Chiba Prefecture

http://mdn.mainichi.jp/mdnnews/news/20120322p2a00m0na015000c.html

KIMITSU, Chiba -- Highly concentrated chloride ion was detected in a water well at a disposal site for radioactive waste from areas affected by last year's March 11 disasters here, suggesting that water stored at the site may have leaked, it has been learned.

While chloride ion is not particularly harmful, the Chiba Prefectural Government is moving quickly to perform an analysis of the situation, not excluding the possibility that radioactive cesium in the disposed materials may have also leaked.

The Chiba Prefectural Government became aware of the incident in January of this year when it detected doses of 250 to 580 milligrams of chloride ion per liter of water stored at an examination well at a radioactive disposal site in the prefectural city of Kimitsu. The doses far exceeded the 26 to 31 milligrams per liter estimated by the site's operating company Arax Group last December.

The disposal site, which is the prefecture's biggest, is used to store radioactive materials, including drain mud and ash from regions affected by the March 11, 2011 disasters. According to the prefectural government, the bottom of the site is covered with water-blocking sheets that are preventing any potential leaks to the exterior of the facility.

Officials at Arax Group have responded to the situation, saying that it is possible that some of the deicer it spread around the disposal site's pathways may have entered the well, thus resulting in the detection of highly concentrated chloride ion.

However, according to sources close to the case, a survey conducted by the prefectural government and the operating company has shown that among several wells located near pathways where deicer had been spread, there were wells where chloride ion doses were very low.

Based on these observations, the prefectural government assumes that the cause of the high chloride ion concentration is not the deicer materials, but points to the possibility that water has leaked from inside the facility.

Furthermore, based on the fact that a sensor at the bottom of the disposal site did not detect the abnormality, the Chiba Prefectural Government estimates that the possibility that a water-blocking sheet had ripped, causing a leak, is low. The prefectural government, however, also does not exclude the possibility that water had leaked from a place where a sensor was not attached.

As a result of the incident, the Chiba Prefectural Government has suspended all transportation operations to the site and has requested the operating company to investigate the situation.

"We are currently investigating the incident by looking at the possibility that it was caused by external and internal factors. We will do our best to provide higher safety operation standards," officials at Arax Group told the Mainichi in a recent interview.

Cesium in sea organisms off the coast of Fukushima

Radioactive cesium detected in submarine organisms in waters off Fukushima

http://mdn.mainichi.jp/mdnnews/news/20120322p2a00m0na013000c.html

Some submarine organisms in waters off Iwaki, Fukushima Prefecture, carried radioactive cesium exceeding the government-imposed provisional limit of 500 becquerels per kilogram, a discovery that shed some light on radioactive substances from the crippled Fukushima nuclear complex transferring along the food chain, researchers said.

A team of researchers including Takashi Ishimaru, professor at Tokyo University of Marine Science and Technology, took samples of four kinds of submarine organisms, including sand worms, from waters about 10 kilometers from Iwaki, Fukushima Prefecture, and measured them for radiation in July 2011.

They detected 854 becquerels of cesium per kilogram in echinocardium cordatum, or the sea potato, which is a kind of sea urchin, and 471 becquerels per kilogram of cesium in sand worms. The researcher conducted a similar research in the same area in October 2011 and detected 582 becquerels of cesium per kilogram in echinocardium cordatum and 328 becquerels of cesium per kilogram in sand worms. The research results were unveiled in Tokyo on March 21. Deep-sea fish such as flounder feed on sand worms.

The Fukushima Prefectural Federation of Fisheries Cooperative Associations, which groups six local fisheries cooperative associations, has been refraining voluntarily from fishing since the outbreak of the crisis at the Fukushima No. 1 Nuclear Power Plant.

March 25, 2012

Minister requests debris disposal in western Japan

http://www3.nhk.or.jp/daily/english/20120325_14.html

Environment Minister Goshi Hosono has asked the municipal government of Kitakyushu in western Japan to accept a portion of the debris from last year's disaster in northeast Japan.

Hosono made the request when he visited the city and met Mayor Kenji Kitahashi on Sunday. It is the first municipality in western Japan the minister has visited to make such a request.

The tsunami and earthquake created more than 22 million tons of rubble in the worst-hit prefectures of Iwate, Miyagi, and Fukushima. The central government is asking municipalities outside the stricken areas to help dispose of the debris.

Earlier this month, Kitakyushu City's assembly unanimously voted to accept debris. The city has since been studying a detailed disposal plan, including a new safety standard on radiation levels.

Hosono told Mayor Kitahashi that debris disposal is going slow in the stricken areas. He asked the city to accept debris from Ishinomaki City, which has a particularly large amount of debris.

Kitahashi said the city faces a variety of challenges, such as public concern, but that it needs to do its utmost to assist reconstruction efforts in the disaster-hit areas.

He revealed a plan to send city employees to Ishinomaki for a study before starting test incineration of the debris.

On March 16th, Prime Minister Yoshihiko Noda officially asked 35 prefectures and 10 major cities to help dispose of the rubble to promote reconstruction efforts.
By mid-March, Tokyo and 8 other prefectures, as well as some major cities, had either begun to help in the disposal effort or had agreed to do so.

The government also says it will pay the necessary costs and extend support to build new disposal sites when existing ones become full.

March 26, 2012

Get rid of that waste!

Aichi to accept disaster debris / Prefecture to build facilities to dispose of 500,000 tons of Tohoku waste

http://www.yomiuri.co.jp/dy/national/T120325002885.htm

The Yomiuri Shimbun
NAGOYA--The Aichi prefectural government will build storage and incineration facilities on an artificial island to dispose of 500,000 tons of debris from the Great East Japan Earthquake, prefectural officials have announced.
Aichi will become the first prefecture to build such facilities to dispose of debris generated by the March 11, 2011, disaster, according to the officials.

The facilities will be located in Nagoya Port's No. 5 south district in Chita, where an industrial waste treatment facility once stood.

The prefectural government said it will seek understanding of the plan from municipalities concerned and residents in nearby areas.

"The central government should normally take the initiative in building waste disposal facilities in disaster-hit areas, but it's not doing anything," Aichi Gov. Hideaki Omura said at a press conference Saturday. "As Japan's top industrial prefecture, Aichi wants to do everything it can to contribute to reconstruction."
Prefectural officials said they have compiled a list of several other sites in coastal areas that could be used as sites for waste disposal plants. They are also arranging to build a treatment facility at Chubu Electric Power Co.'s Hekinan thermal power plant and have sounded out Toyota Motor Corp. on a plan to use the automaker's Tahara plant to help clear disaster debris.
According to the Reconstruction Agency, last year's disaster generated an estimated 22.53 million tons of debris in Iwate, Miyagi and Fukushima prefectures, which were struck hard by the massive earthquake and tsunami. Iwate and Miyagi hope to have about 4 million tons of debris treated outside the prefectures.

The Tokyo metropolitan government has announced it would accept 500,000 tons of debris. More local governments have followed suit amid growing calls from the central government to chip in and remove the disaster debris.

Gunma governor visits Miyagi

Meanwhile, Gunma Gov. Masaaki Osawa visited a temporary debris storage site in Ishinomaki, Miyagi Prefecture, on Saturday.

Although Gunma Prefecture currently has no plan to accept disaster debris for disposal, Osawa told reporters: "I'll hold talks with leaders of [Gunma Prefecture] municipalities that have incineration facilities. I hope my prefecture can help as much as possible."
The governor was briefed by Miyagi government officials about the amount of debris still piled up around the prefecture and Miyagi's plan to clear the waste. He then toured a debris treatment site under construction near the storage site.
During his visit, Osawa used a dosimeter to measure radiation levels of some of the piles of debris. After the dosimeter showed a reading of 0.05 microsievert per hour, Osawa said: "It's not an alarming figure. I don't think there's any need to be concerned over the risk of radiation."

Some local governments have balked at requests to accept debris because residents have expressed fears that it might be contaminated with radiation from the crippled Fukushima No. 1 nuclear power plant.

March 27, 2012

Sounds very simple

Decontamination work reduces radiation by over 60 percent in nuclear plant town

http://mdn.mainichi.jp/mdnnews/news/20120327p2a00m0na008000c.html

Test decontamination work in the Fukushima Prefecture town of Okuma, where part of the crippled Fukushima No. 1 Nuclear Power Plant is located, has reduced radiation dosages by over 60 percent, the Japan Atomic Energy Agency (JAEA) has announced.

The results of model decontamination work in 12 municipalities in the prefecture were announced by the central government and the JAEA on March 26. In Okuma, the level of radiation was decreased to an estimated level of around 20 millisieverts per year in some areas -- the government threshold for ordering evacuations.

The work covered roughly 209 hectares of land, while the amount of contaminated soil and other materials totaled some 16,000 tons.

"Decontamination is the first step toward people returning home, but this result covers only part of an expansive area, so we want to continue these efforts," an agency representative said.

The operation was designed to establish methods of decontamination and obtain data on the cost and effectiveness of these methods. Decontamination work had continued in the no-go and planned evacuation zones in the 12 municipalities since November last year.

In Okuma, radiation levels at people's homes, in parks and on roads were decreased by about 60 percent. At residences, roofs were wiped down and topsoil was removed, bringing the radiation dosage down from 11.5 microsieverts per hour (an estimated dosage of 60 millisieverts per year), to 3.9 microsieverts per hour (roughly 20.5 millisieverts per year when converted into a yearly dosage).

The yearly dosage is calculated by adding the estimated indoor dosage to the estimated outdoor dosage. Each day a person is presumed to spend 16 hours indoors and eight hours outdoors. The estimated daily indoor dosage is calculated by multiplying the hourly measurement by 0.4 to reflect the lower dosage a person is presumed to receive indoors, then multiplying this result by 16 (the number of hours spent indoors). The daily outdoor dosage is the hourly measurement multiplied by 8 (the number of hours spent outdoors). Multiplying each of these figures by 365 and adding them produces an estimated yearly dosage.

In parking lots and on roads, the level was reduced from 13.8 microsieverts per hour (an estimated yearly dosage of 72.5 millisieverts per year) to 5.3 microsieverts per hour (27.8 millisieverts per year).
At homes in the Fukushima Prefecture city of Tamura, radiation levels were brought down from 0.7 to 0.6 microsieverts per hour (3.7 to 3.1 millisieverts per year) -- only a slight change. Similarly in forests, the level declined from 0.8 to 0.7 microsieverts per hour (from 4.2 to 3.7 millisieverts per year under the yearly dosage estimate), marking a decline of just 14 percent. The agency says it will decide on a course of action for such areas in the future.

Decontaminating concrete at residences with high-powered water sprays was found to have a limited effect, while scraping off the surface and cleaning dirty rain gutters were found to be effective. It was also found that decontaminating outside surroundings led to a reduction of radiation levels inside, and the agency concluded that reducing the radiation levels in the surroundings of homes was important.

In forest areas, clearing away fallen leaves up to 10 meters from the boundary between homes and forests was effective, but no significant effect was seen at residences when areas beyond this were also cleared.

March 28, 2012

Radioactive bass

Fishing ban due to radioactive contamination

http://www3.nhk.or.jp/daily/english/20120328_05.html

Radioactive contamination from the Fukushima nuclear accident is forcing fishermen in a neighboring prefecture to suspend catches of one of their fish.

Catches of Japanese sea bass are the first marine products of Miyagi Prefecture, north of Fukushima, to be suspended due to the nuclear accident.

Up to 360 becquerels of radioactive cesium were detected in sea bass hauls over the past 2 months off the coast of Miyagi.

Radioactive cesium levels in fish exceeded the stricter restrictions that will begin next month. This will be 100 becquerels per kilogram.

Miyagi Prefecture and fisheries cooperatives are considering asking fishers in the prefecture to voluntarily refrain from catching the fish.

2 other types of fish from the Miyagi coast have also exceeded the 100 becquerel level.

Radioactive contamination

Bamboo shoot contamination detected

http://www3.nhk.or.jp/daily/english/20120328_06.html

More radioactive contamination has been found in farm products for human consumption about 200 kilometers from the Fukushima Daiichi nuclear plant.

Authorities in a northern city of Chiba prefecture on Tuesday sampled bamboo shoots grown for food. They found contamination of up to 250 becquerels of radioactive cesium per kilogram. 180 becquerels of cesium was found in the bamboo shoots harvested in another northern city in the prefecture. Both locations are some 200 kilometers from the crippled nuclear plant.

The contamination levels are up to two-and-a-half times the government's new limit of 100 becquerels per kilogram, which goes into effect next month.

Prefectural officials also say 130 becquerels of cesium per kilogram was detected last week in a bamboo shoot in a third city.

The prefecture is asking farmers to refrain from shipping their bamboo shoots to customers.

The officials suspect radioactive cesium carried from Fukushima landed upon the leaves of the parent bamboo and was absorbed by the roots.

March 29, 2012

Why only now?

Fish within 20 km of Fukushima plant to be studied

http://www3.nhk.or.jp/daily/english/20120329_04.html

The operator of the disabled Fukushima nuclear power plant plans to begin monitoring radiation off the coast of the no-entry zone by collecting samples of marine life.

The announcement by Tokyo Electric Power Company on Wednesday is in response to requests by fishing cooperatives and researchers who have been calling for full-fledged studies into the impact of radioactive contamination on marine life in the area.

Fishing is banned within a 20 kilometer radius of the plant.

TEPCO says it will collect fish and seashell samples from 20 locations within the zone. It will study what kind of radioactive materials the catch contains, and their densities.
Similar studies have already been conducted beyond the 20 kilometer radius by the national government, Fukushima prefecture and others.

TEPCO will ask fishermen to carry out the research with the aim of providing necessary data on radiation that will help authorities determine when fishing can resume in the area.

Massive amounts of highly contaminated water were released into the ocean in the wake of the nuclear accident last March.

So what's new?

Japan's nuclear policy review proceeds

http://www3.nhk.or.jp/daily/english/20120329_12.html

Japan's Atomic Energy Commission has proposed 3 ways to dispose of spent nuclear fuel from the country's nuclear plants.

The commission has been reviewing Japan's nuclear energy policy in the wake of last year's accident at the Fukushima Daiichi nuclear power plant.

The first of 3 proposals made by a commission working group on Wednesday calls for proceeding with the current project of reprocessing plutonium from spent nuclear fuel into uranium-plutonium mixed oxide, or MOX, fuel. The fuel could be used for a fast-breeder nuclear reactor once it's in practical use.

The second proposal calls for Japan to give up all fast-breeder reactor research and fuel recycling, and to bury all fuel deeply underground.

The third proposal calls for keeping fuel in storage for the time being, and to decide within 20 years whether to use it in a fast-breeder reactor or to dispose of it for good.

The committee plans to pick one of the measures by the middle of this year, after determining Japan's reliance on nuclear energy in the future.

March 30, 2012

Revelations about storage of contaminated soil

Radioactive soil left after decontamination work stored near original locations

http://mdn.mainichi.jp/mdnnews/news/20120330p2a00m0na011000c.html

FUKUSHIMA -- Massive amounts of radioactive soil left after decontamination work at schools, parks and other public spaces here has been stored near its original locations, prefectural authorities have revealed.

The Fukushima Prefectural Government disclosed at a meeting on March 29 that such removed soil -- contaminated with radioactive materials emanating from the nuclear disaster at the Fukushima No. 1 Nuclear Power Plant -- had been temporarily stored at 1,513 locations in 37 local governments as of Feb. 10. The waste included soil removed from school grounds.

While decontamination work will get into full swing in Fukushima Prefecture when fiscal 2012 begins in April, only 13 out of 25 local governments that are designated as priority areas for contamination surveys and have been engaged in decontamination work have set up temporary storage sites for removed soil.

According to the prefectural government, contaminated soil removed from public spaces had been left at 947 locations including schools and nurseries, 541 parks, as well as 25 other locations including houses and business establishments

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"We haven't been able to reach an agreement with local residents over where to set up temporary storage (for removed soil)," said an official in charge of decontamination work at the prefectural government.

April 2, 2012

500 people assigned to decontamination

Decontamination work ramped up

http://www3.nhk.or.jp/daily/english/20120402_29.html

Japan's Environment Ministry is launching new branch offices to speed up decontamination work around the Fukushima Daiichi nuclear power plant.

The ministry on Monday opened 5 new branches in Fukushima Prefecture.

The offices will cover 60 municipalities in Fukushima as well as in neighboring Miyagi and Iwate prefectures.

At an appointment ceremony on Monday, the head of the ministry's decontamination task force, Masaru Moriya, said the mission is urgent and should be carried out properly under the central government's authority.

The ministry also set up a new department at its branch in Saitama Prefecture, near Tokyo, to cover decontamination work in 51 municipalities in the Kanto region.

The ministry now has nearly 500 people assigned to decontamination work, an increase of about 180.

April 4, 2012

Wood chips too contaminated for TEPCO to burn?

TEPCO declines wood chips as fuel for thermal power generation

http://www.yomiuri.co.jp/dy/national/T120403005212.htm

Tokyo Electric Power Co. has declined requests of the timber industry to use wood chips from Fukushima Prefecture and surrounding areas as fuel for thermal power plants out of fears of cesium contamination, leaving local businesses stuck with about 25,000 tons of wood waste.

High levels of cesium were detected in part of wood chips after the crisis broke out at TEPCO's Fukushima No. 1 nuclear power plant. But the radiation level of the wood waste is below the safety standards now. Nonetheless, a huge amount of wood chips are sitting in Fukushima and Tochigi prefectures with no plans for removal.

A local timber industry group repeatedly asked TEPCO to accept the wood chips, but the utility has turned down the requests.

Worried that TEPCO's action could fuel harmful rumors, concerned government offices are planning to ask TEPCO to accept the request.

"If the situation remains unchanged, [timber] factory operations may have to be suspended, forcing some operators to close their businesses," said Yoshiaki Munakata, an executive of the Fukushima prefectural timber cooperative association, which governs about 200 timber and related companies.

The firms are struggling particularly over bark generated during lumber processing. Usually, one ton of bark is sold for about 1,000 yen and is usually used as compost or bedding for livestock.

However, an August survey conducted by the Forestry Agency after the March 11 disaster showed a maximum of about 2,700 becquerels per kilogram of radioactive cesium in some of the bark. Although a follow-up survey found the figures dropped to 200 to 300 becquerels per kilogram--below the government-set limit of 400 becquerels for compost. But only one-fourth of 4,000 tons of bark the prefecture generates each month has been sold or taken in by other entities.

According to the association, 20,000 tons of bark is currently sitting on timber company lots. The bark has been compressed and is piled four to five meters high. The association is worried the bark may combust after fermenting, association officials said.

Neighboring Tochigi Prefecture faces similar problems. As of March, a dozen companies in the prefecture had about 5,000 tons of bark.

The association came up with the idea of using the wood chips as fuel to generate thermal power. Chugoku Electric Power Co. began power generation by burning coal and wood biomass such as bark simultaneously in 2005. Since then, other utilities have followed suit and TEPCO had also planned to start from this fiscal year.

The association said it asked TEPCO to take the wood chips on four occasions between October and February, but the requests were declined.

TEPCO initially told the association that using the wood chips to generate thermal power is technically difficult. But the utility later changed its rationale, saying such a measure is difficult to be taken at the moment because burying ash that contains radioactive cesium requires consent from local residents.

According to the Forestry Agency, the density of radioactive cesium in ash from burned bark is about 30 times higher than that of bark before incineration. But the radiation level for the bark ash is expected to be less than 8,000 becquerels per kilo-gram--an allowable level for landfill.

Officials of the Forestry Agency and the Natural Resources and Energy Agency view TEPCO's refusal as an act that goes against the purpose of the special law requiring the utility to cooperate in antiradiation measures. The agencies therefore plan to ask TEPCO to take in the bark, the sources said.

Meanwhile, a TEPCO spokesperson said the refusal is due to concern over a stable power supply.
"If we don't have clear prospects for disposal of the [bark] ash, that would affect operations of our power stations," the spokesperson said.

Bamboo shoots and shiitake mushrooms over the limit

Food over new limit for radioactive cesium

http://www3.nhk.or.jp/daily/english/20120404_34.html

Following the introduction of new safety regulations in Japan, several types of food have been found to contain radioactive cesium above the legal limit.

Stricter health standards for staple foods such as vegetables and rice were introduced on Sunday. Permissible levels of radioactivity were reduced from 500 to 100 becquerels per kilogram.

Health ministry officials said bamboo shoots harvested in the Kisarazu and Ichihara regions east of Tokyo were contaminated with 120 and 110 becquerels of radioactive Cesium per kilogram respectively.

Officials also said shiitake mushrooms grown outdoors in Miyagi Prefecture, northeastern Japan, were found to contain 350 becquerels of radioactive Cesium.

Farmers voluntarily refrained from shipping these agricultural products to market and they will not be distributed to consumers.

The government is considering whether to order a compulsorily suspension of all shipments of contaminated bamboo shoots.

April 5, 2012

New strontium leaks into the sea

Strontium at Fukushima plant flows into sea

http://www3.nhk.or.jp/daily/english/20120405_13.html

Tokyo Electric Power Company says more radioactive wastewater has leaked from its Fukushima Daiichi nuclear plant and flowed into the sea. The water contained high levels of strontium.

Workers at the plant discovered water leaking from a pipe connected to a wastewater tank, at around 2:00 AM on Thursday.

Workers shut valves, and the flow stopped about half an hour later.

TEPCO says about 12 tons of wastewater leaked from a disconnected joint in the pipe. The company also says it believes that a large portion of the water has flowed into the ocean through a nearby drainage ditch.

The utility is trying to determine how the joint became disconnected, and how much water poured into the sea.

Radioactive wastewater also leaked on March 26th from a different section of the same piping.

Last December, water leaked from another device within the plant compound.

About the strontium leak

Highly radioactive waste water leaked from desalination device at Fukushima plant

http://mainichi.jp/english/english/newsselect/news/20120405p2a00m0na010000c.html

About 12 cubic meters of waste water containing highly radioactive substances was found leaking from the pipe of a desalination device at the crippled Fukushima No. 1 Nuclear Power Plant in the early hours of April 5, Tokyo Electric Power Co. (TEPCO) announced.

The level of radiation in the water, which contained radioactive substances such as strontium, is believed to top 100,000 becquerels per cubic centimeter. There is a possibility that the contaminated water flowed into the ocean through a draining trench, said TEPCO, the operator of the troubled nuclear power station.

According to TEPCO, the flow of waste water in the pipe increased at around 1:05 a.m. on April 5. A TEPCO employee found the water leaking at 1:50 a.m. The water stopped leaking at around 2:20 a.m. after the valve to the pipe was shut off.
On March 26, water leaked from the pipe of the desalination apparatus, and about 0.08 cubic meters of contaminated water was released into the ocean.

April 6, 2012

Toyota and debris

Toyota mulls helping with disposal of disaster debris

http://mainichi.jp/english/english/newsselect/news/20120406p2g00m0dm019000c.html

NAGOYA (Kyodo) -- Toyota Motor Corp. is considering helping dispose of the massive amounts of debris left by the powerful earthquake and tsunami that devastated northeastern Japan last year, Aichi Gov. Hideaki Omura said Thursday.

Omura said he made a formal request to Toyota to build a disposal facility on the premises of its plant in Tahara, Aichi Prefecture in central Japan, and the automaker gave a forward-looking response.

The governor also said Chubu Electric Power Co., which serves five central Japan prefectures, offered to study accepting the Aichi prefectural government's proposal to build a disposal facility at the utility's thermal power plant in Hekinan, also in Aichi.

Both Toyota and Chubu Electric said their decisions will be based on the premise that the prefectural government gains the acceptance of the municipalities where the plants are located.

There are concerns that rubble from areas hit by the quake and tsunami on March 11, 2011 may be contaminated with radioactive materials released due to the disaster-triggered nuclear disaster at the Fukushima Daiichi power plant.

April 8, 2012

New storage facilities in Nahara

Storage space to be built at 2 sites in Fukushima for tsunami debris

http://mainichi.jp/english/english/newsselect/news/20120408p2g00m0dm055000c.html

FUKUSHIMA (Kyodo) -- The state will start building storage facilities for debris generated by the March 2011 tsunami as early as May at two locations in a coastal area of Naraha town, Fukushima Prefecture, Environment Ministry and town officials said Saturday.

Debris created by the tsunami largely remains untouched within a 20-kilometer radius of the crippled Fukushima Daiichi nuclear power plant from which residents have been forced to evacuate in the aftermath of the earthquake-triggered disaster.

About 2.5 hectares of land have already been secured at the two locations, a large portion of which lies within the exclusion zone, and about 25,000 tons of debris are expected to be brought into the facilities beginning in the summer, according to the officials.

Those involved in planning the project are hoping that when zoning comes up for review, the transfer of debris to the facilities would help Naraha get back on its feet, the officials said.

If more than 100,000 becquerels of radioactive cesium are found per kilogram of debris, the debris will be transferred to a medium-term storage facility to be built by the state. But if burnable debris contains 100,000 becquerels of radioactive cesium or less, it may be disposed of at a temporary incinerator to be built within the prefecture, according to the officials.

Within the 20-km-radius no-go zone spanning across Naraha and five other municipalities along the coast, debris caused by the magnitude 9.0 quake and the subsequent tsunami has amounted to an estimated 474,000 tons, much of remaining where it is.

Solidarity?

35 prefectures, cities positive about taking debris

http://www.yomiuri.co.jp/dy/national/T120407002821.htm

Thirty-five prefectures or major cities have accepted or are at least leaning toward accepting disaster debris from Iwate and Miyagi prefectures, according to a Yomiuri Shimbun survey.

Removing the millions of tons of debris dumped by the March 11, 2011, disaster is considered critical to helping reconstruction of these hard-hit areas.

The Yomiuri surveyed the governors of 44 prefectural governments and mayors of 18 ordinance-designated cities that the central government has asked to accept debris for disposal. Of them, 35--nearly 60 percent--have accepted debris or expressed their intention to accept it.

In addition, 17 local governments, or 27 percent, said they would discuss the matter.

Aomori and Yamagata prefectures and Tokyo have already accepted disaster debris.

The 11 prefectures that have expressed their intention to accept debris are: Hokkaido, Akita, Gunma, Saitama, Tochigi, Chiba, Kanagawa, Shizuoka, Kyoto, Osaka and Oita. The ordinance-designated cities that said they intend to accept debris are Chiba, Kawasaki, Hamamatsu and Osaka.

Of them, 10 prefectures and two cities have set or plan to set independent standards that are stricter than government safety guidelines for radiation levels in debris, which range between 240 and 480 becquerels per kilogram before incineration.

Aichi Prefecture said it had decided to accept debris, and 11 prefectures and five cities--Saitama, Yokohama, Sagamihara, Niigata and Kyoto--said they were considering the matter with a view to

accepting debris. According to the survey, 10 other prefectures and seven cities were discussing the matter.

The Yomiuri surveyed all prefectural governments, except for disaster-hit Iwate, Miyagi and Fukushima, and ordinance-designated cities, except for Sendai and Kumamoto, which received the designation just last Sunday.

April 9, 2012

Should this be volunteer work?

Workers collect radioactive leaves and branches in Fukushima park

http://mainichi.jp/english/english/newsselect/news/20120409p2a00m0na015000c.html

People collect leaves and dirt in Bentenyama Park in Fukushima on April 7. (Mainichi)

FUKUSHIMA -- Around 350 people from inside and outside Fukushima Prefecture gathered at a park here on April 7 to rake and pick up leaves and branches believed to have been contaminated with radioactive substances.

Around 90 of those present at Bentenyama Park were from outside the prefecture. The gathering was organized as a result of cooperation between the prefecture and the Fukushima Municipal Government to secure decontamination volunteers. According to prefectural officials, the radiation in the air in the park, which had stood at around 1.4 microsieverts per hour, fell by up to 30 percent following the work.

Susumu Otani, 70, who came from Chiba Prefecture, said, "I heard about the damage to Fukushima through news reports and wanted to do something, and now I have helped."

Decontamination : How long still ?

Decontamination needed even after residents return

http://www.yomiuri.co.jp/dy/national/T120409003637.htm

If decontamination work does not continue for a certain period in areas highly contaminated by radioactive substances from the Fukushima No. 1 nuclear power plant, returning residents will be exposed to at least 100 millisieverts of accumulated radiation over 30 years, the Science Council of Japan said Monday.

An accumulated radiation level of over 100 millisieverts increases the mortality risk from cancer by 0.5 percent.
The council estimated how radiation exposure would change over 30 years, looking at the level before residents were evacuated, the annual level when they return and the existence or lack of decontamination work.

It found residents would likely be exposed to nearly 250 millisieverts of radiation over 30 years if they return home when the annual radiation exposure level drops to 20 millisieverts and decontamination work does not continue, even if radioactive decay is taken into account.

If residents return home when the annual radiation exposure level drops to 10 millisieverts and decontamination work does not continue, they likely would be exposed to more than 100 millisieverts over 30 years.

However, if decontamination work continues for five years after residents return home following a drop to 10 millisieverts, the likely radiation exposure level drops to 80 millisieverts.

"It's necessary to make plans to continue decontamination and to sufficiently control radiation exposure after residents return home," said Fumiko Kasuga, a vice president of the council.

Also Monday, the council compiled a proposal that the density of radioactive substances in debris created by the Great East Japan Earthquake in Iwate and Miyagi prefectures is quite small and it is possible to dispose of debris in a wide range of areas.

Many municipalities have refused to accept the debris for disposal.

April 12, 2012

A sad story

Kyoto unable to dispose of firewood from Iwate

http://www.yomiuri.co.jp/dy/national/T120411003869.htm

KYOTO--The Kyoto municipal government remains at a loss over how to dispose of radioactive firewood from Rikuzen-Takata, Iwate Prefecture. The firewood was supposed to be used for the city's Gozan no Okuribi festival last August, but was left unused as it contained high levels of radioactive cesium released from the crippled Fukushima No. 1 nuclear power plant.

As the municipal government has yet to finish deliberations on safety standards for incinerating radiation-contaminated waste, it has no choice but to take custody of the wood, officials said.

Currently, 500 pieces of firewood made from pine logs from Rikuzen-Takata are stored in a concrete room at a Kyoto packing facility. Each bundle contains about 10 logs and is wrapped in two layers of plastic bags under a large PVC tarpaulin.

According to officials, just before the annual bonfire festival in August, in which firewood is set alight on the slopes of five mountains surrounding Kyoto, 1,130 becquerels of cesium were detected per kilogram of wood.

As the logs are contained in plastic and covered by a tarp, they are not considered dangerous to humans or the environment at the current radiation dosage, said officials at the municipal government's cultural heritage conservation department.

The central government has set the maximum radioactivity levels for public facilities' acceptance of debris from areas struck by the Great East Japan Earthquake and tsunami in a range from at 240 to 480 becquerels per kilogram.

The Kyoto government has also been studying its own standards for accepting debris from disaster-hit areas.
As long as the city's standards remain undecided, the logs cannot be incinerated. However, sending the logs back to Rikuzen-Takata is not an option, they said.

The Gozan no Okuribi festival is a spectacular event celebrated every year on the night of Aug. 16. Huge bonfires are lit in the shape of kanji, such as dai (great), to see off the souls of the dead.

Last year, it was initially planned to dedicate the event to those killed in the disaster by lighting pieces of firewood from Rikuzen-Takata on which survivors wrote the names of relatives they had lost.

These plans were suspended as a large number of Kyoto residents were anxious about radioactivity from the logs. Furthermore, members of the Gozan no Okuribi festival organization committee were also in favor of abandoning the idea to use the Rikuzen-Takata logs, officials said.

However, the decision spurred a rush of protests and the city eventually decided to use other firewood from Rikuzen-Takata for the event.

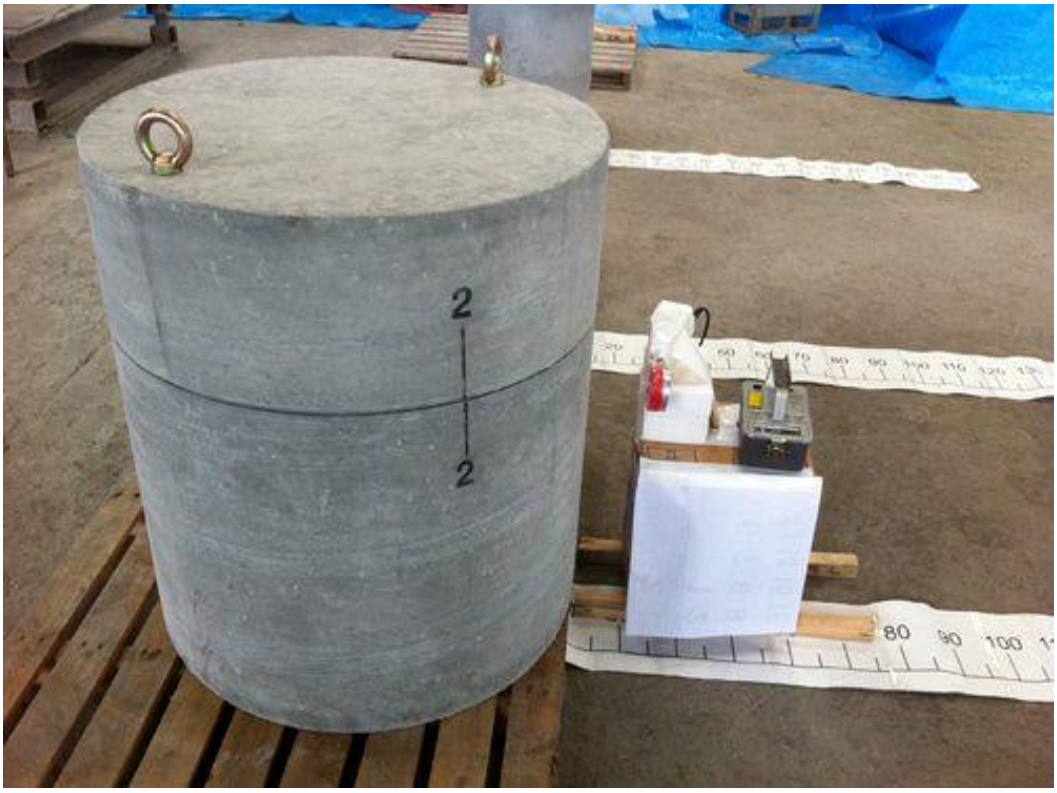
Unfortunately, the new batches of firewood were also found to be tainted with more than 1,000 becquerels of radioactive cesium per kilogram, and the city had no choice but to abort the entire plan, officials said.

Is this feasible?

Researchers develop container made of disaster debris for radiation-tainted soil

http://mainichi.jp/english/english/newsselect/news/20120412p2a00m0na010000c.html

A container made of concrete debris from the March 11, 2011 earthquake and tsunami that can be used to store contaminated soil. (Photo courtesy of Yoshikazu Araki, associate professor at Kyoto University)



A group of researchers has developed a container made of concrete debris from the March 11, 2011 earthquake and tsunami that can be used to store about 25 kilograms of radiation-tainted soil without releasing much radiation into the atmosphere.

The group of researchers from Kyoto University, Nihon University and Fujita Corp. made the announcement on April 11. The group said it had conducted demonstration experiments to confirm that the container was capable of shielding radiation to a certain degree.

Concrete chips picked from debris in Miyagi Prefecture were cut into pieces some 2 to 4 centimeters in diameter before being used as substitute gravel to make the 20-centimeter-thick concrete container.

The 600-kilogram cylindrical container, measuring 70 centimeters in diameter and 80 centimeters in height, can hold 25 kilograms of contaminated soil. When contaminated soil was put into the container, the gamma-ray dose released into the atmosphere from the soil was reduced to about one-eleventh of what it was before it was put into the container, the group said.

There are cases of contaminated soil piled up on school playgrounds and elsewhere in Fukushima Prefecture. Yoshikazu Araki, associate professor at Kyoto University, said, "It can be made at conventional

concrete plants, and I think it can be used to temporarily store contaminated soil. We want to extend support by coordinating with the central and local governments in the future."

April 13, 2012

Only 7.7% disposed of after a year

7.7% of quake debris recycled / Rate remains low as firms fear causing anxiety among locals

http://www.yomiuri.co.jp/dy/national/T120412005114.htm

Of the 1.81 million tons of debris that has been disposed of from the three prefectures hit hardest by the Great East Japan Earthquake, only 140,000 tons, or 7.7 percent, have been recycled by private companies, according to Economy, Trade and Industry Ministry data.

After the Great Hanshin Earthquake, about 50 percent of detritus from the disaster was ultimately recycled. The recycling rate for ordinary waste in fiscal 2010 was 20.8 percent.

Recycling has been hampered by companies' concern over the repercussions for them of local residents' fears regarding radiation, as well as differing levels of commitment between the Environment Ministry and the Economy, Trade and Industry Ministry. The situation may worsen the already slow pace of debris disposal.

The March 11, 2011, disaster generated a total of 22.46 million tons of debris. Generally, the waste is sorted into categories--such as wood, concrete and other materials--at temporary storage sites.

The debris is then finally disposed of by recycling companies or local governments that use it for land reclamation projects.

One of the ways companies recycle debris is by burning wood chips at high temperatures to produce ash for material used to make cement.

In summer last year, the Japan Fiberboard and Particleboard Manufacturers Association, an industry association of makers of wooden boards used in the walls and floors of buildings, decided to recycle debris from the March disaster.

The association planned to crush wood debris into small pieces, which would would then be compressed and solidified with adhesive into boards.

The association planned to recycle 1,000 tons of debris a month at a factory of a manufacturing firm in Ibaraki Prefecture.

However, the association withdrew the plan after organizers of the Kyoto Gozan Okuribi fire festival canceled a plan to burn firewood made from pine trees in Rikuzen-Takata, Iwate Prefecture, in August last year. The association said it wanted to avoid worrying local residents.

Although 75 percent of the debris from the disaster-hit areas has been moved to temporary storage sites, only 8.1 percent of the total had been finally disposed of as of April 2.

The Environment Ministry has said it wants to complete the final disposal of all disaster debris by March 2014. However, the low recycling rate may hamper efforts to reach this goal.

In mid-March, METI was asked by the Environment Ministry via the Cabinet Secretariat to encourage companies to recycle debris.

METI asked seven industries, such as cement and paper manufacturers, to tell it by the end of March how much debris they would be able to accept for recycling.

But officials of the industries said such numerical figures might be misinterpreted as actual targets. As a result, METI's work to compile the answers has been stalled.

"The basic principle is that each local government should dispose of waste, so it's unreasonable to put the burden on companies," one METI official said. "The Environment Ministry couldn't resolve the problem on its own, so it forced it upon us."

April 16, 2012

Convincing through free tours?

Govt to subsidize debris tours / Visits to disaster-hit areas may help accelerate removal of debris

http://www.yomiuri.co.jp/dy/national/T120415001616.htm

The Environment Ministry will subsidize tours of disaster-hit Iwate and Miyagi prefectures to encourage residents of other parts of the nation to accept debris from the prefectures, according to ministry sources.

The ministry hopes the tours will help lead to the implementation of its plan to dispose of debris by alleviating concerns among citizens about radioactive contamination of the material, the sources said.

It will subsidize such costs as bus rental fees, lodging expenses, rental fees for venues to hold explanatory meetings and lecture fees.

In principle, it will pay all the actual expenses. But the ministry will compare actual accommodation fees against those stipulated in the law on travel expenses for national public officials and pay whichever is cheaper to the local governments.

Under the law, the daily maximum for accommodation fees for officials is 19,100 yen.

"We're not sure how many [local governments] will take advantage of this opportunity, but we'd like to provide a reasonable amount of subsidies," an official from the ministry said.

While an increasing number of local governments have officially decided to accept debris or to consider doing so, many have been seeking central government support to reassure their residents about the safety of the debris.

The ministry decided to provide the subsidies after learning that an inspection tour of the disaster-hit areas organized by the Shimada municipal government in Shizuoka Prefecture led to its decision to accept debris from the towns of Yamada and Otsuchi in Iwate Prefecture.

"Residents who first opposed [accepting debris] were won over after seeing the disaster-hit areas," Shimada Mayor Katsuro Sakurai said.

The Shizuoka municipal government, which plans a two-night inspection bus tour of Yamada and Otsuchi on Tuesday, has received applications from more than 20 people, which exceeds the number of positions available, it said.

The Kiryu municipal government in Gunma Prefecture, which holds explanatory meetings for residents about accepting debris, is encouraged by the ministry's plan.

"As the central government will support us, we'd like to hold an inspection tour," said an official of the municipal government.

The Yurihonjo municipal government in Akita Prefecture, which plans to incinerate debris on a trial basis, said some residents want to consider whether to take debris after seeing the local situation.

"We'd like to plan the tour after seeing the result of a trial incineration," an official of the municipal government said.
A total of 20.45 million tons of debris has been generated in Iwate and Miyagi prefectures.

Of that, the central government hopes to arrange for the disposal of about 4 million tons, although there is no prospect that all of it will be accepted by other local governments.

The Tokyo metropolitan government plans to accept 500,000 tons of debris by 2014.

The central government has asked eight prefectures and eight cities designated by government ordinance as major cities to accept a total of 910,000 tons of debris.

Aichi Prefecture plans to accept 1 million tons of debris.

April 17, 2012

"Share the pain"

Osaka to mull accepting N-waste depot

http://www.yomiuri.co.jp/dy/national/T120416004694.htm

OSAKA (Jiji Press)--Osaka Mayor Toru Hashimoto said Monday his city will consider accepting a temporary storage facility for spent nuclear fuel if two reactors at Kansai Electric Power Co.'s Oi nuclear power station have to be reactivated.

On Saturday, Fukui Gov. Issei Nishikawa urged urban areas in the Kansai region--the utility's service area--to "share the pain" of the central prefecture hosting the Oi plant, such as by accommodating a waste depot.

Nishikawa made the remark after industry minister Yukio Edano asked the governor for his cooperation to bring the idled Nos. 3 and 4 reactors at the Oi plant back online.

"The proposal is very meaningful," Hashimoto told reporters at the Osaka municipal office Monday. If the region really needs nuclear power, the city must consider the burden of accepting such a temporary facility, he said.

Hashimoto said he is opposed to the way the reactors' restart has been handled, reiterating his criticism of the central government for not providing sufficient explanations to the public.

Hinting he may accept their restart, however, Hashimoto said he would understand if the government declares it made a political decision that the reactors need to be restarted to meet electricity demand.

On Friday, the government approved the restart by endorsing safety measures for the two reactors drawn up by Kansai Electric and confirming the need to reactivate them to prevent serious power supply shortages this summer.

Osaka Gov. Ichiro Matsui told reporters at the Osaka prefectural office Monday that the hosting of temporary depots should not be forced on Fukui Prefecture alone but should be discussed by the whole service area.

Meanwhile, Hashimoto said if the national government gives him the opportunity, he is willing to explain the eight conditions for nuclear reactors' restart set by a panel of experts under the Osaka prefectural and city governments.
On Friday, he said there was no point submitting the conditions to the central government. The city of Osaka is the largest shareholder in Kansai Electric, with a 9 percent equity stake.

April 24, 2012

IAEA to assist with decontamination

Fukushima to ask IAEA to set up local office

http://www3.nhk.or.jp/daily/english/20120424_02.html

The governor of Fukushima Prefecture will visit the headquarters of the International Atomic Energy Agency to ask it to establish an office in the prefecture to help with the aftermath of the nuclear accident at the Fukushima Daiichi plant.

Sources say that Fukushima Governor Yuhei Sato will visit the IAEA headquarters in Vienna, Austria in August to meet the Director General of the agency Yukiya Amano.

The visit follows his meeting with IAEA experts in Fukushima City last October.

Sato requested them to establish a local office to assist the prefecture in the disaster response and decontamination work.

The governor also wants to ensure that the IAEA and the Japanese government cooperate in holding an international conference on nuclear safety to be held in Fukushima in December.

Prefectural officials say the assistance of IAEA experts is essential for dismantling the damaged reactors and putting an end to the disaster.

Fukushima Prefecture aims to help create a society that does not rely on nuclear energy.

April 25, 2012

The "lessons" from Chernobyl

With clean-up around Chernobyl abandoned, what can Japan learn from 1986 disaster?

http://mainichi.jp/english/english/newsselect/news/20120425p2a00m0na014000c.html

CHERNOBYL, Ukraine -- April 26 will mark the 26th anniversary of the worst case of nuclear contamination in history: the 1986 Chernobyl disaster. Since the meltdowns at the Fukushima No. 1 nuclear plant in March last year, the Japanese government has shown interest in decontamination and other projects around Chernobyl as a reference point for efforts to deal with its own nuclear disaster.

However in northern Ukraine, where the radioactive husk of the former Soviet power station lies, large-scale decontamination work has been abandoned as largely ineffective, and disaster refugees are no closer to going home.

I am a little less than 10 kilometers from the Chernobyl nuclear plant, in a warehouse-like building with a long, narrow trough for waste water cut into the floor. This is where workers clad in protective suits scrub down vehicles and heavy machinery that have gone into high-radiation areas. The scrubbing is done by hand, until the radiation emissions from the truck or the bulldozer drops below 0.5 microsieverts per hour.

Just after the 1986 disaster -- in which one of the Chernobyl plant's reactors exploded, blowing off the reactor housing roof and spewing radioactive material into the air -- Soviet authorities swung into a full-scale decontamination effort, including burying contaminated soil, and washing and then melting down contaminated machinery. However, in the 14 years between the disaster and the year 2000 -- when the last operating reactor at the plant was finally shut down -- authorities apparently judged that there had been "little improvement" in soil conditions, and they decided to halt soil decontamination.

The only decontamination operations going on now are for workers doing safety work in and around the dead plant, including decommissioning the reactors and preventing forest fires. There are currently about 3,700 people who work inside the 30-kilometer radius no-go area around the plant -- referred to simply as "the Zone" -- and they must have their clothes decontaminated periodically. During seasons when humidity is low, vehicles are typically washed one or two times a week, and roads near the plant are also scrubbed.

More than 110,000 people once lived in the Zone, all of whom were evacuated right after the accident. The Soviet authorities apparently attempted to decontaminate the town of Prypiat -- where Chernobyl plant workers and their families had lived -- soon after, but with no success.

Mr. Zolotoverkh, 58, who is in charge of managing the Zone, says there is no chance that decontamination will be resumed, adding, "No one will be allowed to return, not after decades, not after centuries."

About 110 kilometers southwest of the plant is the city of Korostyshiv, which the former Soviet government labeled an "evacuation advisory area" -- one of 440 residential communities given the designation. The Soviet Union established four categories for irradiated areas: forced evacuation areas, forced migration areas, evacuation advisory areas, and radiation management areas. Serious decontamination work in the advisory areas such as Korostyshiv did not begin until 1990, four years after the accident.

The municipal government, meanwhile, replaced the local top soil as well as the roof of every home and school in its jurisdiction. The city also paved over land that had been exposed to the Chernobyl fallout, including the front yard of 53-year-old housewife Ms. Valentina.

The municipal official in charge of the project emphasizes that the efforts resulted in a 50 percent drop in radiation in the 20 years after the accident. This has not, however, staunched a steady flow of people out of the city. Since 1990, Korostyshiv's population has dropped from about 80,000 to 67,000, though the city stresses that this is beginning to turn around.

Valentina's husband passed away from cancer in 2000 at just 48-years-old, and she says that many other members of her family have suffered damage to their health.

Regarding decontamination of homes, Ukrainian government radiation expert Mr. Tabachnyi says, "I can't say it's had any effect but to calm the fears of the residents," adding, "About $1 million was thrown into reducing radiation levels in Korostyshiv to 1 sievert or less per year. It was definitely not a cost-effective effort."

In June 1986, the Soviet government decided to allow residents back to parts of the forced migration areas that were relatively uncontaminated on a trial basis. Decontamination work was done, and the project drew up indices that would show whether the efforts could be applied to the clean-up of other areas. However, the authorities recognized that dangerous radioactive materials remained, and revoked permission for residents to return two years later.

Now, with buildings and infrastructure decaying, "there's almost no chance that permission to return will ever be given," says Tabachnyi, meaning the more than 10,000 Ukrainian "forced migrants" will probably never go home again.

On April 18 this year, Japan and the Ukraine finalized an agreement to share information on the countries' respective nuclear disasters, and the Japanese government is looking to learn "the lessons of Chernobyl" as it implements policy to contain the aftermath of the Fukushima meltdowns.

The scale of the two disasters, however, is different. The Chernobyl accident is thought to have released several times the radioactive material of the Fukushima disaster. The decontamination of agricultural lands -- a process that Japan has put so much faith into -- has been essentially abandoned around the Chernobyl plant, and there is increasing criticism that there is "no way Chernobyl can give any insight into the Japanese situation

No decontamination may now be an option

Highly radioactive areas may not receive clean-up

http://www3.nhk.or.jp/daily/english/20120425_10.html

The Japanese government says NOT carrying out decontamination work may be an option in areas near the Fukushima Daiichi nuclear plant where radiation readings are likely to stay high for at least a decade.

The government is drawing up plans to clean up radioactive substances in areas near the nuclear plant so that residents who have been forced to evacuate can return.

It said for the first time on Sunday that atmospheric radiation levels may remain higher than 20 millisieverts per year in some areas even 10 years from now, a level the government considers difficult for people to go home.

Some officials argue decontamination would not proceed smoothly in such areas, and that a significant reduction of radiation levels is difficult with existing technology.

Others say money should be spent supporting long term evacuees rather than on costly decontamination efforts.

The government says it will consider the opinions of evacuees and affected municipalities in deciding which areas to decontaminate and scheduling the work.

It has already announced plans to **clean up areas with current radiation readings of up to 50 millisieverts per year by the end of March 2014.**

April 30, 2012

Stopped from decontaminating

Koriyama board of education stops decontamination of schools

http://fukushima-diary.com/2012/04/koriyama-board-of-education-stops-decontamination-of-kindergarten-and-elementary-school/

Posted by **Mochizuki**

Prof. Yamauchi Tomoya from Kobe university confessed the board of education of Koriyama city stops decontamination, on the radio show MBS Tanemaki journal. (Assistant professor Koide from Kyoto university regularly talks on this radio show as well.)

It was recorded on 4/30.

He is an expert of decontamination. On the radio show, he talked his experience when he went to a kindergarten and elementary school of Koriyama city to assist decontamination but **the board of education stopped him from decontaminating**. The reason was not talked.

He also added, the safety limit is 0.23μSv/h. If it goes over 0.23μSv/h, local government must decontaminate the school areas, but actually it was difficult to find somewhere less than 0.23μSv/h though it was after decontamination.

Contaminated soil was already removed and new soil was added, but places surrounding the playground of elementary school or kindergarten are still highly contaminated, radiation comes over the playground. If those severely contaminated areas are not owned by schools, it is impossible to decontaminate it.

Children are still living there.

May 2, 2012

New decontamination method

Street denuclearizing method gains

http://www.japantimes.co.jp/text/nb20120502a5.html

Jiji
Obayashi Corp. has developed a method to decontaminate radiation-tainted pavement that is over three times as efficient as the conventional means, according to the major general contractor.

Most pavement contaminated with radiation from Tokyo Electric Power Co.'s Fukushima No. 1 nuclear plant is cleaned with water under high pressure, but this method tends to scatter radioactive materials because it is difficult to collect the wash water.

Obayashi's new method combines Kaercher Japan Co.'s cleaner, which collects water as it washes, and Binos Corp.'s technology to precipitate and aggregate radioactive materials in collected water.

The new method can decontaminate an area of some 1,000 sq. meters a day, compared with 300 sq. meters for the conventional method, Obayashi officials said.

May 3, 2012

Kazakhstan to help with decontaminating Fukushima

Japan, Kazakhstan to cooperate on decontamination

http://www3.nhk.or.jp/daily/english/20120502_02.html

Japan and Kazakhstan have agreed to cooperate in cleaning up areas tainted by radiation after last year's accident at the Fukushima Daiichi nuclear plant.

Japanese industry minister Yukio Edano met his Kazakh counterpart Asset Issekeshev in Kazakhstan on Tuesday.

Edano asked for Kazakhstan's cooperation in decontaminating areas around the Fukushima plant.

Issekeshev said his country will offer its experience and techniques to help Japan's decontamination efforts.

Representatives of Japanese electronics maker Toshiba and Kazakhstan's national nuclear center also signed a memorandum on sharing decontamination expertise.

The center began decontaminating the Soviet Semipalatinsk nuclear site in 1991.

Toshiba intends to use Kazakhstan's experience to develop new decontamination methods.

Edano told reporters he believes that sharing information on decontamination will greatly assist the reconstruction of Fukushima.

May 13, 2012

Osaka to take on Iwate debris

Osaka to bury debris from disaster area on man-made island

http://mainichi.jp/english/english/newsselect/news/20120513p2a00m0na012000c.html

OSAKA -- The Osaka prefectural and city governments have agreed on plans to accept debris generated by the Great East Japan Earthquake and bury it on a man-made island in Osaka Bay after incinerating it.

The Ministry of the Environment (MOE) is expected to give instructions at the end of the month on measures to prevent radioactive cesium from the debris ash from spreading into the bay. Afterward, the prefectural government will hold a meeting of safety experts and make an official decision on the plans.

The location that will be used to bury the debris ash, situated near Hokuto Port on man-made Yumeshima Island, is also the final disposal spot for the city's waste. Currently, 730,000 square meters of the 3.85 million square meters of Yumeshima is used for waste disposal.

The Osaka Prefectural Government has indicated its intention to take on 180,000 tons of debris from Iwate Prefecture. In December of last year, it set a standard of "100 becquerels or less" of radiation per kilogram of debris, and in January of this year it asked municipalities within the prefecture holding incinerator facilities to take on debris and explained the disposal procedures and standards. However, most of the municipalities are reluctant and worried about protests from residents, and only the city of Osaka has indicated it would agree to the move.

In February, the Osaka Municipal Government asked the MOE to survey the safety of the Hokuko Port disposal area. As the capacity of the area is limited, the prefectural government is aiming for disposal at other sites as well.

May 16, 2012

Getting rid of some of the debris, on a trial basis

Kitakyushu to incinerate Miyagi debris on trial basis

http://mainichi.jp/english/english/newsselect/news/20120516p2g00m0dm105000c.html

KITAKYUSHU, Japan (Kyodo) -- The mayor of Kitakyushu, Fukuoka Prefecture, said Wednesday the city will incinerate debris left by the March 2011 earthquake and tsunami in Miyagi Prefecture on a trial basis for three days from mid next week.

The announcement by Mayor Kenji Kitahashi at a regular press conference came after the municipal assembly unanimously passed a resolution in March calling for the acceptance of debris.

The municipal government will incinerate 80 tons of debris with radioactive cesium levels less than 100 becquerels per kilogram and brought from the coastal city of Ishinomaki, Miyagi, mainly by truck.

It will accept around 39,500 tons of debris annually after confirming the safety by examining the radiation levels of incinerators and burned ashes as well as air radiation levels around the incineration plants.

May 21, 2012

Less debris than planned

Debris to be disposed outside Miyagi Pref. drops by two-thirds

http://mainichi.jp/english/english/newsselect/news/20120521p2g00m0dm089000c.html

SENDAI (Kyodo) -- The government of Miyagi, one of the prefectures hardest hit by the March 2011 earthquake-tsunami disaster, said Monday the amount of debris to be disposed of by municipalities outside the prefecture has dropped to 1.27 million tons, about one-third of its original estimate of 3.54 million tons.

The decline came as many people have decided to renovate rather than dismantle damaged homes while the prefecture has increased the amount of debris it will dispose of itself.

However, municipalities still have to be found to accept 1.14 million tons of the 1.27 million tons of debris, and the prefectural government said it will continue to ask for cooperation.

In March last year, the prefecture estimated 15 million tons to 18 million tons of debris would be generated in Miyagi. Even though it planned to build nearly 30 temporary incinerators in coastal areas, it expected 3.54 million tons would need to be disposed of outside the prefecture to meet the March 2014 target for clearing away the debris.

Miyagi Gov. Yoshihiro Murai said the prefecture will first do all it can itself to dispose of debris if it is to ask other municipalities to accept some of it.

May 24, 2012

Incineration begins in Kitakyushu

Kitakyushu starts trial incineration of quake-tsunami debris

http://mainichi.jp/english/english/newsselect/news/20120524p2g00m0dm025000c.html

KITAKYUSHU, Japan (Kyodo) -- Kitakyushu municipality in Fukuoka Prefecture began trial incineration on Wednesday of debris from the March 2011 earthquake and tsunami in northeastern Japan.

After opponents of the incineration blocked trucks carrying the debris outside a waste collection space on Tuesday, police installed barricades at the entrance of an incineration plant to keep protesters away, allowing three trucks to arrive and unload debris.

Kitakyushu plans to measure radioactive cesium levels in waste gas from the trial incineration and check whether the process is safe as local residents are concerned the debris could be contaminated as a result of the crisis at the Fukushima Daiichi nuclear plant, which was triggered by the disaster.

Kitakyushu is the first western Japan city to conduct trial incineration of debris from the disaster.

The trial incineration of debris from the devastated city of Ishinomaki in Miyagi Prefecture will continue until Friday before cesium level data are made available, possibly on Monday.

Based on the trial results, Kitakyushu Mayor Kenji Kitahashi is expected to decide in June whether to accept debris from Ishinomaki for full-fledged incineration.

At a press conference Wednesday, the mayor regretted Tuesday's protest and noted he hopes the trial incineration data will provide reassurance to residents.

Ishinomaki Mayor Hiroshi Kameyama said in a statement, "I hope we will able to gain Kitakyushu residents' understanding and cooperation in the future."

May 25, 2012

Who is going to bear the costs of decontamination?

Edano creates stir with suggestion gov't could partially bear nuclear decontamination costs

http://mainichi.jp/english/english/newsselect/news/20120525p2a00m0na016000c.html

Economy, Trade and Industry Minister Yukio Edano's suggestion that the national government may partially bear the costs of decontaminating areas tainted with radioactive substances leaking from the tsunami-hit nuclear plant has created a stir within the government.

The Finance Ministry, in particular, is wary of Edano's suggestion, fearing that the costs that the government is required to shoulder could snowball.

In a May 10 television program, Edano commented, "It's possible that the national government will bear the expenses to a certain extent as part of its responsibility." The industry minister then said the government will choose between another raise in electricity charges, or use of taxpayers' money to cover the costs.

"After having fully decontaminated affected areas, we'll decide whether we'll ask TEPCO customers to shoulder the costs or the nation as a whole to do so," he said.

The Environment Ministry, which is responsible for decontamination, says the national government will decontaminate eight municipalities in Fukushima Prefecture that are close to the crippled Fukushima No. 1 Nuclear Power Plant and are designated as evacuation zones.

Another 104 municipalities in eight prefectures in the Tohoku and Kanto regions where radiation from the nuclear crisis exceeds 1 millisievert a year face the task of decontaminating affected areas by themselves, while receiving financial assistance from the central government. Under government plans, TEPCO will later be billed for the total cost of decontamination.

The national government has set aside approximately 1.15 trillion yen in taxpayers' money to temporarily finance decontamination work from fiscal 2011 to 2013, but the amount does not include the expenses of building facilities to temporarily store soil contaminated with radioactive substances and other relevant costs.

Some officials fear that the decontamination-related costs could reach 5 trillion yen, even though the government has not exactly predicted how much such work will cost.

"I wonder why (Edano) made such a suggestion when the prospects of the ongoing debate on increasing the consumption tax hike remain uncertain," said a high-ranking official of the Finance Ministry's Budget Bureau.
The Environment Ministry, meanwhile, is taking a wait-and-see approach.

"We don't know what he actually meant. In any case, the current framework, in which we'll demand that TEPCO cover the decontamination costs, remains unchanged," an official with the Environment Ministry said.

TEPCO's rehabilitation plan, which the government has recently endorsed, makes no mention of who will bear the costs of decontamination. However, TEPCO will be forced to review the plan if it is required to fully cover the costs of decontamination, due to stiff opposition from the public to raising electricity charges and reactivating its Kashiwazaki-Kariwa Nuclear Power Plant, which are prerequisites for its plan to improve its profitability.

Speculation is growing within the government that Edano deliberately made the controversial remarks to test public opinion on possible financial assistance to TEPCO.

"I suspect that (the comment) is a trial balloon to explore the possibility of extending financial assistance to TEPCO in the future," a government source said.

June 19, 2012

A regrettable "mistake"

Japan failed to use U.S. radiation data gathered after nuke crisis

http://mainichi.jp/english/english/newsselect/news/20120619p2g00m0dm004000c.html

TOKYO (Kyodo) -- The Japanese government failed to make use of maps showing the spread of radiation in the immediate aftermath of the Fukushima Daiichi nuclear plant disaster, prepared by the U.S. government using data collected by U.S. aircraft, sources familiar with the matter said Monday.

The sources said the maps were neither made public nor used for evacuation of residents near the Tokyo Electric Power Co. nuclear plant devastated by explosions in the days after a massive earthquake and tsunami struck the area on March 11, 2011.

From March 17 to 19, U.S. military aircraft collect radiation data over a radius of 45 kilometers from the plant for the U.S. Department of Energy. The data showed more than 125 microsieverts of radiation per hour being spread about 25 km northwest of the plant, meaning people in the area were being exposed to the annual permissible level within eight hours.

Before releasing the data on March 23, the U.S. government provided the data through the Japanese Foreign Ministry to the Nuclear and Industrial Safety Agency under the Ministry of Economy, Trade and Industry on March 18, and to the Ministry of Education, Culture, Sports,
Science and Technology on March 20, the sources said.

The data were not utilized for the evacuation of people as the agency and the technology minister did not forward the data to the prime minister's office and the Nuclear Safety Commission.

A substantial portion of radioactive materials released from the plant is known to have traveled northwest and fallen on the ground. With some residents "evacuated" to that direction, they could have avoided unnecessary exposure to radiation if the date were swiftly published.

"It was very regrettable that we didn't share and utilize the information," Tetsuya Yamamoto, the chief nuclear safety officer of the agency, told reporters.

Itaru Watanabe, an official of the Science and Technology Policy Bureau of the technology ministry, said it was appropriate for the United States, not Japan, to release the data.

June 21, 2012

Which policy for nuclear waste?

Panel proposes 3 options for nuclear disposal

http://www3.nhk.or.jp/daily/english/20120621_32.html

Japan's Atomic Energy Commission has put forward 3 options that the country could take to replace the policy of recycling all spent nuclear fuel.

The commission has been reviewing the country's long-standing policy of recycling spent fuel since the meltdowns at the Fukushima Daiichi plant in March last year raised doubts about the viability of the policy.

In a meeting on Thursday, the commission decided to submit to the government a proposal in which it says Japan could take one of 3 options depending on the extent to which the country depends on nuclear power generation in the year 2030.

The commission says if Japan has stopped nuclear power generation by then, it would be appropriate to dispose of all leftover spent fuel by burying it deep underground.

It says if Japan still depends at that time on nuclear power for about 15 percent of its electricity needs, it would be appropriate to recycle some of the spent fuel.

The commission says if Japan decides to maintain a 20 to 25 percent dependency on nuclear power generation, it would be preferable to recycle all of the spent fuel.

The government will draw up Japan's long-term energy policy by this summer, based on the proposals by the commission.

A working group of the commission came under fire recently when it was found to have distributed a draft report of the proposal to advocates of nuclear power generation, including power company and government officials.

June 25, 2012

New hot spots in Tokyo

Radioactive hot spots found in Tokyo park

http://www3.nhk.or.jp/daily/english/20120625_29.html

Tokyo officials are to start decontamination of a 92-hectare park where high levels of radiation have been detected.

On Monday, officials tested 14 locations at Mizumoto Park in Katsushika Ward, following reports from the public about radiation hot spots there.

Thirteen of tested locations registered radiation above one microsievert per hour at one meter above

ground, with the highest reading at 1.22.

According to science ministry guidelines, decontamination is required when radiation is at least one microsievert higher than surrounding areas. Based on these guidelines, 9 of the 14 surveyed places in Mizumoto Park will be decontaminated.

Since last year's accident at the Fukushima Daiichi nuclear plant, the ministry has received about 150 reports of Tokyo hot spots, as of March

June 26, 2012

Tokyo gov't forced to react

Tokyo gov't decides to decontaminate Mizumoto Park amid criticism for slow response

http://mainichi.jp/english/english/newsselect/news/20120626p2a00m0na011000c.html

The Tokyo Metropolitan Government has decided to decontaminate Mizumoto Park in Katsushika Ward, where concentrations of radioactive cesium exceeding the national limit were detected, amid criticism for its slow response to initial findings.

It will be the first facility owned by the Tokyo government to be decontaminated. But experts are calling for a cool-headed reaction to the radioactive contamination because relatively high levels of radiation have been detected only in a shrub area where people do not usually enter and radiation is not spreading further. Some critics, meanwhile, point out that the Tokyo Metropolitan Government has been too slow to respond, as it decided to decontaminate the park two weeks after high concentrations of radioactive cesium were detected and reported.

With respect to radioactive contamination linked to the disaster at the Fukushima No. 1 Nuclear Power Plant in Fukushima Prefecture, an ordinance of the Ministry of the Environment specifies that areas contaminated with 0.23 microsieverts (equivalent to 1 millisievert per year) or more per hour of an ambient dose of radiation need to be decontaminated. Furthermore, even if radiation is not spreading, the Cabinet Office and the Ministry of Education, Culture, Sports, Science and Technology call for simple decontamination of areas whose radiation levels are one microsievert per hour higher than surrounding areas.

Of the 14 locations amidst the shrubbery measured for radiation on June 25, nine of them measured radiation levels higher than those detected in the center of the parking lot at the park. But the Construction Bureau of the Tokyo Metropolitan Government said in its explanation, "Because surrounding

areas have already been fenced off, there is no need to decontaminate them urgently." Yo Kato, associate professor at Tokyo Metropolitan University, said, "Cesium may have easily gathered at the foot of slopes after being washed down by rain. There is no need to worry about it because it is not a place where people play or stay for a long time. The levels of radiation will probably go down if the soil is turned over."

The place in question is where Japanese Communist Party (JCP) members of the metropolitan assembly said on June 11 that they had detected 251,000 becquerels of radioactive cesium per kilogram in the soil. After receiving inquiries from local residents, the Katsushika Ward Office asked the Tokyo Metropolitan Government to deal with the situation properly on June 12. But the Tokyo Metropolitan Government did nothing to deal with the matter until it received the results of the JCP's additional radiation monitoring, insisting that levels of radiation detected on June 12 were below the national limit.

An official of the Katsushika Ward Office said, "The ward has been decontaminating its parks and school yards that are contaminated with more than 1 microsievet of radiation per hour based on its own guidelines. We want Mizumoto Park to be properly dealt with in accordance with national policy."

July 5, 2012

"A huge business opportunity" for some

U.S., French firms vie for N-cleanup work

http://www.yomiuri.co.jp/dy/national/T120704003865.htm

U.S. and French firms, supported by their embassies in Japan, are aggressively marketing themselves to take advantage of unprecedented business opportunities in nuclear decontamination work and decommissioning of reactors following the crisis at the Fukushima No. 1 nuclear power plant in Fukushima Prefecture.

The expected lengthy projects, which will cost trillions of yen, are seen as not only **a huge business opportunity b**ut also as a chance to acquire valuable experience.

On June 26, an event on decontamination technologies was held at the Japan External Trade Organization office in Minato Ward, Tokyo.

"We are totally confident in our decontamination work ability," a representative of one U.S. company said. "We have more than 20 years experience in handling radioactive waste and reactor decommissioning," a representative for another U.S. firm said.

With about 230 people from 32 U.S. firms and 100 Japanese firms, including decontamination device manufacturers and general contractors, the venue was filled with excitement.

From the United States, CH2M HILL, an engineering firm whose specialties include the decommissioning and cleanup of contaminated sites, and ECC, which specializes in disposal and management of radioactive waste, took part.

The meeting was jointly organized by JETRO, the Environment Ministry and the U.S. Embassy.
Environment Minister Goshi Hosono said, "I hope you will give us a hand in rebuilding Japan."

U.S. Ambassador to Japan John Roos said the U.S. firms were ready to showcase their experience and find business partners, and he encouraged companies from both countries to develop good relations with each another.

Each U.S. firm had three minutes to introduce themselves on the stage, with some of their representatives speaking fluent Japanese. They exchanged business cards with officials of Japanese firms and explained their technology and experience.

"There are about 10 firms that we consider potential business partners," said an official of a Japanese decontamination device maker.

But a Japanese trading company employee was a little skeptical, saying, "I don't know how much they can actually do."
Behind U.S. firms' aggressive marketing is the enormous budget for the decontamination and decommissioning work. The ministry has already budgeted about 1.1 trillion yen for fiscal 2011, 2012 and 2013.

The full-fledged work will be carried out by several firms. If more interim storage facilities are needed to be built or the scope of cleanup work is expanded, the budget could reach tens of trillions of yen.

Although Tokyo Electric Power Co. earmarked 900.1 billion yen for decommissioning four reactors at its Fukushima No. 1 nuclear plant for the period ended in March, it is unclear exactly how much it would cost, and the expense is highly likely to increase.

Meanwhile, the French Embassy in Japan held in May a radioactive decontamination technology seminar, inviting Japanese general contractors and government officials. Some French firms, including nuclear giant Areva SA, attended the seminar, and an evening reception was also held at the embassy.

"It is not only a big business opportunity for them but also they think they can acquire experience only available in Fukushima in preparation for a possible nuclear accident that might occur somewhere in the future," said a senior official of the Environment Ministry.

July 13, 2012

More tests on rice

Gov't to conduct radiation tests on rice at 40,000 locations in 2012

http://mainichi.jp/english/english/newsselect/news/20120713p2g00m0dm038000c.html

TOKYO (Kyodo) -- The farm ministry will conduct radiation tests on samples of rice grown at a total of 40,000 locations in 17 prefectures in 2012, more than 10 times as many as last year, ministry officials said Thursday.

The Ministry of Agriculture, Forestry and Fisheries will increase the number of samples for the test as government-set allowable limits of radioactive cesium contained in rice have been toughened since April, such as a ban on shipments of rice containing 100 becquerels per kilogram, the officials said.

The test for this year will mainly cover locations where more than 50 becquerels per kg were detected in samples of rice cropped in 2011 and their surrounding areas.

Samples will be collected from all rice-producing households in the selected locations.

July 24, 2012

A new miracle device for Fukushima - But what to do with the wastewater?

New decontamination device for Fukushima plant

http://www3.nhk.or.jp/daily/english/20120724_25.html

A new decontamination device that can remove a large variety of radioactive substances, including strontium, has been developed for the defunct Fukushima Daiichi plant.

The decontamination tool now in use at the plant can only remove radioactive cesium.

More than 170,000 tons of treated water, still contaminated with other radioactive substances, is being stored in tanks in the plant compound. The volume keeps growing.

The new device unveiled in Yokohama near Tokyo on Tuesday can lower contamination to acceptable levels for 62 types of radioactive materials, such as strontium and cobalt.

This is done by putting the water in a stainless steel tank containing a resin that absorbs radioactive materials.

The new mechanism will be tested at the Fukushima plant in early September.

Filtered wastewater will temporarily be stored in the compound, but it's not been decided where it will go from there.

July 27, 2012

Little progress in decontamination

Slow progress in decontamination

http://www3.nhk.or.jp/daily/english/20120727_35.html

Japan's government is under pressure to quickly decontaminate evacuated communities so that residents can return home.

The government hopes to finish cleaning up 11 municipalities by the end of March 2014, except for areas where radiation levels are extremely high.

But the Environment Ministry has yet to draw up decontamination plans for 6 of the municipalities.

Private contractors have been chosen to do the work only in Tamura City and another town.

Procedures to obtain landowners' consent for decontamination have begun only in the city and one village.

None of the municipalities has secured enough space for temporary storage of contaminated soil and other waste.

The government plans to build sites near the disabled Fukushima nuclear plant to store the waste until its final disposal. But the outlook is uncertain due to local concerns.

Decontamination - Not so obvious

Decontamination begins in Fukushima

http://www3.nhk.or.jp/daily/english/20120727_25.html

Japan's government has begun removing soil and other items contaminated by radioactive substances released during last year's nuclear accident at the Fukushima Daiichi power plant.

The work began on Friday in a part of Tamura City that was reclassified in April from a no-go zone to one where residents could return to live in the near future.

The government-led efforts are the first to be carried out in a former no-entry zone.

Workers gathered fallen leaves and cut weeds at shrines and graveyards in the area.

Residents asked that such places be decontaminated first to allow visits to family graves during the upcoming Buddhist Bon holidays.

Residents also took part in the work, saying they want to return to the community as soon as possible.

The Environment Ministry says about 400 houses in Tamura City will be decontaminated, along with 420 hectares of farmland and forests. The work is to finish by the end of March next year.

The government is taking charge of decontamination in 11 municipalities in a 20-kilometer no-entry zone and other places where evacuation was advised.

The municipalities have yet to secure enough sites to temporarily store contaminated soil and other waste to be collected.

Environment Minister Goshi Hosono told reporters that the government wants to begin decontamination work as soon as possible at municipalities other than Tamura City.

Decontamination work begins in Fukushima Prefecture city amid concerns over incinerator plans

http://mainichi.jp/english/english/newsselect/news/20120727p2a00m0na010000c.html

TAMURA, Fukushima -- Full-scale decontamination work under state jurisdiction began July 27 in the Miyakoji district in this Fukushima prefectural city of Tamura while an Environment Ministry plan to build a temporary incinerator is still up in the air due to opposition from local residents.

The decontamination work represents the first state-sponsored project to decontaminate areas within 20 kilometers of the crippled Fukushima No.1 Nuclear Power Plant.

But local residents are up in arms over the Environment Ministry's plan to install a temporary incinerator to burn decontaminated waste due to possible safety worries, and claim a briefing on the project was held only one month ago.

According to Miyakoji district residents and others, the ministry's Fukushima environmental revival office held a briefing on decontamination work for district residents on June 9. But ministry officials made no mention of the incinerator project on private land and revealed the project only during a meeting with district executives after the briefing. The Fukushima office said the ministry has won consent from landowners but some district executives demanded a briefing on the project for district residents.

The Fukushima office held a briefing on the incinerator project for district residents on June 24. Officials from the office explained that the incinerator will be equipped with a bag filter to remove particles inside exhaust gas and radioactive cesium will be below detection limits. They said the incinerator will become operational in October but residents around the proposed site balked, saying cesium will be concentrated and pose a danger if decontaminated waste is burned.

The office held another briefing on July 20 and sought residents' understanding by citing a verification report on an incinerator equipped with a bag filter released by the Japan Atomic Energy Agency (JAEA) in late June. Fukushima office officials said that cesium will be absorbed through a bag filter and a temporary storage site will need to be up to 100 times bigger than the proposed site if decontaminated waste is not burned.

Some residents signaled a willingness to go along with the incinerator project but many others rejected it, saying the Environment Ministry is taking advantage of residents' desire to see decontamination work start early. The project is also causing a rift among residents.

A spokesman for the Fukushima office told the Mainichi Shimbun, "It is true that residents were surprised at the briefing on the project but we never covered it up. We have to consider extending a temporary storage site (if the projected incinerator is not built)."

Environment Ministry officials say the ongoing decontamination work will cover about 480 hectares of residential areas, roads and arable land out of about 4,200 hectares, excluding forests and other plots of land, which account for 80 percent of the district.

A joint venture of Kajima Corp., Sumitomo Mitsui Construction Co. and Hitachi Plant Technologies Ltd. have won the decontamination order for about 3.3 billion yen. Decontamination work will continue through March next year.

Kazuhiro Tsuboi, 64, who lives in temporary housing in the city, hailed the start of decontamination work as a big step forward toward returning to his home. But he also said, "I have lingering worries about if the radiation level will really go down and even if it temporarily drops, the area may be contaminated again because of the forests."

The "upside-down method" of storage

Soil issue buried for lack of storage

http://www.japantimes.co.jp/text/nn20120727f1.html (Kyodo)

More than 15 months after the Fukushima disaster started, municipalities hit by the fallout are struggling to dispose of radioactive soil collected under decontamination efforts.

Nowhere to go: Batches of radioactive soil sit under tarps at a temporary storage site in Minamisoma, Fukushima Prefecture, on June 24. KYODO

Prime Minister Yoshiyuki Noda vowed upon taking office last September to lead the nuclear decontamination effort, but that has proven to be an empty promise, say officials in the Tohoku region and parts of Kanto, including metropolitan Tokyo.

Unaided, local efforts have progressed little because residential opposition and the central government's fickle and evasive policies are making it difficult to set up storage sites, municipal authorities said.

The city of Minamisoma, Fukushima Prefecture, for example, told residents in the July 1 issue of its city magazine that the decontamination plan is being re-examined because it can't find a site to store the tainted soil.

This implied that the March 2014 completion date for decontamination is going to be missed.

At a hamlet in a mountainous area where decontamination was attempted last autumn, airborne radiation was recently found to have returned to 2 microsieverts per hour, the same as it was beforehand and too high for human habitation, local officials said.

"I imagine it's cesium dust coming from the hill behind the village," a local chief lamented. "All we can do is decontaminate the area again, but there is nowhere to store the soil."

Minamisoma, one of the municipalities most affected by the nuclear crisis, is among 111 municipalities in eight prefectures designated in January by the central government as a "priority area" for decontamination.

Anticipating a storage space shortage, the central government has been advocating the "upside-down" method of storage — which actually means burying the tainted topsoil below that excavated from further down, instead of collecting it for storage.

This method has been strongly criticized, especially by those who were forced to leave their hometowns behind.
"This is simply a measure to reduce (radiation)," an official in the deserted Fukushima village of Katsurao angrily said. "It's nothing more than an attempt to conceal radioactive substances."

Farther away, in Shiroi, Chiba Prefecture, some 200 km from the Fukushima No. 1 power plant, bags of contaminated soil sit piled up in a garage next to City Hall. Officials said they had no choice because its plan to create a temporary outdoor storage site has not yet been approved by residents.

"This is the last resort," said an official in charge. "And in three years, even this place will be full."

For safety, the area around the garage is off-limits and officials check radiation levels every day. Officials said they consulted with the Environment Ministry but received no concrete instructions on how to deal with the situation.

Many urban areas in Chiba Prefecture are also resorting to burying tainted soil because it is hard to find land suitable for storage. Local officials are worried the issue will emerge again when they start disposing of contaminated mud from roadside ditches, which is likely to be even more radioactive.

Many officials in the designated municipalities said they felt the central government had changed its stance on its responsibilities and involvement in the decontamination process.

Last August, five months after the nuclear crisis erupted, the nuclear disaster task force declared in its basic policy that the state will, in cooperation with prefectural governments and municipalities, bear responsibility for removing contaminated material and take necessary measures.

Yet subsequently, local authorities — with the exception of those in the immediate vicinity of the Fukushima plant — have been requested to set up temporary storage facilities and permanent disposal sites on their own.

"We have asked the Environment Ministry why the policy has been changed, but all we got was a vague response," an official at the Kashiwa Municipal Government in Chiba said.

Similarly, officials at Noda, also in Chiba, said policy details change every time the ministry sends instructions on decontamination. The ministry also declined to send representatives to briefings with the residents to get approval for storage space, saying they were too busy.

Ministry officials said the government does not require municipalities in designated decontamination areas to report what progress has been made — effectively admitting they are not clearly aware of the lack of adequate storage sites.
"With the exception of regions under the state's direct jurisdiction, we've been asking municipalities to conduct (decontamination) independently," a ministry official in charge said.

"This policy has not changed and we are also asking local authorities to conduct the final disposal at their existing facilities," he added, speaking as if the pledge by the nation's leader had never been made.

August 3, 2012

Debris disposal resolved?

Progress on debris disposal / Destinations found for combustible waste from Iwate, Miyagi

http://www.yomiuri.co.jp/dy/national/T120802006394.htm

Arrangements have almost been completedto find local governments to accept combustible debris from last year's earthquake and tsunami in Iwate and Miyagi prefectures, according to the Environment Ministry.

The ministry will mention the arrangements for disposal of woodchips and other combustible debris in a disaster waste disposal plan it will compile shortly, ministry officials said.

It continues to call for cooperation from municipalities for the disposal of nonflammable disaster debris, an issue that has not been decided as smoothly.

The ministry aims to dispose of debris from the March 11, 2011, Great East Japan Earthquake in the two prefectures by the end of March 2014.

The government has been asking local governments outside the two prefectures to incinerate or bury the disaster debris they cannot process on their own. Miyagi Prefecture has 12.52 million tons of disaster debris, while Iwate has 5.25 million tons, of which 1.14 million tons and 1.19 million tons respectively are designated for disposal outside the disaster-hit prefectures.

Debris in Fukushima Prefecture, meanwhile, will be disposed of within its administrative area.

According to the Miyagi prefectural government, local governments in Tokyo and four other prefectures--Aomori, Yamagata, Fukushima and Ibaraki--have started to accept about 140,000 tons of combustible debris.

In addition, it has been making final arrangements with the Kitakyushu municipal government, which has expressed its willingness to accept a large amount of disaster debris.

Therefore, the prefectural government announced July 25 that the remaining 220,000 tons can be incinerated mainly by asking these municipalities to increase the amount of debris they will accept.

When it comes to combustible debris in Iwate Prefecture, local governments in Tokyo and six other prefectures--including Aomori and Shizuoka--have expressed their willingness to accept it.

Final arrangements, moreover, are also being made with other municipalities, mainly in the Kanto, Hokuriku and Kansai regions. Therefore, Environment Minister Goshi Hosono has said plans have been made for disposing of Iwate's 240,000 tons of combustible debris.

An increasing number of local governments began to examine accepting debris from the two prefectures since Prime Minister Yoshihiko Noda called for cooperation from municipalities nationwide in March this year.

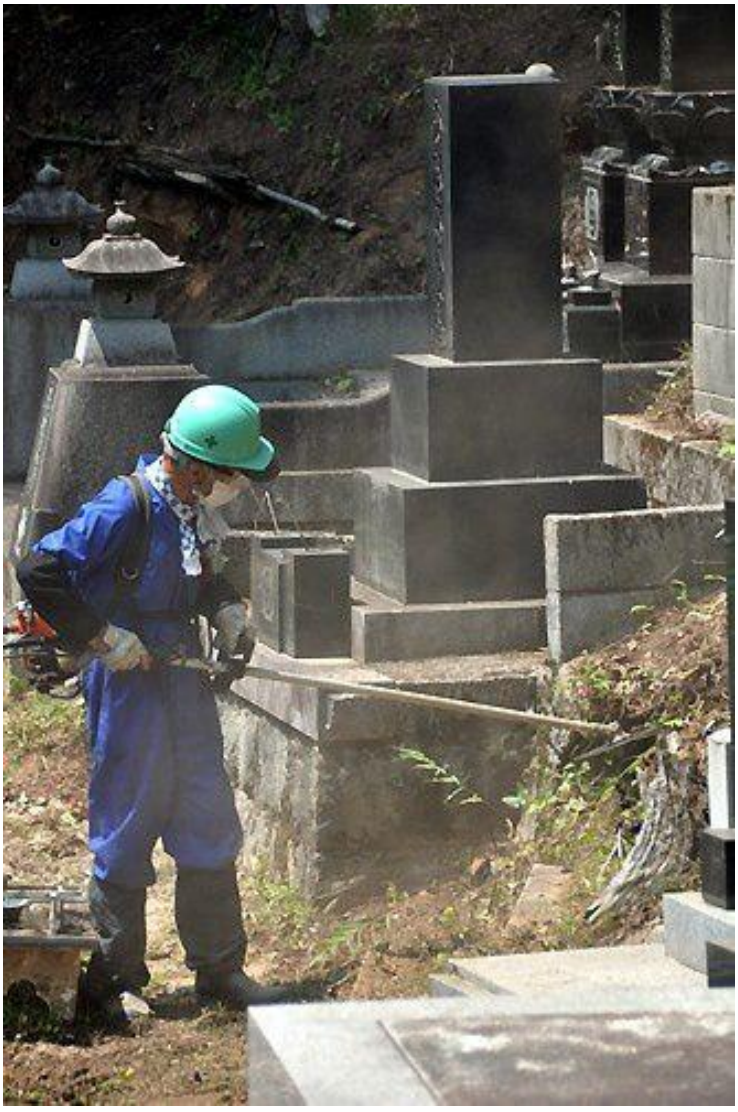
A senior ministry official said the ministry would not have to ask all municipalities that have expressed their willingness to accept debris from the two prefectures.

"Instead, however, we'll ask for further cooperation from the local governments that have already started trial incineration and other preparatory work as a step for full-fledged acceptance [of disaster debris from Iwate and Miyagi]," the official said.
The names of such municipalities will be listed in the disaster waste disposal plan, the official added.

All cleaned-up and nowhere to go

Gov't-backed radiation cleanup operation in Fukushima facing serious hurdles

http://mainichi.jp/english/english/newsselect/news/20120803p2a00m0na013000c.html



A worker cuts grass in a cemetery in Tamura, Fukushima Prefecture, on July 30 as part of a central government radioactive decontamination project. (Mainichi)

TAMURA, Fukushima -- Central government operations to clean up evacuated areas badly contaminated by the disaster at the Fukushima No. 1 nuclear plant finally got under way in late July this year.

However, much of the contaminated soil and other radioactive waste generated by the operation has nowhere to go, with no clear idea of where or when midterm storage sites will be built and with many municipalities still lacking even temporary storage facilities. Meanwhile, it remains to be seen how effective the decontamination -- which must be completed before residents can return home -- will actually be.

"We must remember to hurry," said a representative of the joint-venture firm tasked with the decontamination operation in Tamura on July 27, the day its work began.

Eleven municipalities previously covered in whole or in part by the evacuation zones around the nuclear plant have been re-designated "special decontamination areas" to be cleaned up by the central government. In Tamura, the operation will cover homes, fields and local forests over some 480 hectares in the east of the city that were relabeled "resident return preparation area" in April this year.

On the first day of the cleanup, just cutting and clearing away the grass in a cemetery here dropped the airborne radiation dose from 1.5 microsieverts per hour to 0.9. While significant, however, this is not enough. Abiding by a request from Fukushima Prefecture, the central government included a radiation target of 1 millisievert or less per year -- equivalent to an hourly dosage of 0.23 microsieverts -- in its Fukushima recovery plan (excluding natural background radiation).

"For a fairly extensive area, we should decide on a uniform depth for top soil removal and other steps to get good results as the operation moves forward," the joint venture project head said.

The Tamura city official overseeing the project, however, told the Mainichi Shimbun, "There has to be some technique for not wasting soil that doesn't need to be. If they scrape off soil the same way everywhere, there will be just a huge amount of waste produced."

In this special decontamination zone, called the Miyakoji zone, there are four temporary waste disposal sites. Meanwhile, it appears that the city wants to avoid trying to get resident approval for more, which would be a seriously uphill struggle.

At first, national forests were considered for temporary waste sites. The idea was scrapped, however, when it became clear the roads that would need to be built through the woods would be too costly in time and money. In the end, the city established the four temporary sites on private land along a local river on the understanding that the waste would be moved to a midterm storage facility within three years. The Ministry of the Environment, meanwhile, wants to finish the decontamination operation in Tamura by the end of this fiscal year, despite persistent worries over the dearth of temporary disposal sites.

While Tamura and four other municipalities -- the towns of Kawamata and Naraha, and the villages of Kawauchi and Katsurao -- have at least found someplace to tentatively store the cleanup waste, another five are still negotiating with their residents over disposal sites.

One major factor in the inability to secure temporary waste sites is the fact that there are as yet no solid plans to build any midterm disposal facilities, making many residents worried that the government won't be able to keep its promise to move the waste out of temporary sites after three years. The central government is now in talks with the towns of Futaba, Okuma and Naraha -- the former two hosts to the stricken Fukushima No. 1 plant -- to open midterm storage facilities within their boundaries, though progress is very difficult due to the municipalities' fears that "midterm" will become "permanent" once the facilities are built.

"Residents tell us to hurry up with the decontamination, but they're opposed to temporary and midterm waste disposal sites," lamented one frustrated senior environment ministry official.

August 4, 2012

Contamination from Fukushima disaster

Radioactive cesium found off of Niigata, Shizuoka, Iwate coasts: gov't study

http://mainichi.jp/english/english/newsselect/news/20120804p2a00m0na001000c.html

Radioactive cesium likely from the Fukushima nuclear disaster was detected last year in a survey of ocean waters and fish off Niigata, Shizuoka, and Iwate prefectures, the government announced on Aug. 3.

"Even if taken internally, the radiation levels detected are not a risk to human health," the Ministry of Education, Culture, Sports, Science and Technology stated. The ministry added it believes the small amount of contamination detected even in the Sea of Japan off Niigata was probably originally airborne material that made it to coastal waters through rain and river courses.

The survey is done every year in ocean waters near nuclear power plants nationwide as well as nuclear fuel-related facilities in Aomori Prefecture.

The survey found in May last year that there were 9.1 millibecquerels of radioactive cesium per liter of seawater off Omaezaki, Shizuoka Prefecture, near the Hamaoka nuclear plant, and in December, the survey found two becquerels per kilogram in a type of flounder in the area.

Also in May last year, the survey found dried sea floor dirt from the southeast of Sado Island, near the Kashiwazaki-Kariwa nuclear plant, was contaminated with 31 becquerels of cesium per kilogram.

In the ocean off Yamada, Iwate Prefecture -- an area surveyed in connection with the nuclear fuel cycle facilities in Aomori Prefecture -- 0.7 becquerels per liter of seawater were detected in May 2011.

August 20, 2012

12 sites to store radioactive soil

Govt. names storage sites for contaminated soil

http://www3.nhk.or.jp/daily/english/20120820_12.html

The Japanese government has for the first time proposed candidate sites to store contaminated soil removed from the areas around the Fukushima Daiichi nuclear plant.

Environment Minister Goshi Hosono on Sunday asked the mayors of municipalities around the plant to start surveys.

The government plans to keep the contaminated materials in intermediate storage facilities until final disposal sites are built. I**t needs 5 square kilometers of land, if stored at a single site.**

Hosono named 12 sites in Futaba, Okuma and Naraha Towns where the government wants to build intermediate storage sites.

They are located within a radius of about 15 kilometers of the plant. The government plans to buy or borrow the land.

A farmer in Naraha Town says the plan is unacceptable as it will discourage people who hope to rebuild their communities.

He says local farmers may be hurt by rumors about the safety of their produce once the facilities are built.

A resident in Okuma Town says any protest will delay the decontamination work and make it difficult for evacuees to return to their homes. So, he says, there is no option but to accept the facilities.

More nuclear waste than expected

Govt expects more Fukushima nuclear waste

http://www3.nhk.or.jp/daily/english/20120821_02.html

Japan's environment ministry says radioactive waste from last year's nuclear accident in Fukushima is likely to exceed previous estimates.

The ministry surveyed Fukushima and 8 near by prefectures, including Tokyo, on Monday. It found they are storing a total of 42,575 tons of waste containing radioactive cesium levels of more than 8,000 becquerels per kilogram.

The figure is expected to rise as officials continue testing for radioactivity. The ministry's original estimate was about 50,000 tons.

A law enacted in January says the central government is responsible for disposing of highly radioactive waste from the accident.

The 9 prefectures are storing the waste while the central government tries to secure locations for permanent disposal.

75 percent of the waste is from Fukushima Prefecture, 10 percent from Tochigi and 4 percent from Ibaraki.

August 21, 2012

More about contaminated soil storage facilities

Sites for contaminated soil unveiled / Government proposes building 12 facilities to store Fukushima's radioactive waste

http://www.yomiuri.co.jp/dy/national/T120820003325.htm

At a meeting with local governments, Environment Minister Goshi Hosono proposed 12 possible sites in Fukushima Prefecture for interim storage facilities to house soil and other waste contaminated by radioactive substances released by the Fukushima No. 1 nuclear power plant.

During Sunday's meeting of representatives of the central government, the Fukushima prefectural government and eight municipalities in the prefecture, Hosono said the central government plans to build the facilities at 12 locations in three towns--Futaba, Okuma and Naraha.

The central government originally planned to build just one large facility in each of the three towns. But after surveying seismic faults in the region, the government decided it would be better to disperse the facilities by building smaller ones across a wider area.

Upon gaining approval from local governments, the ministry will start conducting measurements and on-site surveys.
The local governments said Sunday they need a few days to study the government's proposal.

The government wants to build two facilities in Futaba, nine in Okuma and one in Naraha.

A maximum of about 28 million cubic meters of contaminated soil will be put in special containers and taken to the sites from January 2015, according to the plan.

During the meeting, Hosono said contaminated soil from areas with higher radiation would not be carried to areas where radiation was lower.

Fukushima Gov. Yuhei Sato reportedly told Hosono that various factors of the plan will be discussed by the local governments' working-level officials.

Meanwhile, the local governments are expected to face difficulties in forming a consensus about the facilities' construction.

"I can't understand [the central government's proposal]. It's ridiculous [for the government] to proceed with the survey," Futaba Mayor Katsutaka Idogawa said.

He complained that the government did not refer to the final disposal sites of permanent burial.

"We won't discuss [the construction] without preconditions that [the contaminated soil] will definitely be taken [outside the prefecture]," he said.

Under the central government's plan, interim storage facilities will not store contaminated soil for more than 30 years. But the government has not made any decision about final disposal sites.

Okuma Mayor Toshitsuna Watanabe demanded the central government provide more details about the storage facilities' safety after learning of the plans to build nine interim facilities in his town, sources said.

"I feel that the number is large. It may be a step forward, but we're still on the starting line," he said after the meeting. "It's not good if [the government] turns away at the door before discussions begin."

Naraha Mayor Yukiei Matsumoto opposed bringing soil contaminated with high levels of radiation into his town.
"Our town will store soil that was contaminated in our town. We firmly oppose bringing in highly contaminated soil from outside our town," he said. "There is a big difference in mentality between the local and the central governments."

During the meeting, Hosono outlined where the soil to be stored at the interim facilities will come from.
The government plans to bring contaminated soil from eight municipalities including Iitate, which is located in Futaba's north, to the facilities that will be built in the town.

Soil from Hirono and Iwaki will be taken to the facility in Naraha. Hirono and Iwaki are located in Naraha's south.
The prefecture's remaining contaminated soil will go to Okuma.

Some local governments that will not host the interim storage facilities are strongly urging the central government to begin construction earlier.

Full-fledged decontamination operations have started in Fukushima, and the municipal government is having difficulty securing temporary sites to store contaminated soil.

Before Sunday's meeting, Fukushima Mayor Takanori Seto met Tatsuo Hirano, state minister in charge of reconstruction from the Great East Japan Earthquake, and urged him to build interim storage facilities earlier.

"The issue of interim storage facilities is closely linked to temporary storage sites and decontamination," Seto said.
A senior ministry official expressed relief that the government was finally taking a step forward on the issue.

"All of us understand the need [for the facilities]," the official said.

"We want the local governments to discuss this as a matter concerning the whole prefecture. We want them to throw the ball back to us on this issue," he said.

August 22, 2012

Record high cesium detected in fish in sea around Fukushima plant

http://mainichi.jp/english/english/newsselect/news/20120822p2g00m0dm030000c.html

TOKYO (Kyodo) -- Tokyo Electric Power Co. said Tuesday that it has detected a record high 25,800 becquerels per kilogram of radioactive cesium in fish sampled within a 20-kilometer range of the crippled Fukushima Daiichi nuclear power plant.

The level of cesium found in greenling is 258 times that deemed safe for consumption by the Japanese government, **suggesting that radioactive contamination remains serious more than a year after the nuclear crisis.**

Fishing in the sea off Fukushima Prefecture is voluntarily restricted except for trial fishing of certain octopuses, so such contaminated fish would not be distributed in markets.

According to the Fisheries Agency, the previous record of radioactive contamination in fish was 18,700 Bq/kg detected in cherry salmon.

According to the owner of the Fukushima plant, located on the Pacific Coast, two greenlings caught on Aug. 1 at a depth of 15 meters were used for the survey. The agency also checked the fish and detected the same density level.

August 23, 2012

Serious radioactive contamination in sea

Cesium-laden fish may point to ocean hot spots

http://www.japantimes.co.jp/text/nn20120823a2.html

By MIZUHO AOKI
Staff writer

A record-high 25,800 becquerels per kilogram of radioactive cesium has been detected in fish caught within 20 km of the Fukushima No. 1 nuclear plant, according to Tokyo Electric Power Co., indicating there may be hot spots under the sea that need further investigation.

That level is 258 times the government limit for safe consumption. The cesium was found in two "ainame" (greenlings) caught Aug. 1 at a depth of 15 meters, Tepco said Tuesday. It was the most cesium found among seafood samples so far.

A person could get a dose of 0.08 millisieverts by eating 200 grams of the greenlings, Tepco said. A cumulative dose of 100 millisieverts increases the risk of dying from cancer by 0.5 percent.

Greenling are bottom fish that live around rock reefs in coastal waters.

Tepco said it will check further for contamination of greenling and sea creatures that bottom fish feed on, including crabs and prawns.

The utility will also examine soil from the nearby seabed to try to ascertain the reason behind the extremely high contamination level, spokesman Junichi Matsumoto said, adding, "One possible reason is that there is some kind of hot spot (on the sea floor and the contamination in the fish) got this high by eating crabs and prawns that live there."

Overall contamination levels in fish near the surface and at medium depths have been declining, the Fisheries Agency said.

However, relatively high levels of radioactive cesium continue to be detected in bottom fish, such as greenling and flounder, and in fresh water fish regardless of their usual depth, an agency official said.

The Fukushima Prefectural Federation of Fisheries Cooperative Associations resumed sales in June of two types of octopus — "mizu-dako" and "yanagi-dako" — and a shellfish called "shiraitomaki-bai."

In general, cesium accumulates far less in octopus, squid and shellfish than in ocean fish and none has been found in samples the cooperative collected.

Some plutonium too

Plutonium traces detected at 10 locations in Fukushima

Jiji, Kyodo
http://www.japantimes.co.jp/text/nn20120823a4.html

Plutonium believed to be from the Fukushima No. 1 nuclear plant has been detected at 10 locations in four municipalities in Fukushima Prefecture, the science ministry said.

The highest reading was 11 becquerels of plutonium-238 per square meter, detected in the town of Namie, the ministry said Tuesday. That is about 1.4 times higher than the level that originated from fallout from nuclear weapons tests abroad.

The other municipalities are the town of Okuma, the village of Iitate and the city of Minamisoma.

The ministry said there was no health hazard, given the small quantities involved.

The findings were from a survey in which samples were taken at 62 locations within 100 km of the stricken plant. No plutonium was found in samples from areas 45 km or farther from the plant, the ministry said.

The ministry released similar investigation results last September that covered an area 80 km from the plant. This time, the ministry expanded the area to 100 km.

In the latest survey, plutonium-238 was detected in 10 of 62 locations. The farthest point was in Iitate, some 32 km from the plant.

August 27, 2012

New tanks at Fukushima Daiichi

More tanks for contaminated water at Fukushima

The operator of the Fukushima Daiichi nuclear power plant says it will build new tanks to store contaminated water.

Tokyo Electric Power Company says the plant is producing 400 tons of contaminated water per day. **This is partly because groundwater is entering the reactor building through cracks in walls.**

TEPCO says the existing tanks have a capacity of 220,000 tons and are 85 percent full. It says they are likely to be full in around 3 months if water accumulates at the current rate.

The tanks will boost capacity by 170,000 tons. The utility says that should be sufficient until November next year.

After that, the utility may have trouble securing space for extra tanks. It will have to flatten wooded land in its compounds.

August 29, 2012

Fishing suspended...again

Concerns over halt in fishing shipments after cesium found in cod off Aomori

http://mainichi.jp/english/english/newsselect/news/20120829p2a00m0na017000c.html

In this file photo, Pacific cod that had cesium exceeding the limit are seen being prepared for burning at a waste-disposal facility in Hachinohe, Aomori Prefecture, on June 23. (Mainichi)

Following the detection of radioactive cesium over the national limit in Pacific cod from waters off Hachinohe, Aomori Prefecture, those in the fishing industry are worried about the possibility of a prolonged halt to shipments.

The detection shows that the effects on fish from the Fukushima nuclear disaster are far from settled. On Aug. 27, the national government ordered a halt to shipments of Pacific cod from an ocean area around 350 kilometers from the Fukushima No. 1 Nuclear Power Plant. Since the national radiation limit was lowered in April from 500 becquerels per kilogram to 100, Pacific cod off of Hachinohe were found with 116 becquerels per kilogram in June and 132.7 on Aug. 9. The fish became the first marine product in Aomori Prefecture to be barred from shipping. The national government has instructed that products be barred when radiation over the limit is detected multiple times.

According to the Fisheries Agency, Pacific cod are found in coastal waters off the Pacific side of Aomori Prefecture to Choshi, Chiba Prefecture. Because high concentrations of cesium have not been found in other fish types taken from coastal waters off Aomori Prefecture, Fisheries Agency and prefectural officials speculate that the cod were contaminated further south and traveled northward. Compared to other fish types, Pacific cod have been frequently detected with high levels of cesium, and in Miyagi Prefecture a ban on shipments has been in place since May.

The length of the shipment ban is a worry in Aomori Prefecture. Last year, the catch of Pacific cod from the Pacific side was around 4,000 tons and worth around 1.14 billion yen. If the shipping ban stretches on, it will deal a heavy blow to the prefecture's fishing industry. Those in the industry are worried about a drop in income and consumers avoiding other fish as well. A representative of a prefectural fishing association said, "If we don't get quick compensation payments, we won't be able to sustain our livelihoods."

To remove the ban, it is necessary that radioactive materials be measured at low levels for at least a month. A Fisheries Agency representative said, "Thinking of consumers, we want to avoid having repeated ban emplacements and removals."

According to professor emeritus of Tokyo University of Marine Science and Technology Kenya Mizuguchi, Pacific cod are susceptible to acquiring high levels of cesium because they feed off of organisms on the sea floor.

Mizuguchi says, "It is only natural that there was an exceeding of the national limit. Pacific cod only live in a set area, but there are other fish that travel widely. To uncover the extent of the contamination, there should be a study not only on Pacific cod, but on all migratory fish.

Aomori halts cod shipments after cesium level spikes

http://www.japantimes.co.jp/text/nn20120829b2.html

Kyodo

The central government has ordered Aomori Prefecture to suspend shipment of Pacific cod caught near the port of Hachinohe after excessive levels of radioactive cesium have been detected, initiating the first such ban for the prefecture because of the Fukushima nuclear disaster.

Radioactive cesium exceeding the government's allowable safety level of 100 becquerels per kilogram has been detected twice in cod caught off Hachinohe, the government said Monday.

The government said it limited the suspension to cod caught off Hachinohe because the species' Pacific habitat is smaller than those of other migratory fish and the cod containing the maximum allowable level of cesium were caught in areas close to each other.

August 30, 2012

Decontamination of pastures

Decontamination underway on Fukushima pastures

http://www3.nhk.or.jp/daily/english/20120830_26.html

Livestock farmers in Fukushima Prefecture are continuing their work to decontaminate pasture land to try to resume the use of pasture grass for cattle next year.

The farmers have voluntarily refrained from using pasture grass within the prefecture since last year's nuclear accident at the Fukushima Daiichi plant.

Work to decontaminate pasture land began early this month in Samegawa Village, one of the prefecture's areas of livestock production. It will cover about 70 hectares or half of the pastures in the village. Farmers plan to sow seeds there next year.

The decontamination work involves replacing the soil of the grazing ground surface with underground soil and sprinkling it with a mineral called zeolite which absorbs radioactive materials. **The village has commissioned local farmers to do the work.**

One of the farmers said they have no other choice but to continue the decontamination work as pasture grass on contaminated surface soil cannot be used as fodder for cattle.

The farmer also said he still feels anxiety because he does not have any solid data.

The decontamination work is expected to last until early next month in 14 municipalities in Fukushima.

Radiation comes back after decontamination of forest

Fukushima to expand forest areas for radiation decontamination

http://mainichi.jp/english/english/newsselect/news/20120830p2a00m0na003000c.html

The Ministry of the Environment accepted a request on Aug. 29 from Fukushima Prefecture to expand forest areas for radiation decontamination from the nuclear plant disaster, ministry officials said.

Currently, forest decontamination is limited to areas around 20 meters from where people live, and places where people gather, like camping sites or mushroom-raising facilities. Fukushima Prefecture, which is hit hard by the nuclear disaster and has 70 percent of its area covered by forests, requested an expansion of decontamination areas.

At a meeting of experts on Aug. 29, Parliamentary Secretary for the Environment Satoshi Takayama said, "We will decontaminate the forests. We will steadily add to the government guidelines (for decontamination)." He indicated that based on studies and research, the areas of decontamination will be expanded.

The results of experiments by the prefecture in lowering radioactive material levels by forest thinning were also reported at the meeting. After removing 30 percent of the trees in a 50-meter radius area of cedar forest, radiation levels were found to have dropped 23.5 percent in the central area, while only declining by 2.5 percent near the border with the non-decontaminated area.

However, Fukushima Prefecture Vice Gov. Masao Uchibori, who submitted a request to the Ministry of the Environment to push forward with forest decontamination, says, "Even if we decontaminate an area, after a week, two weeks, or a month, the radiation levels return. We think it is because of radioactive material coming from the mountains."

The national government will study factors including radioactive material movement and buildup in forests, the leaking and spreading of radioactive material from forests to other areas, and the effects on radiation levels from tree-thinning.

The Fukushima Prefectural Government, meanwhile, will this fall examine the decontamination effects of tree-thinning over a 10-hectare area.

September 1, 2012

IAEA will help

IAEA, Fukushima Pref. to cooperate on nuclear cleanup, health issues

http://mainichi.jp/english/english/newsselect/news/20120901p2g00m0dm004000c.html

VIENNA (Kyodo) -- The International Atomic Energy Agency and Fukushima Prefecture will cooperate on nuclear decontamination and managing of prefectural residents' health, Fukushima Gov. Yuhei Sato said Friday.

Sato made the remarks after visiting the Vienna headquarters of the U.N. nuclear watchdog and meeting with its director general, Yukiya Amano.

The IAEA has sent several experts to the prefecture for handling the aftermath of accidents at the Fukushima Daiichi nuclear power plant following the March 2011 earthquake and tsunami disaster in northeastern Japan.

"I am glad that Mr. Amano offered to collaborate in decontamination and other activities," Sato told reporters after the meeting. Sato also said he is considering asking the IAEA to send researchers to Fukushima.

"Gaining world-class knowledge would lead to prefectural residents' peace of mind," Sato said.

The Japanese government and the IAEA plan to co-host in December an international conference on nuclear power safety in Koriyama in the prefecture, with government ministers and experts from around the world planning to attend.

After the March 2011 nuclear accident, some in the Japanese government and the prefecture have voiced their desire to have the IAEA set up a permanent office in Fukushima, but a senior IAEA official has indicated that such an office would not be realistic considering budgetary and staffing situations

September 4, 2012

But will the residents agree?

Radioactive waste site proposed for Tochigi

http://www.japantimes.co.jp/text/nn20120904a5.html

Kyodo

The central government proposed building a permanent radioactive waste site Monday in Tochigi Prefecture to store the sludge accumulating from the nuclear crisis in Fukushima Prefecture, drawing immediate opposition from residents near the site.

The 4-hectare site is situated in a national forest under the jurisdiction of the city of Yaita. It was proposed by Vice Environment Minister Katsuhiko Yokomitsu during a meeting with Tochigi Gov. Tomikazu Fukuda in Utsunomiya.

The governor asked the central government to get Yaita's consent and provide a full explanation. But Yaita Mayor Tadao Endo, who heard the proposal at a separate meeting with Yokomitsu, rejected the proposal.

The Environment Ministry plans to hold six months of briefings for local residents from October and start bringing in the waste to Tochigi around summer 2014.

The prefectures of Miyagi, Ibaraki and Chiba also will be targeted to host specific waste disposal sites this month.

There were an estimated 4,445 tons of highly radioactive waste, including cesium-laden mud and ash radiating more than 8,000 becquerels per kilogram, designated for disposal in Tochigi Prefecture as of Aug. 3. the waste is eventually **expected to exceed 9,000 tons.**

Among the nine prefectures where radioactive waste has been sent due to the Fukushima No. 1 crisis, Tochigi is the first to be targeted for hosting a specific disposal site. The eight others are Iwate, Miyagi, Fukushima, Ibaraki, Gunma, Saitama, Chiba and Tokyo.

The government wants each of the nine prefectures to dispose their designated allotments of the waste on their own turf.

In addition to Tochigi, the prefectures of Miyagi, Ibaraki, Chiba also have agreed to build disposal facilities if they can get approval from the proposed host communities. These three prefectures will be asked to host specific waste disposal sites this month.

September 11, 2012

Decontamination not so obvious

Japan finds decontaminating radiation challenging

http://www3.nhk.or.jp/daily/english/20120911_03.html

Japan's central and local governments are still struggling to clean up radioactive contamination from the Fukushima nuclear accident.

The central government is responsible for the cleanup in 11 municipalities inside Fukushima prefecture. It is subsidizing decontamination in 104 municipalities outside the zone.

But the government has taken time to classify the zone according to levels of contamination, so the cleanup has been slow to start. Only Tamura City in the area has begun the process.

In the meantime, some municipal governments have begun preliminary surveys.

They have found roofs and walls in many houses badly damaged from the March 11th earthquake and aftershocks. That means high-pressure water sprays cannot be used in the decontamination.

Some residents are demanding that their houses be repaired first. But the central government has said no, slowing down the radioactive cleanup.

The decontamination plan has been completed in 70 percent of the 104 municipalities outside the evacuation zone. But 25 areas have yet to begin

September 16, 2012

September 16, 2012

Filters and wet dusting would help

'The government could still save lives'

http://www.japantimes.co.jp/text/fd20120916a1.html

Nuclear expert witness Arnie Gundersen discusses Fukushima's radioactive fallout

By DAVID MCNEILL
Special to The Japan Times

In the immediate aftermath of last year's Fukushima triple meltdown, Japan's government and pronuclear experts scrambled to dampen public concern. Experts waved away fears about radiation, cabinet ministers scoffed at comparisons to Chernobyl, and the word "meltdown" itself was effectively scoured from the media.

Some observers, however, were quick to hit the panic button. One of the best known was nuclear expert witness, who predicted that the disaster would lead to 1 million extra deaths from cancer.

Eighteen months later, there is still no consensus on the eventual impact of the No. 1 plant's payload, or even on the amount of radiation released, although the most bloodcurdling initial assessments seem to have largely evaporated.

The final official tally for escaped radiation is 900,000 terabecquerels, about one-fifth the amount released by Chernobyl.

Gundersen, a nuclear engineer, says that's an underestimate. He puts the release of cesium at about half that of Chernobyl, and says little attention has been paid to radioactive gases, Xenon and Krypton, which poured out of the No. 1 plant in quantities "two to three times" greater than the 1986 Ukraine meltdown. He is sticking to his original alarming estimate of cancer fatalities.

"The problem is there are 130 million people (sic) in Japan," he said on a recent visit to Tokyo. "A third of them will die from cancer in the next 30 years. One million more is less than 2 percent — are you going to find it?"

Gundersen bases much of his assessment of Fukushima on what he learned from America's worst nuclear accident, the 1979 partial meltdown at the Three Mile Island plant in Pennsylvania. As an expert witness during the probe that followed, Gundersen said the official estimate of radioactive releases there was also much too low. "You have to remember, we don't know how much radiation was released. It's guys like me who have to calculate it." His assessment upped the official radiation figure for the accident by five times. "I'm dead sure that's too low," he says, adding that he believes the true figure could be 15 times higher than the industry estimate.

So where are all the cancers that might be expected from such a release? A 20-year statistical survey (1979-1998) by the Pennsylvania Department of Health found no evidence of elevated cancer deaths among residents within a five-mile radius of the plant, though it noted that the long-term impact still needed monitoring. A landmark 1990 Columbia University study found elevated lung cancer and leukemia rates downwind of the plant, but concluded that the results did not "provide convincing evidence that radiation releases ... influenced cancer risk." The research is disputed by Gundersen and others: He cites the work of Steve Wing, an epidemiologist who says he has tracked 10,000 extra deaths from lung cancer in the first six to seven years after the accident.

"The same gases (Xenon and Krypton) that caused those cancers leaked out of the containment vessel at the Daiichi (No. 1) plant," he says. "Nobody is talking about it." He says the gases quickly disperse and are notoriously hard to measure. Other emissions are more straightforward. Plutonium is heavy and does not widely disperse. Cesium is relatively easy to track. He also cites a recent reported study claiming that nearly 36 percent of children in Fukushima Prefecture have cysts or nodules on their thyroids as evidence of iodine contamination from the plant.

The insidious uncertainties of the impact of radiation are a feature of all three major nuclear accidents. About 2 million people are still under permanent medical monitoring, quarter of a century after the Chernobyl disaster. Among children, monitoring is recommended for about 400,000 who are believed to have received substantial levels of radiation to their thyroids. Debate on Chernobyl is framed by two startlingly different studies: a 2005 probe by the International Atomic Energy Agency, the WHO and the UN Development Program, which concluded that Chernobyl-related cancers were likely to result in fewer than 4,000 deaths; and a report published by the New York Academy of Sciences, which attributes 985,000 fatalities to the fallout.

Fairewinds Energy Education, the nonprofit organization that Gundersen runs with his wife Maggie and a team of volunteers, has become the go-to place for skeptics of the official nuclear line. He says Fairwinds' website (www.fairewinds.org) has had 8 million hits in the last year. Some of the content has been translated into Japanese.

The site airs often little-publicized information, such as Gundersen's claim that the Hamaoka plant in Shizuoka Prefecture suffered a serious (though not dangerous) accident before it was closed last year. He says salt water flooded back into reactor 5, effectively making it useless. "Hamaoka 5 will never restart.

That piece of equipment is just so severely damaged. The chlorine (in the salt water) attacks the stainless steel."

Gundersen and his team use the site to reach people in Japan, who send samples for what he calls independent research into the Fukushima aftermath. "People started sending us air filters from cars in Tokyo and Fukushima Prefecture," he says. "We now have five or six dozen. A car normally uses the same amount of air as a person, so this is what is inside people's lungs." He says the filters from Fukushima had so much cesium radiation they "turned X-ray film completely white in five days."

"We used a spinning microscope to look at the size (of the cesium particles), and they're in the order of two microns, which means that they float. Once they get into lungs they settle."

An embassy in Tokyo — he declines to say which — sent his team filters from a rooftop system built to withstand a chemical, biological or nuclear attack. "The filters too were loaded with cesium, not as bad as Fukushima but still very serious." He says Fairewinds is now asking ordinary Japanese householders to send vacuum-cleaner bags, to sample house dust. "We've found one that's 120 km from the site and it's 100,000 becquerels per kilogram. That's the highest, but we've found many samples in the 20,000 to 30,000 becquerel range. In Japan, people sleep on the floor, so the internal exposure is significant. But the Japanese government and the IAEA (International Atomic Energy Agency) are not looking at this at all."

Gundersen says the Fukushima crisis has triggered a huge amount of independent monitoring, citing Safecast, a nonprofit group that checks and publicizes radiation (blog.safecast.org), as the most striking example. "There is a lot of data out there. The government should take that data and back-calculate what came out of the plant. Nobody is doing that yet. They're making assumptions about what happened.

"Whatever the number is, I think it can be reduced by 30 percent. There are simple public health things than can be done but because everyone wants to avoid public fear nobody is talking about it. If you talked about indoor care and high-efficiency filters on vacuum cleaners, wet dusting, not dry dusting, to keep down particles, that would help. If I were the Japanese government, I'd be telling people to do that."

September 20, 2012

Cesium in Fukushima fish

Excessive cesium found in 9 types of fish caught near Fukushima plant

http://mainichi.jp/english/english/newsselect/news/20120920p2g00m0dm004000c.html

FUKUSHIMA (Kyodo) -- Tokyo Electric Power Co. said Wednesday that excessive levels of radioactive cesium were detected in nine types of fish caught between Aug. 20 and Sept. 5 in the sea within a 20-kilometer range of the crippled Fukushima Daiichi nuclear power plant.

Cesium measuring as much as 1,350 becquerels per kilogram was found in greenling hauled 1 km off the coast of Minamisoma in Fukushima Prefecture on Sept. 5. The level of cesium was far higher than the 100 becquerels deemed by the Japanese government as safe for consumption.

The utility, which operates the crisis-hit nuclear plant, also said 540 becquerels and 390 becquerels of radioactive cesium per kg were detected respectively in rock fish and skate caught in the waters.

Fishing in the sea off Fukushima Prefecture is voluntarily restricted except for trial fishing for certain types of marine products, so such contaminated fish would not have made it to markets, according to the prefectural government.
A record high 25,800 becquerels of cesium per kg was found in greenling caught on Aug. 1 at a depth of 15 meters in the same waters, according to Tokyo Electric.

September 21, 2012

What will become of the Idagawa district?

Existence of disaster-hit coastal district in Fukushima threatened

http://mainichi.jp/english/english/newsselect/news/20120921p2a00m0na009000c.html

MINAMISOMA, Fukushima -- An administrative district along the coast of Minamisoma, Fukushima Prefecture, is in danger of disappearing as the devastating effects of the March 11, 2011 tsunami and ensuing disaster at the Fukushima No. 1 Nuclear Power Plant continue.

Reclaimed land in the Idagawa district that once bore bountiful rice crops has been damaged by seawater carried in by the tsunami, and the soil in paddy fields and a local water-supplying dam are contaminated with radiation from the crippled nuclear plant. There is no indication that residents who lost their homes in the disaster will return.

Before the March 2011 earthquake and tsunami, the Idagawa district saw golden rice plants swaying in the wind each autumn. But now it is overrun with tall weeds. All that can be seen on the land are restoration workers and rubble.

"I expect most of the residents won't return," said the 65-year-old head of the district, Munenobu Sato, who resides in a temporary dwelling set up after the earthquake. He said he wants the district to remain, but that could be difficult.

In February last year, the Idagawa district was home to 251 people in 63 households, but nearly 90 percent of the homes in the area were struck by the disaster, and 20 people died. Some 180 hectares of rice paddies that stood at sea level sank, and were covered with water until August this year. In March this year, soil at the bottom of a dam in the Fukushima Prefecture town of Namie that provided water for rice paddies was found to contain cesium with a high radioactivity level of 260,000 becquerels per kilogram.

People in the Idagawa district, where land reclamation was carried out between the Meiji and Taisho eras, have opposed the construction of nuclear power plants.

"The idea of our predecessors that it would be dangerous if there was a nuclear power plant explosion wasn't wrong," commented 81-year-old Waichi Oishi whose family has been in the Idagawa district since his parents' generation.
Last year, the Minamisoma Municipal Government proposed a group relocation to higher ground near the district rice fields, but Idagawa refused.

"Nobody wants to produce rice here," said 76-year-old Masakuni Hozuki, recalling last year's devastating disaster. "The tsunami covered the roof of my home, and when the waves subsided, my home was gone."

It is expected that nearly all of the Idagawa district will be designated as an area at risk of a disaster, meaning homes cannot be built there. It is possible for farmers to construct sheds and resume agricultural work, but Sato comments, "The number of people who want to do that is zero."

Some 200 residents from the district have evacuated to other areas. There are strong calls for the Idagawa district to remain, but its future is up in the air. The Minamisoma Municipal Government is considering the prospects for each district, where the state of evacuations and the return of residents are at different stages, but says "There may emerge some administrative districts whose continued existence is difficult."

September 22, 2012

Futaba town logs highest radiation level day after Fukushima accident

http://mainichi.jp/english/english/newsselect/news/20120922p2g00m0dm040000c.html

FUKUSHIMA (Kyodo) -- A district in Futaba town, about 5.6 kilometers northwest of the Fukushima Daiichi Nuclear Power Station, was exposed to the highest radiation level outside the plant after it was crippled by the quake and tsunami of March 11, 2011, according to data released by the prefecture Friday.

An hourly dose of 1,590 microsieverts was logged in the Kamihatori area of Futaba at 3 p.m. the day after the disaster struck, the data retrieved from radiation monitoring posts showed. The recorded amount exceeds even the annual radiation exposure limit of 1,000 microsieverts set by the government for the general public.

The natural disaster stuck the region on the afternoon of March 11, triggering the crisis at the Tokyo Electric Power Co. plant. A hydrogen explosion took place at the No. 1 reactor of the plant at 3:36 p.m. the following day.

Given the record dose was marked before the explosion, "radioactive materials must have been leaking even before the blast and wind direction may have played a role," an official said.

The hydrogen explosion came after operations to release steam from the No. 1 reactor began on the morning of March 12 to lower pressure inside the reactor container.

The prefecture has been retrieving data from its 25 monitoring stations near the nuclear plant, as some of them had experienced communication disruptions or power outages due to the earthquake and tsunami.

What to do about "specific waste"

News Navigator: What is the 'specified waste' from the Fukushima accident?

http://mainichi.jp/english/english/perspectives/news/20120922p2a00m0na012000c.html

Final disposal facilities for "specified waste" from the Fukushima No. 1 Nuclear Power Plant disaster are planned for construction. The Mainichi answers common questions readers may have about this waste.

Question: What is "specified waste"?

Answer: Sewage, straw, grass, ash from burned trash, and other waste with radioactive cesium concentrations of over 8,000 becquerels per kilogram. Radioactive substances spreading from the Fukushima plant have contaminated the environment, and to reduce the impact on people's lives as soon as possible, the national government has taken responsibility for disposing of the specified waste according to a special measures law created for the disposal of radioactive waste.

In Fukushima Prefecture, the construction of "mid-term storage facilities" has become a problem, but those are somewhat different from final disposal facilities. Those storage facilities are to temporarily hold specified waste or contaminated soil that exceeds 100,000 becquerels per kilogram in landfills.

Q: Can final disposal facilities be built anywhere?

A: No, the special measures law dictates that the prefecture where the waste comes from must dispose of it. The relevant prefectures in this situation are Iwate, Miyagi, Fukushima, Tochigi, Gunma, Ibaraki, Chiba, Niigata, and Tokyo. The national government wanted each prefecture to set up final disposal facilities using existing facilities, but in Miyagi, Tochigi, Gunma, Ibaraki and Chiba Prefectures, new facilities will have to be made, as these prefectures either do not have their own waste facilities or they need them in their current state. By the end of this month, the national government will notify each prefecture of the candidate sites for new facility construction.

Q: Why is Yaita, Tochigi Prefecture, objecting to the Sept. 3 designation of a national forest there as a construction site?

A: In April, vice-environment minister Katsuhiko Yokomitsu visited the prefecture to ask for cooperation in the
construction, and he received some amount of understanding. However, the Yaita city government says that the national government's announcement of the forest as a candidate site came suddenly, with no prior explanation. The national government conducted careful preparations like carrying out surveys on ground properties, to look for the presence of rare animals, and the locations of dams and water sources, but the Yaita city government says it was not informed at all about that process.

Q: What condition is the designated waste in now?

A: As of August, there were around 42,575 tons across the nine prefectures. Currently the designated waste is spread across various locations where it is being temporarily held. There are problems with this, as further temporary storage of burned trash ash, for example, will become difficult if processing of the waste does not proceed. This could lead to a halt in operations at trash burning facilities and a halt to garbage collection.

Regarding the final disposal facilities' construction, in addition to having a concrete foundation beneath a concrete floor where the facilities will hold the waste, the national government is stressing that it will work to prevent airborne leakages of radioactive materials by having a concrete lid on top. However, local opposition to construction of the sites is expected, and an explanation of a clear, long-term view from the national government is desired. (Answers by Shun Iwakabe, Utsunomiya bureau)

September 23, 2012

Kamihatori area in Futaba most intensely irradiated

Kamihatori district exposed to 1,590 microsieverts per hour before first explosion at nuke plant

Futaba worst hit by Fukushima fallout

http://www.japantimes.co.jp/text/nn20120923a3.html

Kyodo

FUKUSHIMA — The area most intensely irradiated by the meltdowns at the Fukushima No. 1 power plant was the Kamihatori district in the town of Futaba, about 5.6 km northwest of the facility, data collected by the prefecture show.

Just before a hydrogen explosion ripped apart the No. 1 reactor building, the plant's cohost was being zapped by 1,590 microsieverts of radiation per hour at 3 p.m. March 12, 2011, the day after the Great East Japan Earthquake and ensuing tsunami crippled the complex, data retrieved from monitoring posts showed Friday.

At present, the government's limit for the public is set at 1,000 microsieverts for an entire year.

When the natural disasters struck the Tohoku region on the afternoon of March 11, they triggered a blackout at the Tokyo Electric Power Co. plant that led to three core meltdowns. A hydrogen explosion blew up the building housing the No. 1 reactor at 3:36 p.m. the following day.

Given that the record dose was detected before the explosion, "radioactive materials must have been leaking even before the blast, and wind direction may have played a role," an official said.

The first explosion occurred after steps had been taken to vent steam from the No. 1 reactor on the morning of March 12 to reduce rapidly building pressure.

The prefecture has been retrieving data from its 25 monitoring stations near the plant after some were hampered by communications disruptions or power outages caused by the quake and tsunami.

New debris reaches Hawaii

AP

HONOLULU — A large plastic bin is the first confirmed piece of marine debris from the March 2011 tsunami to arrive in Hawaii, the National Oceanic and Atmospheric Administration reported.

Japanese consular officials confirmed that the blue bin found floating in the ocean last week is from Fukushima Prefecture, Ben Sherman, a NOAA spokesman in Washington, said Friday, noting it is the 12th confirmed piece of debris to arrive in U.S. or Canadian waters.

The bin was spotted off Waimanalo on the southeast coast of Oahu by Makai Ocean Engineering staff, and was retrieved by the Hawaii Undersea Research Laboratory. Used for transporting seafood, the 1.2-meter cube bears the name Y.K. Suisan Co. Ltd., Hawaii's Department of Land and Natural Resources said.

Crabs and barnacles were found on the bin, along with five local seabirds. There were no foreign plant or animal species in or on the bin, but it has been put in quarantine anyway, state officials said.

Nikolai Maximenko, a University of Hawaii researcher and ocean currents expert who is studying the trajectory of tsunami debris, said the bin's arrival is consistent with his forecasts regarding the arrival of the first pieces in the state's waters.

"It came at the right time, according to our model," he said. "But in some sense, it could just be a coincidence."

One million to 2 million tons of debris remain in the ocean, but only 1 to 5 percent could reach U.S. and Canadian shorelines, Maximenko has estimated.

September 24, 2012

Showcasing nuclear clean-up

Nuclear decontamination technologies showcased

http://www3.nhk.or.jp/daily/english/20120924_27.html

Cleaning up nuclear fallout is a top priority for municipalities in Fukushima Prefecture and surrounding areas affected by last year's nuclear accident.

An exhibit showcasing the latest technologies for decontamination opened in Tokyo on Monday.

The 3-day event, the first of the kind in Japan, is being attended by more than 100 firms and organizations involved in the clean-up.

One of the technologies on display is a road decontamination device developed by a construction company. The barrow-like machine blows out pellets of dry ice that freeze radioactive dust on the road surface, allowing the machine to easily remove the contamination.

A company representative says a test run of the machine in March on an expressway in Fukushima lowered radiation levels on the road by 70 percent.

A Tokyo chemical maker is showcasing a filter that removes radioactive cesium from water. The blue-colored filter is coated with powder that absorbs the element.

An electronics maker has developed a camera that can visualize gamma rays. The invisible ray is a common type of radioactive emission. The camera is already being used to identify radiation hot-spots in parks and other areas.

The exhibition at Tokyo's Science Museum will run until Wednesday.

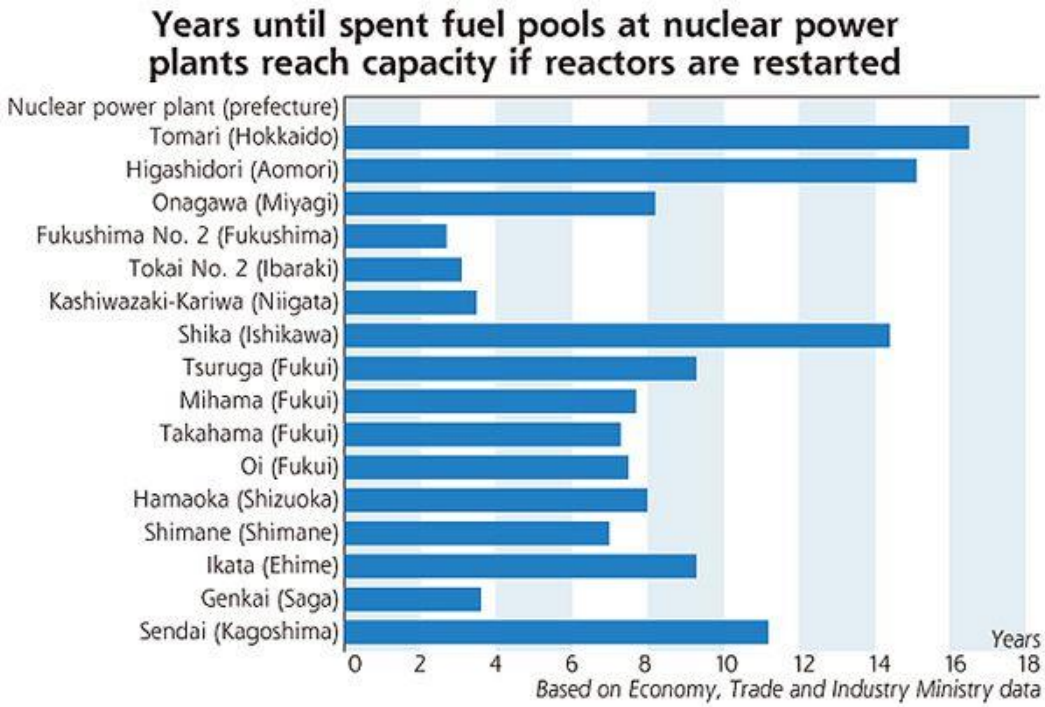
September 25, 2012

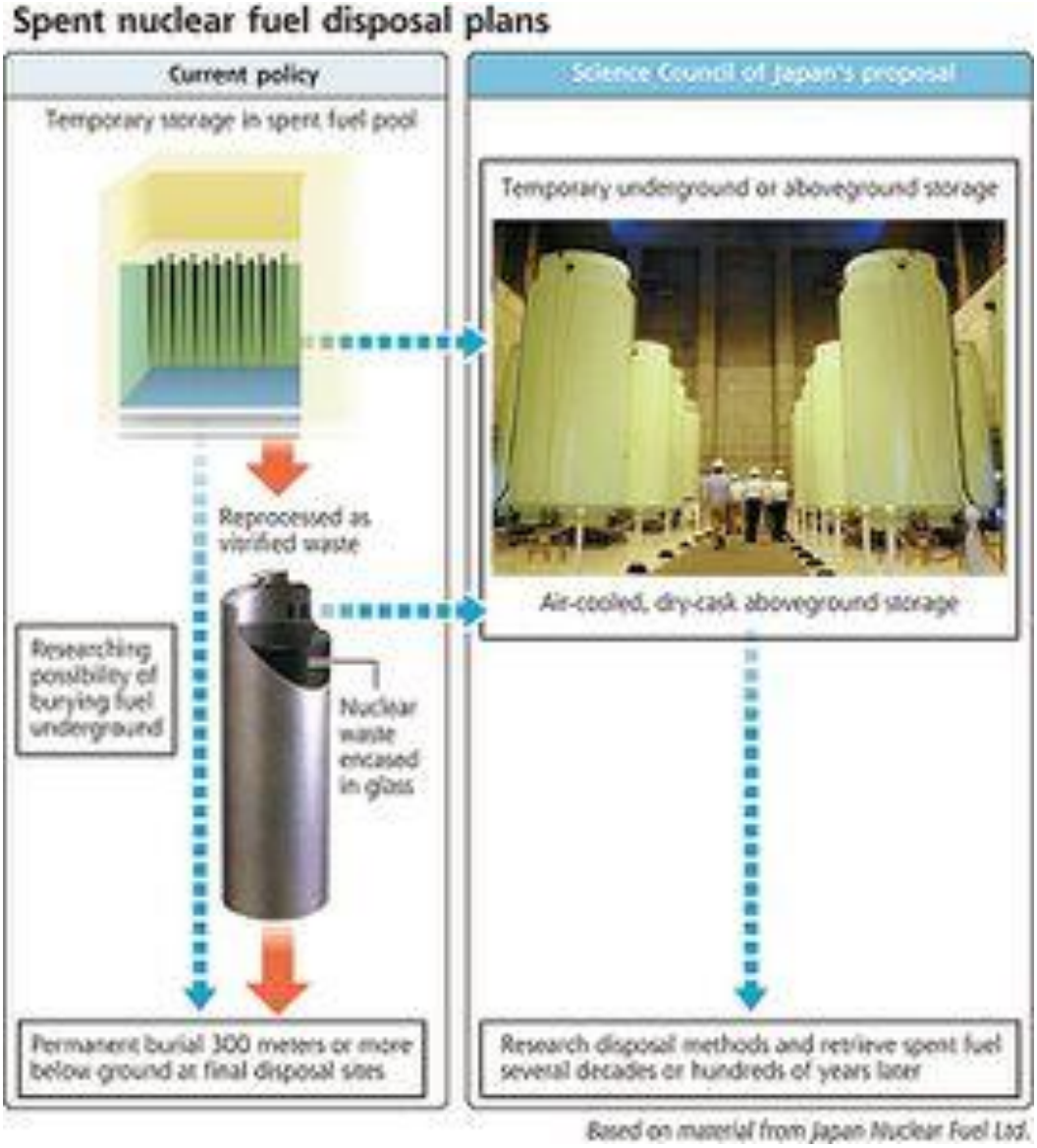
Confusion confusion

Locations for disposal of nuclear fuel lacking / New proposal calls for temporary storage while studying stability of permanent underground sites

http://www.yomiuri.co.jp/dy/national/T120924003848.htm

Koichi Yasuda and Takashi Hagihara / Yomiuri Shimbun Staff Writers





Methods and locations for the disposal of nuclear fuel remain unclear as the government maintains a directionless course over its nuclear policy, which is full of inconsistencies on eliminating nuclear power by the 2030s.

The government has mapped out its nuclear policy in a document on "innovative energy and environmental strategy," but it failed to clarify how spent nuclear fuel from power plants is to be disposed of.

The strategy referred to beginning research on burying spent fuel underground as a final disposal measure, but at the same time, said a project to reprocess spent fuel will continue.

Finding final disposal sites is certain to become more difficult as public distrust of nuclear power has been growing following the crisis at the Fukushima No. 1 nuclear power plant.

"It's impossible to win residents' understanding," said an official of the Nuclear Waste Management Organization (NUMO) after he learned the government called for research into burying the fuel in its new energy policy. The main pillar of the policy is zero dependence on nuclear power.

NUMO, a private organization, has been trying to find final disposal sites for spent fuel.

Currently, all spent fuel from nuclear power plants is reprocessed and plutonium and uranium are extracted from the fuel and recycled as plutonium-uranium mixed oxide (MOX) fuel.

The remaining highly radioactive waste is to be vitrified and permanently buried 300 meters or deeper underground.
The government also included in the current plan an option to dispose of spent fuel by directly burying it underground in anticipation of the future zero nuclear target.

However, if research to bury the fuel underground begins, this will surely increase the hurdles in finding final disposal sites.

If nuclear waste is buried before being reprocessed, the volume is expected to be about three times that of reprocessed waste, making it more difficult to secure disposal sites.

"There aren't many technical problems. The thing that's difficult is addressing the unease of residents who worry that recriticality may occur as [the waste] contains plutonium and other things," said Osamu Tochiyama, director general of Nuclear Safety Research Association's Radioactive Waste Disposal Safety Research Center.

In 2002, the government and NUMO said buried vitrified waste would not affect the environment although it would take several tens of thousands of years until radiation would reach natural levels.

That year, they started searching for potential final disposal sites. But the only local government that applied to be the site was Toyo, Kochi Prefecture. The town later rescinded its application and there has been no further progress on the issue.

"There has been no research to directly bury spent fuel underground, and it will take time to establish the technology. It's almost certain there will be more delays in finding sites," a NUMO official said.

Under the circumstances, a proposal submitted by the Science Council of Japan on Sept. 11 created a stir as it proposed new measures to dispose of spent fuel.

The proposal differs greatly from the current government plan, noting that it is difficult to anticipate the long-term stability of the Earth's strata.

"[We propose] temporarily storing spent fuel in a way that makes it possible to retrieve after several decades or hundreds of years. During that time we can study the stability of strata. We can also study appropriate measures to dispose of the fuel and look into ways to lower the risk of radioactive substances," the proposal said.

The council opted for temporary storage as it wants to find a solution by proceeding to discussions over the deadlocked nuclear waste disposal issue.

The council made this move as it feared there will be no space to store spent fuel that has been piling up toward the capacity of spent fuel pools at nuclear power plants.

If every nuclear reactor restarted operations, the pools are expected to reach capacity in an average of six years. The pools at the Tokai No. 2 nuclear power plant in Ibaraki Prefecture, the Kashiwazaki-Kariwa nuclear power plant in Niigata Prefecture and the Genkai nuclear power plant in Saga Prefecture are expected to reach capacity in about three years.

NUMO is perplexed by the council's proposal.

"The technology to safely bury [spent fuel] underground for several tens of thousands of years has been established. [We're embarrassed] to hear a proposal reversing the initial plan," a NUMO official said.

The Japan Atomic Energy Commission under the Cabinet Office, which asked the council to draw up a proposal, is also unsure how to handle the council's proposal.

Meanwhile, the government is looking to abolish and reorganize the commission that set the basic atomic energy policies.

The government's strategy and its many inconsistencies will cast further uncertainty over types and amounts of nuclear waste, adding another layer of confusion.

September 27, 2012

New waste site in Takahagi forest

Govt. proposes second radioactive waste site

http://www3.nhk.or.jp/daily/english/20120927_15.html

The Japanese government has proposed a second site for disposal of low-level radioactive waste in prefectures contaminated by the accident at the Fukushima Daiichi nuclear plant.

On Thursday, Senior Vice Environment Minister Katsuhiko Yokomitsu visited Governor Masaru Hashimoto of Ibaraki Prefecture, which borders Fukushima.

Yokomitsu suggested as a disposal site a national forest in Takahagi in the prefecture. He explained the forest is located far from residential areas, has sufficient space and is topographically and geologically stable.

Governor Hashimoto replied he would have to consult local residents and municipalities.

Yokomitsu later visited Takahagi City Hall and met mayor Yoshio Kusama, who rejected the government's proposal.

Earlier this month, Environment Ministry officials met similar hard opposition when they proposed a national forest in Yaita in Tochigi Prefecture as a disposal site for the prefecture's own contaminated ash and mud.

Each of Japan's 47 prefectures is required to specially dispose of its own radioactive ash and mud with cesium levels of more than 8,000 becquerels per kilogram. The government allows waste of below 8,000 becquerels to remain in landfills.

Takahagi says no

City opposes radioactive waste site proposal

http://www3.nhk.or.jp/daily/english/20120927_32.html

Japan's government has again met severe local opposition when proposing a site for permanent disposal of ash and mud exposed to radiation from last year's nuclear plant accident.

Senior Vice Environment Minister Katsuhiko Yokomitsu met Ibaraki Governor Masaru Hashimoto and Takahagi Mayor Yoshio Kusama separately on Thursday, to seek their cooperation on the matter.

Yokomitsu suggested a national forest in Takahagi City for the site, saying the forest has enough space and is far from residential areas.

He asked the mayor for a chance to explain the proposal to local residents, saying his ministry will ensure safety of the disposal facility.

Mayor Kusama voiced firm opposition, criticizing the government for abruptly reporting the decision without consultation during the selection process.

Earlier this month, the ministry triggered similarly strong opposition when it proposed a national forest in Yaita City in Tochigi Prefecture as a disposal site for the prefecture's own contaminated ash and mud.

The government plans to dispose of ash and mud with radioactive cesium levels of more than 8,000 becquerels per kilogram within each prefecture. The government allows waste below the 8,000 mark to remain in landfills.

A similar selection process is underway for other prefectures, but the ministry is not revealing candidate sites for fear of possible confusion in communities.

The government says it hopes to win local consent and start building a disposal facility next summer.

September 29, 2012

Official radiation figures

Radiation near Fukushima plant falls by 20%

http://www3.nhk.or.jp/daily/english/20120929_15.html

Japan's Science and Technology Ministry says the average radiation level 1 meter above ground within an 80-kilometer radius of the Fukushima Daiichi plant fell by more than 20 percent during a 7-month period up to June.

Radiation levels were calculated using data collected both on ground and in the air using a helicopter in June.

The average radiation level at about 140,000 locations within an 80-kilometer radius of the plant fell by about 23 percent from early November of last year to June.

The decrease was almost 10 percentage points higher than 14 percent, the amount believed to be due to natural decline.

The ministry says, although radioactive materials may have been washed away by rain, it will continue to carry out the survey, as flight routes of the helicopters may have influenced the data collected.

October 2, 2012

Forest in the no-entry zone to be studied

Forest radioactive contamination to be monitored

http://www3.nhk.or.jp/daily/english/20121002_10.html

A Japanese nuclear research agency will conduct a long-term study of radioactive fallout on Fukushima forests to see how the contamination affects human habitats.

The government-affiliated Japan Atomic Energy Agency plans to begin the study later in October. It will cover forests within 20 kilometers of the crippled Fukushima Daiichi nuclear plant. Most of the area has been designated as a no-entry zone.

The study will also monitor rivers that collect underground spring-water from the area.

Researchers will measure the levels of radioactive cesium and other substances in soil and water for around 20 years.

They hope the long-term monitoring will enable them to predict how the contaminants are carried out of the forests by water and wind, and how they affect human habitats and the sea.

October 7, 2012

Farmers decontaminate their land themselves

Farming family in Fukushima village decontaminate own land

http://mainichi.jp/english/english/newsselect/news/20121007p2a00m0na005000c.html

Hisato Ide, center, and his family remove rocks during work to decontaminate pasture land in Kawauchi, Fukushima Prefecture. (Mainichi)

FUKUSHIMA -- Three members of a dairy-farming family who remained within the 30 kilometer zone around the quake- and tsunami-ravaged Fukushima No. 1 Nuclear Power Plant despite an evacuation order last year **are now working to decontaminate their pasture land themselves.**

Hisato Ide, 60, his 61-year-old wife Yoko and their 36-year-old son Atsushi are replacing soil on their property in the Fukushima Prefecture village of Kawauchi to a depth of about 30 centimeters. The work has turned up rocks and pebbles, and Ide is gathering them up.

"If I leave the work to someone else, I'll grow weak. If I do what I'm able to now, it'll give me hope for next year," he says.

Ide's family continues to look after about 30 cows on their property. After the family resumed milk shipments in June last year, when the village of Kawauchi was still designated as a "caution zone," they refused to be interviewed by the media.
"A lot of dairy farmers put their cows down and they are ridden with guilt. If they learned about us, it would only deepen their sadness," Yoko Ide explained.

Soon after the Fukushima nuclear disaster broke out, the whole of Kawauchi village was evacuated. But Ide was not about to part with his cows.

"If dairy cows aren't milked for even one of two days, they can get mastitis, and in time they'll die. We can't evacuate from here for even just a few days. If all the cows die then we'll end up right back at square one," he said. When he told his wife and son that he was staying, they understood him right away. The family was the only one to remain.

Ide milked his cows each day, only to throw away the milk. When people asked him, "Why don't you flee this place?" it sounded at times like a jab of criticism.

Thinking that dispelling people's uneasiness about radiation was the only way to make progress, Ide decided to purchase U.S.-produced cattle feed, which had soared to six times the regular price. In June last year no radioactive substances were detected in his cows' milk and the Fukushima prefectural dairy cooperative association started collecting his milk again. Ide could feel he was making steps toward the daily life he had lived before the March 2011 disasters.

"At the time, I felt keenly that I could only rely on myself and my family. But rather than lamenting that fact, if I think that's just the way it is, then it takes the difficulty out of any hardship," he says. His milk has been praised for its quality, and it is selling for a higher price than what it sold for before the March 2011 disasters.

The village of Kawauchi declared a return of residents in January this year, and in April, its designation as an evacuation zone was lifted. If Ide waited, the village would arrange to have his land decontaminated, but he decided to do the job himself. And he is now willing to talk to the media.

"If our family members understand each other and cooperate, then we can overcome the situation. It's only natural for the government and Tokyo Electric Power Co. (the operator of the Fukushima No. 1 Nuclear Plant) to fulfill their responsibility, but we have to become strong too," he said, smiling.

Iron powder to absorb dissolved cesium and more

Japanese firms develop decontamination products

http://www3.nhk.or.jp/daily/english/20121008_02.html

Japanese companies are developing new materials to help dispose of radioactive elements released during last year's Fukushima nuclear disaster.

Major metal maker Dowa Holdings has developed iron powder that absorbs radioactive cesium dissolved in water.

An experiment shows the iron powder can cut in half the amount of cesium in water. The used powder can then be removed with magnets.

Leading chemical textile maker Toyobo has combined 2 cesium-absorbing elements to create a material that's more effective in decontamination.

The firm says a test demonstrates that the new material can remove 99 percent of 10 milligrams of cesium in one liter of water.

Elsewhere, chemical maker Union Showa has produced a new material that seals in cesium after being burned solid in high heat. The material can be used in storing waste collected in decontamination work.

Cesium is contained in the incinerated ash of contaminated debris.

The central and local governments are being urged to speed up their decontamination work.

The companies plan to conduct verification tests and call on these authorities to adopt their new technologies.

October 11, 2012

Cesium in tobacco

Above-limit radioactive cesium detected in Fukushima tobacco, JT says

http://www.japantimes.co.jp/text/nn20121011b3.html

Jiji

Japan Tobacco Inc. says radioactive cesium levels in some dried tobacco leaves harvested this year in Fukushima Prefecture exceeded the company's limit of 100 becquerels per kilogram.

JT said Tuesday it will cancel the purchase of some 4.5 tons of leaves found to be contaminated.

Cultivation of tobacco leaves was suspended last year in Fukushima Prefecture due to radioactive contamination from the crippled Fukushima No. 1 nuclear power station.

Sample checks found 110.7 becquerels of radioactive cesium in tobacco grown by three farms in Shirakawa. Radioactive cesium levels were below the limit in leaves from other regions of the prefecture, JT said.

It was the first time the results of inspections conducted by the company have been above the limit.

Sample checks of tobacco leaves from the prefectures of Iwate, Miyagi, Yamagata, Ibaraki and Tochigi showed radioactive cesium levels below the limit, the company said.

JT will conduct inspections in three more stages, including before tobacco is commercially processed, it said.

October 19, 2012

Beef still contaminated by cesium

Cesium above new limit in Miyagi beef

http://www.japantimes.co.jp/text/nn20121019a2.html

Jiji

SENDAI — Radioactive cesium levels above the government's new limit have been found in beef from Miyagi Prefecture, the prefectural government said.

Meat from a cow shipped by a farmer in Tome was found to contain more than 150 becquerels of radioactive cesium per kilogram, the Miyagi Prefectural Government said Wednesday.

The stricter limit of 150 becquerels for beef and rice took effect Oct. 1. The previous limit was 500 becquerels per kilogram.
It is the first time beef with radioactive cesium levels above the tightened limit has been found.

The cow was shipped to a slaughterhouse in the Shibaura district in Tokyo and a radioactivity check on the meat was conducted Tuesday, the prefecture said. The meat was discarded, officials said.

The prefecture is investigating, suspecting that rice straw eaten by the cow was contaminated by fallout from the Fukushima No. 1 nuclear plant disaster.

Miyagi Prefecture told the farmer not to ship any more cows until the investigation is completed, and asked nearby ranchers to suspend shipments voluntarily.

October 21, 2012

Possible mutation

White-colored king crab found in Hokkaido

http://mainichi.jp/english/english/newsselect/news/20121021p2a00m0na001000c.html

The white-colored king crab is seen at the Wakkanai Aquarium in Wakkanai, Hokkaido Prefecture, on Oct. 16. (Photo courtesy of the Wakkanai Aquarium)

WAKKANAI, Hokkaido -- A white-colored king crab has been brought to the Wakkanai Aquarium here, in what is thought to be the result of a mutation.

King crabs are usually reddish-purple in color.

"Until now we have kept purple and blue crabs, but this is the first time for a white one," said a surprised Hidenori Takai, 38, head caretaker at the aquarium.

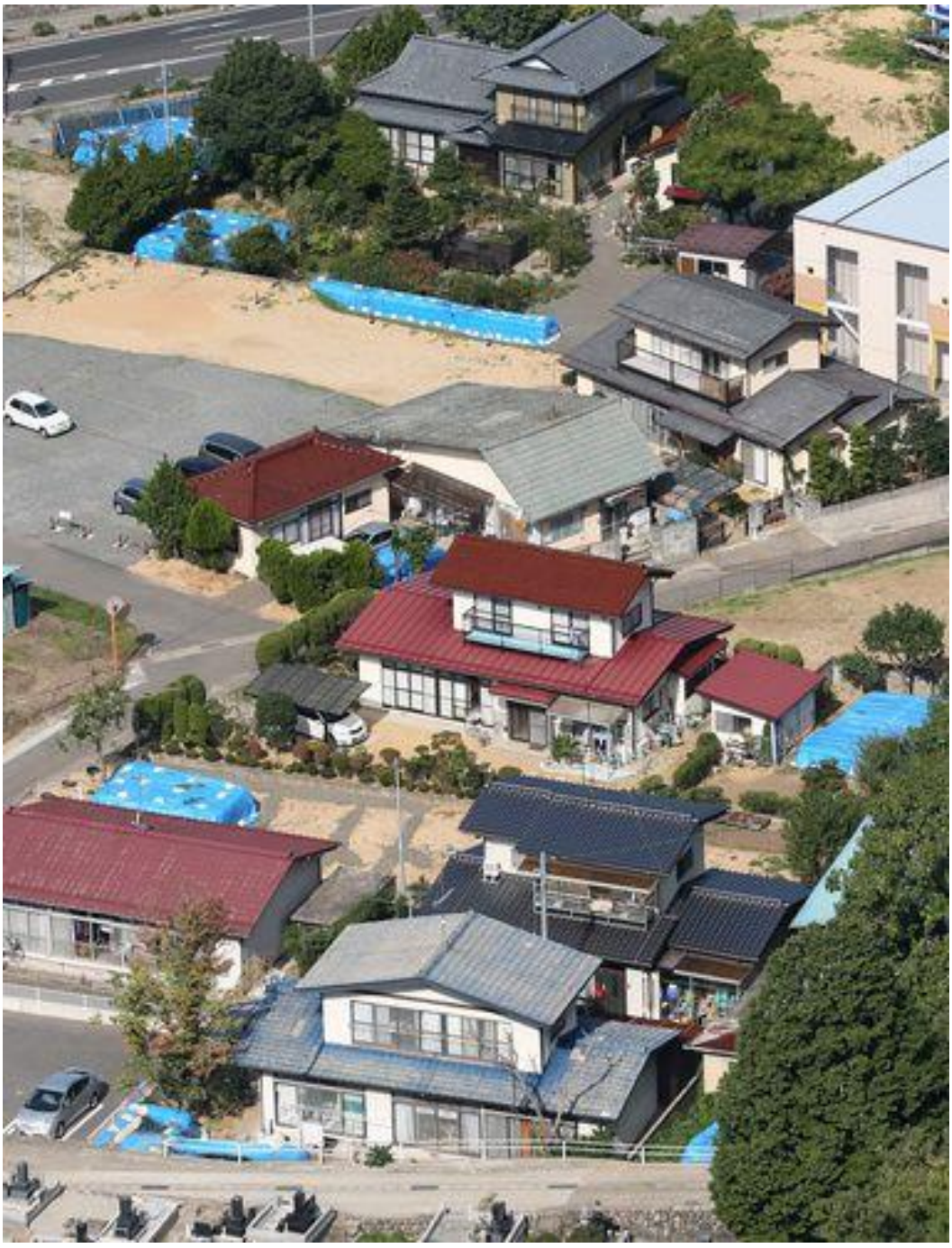
The crab was among king crabs brought into a marine product processing facility in the city on Oct. 10. Apart from the tips of its claws and part of its shell, it is almost completely white. It is a large female, weighing around two kilograms and having an around 25-centimeter-wide carapace. With its legs extended it is almost a meter wide. The aquarium plans to begin putting it on display as early as the end of this month.

October 24, 2012

Home sweet home

Homes in Fukushima become storage sites for radioactively contaminated soil

http://mainichi.jp/english/english/newsselect/news/20121024p2a00m0na011000c.html



Blue plastic sheets cover contaminated soil in this photo taken from a Mainichi helicopter in Fukushima'a Watari District on Oct. 14. (Mainichi)

FUKUSHIMA -- As local municipalities face delays in the construction of storage facilities for radioactively contaminated soil, r**esidents here are being forced to store the soil on their own properties.**

Last summer after the disaster at the Fukushima No. 1 Nuclear Power Plant, officials considered recommending that people in the Watari district of Fukushima, located around 1.5 kilometers from the city's center, evacuate homes where high radiation levels were detected.

Here, at the home of Tsuneo Ota, 66, a member of the Yamagiwa residential community, a sheet spread 3 meters wide, 4 meters deep and 1 meter high covers about 100 plastic cases of contaminated soil in his garden.

"I didn't think it would get this big," he says.

The contaminated soil is put in 45-liter cases that can't be opened once they are sealed. It is the first time the cases, usually used for medical waste, have been used in decontamination work. The cases are stacked in two layers and surrounded by around 1,000 bags of soil. It's said that a 30-centimeter layer of non-contaminated soil can block 98 percent of radiation.

Ota wasn't able to bury his contaminated soil in the ground, partly because it was filled with the roots of trees in his garden. He was also concerned about underground piping. He ended up cutting down most of the trees to make room for the soil. Gone were the camellias, hydrangeas, and sweet Osmanthus trees. The flowers, which Ota's 88-year-old mother Ine had taken care of, disappeared before they could bloom. A maple tree that had watched over the family since the house's construction 39 years ago was reduced to a stump.

Another reason the soil could not be buried underground was that the Yamagiwa community has a lot of water in the ground -- enough to be considered an area susceptible to mudslides. **To bury contaminated soil, residents have to dig around 1.5 meters down, but when people tried to do this they repeatedly came across water.**

One 58-year-old woman received a call in May from a worker who was trying to dig a hole for her. The worker informed her that it wouldn't be possible because diggers had hit water. The woman didn't have enough room on her property for the 600 cases of contaminated soil she had, so she sought the help of nearby relatives to find space.

At an empty lot next to the home of another 70-year-old resident, decontamination work has begun and the area is filled with the sound of grass mowers. During the work here, too, water gushed out from the ground, so workers loaded cases of contaminated soil aboveground, covering them with a sheet.

The Yamagiwa community is one of eight residential communities in the Watari district to have started decontamination work. About 70 percent of households requiring decontamination in the community store contaminated soil aboveground -- a source of stress for residents.

October 25, 2012

Excessive cesium in rice

2012 Fukushima rice exceeds cesium limit

http://www.yomiuri.co.jp/dy/national/T121024003322.htm

FUKUSHIMA (Jiji Press)--Radioactive cesium exceeding the government's new limit has been detected in rice harvested this year for the first time in Fukushima Prefecture, the prefectural government said Wednesday.

Rice from Sukagawa was found to contain 110 becquerels of radioactive cesium per kilogram. The level topped the stricter limit of 100 becquerels introduced for rice on Oct. 1, against the previous limit of 500 becquerels.

The rice has not been distributed to the market, according to the prefecture, home to Tokyo Electric Power Co.'s disaster-hit Fukushima No. 1 nuclear power plant, which experienced the nation's worst-ever nuclear crisis.

The above-limit cesium was detected in one 30-kilogram bag out of 320 bags of brown rice harvested at a farm in the city, the prefectural government said.

Fukushima rice above threshold for cesium

http://www.japantimes.co.jp/text/nn20121025a5.html

Kyodo

FUKUSHIMA — Rice grown by a farmer in Sukagawa, Fukushima Prefecture, returned a radioactive cesium reading of 110 becquerels per kilogram, exceeding the maximum of 100, the prefectural government announced.

It is the first time that Fukushima rice has exceeded the current limit introduced in April. The Sukagawa rice did not make it to distribution channels, the prefecture said Wednesday.

Of 320 bags of rice produced by the farmer, only a single bag of the Koshihikari brand of unpolished rice exceeded the cap for radioactive cesium.

The prefectural government has asked neighboring farmers to voluntarily refrain from shipping their rice. Officials stressed that consumers are safe because the prefecture is scanning every bag for radiation.

The farmer's land will be inspected for the cause of the contamination.

The central government introduced new ceilings of radioactive food contamination in April, setting a limit of 100 becquerels of cesium per kilogram of regular food items such as meat, vegetables and fish, 50 becquerels for milk and infant food, and 10 becquerels for drinking water.

October 26, 2012

Radiation in fish is not going down

Failure to fall points to seabed or reactor leaks

AP

Radioactive cesium levels in most kinds of fish caught off the coast of Fukushima haven't declined in the year since the nuclear disaster started, a signal that the seafloor or leakage from the damaged reactors is continuing to contaminate the waters — possibly threatening fisheries for decades, a researcher says.

Although the vast majority of fish tested off the Tohoku region remain below recently tightened food safety limits for cesium-134 and cesium-137, government data show that **40 percent of bottom fish, including cod, flounder and halibut, are still above the limit,** Ken Buesseler, a marine chemist at the Woods Hole Oceanographic Institution in Massachusetts, wrote in an article published Thursday in the journal Science.

In analyzing extensive data collected by the Agriculture, Fisheries and Forestry Ministry, he found that the levels of contamination in almost all kinds of fish haven't declined more than a year since the Fukushima No. 1 plant suffered three reactor meltdowns.

"The (radioactivity) numbers aren't going down. Oceans usually cause the concentrations to decrease if the spigot is turned off," Buesseler said in an interview. "There has to be somewhere they're picking up the cesium.

"**Option one is the seafloor is the source of the continued contamination. The other source could be the reactors themselves,"** he said.

The safety of fish and other food from around Fukushima remains a concern among ordinary Japanese, among the world's highest per capita consumers of seafood.

Most seafood from Fukushima's coast is barred from the domestic market and export. In June, authorities lifted bans on octopus and sea snails caught off Fukushima after testing showed very low levels of radiation.

But the most contaminated fish found yet off Fukushima were caught in August, some 17 months into the disaster. The two greenlings, which are bottom-feeders, had cesium levels of more than 25,000 becquerels per kilogram, 250 times the level the government considers safe.

A government fisheries official, Chikara Takase, acknowledged that the figure for the greenlings was "extremely high," but added that high numbers were detected only in limited kinds of fish sampled in the restricted waters closest to the plant. He acknowledged that "we have yet to arrive at a situation that allows an overall lifting of the ban."

To bolster public confidence in food safety, the government in April tightened restrictions for cesium-134 and cesium-137 on seafood to 100 becquerels per kilogram from 500. But the step confused consumers as people noticed that more products were barred.

Tokyo Electric Power Co. said radioactive water used to cool the Fukushima reactors has leaked into the ocean several times — most recently in April.

"Given the 30-year half-life of cesium-137, this means that even if these sources (of contamination) were to be shut off completely, the sediments would remain contaminated for decades to come," Buesseler wrote in Science.
Experts suspect that radioactive water from the plant is seeping into the groundwater at the same time, and is continuing to make its way into the ocean.

Hideo Yamazaki, a marine biologist at Kinki University, agrees with Buesseler's theory that the cesium is leaking from the Fukushima plant and that it will contaminate seafood for more than a decade.

Fish Off Japan's Coast Said to Contain Elevated Levels of Cesium

http://www.nytimes.com/2012/10/26/world/asia/fish-off-fukushima-japan-show-elevated-levels-of-cesium.html?ref=asia&_r=1&

By HIROKO TABUCHI

TOKYO — Elevated levels of cesium still detected in fish off the Fukushima coast of Japan suggest that radioactive particles from last year's nuclear disaster have accumulated on the seafloor and could contaminate sea life for decades, according to new research.

The findings published in Friday's issue of the journal Science highlight the challenges facing Japan as it seeks to protect its food supply and rebuild the local fisheries industry.

More than 18 months after the nuclear disaster, Japan bans the sale of 36 species of fish caught off Fukushima, rendering the bulk of its fishing boats idle and denying the region one of its mainstay industries.

Some local fishermen are trying to return to work. Since July, a handful of them have resumed small-scale commercial fishing for species, like octopus, that have cleared government radiation tests. Radiation readings in waters off Fukushima and beyond have returned to near-normal levels.

But about 40 percent of fish caught off Fukushima and tested by the government still have too much cesium to be safe to eat under regulatory limits set by the Japanese government last year, said the article's author, Ken O. Buesseler, a leading marine chemistry expert at the Woods Hole Oceanographic Institution, who analyzed test results from the 12 months following the March 2011 disaster.

Because cesium tends not to stay very long in the tissues of saltwater fish — and because high radiation levels have been detected most often in bottom-feeding fish — it is likely that fish are being newly contaminated by cesium on the seabed, Mr. Buesseler wrote in the Science article.

"The fact that many fish are just as contaminated today with cesium 134 and cesium 137 as they were more than one year ago implies that cesium is still being released into the food chain," Mr. Buesseler wrote. This kind of cesium has a half-life of 30 years, meaning that it falls off by half in radioactive intensity every 30 years. Given that, he said, "sediments would remain contaminated for decades to come."

Officials at Japan's Fisheries Agency, which conducted the tests, said Mr. Buesseler's analysis made sense. "In the early days of the disaster, as the fallout hit the ocean, we saw high levels of radiation from fish near the surface," said Koichi Tahara, assistant director of the agency's resources and research division. "But now it would be reasonable to assume that radioactive substances are settling on the seafloor."

But that was less of a concern than Mr. Buesseler's research might suggest, Mr. Tahara said, because the cesium was expected to eventually settle down into the seabed.

Mr. Tahara also stressed that the government would continue its vigorous testing and that fishing bans would remain in place until radiation readings returned to safe levels.

Naohiro Yoshida, an environmental chemistry expert at the Tokyo Institute of Technology, said that while he agreed with much of Mr. Buesseler's analysis, it was too early to reach a conclusion on how extensive radioactive contamination of Japan's oceans would be, and how long it would have an impact on marine life in the area.

Further research was needed on ocean currents, sediments and how different species of fish are affected by radioactive contamination, he said.

As much as four-fifths of the radioactive substances released from the Fukushima Daiichi nuclear power plant are thought to have entered the sea, either blown offshore or released directly into the ocean from water used to cool the site's reactors in the wake of the accident.

Sea currents quickly dispersed that radioactivity, and seawater readings off the Fukushima shore returned to near-normal levels. But fish caught in the area continue to show elevated readings for radioactive cesium, which is associated with an increased risk of cancer in humans.

Just two months ago, two greenling caught close to the Fukushima shore were found to contain more than 25,000 becquerels a kilogram of cesium, the highest cesium levels found in fish since the disaster and 250 times the government's safety limit.

The operator of the Fukushima plant, the Tokyo Electric Power Company, said that the site no longer released contaminated water into the ocean, and that radiation levels in waters around the plant had stabilized.

But Yoshikazu Nagai, a spokesman for the company, said he could not rule out undetected leaks into the ocean from its reactors, the basements of which remain flooded with cooling water.

To reduce the chance of water from seeping out of the plant, Tokyo Electric is building a 2,400-foot-long wall between the site's reactors and the ocean. But Mr. Nagai said the steel-and-concrete wall, which will reach 100 feet underground, would take until mid-2014 to build.

November 5, 2012

The endlessly put-off issue

Editorial: Time to deal with nuclear waste disposal

http://mainichi.jp/english/english/perspectives/news/20121105p2a00m0na001000c.html

How are we going to dispose of the highly radioactive waste produced by nuclear reactors? It's an issue that's been put off endlessly in Japan. But the ongoing disaster at the Fukushima No. 1 Nuclear Power Plant has made it clear that we can no longer continue turning a blind eye to the problem.

In its new energy and environment strategy announced in mid-September, the government made the contradictory proposal to end the use of nuclear power by the 2030s, while also maintaining a policy of reprocessing spent fuel. In response, we have continued to argue that fuel reprocessing should be abandoned.

However, regardless of whether we reprocess spent fuel or not, nuclear reactors will keep producing highly radioactive nuclear waste as long as they are in operation. Even if nuclear reactors are stopped, pre-existing nuclear waste must be disposed of. **Nuclear waste disposal must be addressed first before a nuclear policy can be decided.**

Japan has thus far adopted a policy of burying high-level radioactive waste hundreds of meters underground in stable ground. However, it takes tens of thousands of years for radiation levels of nuclear waste to drop sufficiently, causing concern among many over the safe management of such waste. The Nuclear Waste Management Organization of Japan (NUMO) is soliciting local municipalities to host final disposal sites for nuclear waste, though there appears to be a lacking urgency on the part of the organization. No municipalities have thus far come forward.

One possible response to this stalemate is to adopt the recommendation of the Science Council of Japan (SCJ), including regulation of the total amount of nuclear waste -- putting a cap on the amount of high-level radioactive waste allowed and strictly restricting increases -- and temporary storage.

Considering we had operated 54 reactors across the country without addressing the issue of increasing nuclear waste, the adoption of the SCJ's proposal would be a significant move. **If the government is sincere in its goal of achieving independence from nuclear power by the 2030s, it should indicate its intention to approach that goal from the angle of nuclear waste as well**. This will help erase the public's fears that the "2030s" goal is an empty promise.

The temporary storage advocated by the SCJ entails storing waste in retrievable containers for several decades to several centuries. It is **a moratorium of sorts,** and there is bound to be criticism that the method merely postpones a final resolution.

At the same time, however, the "moratorium" can be interpreted as a grace period to seriously deliberate whether the current underground disposal method is reasonable, and the plausibility of future technical progress in waste disposal methods. This will require each and every member of the Japanese public to continually wrestle with the problem as their own.

The SCJ has pointed out that Japan's nuclear policy has heretofore created two groups: those who have reaped the benefits of nuclear power, and those who have shouldered the burden of nuclear waste and the

risk of disaster. The gap has thus far been reconciled through economic benefits provided to those who live with the risks, but faced with the issue of final disposal, we are in need of a better response.

November 8, 2012

Wrong radiation readings

Radiation monitors underreport data

http://www3.nhk.or.jp/daily/english/20121108_18.html

Hundreds of radiation monitors installed in Fukushima and surrounding prefectures have been found to show readings around 10 percent lower than the actual level.

The science ministry installed 675 of the devices to monitor radiation in 7 prefectures.

Fukushima Prefecture has 545, while other prefectures have 10 to 30 each.

The readings have been uploaded in real time on the Internet since April.

But the ministry was examining reports from residents and local governments that their monitors showed higher readings than the government's data.

It found that the detection of radiation was being partially blocked by a metal battery housing in the units, which lead to an underreporting of the levels by around 10 percent.

The ministry will spend about 1.8 million dollars to fix the monitors, starting next week.

November 10, 2012

Debris from the tsunami

33,000 tons of quake debris to reach N. America by June 2013

http://mainichi.jp/english/english/newsselect/news/20121110p2g00m0dm025000c.html

Tsunami debris may reach US next month

http://www3.nhk.or.jp/daily/english/20121110_03.html

The massive debris from the tsunami that hit northeastern Japan last year may reach North America's west coast in December. Japan's Environment Ministry says that's two months later than previously predicted.

An estimated 1.5 million tons of debris from the tsunami is drifting in the ocean. Some of it has already reached the Pacific coast of North America.

The ministry has commissioned groups of researchers at Kyoto University and other institutions to analyze the debris' movement.

They predict that about 33,000 tons of household debris will have reached North America by next June.

They also say fishing boats and buoys are drifting west and are expected to reach the waters off the Philippines in February.

That debris is prone to movement by winds as it is exposed above the ocean's surface.

The Environment Ministry has reported these estimates to the governments of the United States and Canada.

November 13, 2012

New cesium processing apparatus

Cesium-tainted material processing system starts test run in Fukushima village

http://mainichi.jp/english/english/newsselect/news/20121113p2a00m0na009000c.html

An apparatus in Kawauchi, Fukushima Prefecture, for processing plant matter contaminated with radioactive cesium. The final step in the cesium extraction process happens in the cylinders at front, where the radioactive element binds to blue dye particles. (Mainichi)

KAWAUCHI, Fukushima -- Reporters got a first-hand look on Nov. 12 at an experimental system for processing radioactive cesium-tainted plant matter that has been set up near the stricken Fukushima No. 1 nuclear plant and is ready to help in cleanup efforts.

The test system, designed and built by a team led by the National Institute of Advanced Industrial Science and Technology (AIST), has been built in the Fukushima prefectural village of Kawauchi, much of which remains under an evacuation order and is now being decontaminated.

The processing begins with incinerating the contaminated plant matter and then combining the ash with water and acid. The radioactive cesium that dissolves out of the ash is extracted in liquid solution and transferred to cylinders containing an artificial Prussian blue dye. The dye granules bind to the cesium, effectively cleaning it out of the solution.

The apparatus can currently process about 120 kilograms of contaminated material per day, and testing is scheduled to continue through the end of fiscal 2013 under the stewardship of AIST and a subsidiary of Tokyo Electric Power Co., operator of the Fukushima No. 1 nuclear plant. The project is expected to cost 150 million yen.

"What's special about this system is that we've brought the incineration and decontamination processes together in one apparatus," commented AIST research group chief Toru Kawamoto. "We'd like to start releasing our first analysis results within the year."

November 14, 2012

Something is preventing the radiation level in the ocean from dropping

Ocean still suffering from Fukushima fallout

http://www.nature.com/news/ocean-still-suffering-from-fukushima-fallout-1.11823

Continuing leaks and contaminated sediment keep radiation levels high.

Tokyo

Noriko Hayashi for The Washington Post via Getty Images

Radioactivity is persisting in the ocean waters close to Japan's ruined nuclear power plant at Fukushima Daiichi.

New data presented at a conference held on 12–13 November at the University of Tokyo show that levels of radioactivity in the sea around the plant remain stable, rather than falling as expected. Researchers believe that run-off from rivers, as well as continued leaks from the plant, may be partially to blame. But contaminated sediment and marine organisms also seem to be involved.

The level of contamination is not likely to pose a significant health risk to humans. But it could have long-term economic consequences for fishermen along Japan's east coast.

On 11 March 2011, a magnitude-9 earthquake struck off the coast of Japan. The quake sparked a massive tsunami that hit the Fukushima Daiichi nuclear power plant. Three of the plant's six units suffered meltdown, releasing large quantities of radioactivity into the atmosphere. In the days after the accident, emergency cooling water leaked into the sea, adding to ocean contamination.

The Fukushima disaster caused by far the largest discharge of radioactivity into the ocean ever seen. A new model presented by scientists from Woods Hole Oceanographic Institution in Massachusetts estimates that 16.2 petabecquerels (10^{15} becquerels) of radioactive caesium leaked from the plant — roughly the same amount that went into the atmosphere.

Most of that radioactivity dispersed across the Pacific Ocean, where it became diluted to extremely low levels. But in the region of the ocean near the plant, levels of caesium-137 have remained fixed at around 1,000 becquerels, a relatively high level compared to the natural background. Similarly, levels of radioactive caesium in bottom-dwelling fish remain pretty much unchanged more than 18 months after the accident.

Triple blow

Researchers at the conference are convinced that something is preventing the radiation levels from dropping. "There must be a source," says Scott Fowler, an oceanographer at Stony Brook University in New York.

In fact, a fresh analysis by oceanographer Jota Kanda at the Tokyo University of Marine Science and Technology suggests that not one source, but three, are responsible. First, **radioactivity from the land is being washed by rainfall into rivers, which carry it to the sea.** Second, **the plant itself is leaking around 0.3 terabecquerels (10^{12} becquerels) per month**, he estimates.

“We can't answer the basic question of when these fisheries will be able to open.”

But Kanda thinks that the third source, **marine sediment**, is the main cause of the contamination. Around 95 terabecquerels of radioactive caesium has found its way to the sandy ocean floor near the plant. How it got there, Kanda says, no one is sure. It may have been absorbed directly by the sand itself, or it may be that tiny marine organisms such as plankton consumed the radioactive caesium and then deposited it on the sea floor through their excretions. Organic detritus from rivers could also be a source of the contamination, he says. Regardless of how it got there, "there must be some loaded organic material somewhere in the sediment", Kanda says.

Whether originating from plankton or sediment, the contamination is finding its way into the food chain. Bottom-dwelling fish in the Fukushima area show radioactivity levels above the limit of 100 becquerels per kilogram set by the Japanese government. Greenlings, for example, have been found to have levels as high as 25,000 becquerels per kilogram. But the contamination varies widely between species. Octopuses and squid seem to have escaped contamination, whereas other fish such as red snapper and sea bass are only sometimes found to be contaminated. Overall, the levels of caesium in fish and marine life seem to have begun dropping slightly this autumn, says Tomowo Watanabe, an oceanographer with the Fisheries Research Agency in Yokohama.

The implications are serious for the fishing industry, which lost an estimated ¥100 billion to ¥200 billion (US$1.3 billion to $2.6 billion) in 2011 as a result of the accident. Many fisheries remain closed, and because of the persistent contamination "we can't answer the basic question of when these fisheries will be able to open", says Woods Hole oceanographer Ken Buesseler.

Much more must be done to understand the accident, Buesseler says. He hopes that, in the coming months, researchers will be able to find out more about the various sources of radioactivity that continue to feed into the ocean, as well as how this affects different organisms.

Nature
doi:10.1038/nature.2012.11823

November 18, 2012

Contaminated fish again

Cesium in trout 110 times over limit

http://www.japantimes.co.jp/text/nn20121118a8.html

A mountain trout caught in the Niida River in Fukushima Prefecture contained 11,400 becquerels of radioactive cesium per kilogram, more than 110 times above the government limit for food products, a survey by the Environment Ministry showed.

Presenting its findings Friday on cesium in fish and insects in rivers, lakes and sea in Fukushima, the ministry said it also detected 4,400 becquerels of radioactive cesium in a smallmouth bass and 3,000 becquerels in a catfish caught at the Mano Dam in Iitate.

The maximum threshold for food items is 100 becquerels per kilogram.

It is only the second time the ministry has conducted such a survey, after undertaking a study between December and this February. The first data were published in July.

"Like the previous survey, concentrations (of cesium) tended to be higher in rivers and lakes than in the sea. We want to grasp the extent of pollution by continuously conducting the survey," a ministry official said.

Disposal of debris in US

NGO members to discuss drifting debris in US

http://www3.nhk.or.jp/daily/english/20121118_12.html

Japan will again send a team of NGO members to the Pacific coast of North America to discuss specific ways of disposing of drifting debris from the March 11th disaster.

About 1.5 million tons of wreckage is believed to have washed into the Pacific after tsunami hit Japan's northeast coast in March of last year. The Environment Ministry's latest simulation has most of the debris reaching the Pacific coast of North America from around next month.

Japan sent a team of Tokyo-based NGO JEAN members to the United States in August to conduct a fact-finding survey. The government has decided to again send the NGO group to the Pacific coast of North America and Hawaii as early as December.

Japan will offer about 247,000 dollars from the fund capitalized by the government for the activity.

The NGO group will conduct a fact-finding survey on drifting debris in cooperation with local private organizations.

Following the survey, the group will work out specifics of how to dispose of debris after hearing opinions of Japanese experts.

The NGO will also consider providing technological assistance to Alaska and other areas which lack transport access and difficult work is expected due to geographical features.

Cesium in the mud in Lake Kasumigaura - A 'time bomb"

The muddy issue of cesium in a lake

http://www.japantimes.co.jp/text/fl20121118x3.html

By TOMOKO OTAKE
Staff writer
Lake Kasumigaura in Ibaraki Prefecture is facing an environmental threat that has essentially turned it into a time bomb ticking away 60 km northeast of Tokyo.

Environmentally minded: Hiroshi Iijima, head of the Asaza Fund, says local and national authorities should work in tandem with citizens' groups like his to investigate and deal with radiation contamination in and around Kasumigaura Lake. TOMOKO OTAKE

Experts warn that Japan's second largest lake with a surface area of 220 sq. km is quietly but steadfastly accumulating radioactive cesium released from the crippled Fukushima No. 1 nuclear power plant.

It's no big surprise. The lake's catchment area is huge, covering 2,200 sq. km across 24 municipalities in Ibaraki, Chiba and Tochigi prefectures. It doesn't take a genius to understand that the radiation that fell across some of the Tohoku region, and beyond, in the wake of the March 2011 nuclear disaster found its way into the area's rivers and thus flowed into the lake. In addition to that, Lake Kasumigaura, which is the name given to three contiguous lakes (the largest is Lake Nishiura and the other two are called Kitaura and Sotonasakaura), is a closed lake with no outflow. That means incoming radioactive substances have nowhere else to go.

More disturbing than this, however, is that 20 months after the nuclear crisis, government agencies have shown no signs that they are trying to prevent the accumulation of cesium in the lake — which is not only rich with fishery resources but whose water is used for irrigation, industrial purposes, and even for consumption as drinking water for 960,000 people in Ibaraki Prefecture. Furthermore, no one knows how and by how much the problem has worsened over the months, except for one obvious thing: it hasn't gone away.

Hiroshi Iijima, director general of the nonprofit organization Asaza Fund in Ushiku, Ibaraki Prefecture, has tried to alert the public to the situation for months. "What's unique about Kasumigaura, as opposed to other lakes across the nation, is that it's fed by numerous small rivers and streams, not only the 56 rivers running directly into the lake but also hundreds of tributaries," Iijima told The Japan Times. "Also, the area is flat, meaning that the radioactive substances travel downstream very slowly; they will accumulate in the lake over a long period of time."

In the aftermath of the Fukushima disaster, the Environment Ministry and the Ibaraki Prefectural Government have been measuring cesium levels in mud and sludge once every three months at eight sample points in the lake and at 56 sample points at the bottom of the rivers flowing into it. According to the latest round of monitoring, which was the fourth of its kind, and carried out in September and October, no traceable amount of cesium was detected in the water itself.

The mud samples from the lake and the rivers, meanwhile, were found to contain up to 5,200 becquerels/kg of cesium-134 and cesium-137, compared with a maximum of 500 Bq/kg detected a year ago, a maximum of 5,800 Bq/kg in February this year and a maximum of 4,800 Bq/kg in July. The sludge sampled from the bottom of the lake registered cesium contamination ranging from 97 Bq/kg to 520 Bq/kg. That is lower than the maximum 1,300 Bq/kg registered in February, but higher than the 340 Bq/kg detected in the first round of monitoring a year ago. The government safety limit for cesium-tainted food is 10 Bq/kg for water and 100 Bq/kg for most other foods. The mud samples from Kasumigaura have surpassed these figures, but mud is usually not ingested as food. Government regulations state that soil containing more than 8,000 Bq/kg of cesium is considered to emit levels of radiation that pose a danger to human health and therefore must be sealed away.

Based on those results, the Environment Ministry concluded in a report released Oct. 30 that the overall figures show that the contamination of rivers, the lake and water supply sites (in and around Kasumigaura) "has leveled off, or is in a downward trend."

A closer look at the situation, though, shows the reality is a lot more complex. Katsuhiko Sato, an official at the ministry's water environment section, says that the ministry cannot explain why the levels of cesiums in Kasumigaura seem to have leveled off. "To be honest we don't know," Sato said. "The figures are somewhat inconsistent."

Sato even hinted that the ministry's sampling of soils might not have been sophisticated enough. "We don't know if we can get the same kinds of samples each time," he said. "Cesium is known to stick to solid substances such as sludge and mud. The finer the grains are, the more cesium it absorbs. We try to pick the same kind of samples each time, but by just looking at them. Grains of sand vary from 0.06 mm to 0.3 mm. (A detailed analysis of the samples) would take a very long time, and at present, we haven't been able to do that."

Sato said the ministry has no plans to increase the number of radiation monitoring points or the frequency of the tests, citing "a limited budget," but claimed that the current levels of contamination pose no health risk for the area's residents, because radiation in the lake and the rivers is shielded by water. "The government priority is to decontaminate (irradiated) land spaces," he added.

Radiation on the lake's bottom has hit the local fisheries industry hard, however. Five species of fish, including eel, American catfish and carp have been banned from the market as samplings in those animals showed levels of cesium surpassing the government-set exposure limit of 100 Bq/kg. And while drinking water sourced from Kasumigaura is technically safe now, dry solids that are produced in the water sedimentation process contains cesium, according to the Ibaraki Prefectural Government.

Iijima from Asaza Fund says the government monitoring of radiation levels is far from satisfactory, as it only surveys one location per river. For its part, in cooperation with other citizens' groups and a local food-delivery cooperative, his own group measured radiation levels at some 200 locations in March-April and again in October covering up to 20 locations in one river. The results have shown that, over the six-month period, radioactive substances are believed to have traveled downstream, as figures of cesium-134 and cesium-137 in upstream locations have gone down while those downstream have increased. The highest level of cesium contamination so far detected by the group's volunteers is along the Onogawa River, which snakes through the cities of Ibaraki Prefecture and runs into Kasumigaura's Lake Nishiura, where, close to the river banks in the city of Ushiku, 13,200 Bq/kg of cesium was detected in a sample of sludge in May.

"**What we have found is that there are 'hot spots' in the rivers as well as on land**," Iijima said. "**Measures should be taken to stop cesium from moving into the lake, because once it's absorbed into the lake, it will be too hard to track and collect."**

Atsunobu Hamada, former director of the government-affiliated Ibaraki Freshwater Fisheries Research Institute, meanwhile, argues that preventing some cesium from making its way into the lake is impossible.

Both Hamada and Iijima maintain that the inevitable solution would be to release Kasumigaura's cesium into the Pacific Ocean via the Tone River, which the lake feeds. But to do that would involve a change in the national government's water management policy. The 250-meter-wide Hitachigawa Water Gate was built in 1963 at the southern end of Kasumigaura to store water and keep seawater out, thereby stopping salted water from damaging the area's crops, preventing floods and securing enough water for the region's industrial complexes. This might have worked while demands for industrial water were high — due to the booming economy of yesteryear — but it's now out of date, Hamada says, adding that the water quality has greatly suffered over the years from the policy of closing the water gate into the lake.

"In our negotiations with the Ibaraki government, we have repeatedly asked that that the gate be opened (to keep cesium from being accumulated further)," said Hamada, who now serves as secretary general of the environmental nonprofit Kasumigaura Academy. "We pressed the prefectural government until it finally said it'll keep monitoring the cesium levels and base their future decisions on the results of the monitoring. But it will be too late if we wait until the results come out."

Iijima says that institutions and individuals with a stake in the future of the lake, not just government agencies but people from the private sector and citizens' groups like his, should band together to investigate and deal with the issue. A systematic and comprehensive monitoring of cesium movement along the rivers and across the lake would only be possible through such collaboration, he said.
Unfortunately, Iijima says there is little sign of that happening now — and the group's letters to the Ibaraki prefectural government demanding joint action on Kasumigaura have fallen on deaf ears.

"We have a potential disaster waiting to happen," he said. "This is a lake in the Tokyo metropolitan area and the second-largest lake in Japan, and we are sitting idly by, letting it get contaminated."

November 26, 2012

Rice in Hirono and Kawauchi again

Rice planting to resume in Fukushima Prefecture
http://www.yomiuri.co.jp/dy/national/T121125003077.htm

The town government of Hirono and the village government of Kawauchi in Fukushima Prefecture have decided to resume planting rice next year.

Both municipal governments had asked farmers to voluntarily stop planting rice shortly after the crisis at Tokyo Electric Power Co.'s Fukushima No. 1 nuclear power plant began.

On Tuesday, the Hirono town government decided to resume rice planting in all areas, and the Kawauchi village government decided to plant rice in areas other than that formerly designated as a no-entry zone.

It will be the first resumption of rice planting in areas designated as emergency evacuation preparation areas.

Though many farmers welcomed the decisions, some voiced concern about whether the rice could be sold.

This month, the Hirono town government began decontaminating about 400 hectares of farmland by using such techniques as a process called sparging in conjunction with the mineral zeolite, which can absorb radioactive substances.

The town government aims to complete the work by the end of this fiscal year.

Yoshiyuki Haga, 65, evacuated to Chiba Prefecture after the start of the nuclear crisis but later returned to Hirono. He has been removing weeds in his rice paddies since August last year.

"If I can grow rice, the town will be revitalized even if only a little," he said. "Some of the residents will return."

But it is uncertain how many farmers among the town's about 400 farming households will resume planting rice.

Some farmers voiced lingering concern about whether they will be able to sell the rice they produce.

This year, Ryohei Niitsuma, 53, planted rice despite the town government's request to refrain from doing so.

But after he sent letters to about 100 individual customers, only five or six replied that they would buy the rice.
"It's painful for me that the rice I produced through hard work doesn't sell," he said. "But unless I continue production, this town will decline."

Niitsuma said he will plant rice on about five hectares next year.

This year, all bags of rice experimentally grown in the town were examined, and two of them were found to contain radioactive cesium in quantities exceeding the government-set maximum limit of 100 becquerels per kilogram.

But it is believed the radioactive substances detected in the bags came from such sources as dust in rice hullers, not the rice itself [??]

"The rice itself had no problems," the town government said, adding that all bags of rice to be shipped next year will be carefully checked to ensure safety.

At a meeting of the Kawauchi village agricultural committee held Tuesday, Mayor Yuko Endo asked villagers about rice planting next year, and all committee members said they planned to resume.

One of them said, "If we don't plant, the paddies will be ruined."

According to the village government, quantities of radioactive cesium in rice experimentally grown in 30 locations were **lower than the central government-set limit.** **[yes but is there such a thing as a limit?]**

Endo said: "If we don't plant rice for three years in a row [since the nuclear crisis], morale will suffer. As the experimental growing showed no problems, there's no reason not to plant rice."

An agriculture committee in Minami-Soma, Fukushima Prefecture, on Tuesday asked Mayor Katsunobu Sakurai to decide as soon as possible whether they should plant rice next year.

The mayor replied: "I want to see when decontamination can be completed. I'll decide by the middle of December."

The city government asked farmers to refrain from planting rice in all areas in the city after the onset of the nuclear crisis.
The city government grew rice experimentally in 130 locations, including those in the former no-entry zone.

The harvested unpolished rice fell within the government-set limit for radioactive cesium.

Trial incineration of debris in Osaka

Osaka ships debris from quake-hit Iwate to incinerator

http://mainichi.jp/english/english/newsselect/news/20121126p2g00m0dm066000c.html

OSAKA (Kyodo) -- Osaka Prefecture began transporting Monday 100 tons of debris left behind by last year's earthquake and tsunami in Iwate Prefecture to reclaimed land in Osaka Bay prior to its trial incineration by the city of Osaka on Thursday and Friday.

Up to 36,000 tons of the debris shipped from the quake-hit prefecture in northeast Japan is to be burned by March 2014 after full operation at the incinerator begins at the reclaimed island of Maishima in February, Osaka officials said.

The prefecture and the city agreed to dispose of the debris from Iwate in August despite opposition from local citizens who fear environmental pollution.

The debris has been stored on another reclaimed island called Yumeshima, which lies next to Maishima.

November 27, 2012

What about radioactive waste?

Commission recommends revising disposal plans for dangerous nuclear plant waste

http://mainichi.jp/english/english/newsselect/news/20121127p2a00m0na017000c.html

The Cabinet Office's Japan Atomic Energy Commission (JAEC) on Nov. 27 submitted a draft proposal to the government suggesting that plans to "semi-permanently" bury highly radioactive nuclear power plant waste underground be revised in favor of an approach allowing the waste to be retrieved in the future.

Under current plans, highly radioactive nuclear waste that remains after reprocessing spent nuclear fuel is supposed to be solidified with glass and then cooled aboveground for 30 to 50 years before being inserted into metal containers to be stored some 300 meters or more below the ground's surface for tens of thousands of years.

The JAEC, however, says that current plans do not properly reflect the latest scientific expertise or make an effort to achieve a shared awareness with the public on the issue.

Citing difficulties in guaranteeing the stability of geological layers tens of thousands of years into the future and the possibility of more stable disposal areas and better disposal methods being discovered in the future, the JAEC proposal says the government should evaluate the necessity and significance of making it possible to retrieve such waste in the future.

Under the current approach, it will remain possible to retrieve and transport highly radioactive nuclear waste for several decades before tunnels are blocked off, but government plans have made no mention of this.

In its proposal, the JAEC recommended that the government specify the total amount of high-level radioactive waste that will be produced if it goes ahead with energy and environmental reforms limiting the life of nuclear reactors to 40 years and banning new reactors. It did not propose restrictions that specify the total amount of waste produced in advance to restrict the operation of nuclear power plants and nuclear reprocessing facilities.

From 2002, the Nuclear Waste Management Organization of Japan has called for local bodies to host nuclear waste disposal facilities, but there have been no applications besides one from the Kochi Prefecture town of Toyo in 2006 (which was later retracted).Even literature-based research has failed to move forward. **No country in the world has actually started disposing of high-level radioactive waste underground. [??]**

Yaita - No local approval, but no alternative solutions either

Yaita residents angry over government's radioactive disposal site proposal

http://mainichi.jp/english/english/newsselect/news/20121127p2a00m0na013000c.html

YAITA, Tochigi -- As opposition candidates vying for lower house seats in the upcoming election criticize the national government's proposal to designate this city as the final disposal site of highly radioactive waste created by the Fukushima No. 1 Nuclear Power Plant disaster without local approval, regional voters are growing increasingly impatient, as the opposition has not been able to offer any alternative solutions.

Delegations of five to 10 people each from the Social Democratic Party (SDP), New Komeito, Your Party and the Liberal Democratic Party (LDP) visited the proposed disposal sites in Yaita between mid-October and late November -- around the time the lower house was dissolved. Serving as their guide was Yaita Agricultural Cooperative Association staff member Toshiyuki Onozaki, 63, who heads All Yaita, an alliance of about 80 civic organizations including the local chamber of commerce, that are seeking the government's retraction of Yaita's disposal site candidacy.

It was in early September that then Vice Environment Minister Katsuhiko Yokomitsu visited Yaita City Hall and revealed the government's proposal to designate a national forest in the city as the final disposal site of radioactive waste with concentrations of over 8,000 becquerels of radioactive cesium per kilogram generated in Tochigi Prefecture. The national government had deemed the site "appropriate" because there was only one private home in close proximity, and there would be little impact on the ecosystem. Taken by surprise, Yaita Mayor Tadashi Endo rejected the proposal on the spot.

There are approximately 75 households in Yaita's Shioda district where the proposed site is located. Freshwater crab, trout and loach live in the nearby Yaname River, and the local elementary schools use the forest to teach students about nature. Onozaki, too, was born and raised in this district, where now, red banners saying, "No to the disposal site," are seen everywhere.

Senior opposition party officials have visited the site and criticized the government in front of television cameras with comments like, "It's wrong that residents' lives have been ignored in making this decision," and "The Environment Ministry's selection standards are half-baked."

"We're looking for the proposal to be retracted after the lower house elections, and really hope that it will happen," Onozaki says. However, because of the vast number of parties that are contesting the election, there are fears the disposal site issue will be largely swayed by the new administration's framework.

Meanwhile, Shikio Nagai, 72, who lives in the one private home in close proximity to the proposed site, says his wife inherited the land. He moves back and forth between his house located approximately 300

meters from the proposed disposal site and another home in Kawaguchi, Saitama Prefecture, but he had been planning to move to Yaita full-time next spring.

"The government is trying to force the disposal site on us without resolving whose responsibility it is that the waste was created in the first place," Nagai says. "I hope the proposal is taken back, but the opposition parties have not yet come up with any specific alternative solutions, either."

A citizens' alliance has also been formed in the Ibaraki Prefecture city of Takahagi, which was selected as a candidate site for radioactive waste generated in the prefecture. Mayors of both Yaita and Takahagi signed a joint agreement Nov. 9 seeking a retraction of the government's disposal site proposals. An outdoor rally is set to be held in Yaita on Dec. 2, with organizers hoping to mobilize 10,000 participants.

Prefectures not positive about nuclear disposal

http://www3.nhk.or.jp/daily/english/20121127_34.html

An NHK survey shows that none of Japan's prefectural governments is positive about hosting a disposal site for nuclear waste generated at power plants.

NHK asked Japan's 47 prefectures last month about a possible proposal by the state government to conduct preliminary surveys for developing such a site.

None of the governments said they would examine the proposal, while 17 said they should never accept it. 30 did not respond.

Some prefectures that responded negatively said a safe method of disposal has not been decided.

Akita Prefectural Governor Norihisa Satake said the state government hasn't even shown whether nuclear waste will be brought to one site or more. He added that the government should ensure the safety of nuclear waste disposal in a country with frequent earthquakes.

Eight of the 30 prefectures that didn't answer said the state, not local governments, should be responsible for choosing a disposal site location.

Japanese law says highly radioactive nuclear waste should be buried more than 300 meters underground. But the government has not chosen a disposal site nearly 50 years after nuclear power plants started operating in the country, due to strong local opposition to preliminary surveys.

Commission recommends revising disposal plans for dangerous nuclear plant waste

http://mainichi.jp/english/english/newsselect/news/20121127p2a00m0na017000c.html

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November 28, 2012

Municipalities concerned about spent nuclear fuel

http://www3.nhk.or.jp/daily/english/20121128_17.html

In an NHK survey, nearly half of all municipalities in Japan hosting nuclear power plants or storing spent fuel say current safety measures are inadequate.

The survey in October included 34 municipalities. Concern about potential radiation leaks has increased since the March 2011 disaster damaged nuclear fuel storage pools at the Fukushima Daiichi nuclear plant.

Fifteen municipalities surveyed said the current safety measures are inadequate. They said they had asked power utilities and storage site operators to take new steps to make facilities earthquake-proof and improve cooling systems.

Ten municipalities said they want spent fuel storage facilities immediately removed from their jurisdictions.
Another 11 said storage for a certain period is unavoidable.

13 municipalities said they could not respond to the survey. One asked the central government to take responsibility. Another urged that discussions include the municipalities that consume nuclear-generated electricity.

Spent nuclear fuel is stored across the country under a government recycling program. All of the spent fuel is taken to a plant at Rokkasho in Aomori Prefecture, northeastern Japan, for reprocessing. But the plant has not been operating at capacity.

As a result, 14,400 tons of the more than 17,000 tons of spent fuel currently stored remain in pools at nuclear plants nationwide. Those plants are now at 70 percent of their storage capacity.

New energy policies announced by the government in September pledged to move the country away from reliance on nuclear power generation in the future, while maintaining nuclear fuel recycling.

In Fukui Prefecture, central Japan, Tsuruga City Mayor Kazuharu Kawase says he wants temporary storage and disposal sites for spent fuel built immediately.

In Ibaraki Prefecture, north of Tokyo, Tokai Village chief Tatsuya Murakami says nuclear fuel recycling has not seen progress in 50 years despite predictions. He said it is wrong to cling to a policy that is not feasible.

Murakami said the current plan to bring all spent fuel in the country to Aomori Prefecture may not be feasible. He said it is more practical to keep the spent fuel at the power plants that used it.

December 5, 2012

28 canisters of radioactive waste to be returned to Japan

Britain to return radioactive waste to Japan around February

http://www.japantimes.co.jp/text/nn20121205b2.html

Three utilities said Tuesday that 28 canisters of high-level radioactive waste produced through the reprocessing in Britain of their spent nuclear fuel will be returned to Japan around February.

It will be the third time vitrified radioactive waste will be brought from Britain. Japan's spent fuel has also been handled in France, but all of the high-level radioactive waste created there had been transferred to Japan by 2007.

The exact date of the shipment from Britain was not disclosed for security reasons.

The 28 canisters of waste have been produced through the reprocessing of spent nuclear fuel at the request of Chubu Electric Power Co., Chugoku Electric Power Co. and Kansai Electric Power Co.

Japan has received 104 canisters of such waste from Britain and plans to receive about 800 more.

High-level radioactive waste will be placed at a final disposal site to be located deep underground after being stored for about 30 to 50 years at a facility in Rokkasho, Aomori Prefecture, for cooling.

No progress has been made in selecting the site for the final repository.

December 11, 2012

Brave Misato

Saitama city builds temporary storage for radiation-contaminated soil

http://mainichi.jp/english/english/newsselect/news/20121211p2a00m0na013000c.html

MISATO, Saitama -- The municipal government here began building a temporary storage site in August for soil contaminated by radioactive materials released in the Fukushima No. 1 nuclear plant disaster, it has emerged.

The city had briefed nearby residents and the city council on its plans, but had not made a more public announcement.

According to the Misato Municipal Government, the temporary storage site is on the grounds of a municipal athletic facility in the city's Kobo district. This month, the contaminated soil is set to be transported to the storage site from the city's general waste disposal plant located south of the athletic facility's parking lot.

There is approximately 700 cubic meters of soil that had been removed from 27 locations around the city in fiscal 2011, packed into 675 synthetic fiber bags. At the time the soil was collected, their radiation levels were on average 0.25 microsieverts per hour.

"We decided to build a temporary storage site until the national government decided on a final disposal site," said Misato Municipal Government official Susumu Akimoto. "We explained the plans to five households nearby, and let the city council know in June."

A representative for a civic organization concerned with measures against radiation said, "We wish we had been notified about this, too."

December 14, 2012

Is this good news?

118 Fukushima radiation "hot spots" removed from alert list

http://mainichi.jp/english/english/newsselect/news/20121214p2g00m0dm088000c.html

FUKUSHIMA, Japan (Kyodo) -- A total of 118 locations in Fukushima Prefecture have been removed from the list of evacuation-recommended areas as their radiation levels have fallen below the reference value, the government said Friday.

The removal was the first since the nuclear accident occurred at the Fukushima Daiichi complex in March last year, prompting the government to recommend residents living in "hot spots" with annual radiation levels of 20 millisieverts or more to evacuate.

The 118 locations include 117 sites in Date and another one site in Kawauchi encompassing 129 households in total. Studies have confirmed the radiation levels have slipped below the 20-millisievert threshold, the government said.

December 15, 2012

Whatever the energy policy, the question of nuclear waste remains

Political parties not holding enough discussion on nuclear waste

http://mainichi.jp/english/english/perspectives/news/20121215p2a00m0na001000c.html

A tidal embankment 18 meters above sea level and 1.6 kilometers long, built on a 24-hour schedule, stretches along the coast at the Hamaoka Nuclear Power Plant in Shizuoka Prefecture. After the Fukushima disaster, when the government requested that the Hamaoka plant be stopped, it symbolized to me a change in nuclear policy. Now, however, the endlessly stretching embankment -- or a "fortress" -- symbolizes to me the current lack of a nuclear policy.

There is no absolute safety with nuclear plants, only degrees of risk. Even though that has become clear, the political arena has been unable to produce a vision of a future without nuclear power for 21 months. The future of Fukushima Prefecture, where the people had their homes and jobs stolen from them, also remains unclear. It is only natural that feelings of hopelessness should spread.

Even so, there are many things the political parties are not talking about in their election campaigns. One subject not getting enough discussion is what to do with nuclear waste. There are about 17,000 tons of

spent nuclear fuel in Japan. Much of it is stored in pools at nuclear power plants, and part of it is sent to Aomori Prefecture and stored in the pools of reprocessing plants.

Under a policy of fuel reprocessing, that fuel was considered a resource, but with a stop to that policy it has all become waste, and Aomori Prefecture will ask for nuclear plants to take back their spent fuel. However, nuclear plants do not have much space left in their pools, and if they become full the plants will stop. Local governments hosting nuclear plants also do not want to accept waste.

Reprocessing served as a way to put off disposing of the waste, but both technological and cost problems have stymied that policy, and it also contradicts with a policy of reducing nuclear plants. Reprocessing would create plutonium with nowhere to burn it and make a big problem from the view of nuclear non-proliferation.

No matter what policy is pursued, the issue of nuclear waste disposal remains. A new plan is needed to solve the problem. One policy is "total amount management," putting a top limit on the amount of waste, managing from the end point of the process and not allowing nuclear plants to operate if the amount of waste grows too large.

Another policy is "temporary storage," holding the waste in an extractable form for tens or hundreds of years. One could call it putting off the problem, but it could be used as a grace period for technology to advance and each of us to think about nuclear waste disposal. It would lead to discussion on not forcing waste storage on other areas, but rather storing it in power-using regions like Tokyo.

The Democratic Party of Japan's policy on reprocessing is unclear, but it has made mention of total amount management and direct waste disposal. There remains uncertainty in its policy, but it is better than the Liberal Democratic Party, which only puts off the issue. The Tomorrow Party of Japan, meanwhile, says it will put together a plan for getting rid of nuclear plants that combines "total amount regulations" and temporary storage. Though what the contents of the plan will be are not yet clear, it is gradually forming into what would be an attempt to get rid of nuclear plants based off of management of nuclear waste.

The opinion of the United States and the issue of outsourced reprocessing also become factors, so the diplomatic prowess of the political parties also needs to be examined. (By Yuri Aono, Expert Senior Writer)

December 20, 2012

Mayor targeted with no-confidence motion over temporary storage facility for radioactive soil

http://mainichi.jp/english/english/newsselect/news/20121220p2a00m0na016000c.html

KAZO, Saitama -- The municipal assembly of the Fukushima Prefecture town of Futaba has passed a no-confidence motion against Mayor Katsutaka Idogawa over a controversial plan to construct a temporary storage facility for radioactive soil amassed from decontamination work.

The town assembly -- which has been evacuated to Kazo, Saitama Prefecture, following the Fukushima nuclear disaster -- unanimously passed the motion on Dec. 20 after Mayor Idogawa was absent from a meeting in November between the Fukushima Prefectural Government and the mayors of the towns and villages in Futaba county over a plan to construct an interim storage facility for soil and other radioactive materials generated from decontamination work in Fukushima Prefecture. "I haven't received convincing answers from the central government yet over issues including the final disposal site," Idogawa said at the time as the reason for his absence.

Mayor Idogawa will decide whether he will resign or dissolve the town assembly within 10 days under the Local Autonomy Law. "I will make a decision early next week," the mayor told reporters.

There are a total of nine candidate sites -- including two locations in Futaba -- for the construction of the temporary storage facility. The central government is planning to start on-site surveys on those sites as early as the beginning of next year, but the turmoil in Futaba may affect the schedule.

Hisato Iwamoto, member of the Futaba town assembly, proposed the no-confidence motion during a regular meeting earlier this month, saying, "The mayor has caused confusion among town residents." At the meeting, all eight assembly members -- including assembly chairman Seiichi Sasaki -- voted for the censure motion. Supporting votes from at least three-fourths of assembly members present were required for passing the motion.

On Dec. 12, the town assembly filed a request for the mayor's resignation, but the mayor refused, saying, "I can't resign while I'm tasked with such serious missions as the rezoning of evacuation zones and handling the temporary storage facility."

If the mayor dissolves the town assembly and if a newly elected assembly once again submits a no-confidence motion against him, he will lose his job if a majority of assembly members present voted for the motion.

The town assembly had earlier voted on a no-confidence motion against the mayor twice this year, in June and September, after the motions were submitted on the grounds that the mayor's decision over bringing Futaba's office functions back to Fukushima Prefecture was delayed. However, both motions were voted

down after supporting votes did not reach three-fourths of the assembly members present. The town assembly has also repeatedly criticized the mayor over his response to the aftermath of the Great East Japan Earthquake, widening the rift between the two parties.

December 21, 2012

Choosing storage site(s) a long way off

Govt. to delay choosing nuclear waste storage site

http://www3.nhk.or.jp/daily/english/20121221_36.html

Japan's government is likely to lag behind schedule in choosing storage sites for soil and waste contaminated with radiation from the nuclear accident in Fukushima.

The Environment Ministry on Friday began accepting applications from contractors to conduct environmental assessments at candidate sites in Fukushima Prefecture.

The ministry plans to select the contractors by early February. The surveys are expected to take several months, meaning that the ministry will be unable to decide on the locations by the end of March as planned.

The prefectural government and municipalities around the damaged Fukushima Daiichi nuclear power plant decided to accept the surveys last month.
But some local authorities and residents oppose the surveys. The ministry says it will continue to try to persuade opponents of the plan.

No-confidence motion against Futaba's Mayor

Futaba assembly passes no-confidence bid against mayor for skipping talks on nuclear waste storage

Jiji / kyodo
http://www.japantimes.co.jp/text/nn20121221a3.html

KAZO, Saitama Pref. — The town assembly of Futaba, Fukushima Prefecture, adopted a no-confidence motion Thursday against Mayor Katsutaka Idogawa amid the turmoil over the construction of temporary storage facilities for radioactive waste.

The eight-member assembly unanimously passed the motion, criticizing Idogawa's absence from a meeting last month between Fukushima Gov. Yuhei Sato and leaders of municipalities near the crippled Fukushima No. 1 nuclear plant.

Those at the meeting accepted a government on-site survey for the construction of temporary storage facilities for radioactive waste from the plant, which last year suffered three reactor core meltdowns. But Idogawa did not attend the meeting to protest the government plan.

The Futaba assembly members said that dealing with the radioactive waste is something they cannot ignore, regardless of their positions, but noted the mayor had acted on his own without consulting them.

The turmoil may delay the on-site survey, which was to be conducted in early January at the earliest.

Authorities in Futaba, which, together with the town of Okuma, hosts the Tokyo Electric Power Co. plant, have transferred their office to Kazo, Saitama Prefecture.

The town of Futaba and Okuma have relocated their municipal offices, presumably on a temporary basis, to Kazo, Saitama Prefecture, where the assemblies met Thursday.

The no-confidence motion means the mayor must either dissolve the town assembly or leave office within 10 days.
If the assembly is dissolved, an election will be held within 40 days under the Public Offices Election Law. If newly elected assembly members pass a no-confidence motion again, Idogawa will automatically lose his post.
Following passage of the motion, Idogawa told reporters, "I have worked hard to relay the requests of the townspeople to the central and prefectural governments."

Idogawa signaled he may dissolve the assembly, saying, "Those who criticize me are also responsible." He indicated a decision will be made, possibly early next week, after consulting with local government staff.

Hisato Iwamoto, the town assembly member who submitted the motion, urged Idogawa to step down.

"The issue (of temporary storage facilities) concerns the whole prefecture, not just Futaba," Iwamoto said. "I hope the mayor will take the unanimous vote seriously," he added.

The town has actually twice voted down, in June and September, a no-confidence motion submitted against Idogawa regarding the relocation of the Futaba town office to Fukushima Prefecture, and has been having problems with him.
Idogawa is in his second term, after being elected mayor in November 2005. The entire town of Futaba is within the designated no-go zone, with some 7,000 people having been forced to evacuate.

The central government has been urging three towns near the nuclear plant — Futaba, Okuma and Naraha — to accept the establishment of the temporary storage facilities, but Idogawa remains strongly opposed to the plan.

December 24, 2012

Cesium testing of food in Tokyo

Tokyo suburban city to conduct free cesium tests on food

http://mainichi.jp/english/english/newsselect/news/20121224p2a00m0na007000c.html

The Tokyo suburban city of Higashimurayama will start providing free cesium testing in January next year on food items brought by citizens, becoming the second municipality in the Tama district to offer such a service.

The Higashimurayama Municipal Government said it will start accepting reservations on Dec. 20 for the tests scheduled to commence on Jan. 15. The city said it will begin the service because it won a draw for the free lease of a radiation counter from the Consumer Affairs Agency this summer.

According to officials, the city will conduct the tests jointly with a citizens group called Geiger Higashimurayama. Residents of the city aged 20 years or older will be eligible to use the service, whose test subjects will be limited to food items for individual consumption, including home-grown crops and items purchased from retailers. Food must be chopped or processed in a blender before being brought in. Drinking water will not be covered by the tests.

The measurable limit of the radiation counter is 10 becquerels of radioactive cesium per kilogram. Citizens will be able to learn the results shortly after the testing.

While the city government is not anticipating any food items whose cesium levels would exceed the central government-set standard of 100 becquerels per kilogram -- which came into effect in April this year -- an official in charge said, "We hope residents will make use of the tests as a tool to remove their anxiety about what they eat."

Reservations are accepted at the municipal government or by telephone at: 042-393-5111 (in Japanese) on a first-come-first-served basis.

The Tokyo suburban city of Kunitachi has earlier started a similar testing service.

December 31, 2012

Reluctant acceptance of interim storage sites

Survey: 76% of nuclear evacuees would tolerate waste storage facilities near their homes

http://ajw.asahi.com/article/0311disaster/recovery/AJ201212310062

Seventy-six percent of residents from candidate areas to store soil contaminated by radioactive fallout from the Fukushima disaster would reluctantly accept interim storage facilities in their neighborhoods, an Asahi Shimbun survey showed.

The survey results showed that some respondents are abandoning hope of returning to their homes around the stricken Fukushima No. 1 nuclear power plant, and are now moving to rebuild their lives elsewhere.

The Asahi Shimbun sent questionnaires to 788 residents of the candidate areas and their surroundings in early December, and obtained responses from 305, or 39 percent.

The candidate areas, designated by the Environment Ministry, are located in the three towns of Futaba, Okuma and Naraha in Fukushima Prefecture.

Almost all of the respondents live away from their homes.

On the question of how they would feel if an interim storage facility were built at or near their homes, 76 percent of the respondents said they would "understand" or "be inclined to understand" the need for such a plan. Twenty-four percent said they would either "not understand" or "be inclined to not understand" the necessity of the plan.

Eighty-two percent of those who would “understand” or be inclined to accept such plans cited the difficulty in returning to their old homes, while 62 percent noted that radiation levels are higher there than elsewhere.

Fifty-eight percent said they hope their land will soon be purchased so that they can start rebuilding their lives, while 52 percent called for further decontamination efforts across Fukushima Prefecture.

When asked to provide comments, some of the respondents expressed a sense of resignation over their inability to move back home and impatience about the delay in rebuilding efforts.

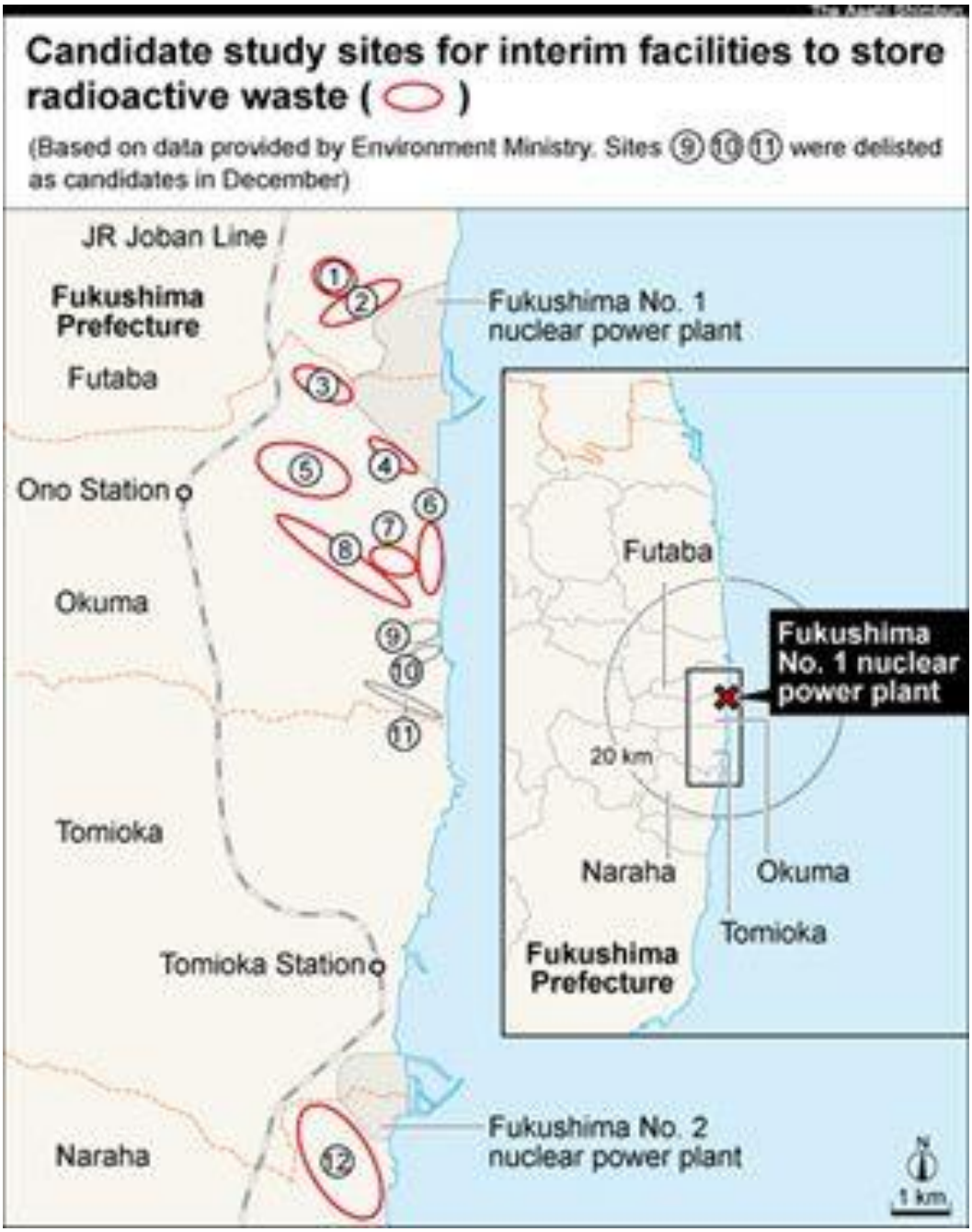
Those who signaled their approval were also asked to list conditions for their acceptance of the interim storage facilities. Seventy percent said "continual assistance to help end the evacuation and rebuild lives," while 67 percent cited "acceptable land purchase prices."

Sixty-three percent cited "safety of the facility."

Thirty-three percent of those who expressed opposition to the storage plans said they could change their stance if certain conditions are met.

When asked to name these conditions, 50 percent cited "acceptable terms for (land) purchases," 36 percent said "a decision on the location of the final disposal site," and 36 percent pointed to "assistance measures to help rebuild lives."

Nineteen percent of the opponents said they would not change their views under any condition.
(This article was written by Takayuki Kihara and Shunsuke Kimura.)



Decontamination: Asahi reveals very shoddy practices (1)

CROOKED CLEANUP (1): Radioactive waste dumped into rivers during decontamination work in Fukushima

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201301040058

Cleanup crews in Fukushima Prefecture have dumped soil and leaves contaminated with radioactive fallout into rivers. Water sprayed on contaminated buildings has been allowed to drain back into the environment. And supervisors have instructed workers to ignore rules on proper collection and disposal of the radioactive waste.

Decontamination is considered a crucial process in enabling thousands of evacuees to return to their homes around the crippled Fukushima No. 1 nuclear power plant and resume their normal lives.

But the decontamination work witnessed by a team of Asahi Shimbun reporters shows that contractual rules with the Environment Ministry have been regularly and blatantly ignored, and in some cases, could violate environmental laws.
"If the reports are true, it would be extremely regrettable," Fukushima Governor Yuhei Sato said at his first news conference of the year on Jan. 4. "I hope everyone involved will clearly understand how important decontamination is to the people of Fukushima."

He called on the Environment Ministry to investigate and present a clear report to the prefectural government.
The shoddy practices may also raise questions about the decontamination program itself--and the huge amounts of money pumped into the program.

The central government initially set aside 650 billion yen ($7.4 billion) to decontaminate areas hit by radioactive substances from the March 11, 2011, accident at the Fukushima plant. Since last summer, the Environment Ministry has designated 11 municipalities in Fukushima Prefecture for special decontamination work.

Work has already begun in four municipalities to remove radioactive substances from areas within 20 meters of buildings, roads and farmland.

The Environment Ministry itself does not have the know-how to decontaminate such a large area, so it has given contracts to joint ventures led by major construction companies to do the work.

A contract worth 18.8 billion yen to decontaminate the municipality of Naraha was awarded to a group that includes Maeda Corp. and Dai Nippon Construction. A 7.7-billion-yen contract for Iitate was signed with a group that includes Taisei Corp., while a 4.3-billion-yen contract for Kawauchi was given to a group

led by Obayashi Corp. A consortium that includes Kajima Corp. was awarded a 3.3-billion-yen contract to clean up Tamura.

In signing the contracts, the Environment Ministry established work rules requiring the companies to place all collected soil and leaves into bags to ensure the radioactive materials would not spread further. The roofs and walls of homes must be wiped by hand or brushes. The use of pressurized sprayers is limited to gutters to avoid the spread of contaminated water. The water used in such cleaning must be properly collected under the ministry's rules.

A special measures law for dealing with radioactive contamination of the environment prohibits the dumping of such waste materials. Violators face a maximum prison sentence of five years or a 10-million-yen fine.

From Dec. 11 to 18, four Asahi reporters spent 130 hours observing work at various locations in Fukushima Prefecture.

At 13 locations in Naraha, Iitate and Tamura, workers were seen simply dumping collected soil and leaves as well as water used for cleaning rather than securing them for proper disposal.

Photographs were taken at 11 of those locations.

The reporters also talked to about 20 workers who said they were following the instructions of employees of the contracted companies or their subcontractors in dumping the materials. A common response of the workers was that the decontamination work could never be completed if they adhered to the strict rules.

Asahi reporters obtained a recording of a supervisor at a site in Naraha instructing a worker to dump cut grass over the side of the road.

Officials of Maeda and Dai Nippon Construction have not responded to questions from The Asahi Shimbun.

Four workers at a site in Tamura said they were told to dispose of leaves and soil in a river. At another site in Tamura, reporters saw the leader of the subcontractor group kick a pile of leaves into the river.

A Kajima official said the company was investigating the incident.

Although the Environment Ministry has asked the construction companies to take radiation readings before and after decontamination work, the limits on measurement sites make it difficult to determine the

extent to which contamination is actually being conducted.

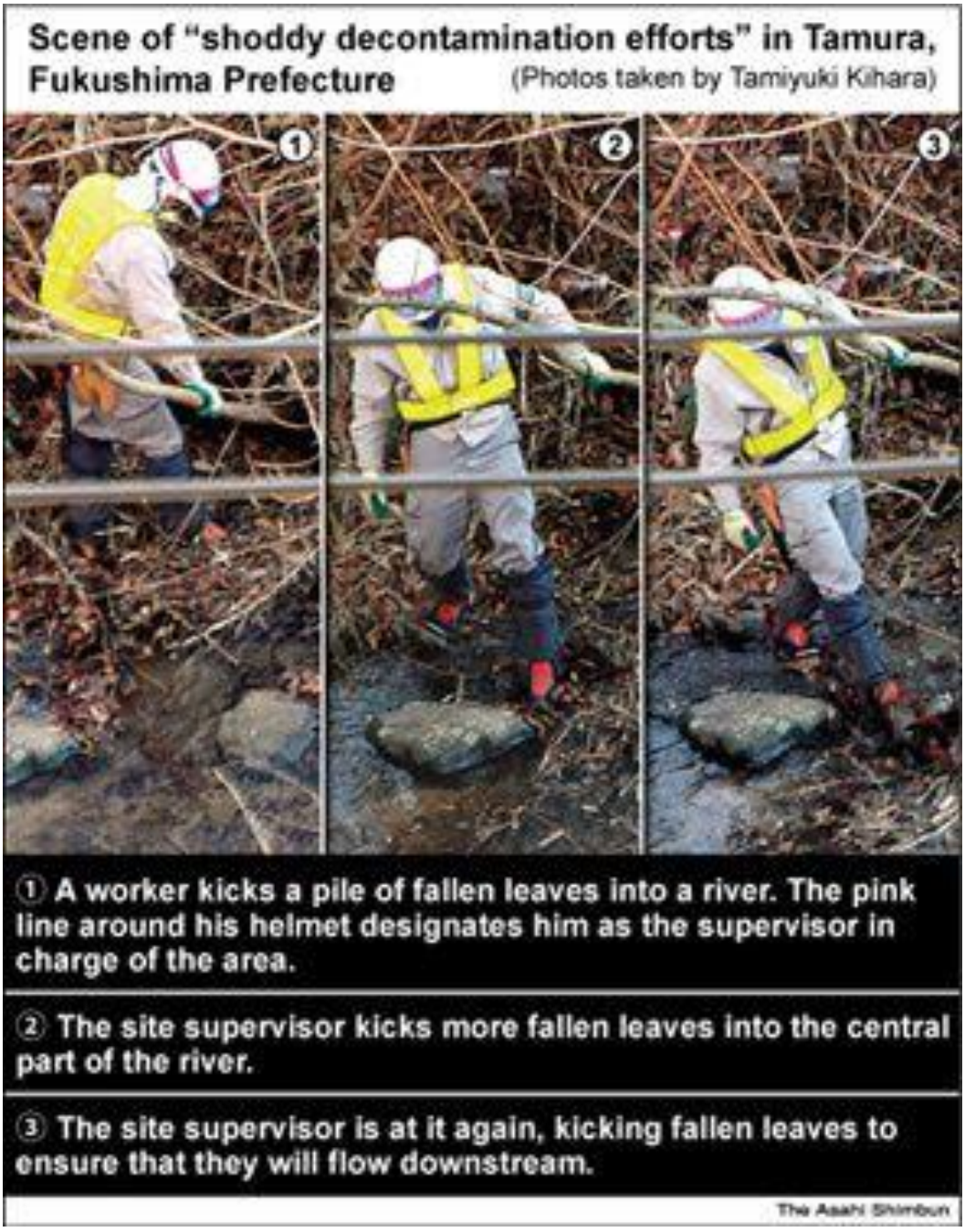
"We were told to clean up only those areas around a measurement site," one worker said.

Environment Ministry officials who work on-site said it is impossible to oversee every aspect of the decontamination effort. But they said they have begun investigating the practices revealed by The Asahi Shimbun.

The latest revelations will call into question whether taxpayer money is being properly used. Some living in Fukushima Prefecture have called for using the decontamination funds to support the lives of the evacuees instead.

The 650 billion yen for initial decontamination covers limited areas in only four municipalities. Questions will likely be raised on whether the decontamination program now being implemented is the best use of taxpayer money.

(This article was compiled from reports by Miki Aoki, Tamiyuki Kihara and Toshio Tada.)



CROOKED CLEANUP (2): Some decontamination workers sorry for following orders

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201301040073

A man in his 20s questioned the shady practices involved in decontaminating areas in Fukushima Prefecture, only to be assured that everything was OK.

He continued working and watching others around him dump the collected waste instead of properly storing it for disposal.

Like him, other workers involved in cleaning up the radioactive fallout from the Fukushima No. 1 nuclear plant disaster expressed concerns. One even apologized for what he did.

But they were on the bottom employment levels in the decontamination process, and their words apparently meant nothing to their supervisors.

The man in his 20s did eventually inform the Environment Ministry about what was going on. And he recently took Asahi Shimbun reporters to a forested area about 20 meters from a prefectural road in Naraha, about 15 kilometers south of the crippled Fukushima No. 1 nuclear power plant.

"This is where we dumped the vegetation that should have been collected in bags," the man said.
Fallen leaves and stems were scattered over an area about 1 meter wide and 50 meters long. In some areas, a pile of waste reaching 1.5 meters in height had been created.

A no-entry zone designation was lifted for Naraha in August last year, but residents still cannot return to their homes because a new designation put a large part of the municipality in an area in which preparations are being made for lifting the evacuation order.

A joint venture that includes Maeda Corp. and Dai Nippon Construction is handling decontamination of the Naraha site.
Under rules established by the Environment Ministry, vegetation and soil in an area within 20 meters of both sides of a road must be removed, collected into bags and kept at temporary storage sites. That work is the first step toward reaching the long-term objective of lowering the airborne radiation level to under 0.23 microsievert per hour.

Last October, the man in his 20s was at a job placement center in Tokyo where he found employment with a tertiary subcontractor of the Naraha decontamination project.

Pink tape marked off 20 meters from both sides of the road. Within that area, workers were supposed to cut trees and mow grass before the clippings and fallen leaves were raked into bags and carried from the site.

However, the supervisor from Dai Nippon Construction told the 30 or so workers under his watch to dump whatever would not fit into the bags or to throw materials down the slope outside of the line marked by the pink tape. Whenever the supervisor was not present, the person taking his place gave similar instructions.

The man questioned if the work could actually be called decontamination. He confronted the supervisor about his instructions on Nov. 27 and recorded the conversation.

The man can be heard asking, "Is it all right to just dump the stuff?"

The supervisor replied: "Yeah, yeah, it's OK. It can't be helped."

Fallen leaves were scattered all over the isolated area. The man said he felt the supervisor was convinced that no one would know about what was being dumped.

"Were you told to do this by the Environment Ministry?" the man asked the supervisor.
"No, I heard it from those around me," was the response on the recording.

The man never asked who those people were and abided by the supervisor's instructions.

However, toward the end of last year, he informed the Environment Ministry about the dumping.

Kajima Corp. was part of the joint venture that won the contract to decontaminate forests in Tamura. On Nov. 16 and 17, four workers for a tertiary subcontractor in their 40s and 50s were instructed to gather fallen leaves and stems along a slope by a river--and to dump it into the water. The 3 cubic meters turned the river brown.

A 43-year-old man who was part of that group took an Asahi Shimbun reporter to the site. A pile of leaves was found at the bottom of the slope by the river. The man came from Toyama Prefecture and ended the work on Dec. 26.
"Even though I was following an order, I am sorry for polluting the river," the man said.

(This article was compiled from reports by Miki Aoki and Jun Sato.)

Fallen leaves and debris gather along a slope by a road in Naraha, Fukushima Prefecture. (Miki Aoki)

January 4, 2012

CROOKED CLEANUP (3): Reporters document extent of shoddy decontamination practices

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201301040076

To discover the extent of shoddy decontamination practices, **Asahi Shimbun reporters spent 130 hours observing, photographing and interviewing workers at various locations in Fukushima Prefecture from Dec. 11 to 18.**

Early on Dec. 14, one of the reporters visited a forested area in Tamura, about 17 kilometers west of the Fukushima No. 1 nuclear power plant, and positioned a camera at a site about 50 meters up a slope from a local road.

Around 8:15 a.m., five men hired by a subcontractor appeared at the site. Wearing helmets and face masks, they spread out along the river bank carrying rakes and large dustpans. They filled bags with leaves, stems, snow and soil and used a small truck to carry the waste to a nearby collection point.

Before the noon break, however, one of the workers began kicking a pile of fallen leaves into the river. The worker had a pink line around his helmet, designating him as the person in charge of the group. **The river eventually meets up with the Ukedogawa river, which passes through Fukushima Prefecture before reaching the Pacific.**

The following day, a camera was positioned farther up the river. One worker dumped leaves that had gathered on a rock into the river. Another pushed in a tree trunk. After the work was done, workers used the river water to clean off the dirt that had accumulated on their rubber boots.

On Dec. 18, two workers for a subcontractor to the joint venture tasked with decontaminating Iitate were found using a pressurized sprayer to clean the parking lot in front of a post office. Some of the water used in the cleaning splashed onto the sidewalk and some flowed into a gutter that eventually reaches a river. An employee for Taisei Corp., which was part of the joint venture, was at the site serving as a supervisor.

The airborne radiation level near the gutter before the cleaning water flowed in was 0.8 microsievert per hour. The radiation level near the cleaning water hovered between 1.9 and 2.9 microsieverts. The larger figure is close to the cutoff point in determining if residents should evacuate.

A worker who was asked why the water was not being collected only said, "I don't know because I am not in charge."
An official with the subcontractor who was later asked about the incident said, "There is a strong possibility that water used in the cleaning flowed into the gutter."

Photos were also taken of workers using pressurized sprayers in Kawauchi on Dec. 17. Although water from the sprayers was observed seeping into the soil, an official with Obayashi Corp., which is part of the joint venture handling work in that village, said, "The water and soil were collected in an appropriate manner in accordance with work procedures."

Also on Dec. 17, a worker in Naraha was observed using a pressurized sprayer to clean the veranda of a private home. Because no protective sheet was installed, water splashed the walls of neighboring structures.

Under Environment Ministry rules, all water used in decontamination must be collected.

However, a man in his 40s who was in charge of the site at Naraha said: "The radiation level does not drop just by wiping. Almost all work involves cleaning with water and letting the water drain off."

In some cases, radiation levels at homes have even increased after decontamination, leading some workers to suspect that radioactive materials were blown into the area by wind.

(This article was compiled from reports by Tamiyuki Kihara and Kenji Oda.)

Two workers wash off dirt from their rubber boots and rakes after decontamination work in Tamura, Fukushima Prefecture. (Tamiyuki Kihara)

"Regrettable"...

Illegal dumping of contaminated soil suspected

http://www3.nhk.or.jp/daily/english/20130105_04.html

The Japanese government will investigate suspected illegal disposal of radioactively contaminated soil by some contractors in Fukushima Prefecture.

The government commissioned contractors in July of last year to decontaminate housing and other areas of 11 municipalities in the northeastern prefecture.

The Environment Ministry obtained information about some of the contractors working in Tamura City, Naraha Town and Iitate Village.

They are suspected of illegally dumping contaminated soil and vegetation into rivers and not collecting the water used in decontamination.

The ministry's guidelines stipulate that tainted soil should be sealed and stored in places of decontamination work or at initial storage sites. They also require contractors to collect the water used in decontamination.

Violators will be imprisoned for up to 5 years or fined up to 10 million yen, or around 115,000 dollars.

The ministry will question the contractors as early as Monday and look into whether similar violations are suspected in other areas.

Decontamination companies suspected of illegally dumping radioactive waste in Fukushima

Kyodo

Contractors might be illegally dumping radiation-tainted soil, vegetation and water into rivers or other places near the stricken Fukushima No. 1 nuclear plant, the Environment Ministry said Friday.

The ministry plans to summon senior officials from the contractors to the Fukushima Office for Environmental Restoration to answer questions on how they manage contaminated waste.

Some of the contractors hired to decontaminate areas tainted by the fallout are suspected of illegally dumping tainted material in the coastal town of Naraha, the hard-hit village of Iitate, and even farther inland in the city of Tamura, the ministry said.

A special law made due to the nuclear disaster bans illegal dumping of contaminated substances into the environment and makes it punishable by up to five years in prison or a fine of up to ¥10 million. The guidelines for decontamination work require contractors to store tainted substances at the decontamination site or at temporary storage sites.

"It is very regrettable if that is true," Fukushima Gov. Yuhei Sato said of the suspected dumping at his first news conference of 2013.

Dumping of tainted soil suspected

http://www.japantimes.co.jp/text/nn20130104x1.html

Contaminated soil might have been illegally dumped in Fukushima

http://mainichi.jp/english/english/newsselect/news/20130104p2g00m0dm068000c.html

January 5, 2013

Decontamination a waste of tax funds?

Decontamination worker says illicit dumping is daily occurrence

http://mainichi.jp/english/english/newsselect/news/20130105p2a00m0na015000c.html

Illicit dumping of radiation-tainted soil, plants and water resulting from decontamination work in areas affected by the Fukushima No. 1 Nuclear Power Plant disaster is "common practice," a worker has told the Mainichi Shimbun.

The Environment Ministry launched an investigation after allegations of illicit dumping by contractors charged by the government to conduct decontamination efforts emerged on Jan. 4.

According to the worker, who has been monitoring radiation levels as part of decontamination efforts in the Fukushima Prefecture village of Kawauchi and elsewhere since last fall, general contractors are awarded primary contracts, and subcontractors take charge of each decontamination zone. These zones are then divided up among unions of sub-subcontractors comprising small to mid-size companies and local operators.

The worker said that branches and leaves collected during decontamination work are supposed to be stored temporarily in special bags, but such rules are commonly disregarded.

"There's no temporary storage space anymore, so branches and leaves are often just left there," he said. "It's common practice. In other words, we arrive at the conclusion that since there's no space to put it, there's nothing else we can do."

Water that has been used to decontaminate surfaces must also be collected by placing plastic sheets under structures during cleaning. The tainted water is then pumped into a tank and processed with a purification system. However, failure to take such measures is common, the worker said.

"It's only in model zones directly under the jurisdiction of the Environment Ministry where the ministry conducts inspections that water is collected properly. Otherwise, it's not done. (Tainted water) is left as is.

"My colleagues and I are always saying, 'If the mass media were to come and see what's going on now, all hell would break loose.' When a high-ranking state figure came for an inspection, we did everything right. But everything is usually done really shoddily. Sometimes, grass on the side of the road that's been cut is just left there."

As a result, it is common for air radiation levels to remain relatively unchanged after decontamination, the worker said.
"In reality, (decontamination) hasn't been very effective. From our point of view, it's a waste of tax funds. But the government can't very well say they're going to stop decontamination efforts because there's no budget for it. For primary contractors, there's no deal as sweet as this. The more work they take on, the more money they're paid.

"Unless we do something now (since things have come to light), things will get worse. No matter how much tax money we have, it'll never be enough."

January 6, 2013

Radioactive contamination of Aomori mushrooms not necessarily due to 3/11

Professor: Cesium in wild mushrooms not caused by Fukushima accident

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201301060010

By SEIKO SADAKUNI/ Staff Writer

When high levels of radioactive cesium were detected in wild mushrooms in Towada, Aomori Prefecture, a restaurant owner pointed her finger at the Fukushima No. 1 nuclear plant.

The government slapped a ban on shipping wild mushrooms for 10 prefectures, including Aomori, Nagano, Shizuoka and Yamanashi.

The 70-year-old woman was forced to stop using wild mushrooms in the stew and vinegared dishes served at her restaurant in Towada, 350 kilometers from the crippled nuclear plant. She now buys screened mushrooms from a vegetable stand.

She still asks, “How can the mushrooms be contaminated when the city is so far away from the nuclear power plant?"
Gakushuin University professor Yasuyuki Muramatsu, an expert on radioecology, has an answer: The high radioactivity levels in the mushrooms were not caused by the Fukushima disaster, but by events much farther away.

If the Towada “chichitake” mushrooms had been contaminated by the Fukushima accident, then two types of radioactive cesium--cesium-134 and cesium-137--would have been detected in roughly equal amounts, he said.

Cesium-137, which has a half-life of 30 years, was detected at a level of 120 becquerels, exceeding the government-mandated safe level of 100 becquerels per kilogram. But no cesium-134, which has a half-life of two years, was found in the mushrooms.

Similarly, in “sakura shimeji” mushrooms from the city of Aomori, cesium-137 was measured in late October at 107 becquerels, while almost no cesium-134 was found.

"The fact that no cesium-134 has been detected proves that the contamination happened prior to the Fukushima nuclear accident,’’ Muramatsu, 62, said. “It is from nuclear weapons tests conducted by the Soviet Union and China from the late 1940s to the late 1960s, and from the Chernobyl accident in 1986."

In the 1990s, after the Chernobyl disaster, Muramatsu and his research team studied the effects on wild mushrooms in Japan. They found radioactive cesium exceeding 100 becquerels, mainly in northern Japan.

Some of the mushrooms topped 1,000 becquerels, and when dried, some had readings that were over 10,000 becquerels.

At that time, the Japanese government did not have any restrictions on shipping.

According to the Ministry of Health, Labor and Welfare, a study of wild mushrooms in Fukushima Prefecture following the nuclear accident found some within the safety limits, while radioactive cesium topping 10,000 becquerels was detected in others.

Muramatsu said many mushrooms in and around Fukushima Prefecture have clearly been contaminated by the nearby accident, but some had already been affected by other causes, such as nuclear weapons tests.

Mushrooms have fungal filaments called hyphae, which extend into the ground and act like roots. A hypha easily absorbs radioactive cesium in the soil of forests, making wild mushrooms more likely to build up cesium than vegetables. The absorption rate differs among mushroom types.

"The ones on the market are fine since they're being screened, but people should avoid eating too many mushrooms that they pick themselves in places at risk of contamination," Muramatsu said.

According to a statement from the health ministry's inspection and safety division, "We need to observe changes over the long term, and we want to work with relevant organizations to study (this issue)."

January 7, 2013

Decontamination - Gov't will investigate

CROOKED CLEANUP: Government to investigate Fukushima decontamination

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201301070080

The government will investigate decontamination work around the crippled Fukushima nuclear plant following reports that potentially radioactive debris has been dumped into the environment, even during the preparatory stage of the program.

"It is extremely regrettable," Chief Cabinet Secretary Yoshihide Suga told a news conference on Jan. 7. "We will take stern measures after fully investigating it."

An Environment Ministry task force, headed by Senior Vice Minister Shinji Inoue, held its first meeting later in the day. It is expected to investigate what happened in Fukushima Prefecture, strengthen management of the decontamination operations and find ways to restore public trust in the work.

Asahi Shimbun reporters discovered violations of Environment Ministry rules listed in the lucrative contracts signed with construction companies for the decontamination work. Under those rules, workers must properly store collected debris and water used for cleaning buildings for proper disposal.

Instead, the reporters found numerous instances of waste being dumped in forests and rivers--often on the instructions of supervisors.

DUMPING OCCURRED IN EARLY PHASE

Some cleanup crews said they were told to dump potentially radioactive debris into rivers even during preparations to establish bases for full-scale decontamination efforts around the Fukushima No. 1 nuclear power plant.

The workers talked to The Asahi Shimbun after a Jan. 6 meeting in Koriyama, Fukushima Prefecture, organized mainly by a support group called Hibakurodo-wo Kangaeru Network (network to think of work under radiation exposure), which consists of labor unions, lawyers and others.

Around 20 workers attended the meeting.

Some of them said they dumped branches, leaves and water after cleaning local government offices and other places that would serve as bases for the full-scale decontamination of areas within 20 meters of buildings and roads.

"The supervisor from a subcontractor told me, 'It's good to work seriously, but I think it's OK to dump them over there.' So I threw away branches and leaves into a river," said a worker engaged in preparatory decontamination work in Naraha last summer.

Another worker involved in the cleanup in Katsurao said: "Around July, we just allowed the water used to clean buildings to flow away. We were instructed not to do so only on days when Environment Ministry officials came."

The Jan. 6 meeting, however, was more focused on pressing the Environment Ministry to ensure workers receive special hazard pay, which has not been provided in many cases.

Crews clean a road in preparatory work for full-scale decontamination in Naraha, Fukushima Prefecture, in March 2012. (Provided by the Environment Ministry)

January 8, 2013

Extra 11 billion yen requested for decontamination

Ministry seeks 11 bil. yen for decontamination centers in Fukushima

http://mainichi.jp/english/english/newsselect/news/20130108p2g00m0dm019000c.html

TOKYO (Kyodo) -- The Environment Ministry said Monday that it requested around 11 billion yen as part of an envisioned extra budget for fiscal 2012 to build centers for research on radiation decontamination in Fukushima Prefecture.

The government earlier allocated 8 billion yen for the centers to the northeastern prefecture that is struggling in the aftermath of the devastating accident at Tokyo Electric Power Co.'s Fukushima Daiichi nuclear power plant in 2011.

The centers, with the cooperation of the International Atomic Energy Agency and domestic institutions, are expected to conduct research and development of technologies to clean the environment and dispose of contaminated waste, a ministry official said.

According to a plan unveiled by the prefecture last October, the centers will also have radiation monitoring functions, while developing human resources with knowledge on environmental radioactivity.

The prefecture plans to place the centers at two locations, one in the town of Miharu and another in the city of Minamisoma, at an area just outside the 20-kilometer radius of the crippled nuclear complex.

Feeling of helplessness + lack of storage and gov't monitoring

CROOKED CLEANUP: Ministry questions decontamination contractors; workers express hopelessness

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201301080089

FUKUSHIMA--Workers in Fukushima Prefecture appeared tense on Jan. 7 as they kicked off this year's decontamination mission under increased scrutiny and the threat of punishment for breaking the Environment Ministry's rules.

The central government is trying to stamp out the shoddy decontamination work reported by The Asahi Shimbun--and has confirmed two cases so far. Yet the increased pressure on the workers could also heighten their sense of futility in trying to remove the radioactive substances that spewed from the crippled Fukushima No. 1 nuclear plant.

Some workers said they dumped potentially contaminated soil, leaves and water into rivers and secluded forest areas to feel they were making progress in this huge and unprecedented project in Japan.

"If we follow the rules, we can never go home," said a decontamination worker in his 50s.

The government is not expected to review the framework of the program, which relies heavily on general contractors. Instead, it will try to ensure the ministry's rules are followed in the decontamination process, a crucial step in the plan to reduce radiation levels and allow evacuees to return home.

To determine if rules had been broken, an Environment Ministry office in Fukushima overseeing decontamination interviewed supervisors at four major construction companies that received lucrative government contracts.

Takashi Omura, chief of the office, said that water used for cleaning in December was not properly recovered in two instances, one in Naraha and the other in Iitate. A group that includes Maeda Corp. is cleaning up Naraha, while a group that includes Taisei Corp. is decontaminating Iitate.

Omura said the ministry is still investigating other cases.

"Our office is also responsible (for overseeing the companies)," Omura told a news conference on the night of Jan. 7. "We will conduct thorough supervision and instruction."

In an initial step, the ministry will station monitoring officials at the 17 locations where decontamination work is under way.

"We will strictly deal with violations as the ministry that awarded the contracts," Environment Minister Nobuteru Ishihara told reporters.

A ministry task force set up on Jan. 7 plans to compile measures by Jan. 18 to prevent a recurrence. Senior Vice Environment Minister Shinji Inoue, who leads the team, will visit the sites of slipshod cleanup as early as Jan. 9 and also meet with Fukushima Governor Yuhei Sato.

The Fukushima prefectural government asked the ministry to investigate the suspected violations reported by The Asahi Shimbun. The prefecture also proposed that local government officials and residents monitor sites that are beyond public view.

Goshi Hosono, a former environment minister, said the problem stems partly from the lack of an intermediate storage facility for contaminated soil and waste.

He said he would not be surprised if contractors tried to cut corners because they could not find a disposal area for a large amount of waste.

NO END IN SIGHT TO WORK

But those on the front lines say the problem is much wider.

At a meeting before the day's shift on Jan. 7, a supervisor at one site told workers not to talk with reporters, sources said. The supervisor also told the workers to pay particular attention to the rules after explaining the Environment Ministry's instructions.

Under the rules, collected soil and leaves must be placed in bags to ensure radioactive materials do not spread further. The roofs and walls of homes must be wiped by hand or brushes, in principle.

In Tamura, workers were collecting leaves and branches with rakes in a forest along a road, but did not throw away the debris around the site.

In Naraha, 10 or so workers were removing surface soil and wiping home balconies. Pressurized sprayers, whose use is limited to gutters to avoid the spread of contaminated water, were not seen.

When an Asahi Shimbun reporter prepared to take a photo, one worker asked, "Do you live near here?" Others paused and turned their face to the reporter.

According to an official of a company involved in the cleanup, five workers must spend three days to decontaminate a home by hand, compared with only two hours if they use a pressurized sprayer.

"We will never be able to finish the work by the March deadline," the official said.

The worker in his 50s who longed to go home said workers are supposed to collect the water used to wash their boots and other tools after work. To save time, they use a river instead, he said.

Companies are only required to remove radioactive materials from buildings, roads and areas within 20 meters from those facilities.

A worker in his 20s said a supervisor told him to throw away waste because the crew "did not need to do anything beyond the areas marked with tape."

Some people said workers grow despondent after removing radioactive materials because new ones may flow in from beyond the 20-meter areas.

They said **a feeling of helplessness led to a moral vacuum** that enabled workers to ignore the Environment Ministry's rules.

Radiation levels must be measured after the decontamination work, but such sites are limited. Some workers said they only have to repeat the decontamination work in areas where radiation levels failed to drop.

Government monitoring has also been limited. Thousands of people are engaged in decontamination daily, but only a few dozen Environment Ministry officials go on patrol.

Some workers said they were told to exert extra effort only on days when ministry inspectors were scheduled to visit the sites.

(This article was compiled from reports by Harufumi Mori, Shunsuke Kimura, Tamiyuki Kihara, Miki Aoki and Toshio Tada.)

Workers wipe away radioactive materials at a home in Naraha, Fukushima Prefecture, on Jan. 7. (Miki Aoki)

January 9, 2013

Decontamination - Whose fault?

CROOKED CLEANUP: Decontamination workers say cutting corners came naturally

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201301090070

The slipshod organization of the mammoth decontamination program around the stricken Fukushima nuclear plant created an environment where cutting corners came naturally and morals and ethics quickly slipped away, workers said.

They cited a lack of training, unreasonable deadlines, threats of isolation, and persistent feelings that their efforts were pointless.

"When I first entered the work area, I could not believe that I was involved in a state-run project," a 50-year-old worker said in an e-mail.

Asahi Shimbun reporters and the company have received more than 100 e-mails and phone calls from people involved in the decontamination project in Fukushima Prefecture. They were responding to the newspaper's reporton Jan. 4 that workers were dumping potentially contaminated soil, water and debris into the environment instead of properly storing them for disposal.

Many of those messages and calls showed the workers felt they were not doing anything inappropriate under the circumstances.

"We were pressed to finish the work as quickly as possible," wrote the 50-year-old worker who was involved in decontaminating Tamura between Nov. 5 and Dec. 28.

"If we tried to resist, we would become isolated from other workers, although it did not reach the extent of losing the job. With sub-zero temperatures in the mountains, being placed in such circumstances would have led to feelings of loneliness among many people."

In December, the leader of the work group instructed the man to throw bundles of collected bamboo grass outside of the cleanup area within 20 meters from a road. The 15 or so workers each tossed away several bundles in the area, which had very little vehicle traffic.

The man felt that many workers soon realized their efforts were not very productive, leading to a weakening of their ethics. He said that when he tried to work carefully, others told him, "Most of the leaves will end up flowing down rivers."
He said he felt an invisible gap was developing between him and the other workers.

Arrangements were made to meet the man on Jan. 5. He told The Asahi Shimbun that he was born in Fukushima Prefecture, graduated from Waseda University in Tokyo, and worked in construction and landscaping.

He was hired for the decontamination work through a job placement center last October. A subcontractor told him the work would only involve bagging debris that had been left by the side of roads.

But the work was much tougher, and he found himself gathering vegetation along steep slopes by the road.

"Even if the work was not properly completed, we were told to hurry up because there was no time," the man said. "As long as the site looked all right, we moved on to the next location."

The man showed a copy of his work contract, which listed his daily wage as 11,000 yen ($125). There was no indication that he was given the 10,000 yen in hazard pay to which he was entitled.

He said Environment Ministry officials never showed up at the work sites.

“Radiation levels returned even after we completed the work, so there was a sense that what we were doing was worthless," he said. "There will be no end to the shoddy work even if oversight is strengthened."

Another man in his 50s also described the futility of the work: "While we did try to scoop up leaves that had fallen into a river, most just flowed away."

He said some bags filled with leaves were simply left in the river.

Many workers lost all concerns about handling radioactive substances, the man said, adding that he feared he would become as insensitive as those around him.

Another e-mail was critical of the lack of local companies involved in the decontamination work.

An executive with a Fukushima Prefecture construction company said he often observed vegetation flowing down rivers.
"Residents know that such leaves and vegetation will flow downstream,” he wrote in an e-mail. “There was a problem with the major construction companies that did not use local people."

A man in his 60s said the workers should not be the target of criticism.

"Not all workers were being lax," the man wrote. "They were doing their best trying various methods because there was no job manual."

The man said workers did not receive detailed training before starting the job. He also said contractors took part of the workers' pay for various reasons.

"It would be very difficult to accept criticism about shoddy work against people who were doing their best amid the terrible work conditions," the man wrote.

(This article was compiled from reports by Tamiyuki Kihara and Toshio Tada.)

January 11, 2013

Thank you so much

Reprocessed nuclear waste to arrive in Aomori from Britain in late February

http://www.japantimes.co.jp/text/nn20130111a6.html

Kyodo

AOMORI — Japan Nuclear Fuel Ltd. said Thursday that 28 canisters of high-level radioactive waste produced through the reprocessing of spent Japanese nuclear fuel in Britain will arrive in Aomori Prefecture in the latter half of February.

The 28 canisters of vitrified radioactive waste include 14 for Kansai Electric Power Co. and seven each for Chubu Electric Power Co. and Chugoku Electric Power Co.

The freighter Pacific Grebe carrying the waste left the port of Barrow on Wednesday and will travel to Rokkasho, Aomori Prefecture, via the Panama Canal, Japan Nuclear Fuel said.

It will be the third time that vitrified radioactive waste will be brought to Japan from Britain.

Japan has received 104 canisters of such waste from Britain and plans to receive around 800 more. The 104 canisters have been stored at a facility in the village of Rokkasho.

January 12, 2013

Osaka officials not worried

Burning issue: Debris generated in Iwate Prefecture by the March 2011 tsunami is moved to an incinerator at a waste-processing plant in Konohana Ward, Osaka, for a test run Nov. 29. KYODO

Move to burn 36,000 tons from Iwate, bury it in bay spooks locals

http://www.japantimes.co.jp/text/nn20130112f1.html

By ERIC JOHNSTON
Staff writer

OSAKA — Despite fears of radioactive contamination, Osaka Prefecture is finalizing plans to begin incinerating 36,000 tons of tsunami debris from Iwate Prefecture next month.

The debris is scheduled to be burned in the city of Osaka's harbor district. The resulting ash will then become landfill on Yumeshima, or "Dream Island," a man-made isle in Osaka Bay that was once a proposed site for the city's failed 2008 Summer Olympics bid.

Originally, the prefecture was supposed to have begun burning the debris last spring. But local opposition due to fears the incineration would create highly radioactive ash delayed the start. Critics argued that

even with special filters at the incineration plant, radioactive ash would still pollute the air, and that it was folly to bury the ash in the bay area.

The prefecture's maximum radiation limit for incinerated ash is 2,000 becquerels per kilogram, far stricter than the central government threshold of 8,000 becquerels. Critics, however, warned the true health hazard was being underplayed by local officials, and that it was important **not to focus on the 2,000-becquerel standard but on the dangers presented by burning 36,000 tons with that degree of contamination**.

However, after the Osaka Ishin no Kai (One Osaka)-controlled prefectural assembly gave its OK, with the backing of both Osaka Gov. Ichiro Matsui and Osaka Mayor Toru Hashimoto, who founded the local group, a test incineration of 100 tons was carried out at the end of November.

The resulting ash had radiation levels of 38 becquerels per kilogram, prefectural officials said.

But citizens' groups in Osaka and elsewhere continued their opposition, leading to several arrests.

The most notorious was that of Hannan University professor Masaki Shimoji, one of the most visible leaders in the fight against burning the debris. He was arrested in early December for allegedly trespassing, obstructing business activities and violating an obscure railway services law.

What was newsworthy about Shimoji's arrest is that it took place nearly two months after his alleged crimes. On Oct. 17, he and several others gathered at JR Osaka Station and began heading to City Hall via the eastern corridor of the station to protest the incineration of Iwate debris.

The arrest warrant stated that Shimoji led an illegal protest march through the station, and that he refused to obey the orders of station personnel. Shimoji denied the allegations, and quickly attracted the support of legal scholars and activists nationwide.

"Shimoji was targeted because he was involved in the campaign to oppose city plans to incinerate imported earthquake debris throughout the nation, including Osaka, where he resides," said activists Uiko Hasegawa and Park Seung Joon in an international appeal for his release.

Shimoji was freed at the end of December without charges.

Now, with less than a month to go before incineration is slated to start, opponents are mounting what may be a last-ditch campaign to halt the project.

On Thursday, Kinuko Motoshige sent a petition on behalf of 27 citizens' groups nationwide to Prime Minister Shinzo Abe, Environment Minister Nobuteru Ishihara and two other officials in the Cabinet, asking them to put pressure on the city of Osaka to block the debris-burning plan.

In addition to citing various environmental reasons, the petition called on the Liberal Democratic Party government to sit down with city officials and discuss the issue in a public debate over the safety of incinerating the debris, and to not burn any of it until the dangers are completely eliminated.

"Some 2,232 letters and petitions calling on the city not to burn the debris have been sent to municipal assembly members. While LDP members have opposed the burning, Osaka Ishin no Kai and New Komeito, which are the ruling parties (in the assembly), have supported it," Motoshige said.

She also noted the Osaka Prefectural Assembly is not listening to the concerns, and is simply saying the debris is safe to burn.

On Wednesday, prefectural and city officials, and, possibly, officials from the Environment Ministry, will meet with residents in Osaka for what is likely to be the final public meeting before the start of the incineration. Osaka officials, however, continue to claim that November's test incineration met all environmental regulations and proved the waste could therefore be burned in the same manner as conventional garbage.

January 14, 2013

No one knows how it should be done

Soil-removal contractor says proper knowhow, guidance lacking

http://www.japantimes.co.jp/text/nn20130114x1.html

Kyodo

FUKUSHIMA — Contractors commissioned by the central government to decontaminate areas tainted by the Fukushima nuclear disaster lack the knowhow or manpower to handle the unprecedented work, one of the workers said.

The worker, a 60-year-old man from Iwaki, Fukushima Prefecture, said: "Theories and experience in the field are different. It's something no one has experienced before. No one knows how it should be done, exactly."

On Jan. 7, the Environment Ministry disclosed two cases in which contractors failed to collect water used for decontamination in areas tainted by the meltdown crisis under a central government project. The disclosure came days after the media reported suspected cases of illegal dumping of radioactive waste into rivers and other unauthorized locations.

Although the ministry again told contractors to step up their oversight, they lack the knowhow and manpower to resolve the problem.

The man said he works from 7:30 a.m. until 4:30 p.m. and takes one day off a week. Around 10 men and women, ranging from teenagers to those in their 60s, and with different professional backgrounds, work together. Only a few have civil engineering experience.

Some do not even seem to know the basics, including the need to wear a helmet and protective footwear. Many apparently work around the contaminated areas in regular boots.

Part of the decontamination work entails removing layers of topsoil down to around 5, 7 or even 10 cm deep if the dosimeters they carry fail to give off progressively lower radioactivity readings.

The worker described the process as trial and error.

"Those overseeing us from the contractor company or government offices nag at us to work safely, but they don't give us any specific instructions," he said. "They are all laymen who don't know what poses a danger."

There is no specific workload to be performed each day and workers are not encouraged to hasten their operations, the man said, adding that many quit after just a week.

The two cases the Environment Ministry disclosed concerned decontamination work undertaken in mid-December — one case in the village of Iitate and the other in the town of Naraha, both in Fukushima Prefecture.

In Naraha, workers used high pressure water hoses to wash off radioactive waste from the balconies of homes, when they were supposed to wipe them down instead, the ministry said, adding the water was not properly removed from the sites.

In Iitate, water used to clean road surfaces was allowed to run off into ditches, it said.

Alarmed by the revelations, Naraha officials visited the homes on Jan. 8 as well as the forest decontamination sites and a temporary storage site for contaminated topsoil removed from various locations.

Hiroshi Aoki, head of the town's radiation measures division, said: "Decontamination is the first step to allow residents to return home. We really hope the state undertakes work in a credible manner."

The central government has designated 11 municipalities as "special decontamination areas" where the state is required to take direct charge of removing radioactive materials. These areas cover exclusion or restricted zones where residents were forced to evacuate after the Fukushima disaster started.

The cost of decontamination work in and outside of Fukushima Prefecture has so far totaled around ¥570 billion. Of the sum, roughly ¥120 billion has been spent on those "special" areas.

Decontamination methods are detailed in the guidelines of the Environment Ministry as well as in the manuals of contractors. They require the collection of high-pressure water used for cleaning.

According to Tokyo Electric Power Co., 900,000 terabecquerels of radioactive fallout was discharged into the atmosphere during the triple meltdowns at the plant in March 2011 alone. One terabecquerel is 1 trillion becquerels. It is not known howmuch fell onto the land.

The decontamination effort requires the removal of substances on roads, farmland and areas 20 meters into woodlands where people's daily activities take place. It does not cover areas where residents are still barred from returning.

But there is no mention of how to decontaminate the other wooded areas that cover 70 percent of Fukushima Prefecture, suggesting the project itself will have extremely limited remedial effect.

Nearly two years into the crisis, a worker in the field said, "If you ask if (the decontamination) can be done thoroughly in all areas, (the answer is) it will be difficult in reality."

January 15, 2013

Filtration or sprayers?

CROOKED CLEANUP: Fukushima city not sticking to plan to decontaminate homes

FUKUSHIMA--The Fukushima municipal government is apparently not following its own proposal for decontaminating homes polluted by radioactive materials or guidelines called for by the Environment Ministry.

Water used in pressurized sprayers to clean the roofs of homes and roads has been allowed to flow into gutters.

Guidelines established by the Environment Ministry call for efforts to collect as much as possible the runoff from the cleaning of roofs.

Moreover, the Fukushima municipal government submitted a proposal to the ministry that designates the use of bags containing zeolite and sandbags to filter radioactive materials out of the water used to clean homes and roads. However, the city has so far not utilized that method except in a small percentage of cases.

"With difficulties in finding a temporary storage place for the contaminated sandbags, we chose to emphasize reducing radiation levels in residential areas," explained one Fukushima city official in charge of the decontamination process. "Because there has been an increase in temporary storage areas, we plan to implement the method in the future."

Environment Ministry officials said they thought that the filtration system was being used in Fukushima city.

Fukushima city is not one of the 11 municipalities over which the Environment Ministry has direct jurisdiction to decontaminate polluted areas. The Asahi Shimbun broke a story on Jan. 4 that found shoddy decontamination work in three of those municipalities.

However, other municipalities, such as Fukushima city, are conducting decontamination work at their own initiative. In areas where the annual radiation level is 1 millisievert or higher, which translates into 0.23 microsieverts per hour, the central government provides subsidies for the decontamination work conducted by the municipality.

Almost the entire city of Fukushima has radiation levels that call for such subsidies. About 90,000 households are eligible for such decontamination work. So far, decontamination has been completed on about 4,000 households.

In tests conducted on the filtration system proposed by Fukushima city, about 90 percent of the cesium was filtered out of the water through the use of the zeolite-filled bags and sandbags. Last September, the Environment Ministry approved the payment of subsidies for the use of that filtration system.

In meetings with local residents, Fukushima municipal government officials explained that the filtration system would be used. They asked the companies that actually conducted the decontamination work to use the system from those areas where temporary storage areas for the bags were found.

However, city officials admitted that the method has only been used for about 300 households in 10 neighborhoods in eastern Fukushima city.

Experts have raised doubts about the effectiveness of using pressurized sprayers to decontaminate roofs. They have said that wiping the surfaces with a cloth was much more effective in removing radioactive materials.

"There are many residents who ask that the pressurized sprayer be used because it ends up looking cleaner," one city official handling decontamination said.

One individual handling the actual decontamination work raised doubts about the guidelines established by the Environment Ministry.

"Because large amounts of radioactive materials have already flowed into sewers and rivers through the wind and rain, I do not think there is much meaning to collecting the polluted water from the decontamination work," the on-site inspector said.

Experts have also raised questions about processing the polluted water that emerges from decontamination using pressurized sprayers.

Junichiro Tada, an executive with the Radiation Safety Forum, a nonprofit organization that is involved in decontamination work in Fukushima Prefecture, said, "I do not think there is a large effect on the environment even if (the wastewater) is not filtered."

He said there was a much larger effect from radioactive materials that have flowed into gutters or rivers during heavy rains.

At the same time, he said, "There is the question of morals if they promised citizens that they would filter the water."

Tada also raised doubts about the limits placed on municipalities that are trying to decontaminate through the Environment Ministry guidelines.

"The pressurized sprayers that are included in the Environment Ministry's guidelines go against the objective of decontamination because radioactive materials are splattered in surrounding areas," he said. "There are more than a few items in those guidelines that do not fit the reality that those doing decontamination work actually face."

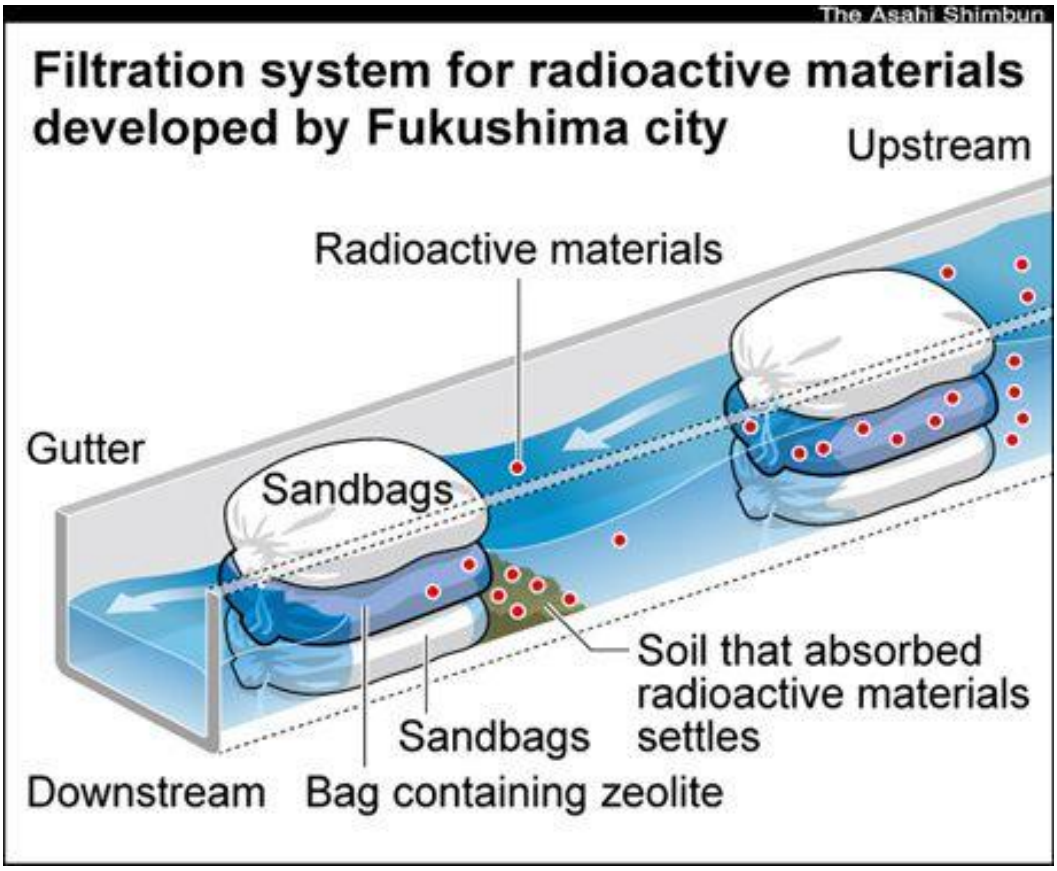
Kunihiro Yamada, a professor specializing in environmental design at Kyoto Seika University, has proposed his own decontamination methods to local governments in Fukushima Prefecture.

"From the standpoint of those actually doing the work, it is impossible to collect all of the polluted water, and there are also limits to the areas to which that collected material can be kept," Yamada said.

He said rather than use pressurized sprayers, a combination of foam cleansing, brushing and absorbing the materials should be used to decontaminate areas of radiation.

(This article was mostly compiled by Masakazu Honda.)

A worker on a crane uses a pressurized sprayer to remove radioactive materials from the roof of a home in Fukushima city. (Masakazu Honda)



January 19, 2013

Who said fish was safe?

Record radioactive cesium levels found in Fukushima rockfish

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201301190042

A rockfish caught in the port of the Fukushima No. 1 nuclear power plant was found to have radioactive cesium 2,540 times the government's safety standard for foodstuffs, Tokyo Electric Power Co., the plant operator, said Jan. 18.

Caught in December, the rockfish had a reading of 254,000 becquerels per kilogram, the largest reading found in seafood since the nuclear disaster of March 2011.

The rockfish was caught near an unloading point north of the No. 1 through No. 4 reactors. No fishermen operate in the nuclear plant's port.

The previous record was 25,800 becquerels of cesium per kilogram found in two greenlings caught about 20 kilometers north of the plant in August 2012.

Potentially radioactive debris and invasive species debris worry Hawaï

Fukushima debris hits Hawaii

http://rt.com/usa/news/fukushima-debris-hawaii-radiation-285/

Fukushima nuclear disaster

Reuters / Handout

Debris set adrift by the 2011 Japanese tsunami has made its way to Hawaii, triggering concerns over the unknown effects of the radiation it may carry from the meltdown of the Fukushima reactor.

Debris has washed ashore the islands of Oahu and Kauai and the state's Department of Health has been asked to test some of the incoming material for radiation levels. Refrigerator parts, oyster buoys, housing insulation, storage bins, soda bottles, toys, fishing nets, plastic trash cans and even Japanese net boats have all washed up on Hawaiian sands in the past few weeks, triggering serious environmental concerns over both water pollution and radiation exposure.

Long-term exposure to radiation can cause cancer, gene mutations, premature aging and in severe cases, death. The consequences of the influx of debris are unknown, causing local agencies to advocate precaution in picking up the Japanese debris.

After a Kona fisherman discovered a 24-foot Japanese net boat floating along the Hawaiian coast early this month, the National Oceanic and Atmospheric Administration began an investigation to trace where some of the items have come in from and possibly find its owners.

*"On behalf of NOAA and the State of Hawaii, we ask that anyone who finds personal items, which may have come from the tsunami, to please report them to county, state and/or federal officials,"*William J. Aila, Jr., Department of Land and Natural Resources (DLNR) chairperson, told Hawaii 24/7 News.

Depending on an object's weight, density and other physical characteristics, it can take months or years to travel from Japan to Hawaii, which explains why many of the same type of items are floating ashore at the same time. Although an estimated 70 percent of the tsunami debris sank offshore, millions of tons of wreckage are still adrift and slowly making landfall, reports LiveScience.

Aside from the unknown radiation risks, some of the debris is bringing invasive species to Hawaii, thereby threatening the island chain's ecosystem and introducing the possibility of consuming contaminated seafood. The 24-foot boat found by the fisherman was covered in blue mussels, which are native to Japan and harmful to Hawaii's marine life – especially the corals.

"If it does take hold, the concern is that they will just be able to populate at a fast rate and out compete some of our native species," Jono Blodgett, the aquatic species program leader at DLNR, told the Honolulu Civil Beat. And even if Hawaiians attempt to kill the invasive mussels, their attempts might be fruitless.

"When species are stressed out and about to die, they might release their eggs or sperm," he said. The fisherman who discovered the abandoned Japanese boat saw the mussels as an opportunity for a tasty meal, raising additional concerns about Hawaiian locals' exposure to radiation found in seafood. Blodgett believes the boat likely drifted to sea before the Fukushima reactors had a meltdown, making the attached mussels safe to consume – but the possibility of contamination remains, especially if the creatures are found on some of the other debris.

Even though Hawaiian officials have minimized panic by assuring residents that radiation risks are low, their investigations and detection programs indicate that the concern is still there. The state of Hawaii purchased a $15,000 portable radiation detection device in September, while the Hawaii Department of Health has conducted quarterly shoreline surveillance since the tsunami hit in 2011. This monitoring has increased since the debris began to wash upon the Hawaiian shoreline.

But some of the debris is so small that it becomes quickly buried in the sand on the beach, making it impossible to clean up or even detect.

"Many places on the beach, it's hard to differentiate the sand from the plastics on the surface," Nicholas Mallos of the Ocean Conservancy group told LiveScience.

And as long as the radiation risks are unknown, Hawaii residents should avoid collecting floating refrigerator parts or consuming Japanese mussels they might find on washed up debris.

January 20, 2013

Radioactive sludge

Highly radioactive sewage sludge shipped out of Fukushima for compost

http://fukushima-diary.com/2013/01/highly-radioactive-sewage-sludge-shipped-out-of-fukushima-for-compost/

Posted by **Mochizuki**

According to Fukushima prefecture, 32 tones of radioactive sewage sludge is shipped out from the sewage plant in Kunimimachi Fukushima everyday from this month.

It's about 80% of the total radioactive sewage sludge produced on the daily basis. If it's under 200 Bq/Kg, compost makers accept it, if it's under 300 Bq/Kg, interim processers accept it to in and out of Fukushima prefecture.

Fukushima prefectural government is trying to ship out all of the radioactive sewage sluge.

By the end of last year, the sewage plant had 23,000 tones of sludge. Fukushima prefectural government is negotiating with Ministry of the Environment about where to ship it out.

They also stock 21,000 tones in Koriyama, 1,500 tones in Nihonmatsu, and 190 tones in Tamura city. From Nihonmatsu city and Tamura city, newly produced sewage sludge is also shipped out.

http://radiation7.blog.fc2.com/blog-entry-1238.html

February 1, 2013

Removal of debris starts in no-entry zone

Govt starts removing debris around Fukushima N-plant

http://www.yomiuri.co.jp/dy/national/T130201004630.htm

Debris is being removed in Minami-Soma's Odaka Ward, Fukushima Prefecture, on Friday.

FUKUSHIMA--The Environment Ministry began removing debris from the Great East Japan Earthquake in Odaka Ward, Minami-Soma, in Fukushima Prefecture on Friday, in the government's first attempt to clear debris in a former no-entry zone.

Odaka Ward had been designated as a restricted access area in principle until April, when the restriction was lifted.

The tsunami triggered by the March 2011 earthquake created about 20,200 cubic meters of debris in the Tsukabara district along the coast.

First debris removed from previous restricted area in Fukushima

http://mainichi.jp/english/english/newsselect/news/20130201p2a00m0na012000c.html

Disaster debris is seen on Feb. 1 before it is carried to the storage site in the Odaka district of Minamisoma, Fukushima Prefecture. (Mainichi)

MINAMISOMA, Fukushima -- The Ministry of the Environment on Feb. 1 started the first removal of debris from a previous restricted area some 20 kilometers from the Fukushima Nuclear Power Plant.

On the coast of the Odaka district, a restricted area until April last year because of the accident at the Fukushima No. 1 Nuclear Power Plant, the ministry started removing debris caused by the Great East Japan earthquake and tsunami.

Some 183,000 tons of debris was estimated to lie in restricted areas in the city of Minamisoma. The ministry plans to build five temporary storage sites in these areas by September this year. After half of a storage site in the district of Tsukahara was completed, the ministry started removing debris from the district's neighboring areas.

Since the national government lifted some restricted areas in Minamisoma last April, those residents who could return to their homes have asked for the early removal of the debris. However, anxiety among residents about radiation persisted, preventing the building of temporary storage sites. The residents are concerned about how the temporary storage sites use plastic sheets for the prevention of soil pollution by radioactive materials. The ministry will also carry out real-time measurements on the amount of radiation.

On Feb. 1, the staff worked on the debris, separating wood, metal and concrete with bulldozers. These materials will be carried to the storage site and then separated into recyclables and non-recyclables. The combustibles will be burned at a temporary incinerator in the area.

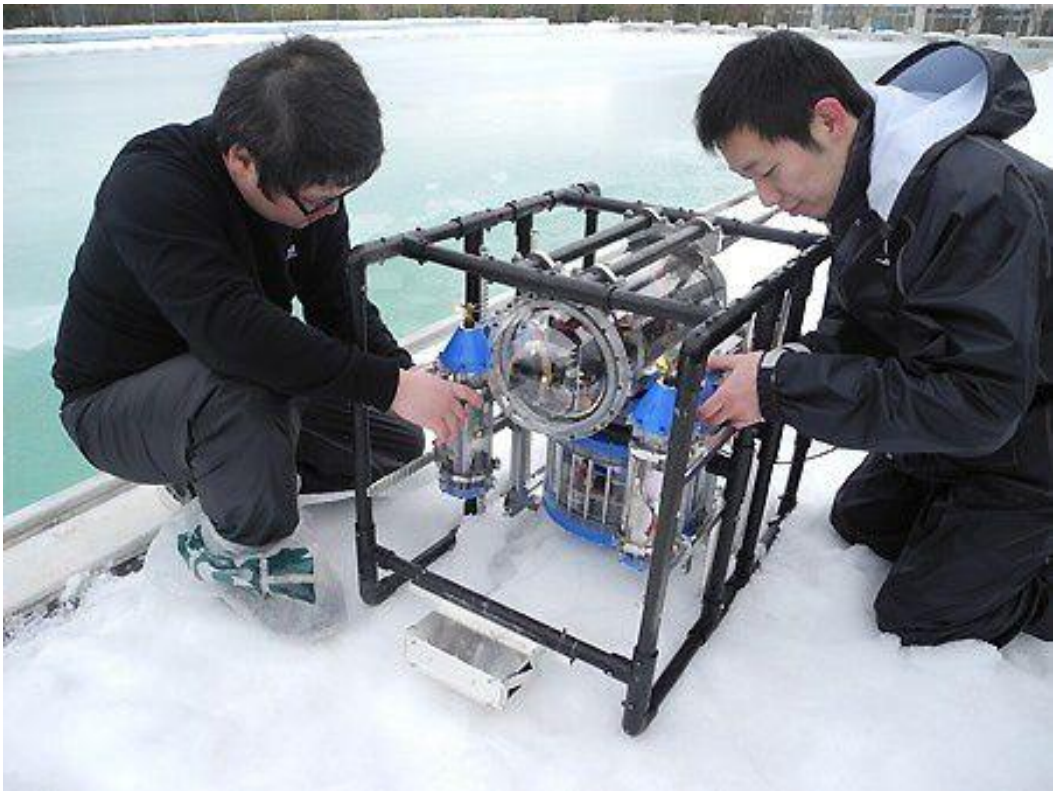
Head of the Tsukahara administrative district, 62-year-old Yoshiki Konno, watched the debris removal and commented, "The recovery and reconstruction have just begun. Not every resident supports the construction of the storage sites, but we are working with the hope of making a faster recovery."

February 4, 2013

Checking for radioactivity in Inawashiro Lake

Robot to check popular Fukushima lake for radiation

http://mainichi.jp/english/english/newsselect/news/20130204p2a00m0na010000c.html



A robot that will test lake soil and water for radioactive contamination is seen on Jan. 25 in Fukushima. (Mainichi)

FUKUSHIMA -- Researchers plan to use a robot to check radiation levels in a popular lake here in response to fears about radiation contamination from the crippled Fukushima No. 1 Nuclear Power Plant.

Speculation has arisen that radioactive material may have been carried by rivers and other means into Inawashiro Lake.
The prefectural government reported in June and September last year that no radiation had been detected during water tests on the lake, but they did not test the soil at the bottom of the lake.

"The worst situation is not knowing the truth. If we know the level of contamination, we can respond to that," says Takuya Omuro, 25, a graduate student who was involved with the robot's development, led by Fukushima University robotic technology professor Takayuki Takahashi.

To check the soil, the researchers will use a robot they have been designing since autumn 2010 to study organisms in the lake. The robot is equipped with a camera and has a shovel fixed to its frame. From late February onward, the robot will be controlled remotely to collect soil and water from the lake, and

collected samples will be tested for radioactive material. Researchers plan to create a distribution map of radioactive material in the lake.

The researchers are also planning an experiment that will use a dosimeter in place of the shovel, to take real-time measurements of radiation levels.

Inawashiro Lake is popular with tourists in the summer, but last year the number of visitors stood at around just 60 percent of pre-disaster levels. The lake stretches across three municipalities, the governments of which are hoping the measurement project will erase tourists' fears of radiation.

February 12, 2013

Cesium contamination

90,500 Bq/Kg of cesium from the pollen of Japanese cedar in Fukushima

http://fukushima-diary.com/2013/02/90500-bqkg-of-cesium-from-the-pollen-of-japanese-cedar-in-fukushima/

Posted by **Mochizuki** on February 12th, 2013 ·

On 1/23/2013, Fukushima Diary reported “Radiation level of Japanese cedar is 20 times much as back ground, Tokyo to have 5~6 times much as pollen this year” [URL 1].
According to the Forestry Agency, **90,500 Bq/Kg of cesium-134/137 was measured from the pollen** of Japanese cedar. The sample was taken in Namie machi Fukushima.
They surveyed from 11/6/2012 to 12/26/2012.
The Forestry Agency comments the radiation level decreased to be about half of 2012, but they are still in high level to reach metropolitan area.

http://www.rinya.maff.go.jp/j/press/kenho/pdf/130208_2-01.pdf

February 17, 2013

Radiation restriction "too difficult to comply with"

Fukushima governor asked the government to ease the 1mSv/y restriction. “Too strict to comply with.”

Posted by **Mochizuki**
http://fukushima-diary.com/2013/02/fukushima-governor-asked-the-government-to-ease-the-1msvy-restriction-too-strict-to-comply-with/

On 2/17/2013, Fukushima governor Sato required the government **to ease the restriction of 1mSv/y** and make a new standard.
He commented, they are trying to build the interim storage facility but **it’s difficult to comply with** the restriction of 1mSv/y, achievable goal is needed.
It was stated in the public meeting between local governments in disaster area and the government.

http://ameblo.jp/misininiminisi/entry-11472890106.html

Related article..Completion percentage of Minamisoma decontamination is only 1%, “will get it done by the end of 2014” [URL]

February 18, 2013

Too much cesium in fish

High levels of cesium detected in fish off Chiba

http://www3.nhk.or.jp/daily/english/20130218_37.html

Fish caught in waters off Choshi City in Chiba Prefecture have been found to contain radioactive cesium above the government safety limit.

Choshi is nearly 200 kilometers south of the crippled Fukushima Daiichi nuclear power plant.

Chiba Prefecture says it found 130 becquerels of cesium per kilogram in Japanese sea bass caught about 10 kilometers off Choshi on Thursday of last week. The acceptable limit is 100 becquerels.

It is the first time that higher-than-permitted levels of radioactive substances have been found in fish landed at ports in the prefecture.

Local fisheries cooperatives have already voluntarily suspended their shipments of sea bass after 60 becquerels of cesium per kilogram were detected in the fish caught off Choshi in December.

February 22, 2013

Nuclear Waste Curse

It keeps piling up but despite enormous incentives, not one single candidate has emerged

http://www3.nhk.or.jp/nhkworld/english/movie/feature201302222000.html

February 25, 2013

Radioactive waste

Reviewing radioactive waste disposal sites

http://www3.nhk.or.jp/daily/english/20130225_30.html

The government has unveiled plans to review the way it selects final disposal sites for radioactive waste.

It earlier decided that contaminated mud and incinerator ash from the 2011 nuclear accident in Fukushima would be disposed of in the prefectures where it was generated.

The Environment Ministry plans to bury the radioactive materials in final disposal sites to be built in 5 prefectures.

The Ministry earlier selected state-owned forests in Yaita, in Tochigi Prefecture, and Takahagi, in Ibaraki Prefecture, as possible sites.

But construction has yet to proceed there due to opposition from the host cities and surrounding areas.
Senior Vice Minister Shinji Inoue on Monday announced that the ministry would meet with local governments during the decision-making process. He said the previous government had failed to fully explain to local municipalities why they had been chosen as candidate sites.

He also disclosed a ministry plan to seek recommendations from a new panel of experts, and added that drilling surveys will be carried out to narrow down the choices for the final disposal sites.

February 26, 2013

More delay for nuclear waste disposal

Ministry forced to start radioactive waste disposal site plan over

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201302260086

Bags of incineration ash contaminated with radioactive substances are piled in a warehouse at the Nasushiobara Clean Center in Nasushiobara, Tochigi Prefecture. (Asahi Shimbun file photo)

Fierce local opposition has forced the Environment Ministry to scrap and redo the selection of candidate sites to dispose of high-level radioactive waste from the crippled Fukushima No. 1 nuclear power plant.

The ministry admitted on Feb. 25 in regard to the site selection process, "there was a lack of communication with local governments."

The ministry said it will set up a platform to discuss the situation with local mayors and will ask experts to reconsider examination methods for the selection of disposal sites for incinerated ash and sludge with high concentrations of radioactive substances.

The do-over will inevitably delay the summer 2014 planned start of hauling waste to the sites.

The central government has decided that “designated waste” containing more than 8,000 becquerels of radioactive cesium per kilogram will be disposed of within Tochigi, Ibaraki, Miyagi, Chiba and Gunma prefectures.

The Environment Ministry plans to build a final disposal site in each of the prefectures.

But the plan has stalled due to vehement opposition from leaders in Yaita, Tochigi Prefecture, and Takahagi, Ibaraki Prefecture. These cities were chosen as final candidate sites last autumn.

After reviewing the site selection process, following the administration change in December, the ministry has acknowledged there were problems. The ministry's actions created a strong backlash, having failed to beforehand provide local governments with sufficient explanation of the site selection process. Research and experts’ assessments were also insufficient in regards to guaranteeing the safety of disposal sites.

The ministry said it will meet with governors and mayors and detail the need for disposal sites and solicit feedback on proceeding with the plan.

It will also establish an expert panel to reconsider evaluation points and examination methods in narrowing the list of candidate sites and assess safety issues in the closing stages of the selection process.

The ministry said it will return the status of the cities of Yaita and Takahagi to options among many candidates for sites.

Shinji Inoue, senior vice environment minister, visited Tochigi Governor Tomikazu Fukuda and Yaita Mayor Tadashi Endo on Feb. 25 to seek their cooperation.

Although Inoue said he could not confirm it with certainty, construction of the sites will apparently be substantially delayed. That will prolong even more the current situation where radioactive-tainted waste is being temporarily stored at sites that have insufficient safety measures.

510,000 Bq of cesium in rock fish (Fukushima port)

510,000 Bq/Kg from fat greenling caught in Fukushima plant port, over 100,000 Bq/Kg from 30% of the samples

Posted by **Mochizuki**

http://fukushima-diary.com/2013/02/510000-bqkg-from-fat-greenling-caught-in-fukushima-plant-port-over-100000-bqkg-from-30-of-the-samples/#.US82H7Nvlb4.facebook

According to Tepco, **510,000 Bq/Kg of Cs-134/137 was measured from fat greenling caught in Fukushima nuclear plant port.**

The sampling date was 2/17/2013.

This is the highest reading among all the fishery samples that have ever been caught.

As a reference, this is 5,100 times much as the safety limit though there is no basis about this “safety limit”.

Tepco collected 53 fishery samples from the port, but **over 100,000 Bq/Kg was measured from 30% of them.**

The second highest reading was 277,000 Bq/Kg (Spotbelly rockfish), the average was 73,000 Bq/Kg.

The amount of Sr-90 is not reported.

Highest radiation detected in fish at TEPCO port

http://www3.nhk.or.jp/daily/english/20130228_31.html

Radioactive cesium far beyond Japan's safety limit has been detected in a fish caught near the crippled nuclear plant in Fukushima Prefecture.

Tokyo Electric Power Company, operator of the damaged Fukushima Daiichi plant says the rock trout contained 510,000 becquerels of cesium per kilogram.

That's the highest ever detected in fish and about 5,100 times the government safety limit.

The utility caught the fish on February 17th in a net put up around its own port at the plant.

TEPCO installed the net about a week before to contain contaminated marine life after detecting high levels of cesium in fish and shellfish caught in the port.

A fish caught in December at the same port contained 254,000 becquerels of cesium per kilogram.
The new record is about twice that amount.

TEPCO says it will step up efforts to keep fish within the port and exterminate them

March 1, 2013

Confirmation of fish contamination

Record cesium level found in Fukushima fish

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201303010040

A record concentration of radioactive cesium--5,100 times the government's food safety standard--was detected in a fish caught near the crippled Fukushima No. 1 nuclear plant, the plant’s operator said Feb. 28.

Tokyo Electric Power Co. said the reading of 510,000 becquerels per kilogram in the greenling is the highest ever recorded in the utility’s seafood sampling surveys following the March 2011 disaster at the nuclear plant.

The finding was announced Feb. 28 at a meeting of leaders of the Fukushima Prefectural Federation of Fisheries Cooperative Associations.

The greenling was found caught Feb. 17 in a gill net at the mouth of the plant's port. The net was installed to prevent fish from drifting outside.

A rockfish found caught Feb. 15 in a cage net along a wharf in the port produced a reading of 277,000 becquerels per kilogram, according to TEPCO.

TEPCO told the fisheries federation that it will step up measures to contain radioactive fish.

March 2, 2013

High radiation in fish caught off No. 1 plant

http://www.japantimes.co.jp/life/2013/03/02/environment/high-radiation-in-fish-caught-off-no-1-plant/#.UTDn2zf1tEs

March 3, 2013

High cesium in Fukushima frogs and insects

High concentration of radioactive cesium found in land animals

http://mainichi.jp/english/english/newsselect/news/20130303p2g00m0dm005000c.html

TOKYO (Kyodo) -- A high concentration of radioactive cesium has been found in a range of land animals and insects in areas around the site of the Fukushima nuclear plant accident, providing a clue to a mechanism of radioactivity accumulation in the food chain, a study showed Saturday.

According to a survey by the Tokyo University of Agriculture and Technology and Hokkaido University, over 6,700 becquerels per kilogram of cesium 137 was detected in a frog captured in Nihonmatsu, Fukushima Prefecture, some 40 kilometers west of the crippled nuclear plant.

The finding suggests animals positioned relatively high in the food chain tend to accumulate more radioactive materials, the research team said.

There has been little study data on radioactive contamination of wildlife except some birds and animals allowed for hunting.

The survey also found 2,843 becquerels of cesium 137 in a fresh water crab. As for insects, over 4,313 becquerels was detected in a camel cricket and a ground beetle showed a reading of 957 becquerels, it said.

In Midori, Gunma Prefecture, about 180 km southwest of the Fukushima plant, up to 903 becquerels was detected in frogs and 403 becquerels in a camel cricket.

Levels of radioactivity concentration seem to vary depending on how animals take in food contaminated with radioactive materials, the team said.

Geographical traits may also cause differences in how contamination of animals occurs, it said.

March 6, 2013

Dumping tritium-contaminated water

TEPCO considers dumping water from Fukushima nuclear plant into ocean

http://mainichi.jp/english/english/newsselect/news/20130306p2a00m0na019000c.html

Tokyo Electric Power Co. (TEPCO) has started to consider dumping massive amounts of water from the crippled Fukushima No. 1 Nuclear Power Plant into the Pacific Ocean after treating the radiation-tainted water.

The utility is considering taking the measure because space on the premises of the nuclear power station for storage tanks for contaminated water is nearing its limit. Before releasing the contaminated water into the ocean, TEPCO plans to introduce new purification equipment to remove radioactive substances from the contaminated water as early as the end of March and conduct a test operation. But with the local fisheries industry standing firmly against any move to release the water into the ocean, the situation remains far from resolved.

At an expert meeting of the Nuclear Regulation Authority (NRA) held in Tokyo on March 1, a TEPCO official commented on how to deal with the ever-increasing contaminated water, saying, "We will treat it with new purification equipment. If we were to release the water into the ocean, we would like to obtain the understanding of the people concerned." Responding to this, Prime Minister Shinzo Abe told a plenary session of the House of Representatives on March 5, "The water will not be released into the ocean easily."

There is about 360,000 cubic meters of contaminated water on the premises of the Fukushima No. 1 Nuclear Power Plant. Of the total volume of the water, about 80,000 cubic meters is in reactor buildings at the No. 1 to No. 4 reactors and about 40,000 cubic meters is in other reactor buildings and elsewhere, leaving storage tanks that can hold only about 240,000 cubic meters available.

TEPCO is currently using cesium absorption equipment to remove radioactive substances such as cesium from the contaminated water. The utility then separates it into pure water and condensed salt water, and reuses the pure water to cool molten fuel and store the condensed salt water in tanks.

There is apparently an influx of about 400 cubic meters of groundwater per day beneath the reactor buildings, but the influx routes have not been confirmed. TEPCO plans to build more storage tanks by September 2015 to boost the capacity to a total of 700,000 cubic meters. But space on the premises of the plant for such storage tanks is nearing its limit.

Furthermore, the condensed salt water in storage tanks and the pure water to be used as coolant still contain not only cesium but also many other radioactive substances such as strontium. A senior NRA official voiced concern, saying, "There is always a danger of radioactive substances being released from storage tanks into the general environment." Problems have emerged one after another, hampering efforts to decommission the nuclear power station.

This led TEPCO Managing Director Akio Komori to declare the need to consider the release of water into the ocean as an option. Hoping to make the option a reality, the utility introduced a water purification system called "ALPS." On Feb. 21, an NRA expert panel endorsed TEPCO's plan to conduct a test run on ALPS, saying, "The risk involved in the problem of contaminated water can be reduced by introducing ALPS." TEPCO plans to test the new system soon.

However, while the new system is capable of removing a total of 62 of the 63 radioactive substances so far detected, it cannot remove radioactive tritium for technical reasons. The concentration of tritium contained in contaminated water and other areas is about 1,300 becquerels per 1 cubic centimeter, exceeding the government-imposed limit of 60 becquerels per 1 cubic centimeter. Therefore, the NRA demanded TEPCO store condensed salt water on the premises of the nuclear plant even after treating it using ALPS.

University of Tokyo professor Satoru Tanaka, who is knowledgeable on tritium, said, "Tritium removal equipment is operating in Canada, but a huge device is needed to remove the substance from such a large amount of contaminated water as that from the Fukushima plant. It is unrealistic. Even if the water were to be released into the ocean, it would have to be diluted to push the levels of tritium below the prescribed standard." On how to treat the tritium, TEPCO said, "It is under consideration at present."

Shoichi Abe, a senior official of the Soma Futaba fisheries association, angrily said, "Even if tritium is diluted, it cannot be removed 100 percent. If it is released into the ocean, consumers will look at Fukushima's seas with suspicion."

On April 2, 2011 -- shortly after the outbreak of the nuclear disaster -- highly radioactive water that leaked from the No. 2 reactor flowed into the ocean. Shortly after that, TEPCO intentionally released low-level radioactive water into the ocean without consulting with local residents in advance. Because of this, the fisheries industry was forced to stop operations to catch fish temporarily in waters off Fukushima.

The issue of releasing the contaminated water into the ocean has emerged at a time when the local fisheries industry has just begun to rebuild itself. Therefore, the Fukushima Prefectural Federation of Fisheries Cooperative Associations has been urging TEPCO to pledge never to release contaminated water into the ocean

Still too much cesium in wild foods

Cesium levels still exceed standards in wild mushrooms, seafood, game

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201303060066

Nearly a year after the government set tougher safety standards for radioactive materials in food and drink, roughly 2,000 samples--mostly from wild mushrooms, seafood and game--were found to exceed the new limit.

Most of the food products showing cesium levels higher than the safety standards were not for commercial distribution and were collected only for the test.

Marine products such as flatfish, boar and other wild meat and mushrooms accounted for 80 percent of the contaminated items seen in tests from April 2012 to January 2013. The vegetables that exceeded the standards were mostly gathered from the wild.

All drinking water, infant formula and baby milk tested showed lower cesium levels than the standards.

Under the standards that took effect on April 1, 2012, the limit for general food items is 100 becquerels of radioactive cesium per kilogram. The limit for milk and infant formula is 50 becquerels per kilogram. The new standards are much tougher than the tentative ones decided on immediately after the accident at the Fukushima No. 1 nuclear power plant following the March 11, 2011, Great East Japan Earthquake.

"After a round of the seasons with the new standards, we have gone through almost all of the food items that could contain radioactivity," a health ministry official said.

Experts say radiation levels will be affected for a long time. Cesium 137, for instance, has a half-life of 30 years, and radioactive contamination in mountainous areas can reach seawater through river flow.

Yasuyuki Muramatsu, a chemistry professor at Gakushuin University who has been studying the radioactive content in mushrooms, said some types of fungi may absorb higher radioactivity levels.

"It depends upon the variety," he said. "But wild mushrooms need to be tested for at least 10 years."

Muramatsu has tested wild mushrooms growing in Fukushima Prefecture.

He said there was no sign of cesium levels having decreased in the second year after the accident.

While cesium has no longer been detected in rivers and seawater, it can cling to organic substances such as clay and fallen leaves.

"Bottom fish, which consume marine organisms that eat accumulated leaves in the sea bottom, are likely to remain contaminated," said Tatsuo Aono, an expert in marine radioecology at the National Institute of Radiological Sciences.

According to the Ministry of Health, Labor and Welfare, the central and local governments carried out about 230,000 tests for cesium between April 2012 and January 2013.

Of those tests, about 2,000, or 0.9 percent, had cesium levels that exceeded government standards. Cesium levels are diminishing, the ministry said.

Fifty-five percent of the samples with higher cesium levels were detected in Fukushima Prefecture, while Iwate, Tochigi, Miyagi, Ibaraki and Gunma prefectures each had more than 100 samples that exceeded the government limit.

The central government asked 17 prefectural governments mainly in eastern Japan to test food and drink for cesium. When high levels are detected in a food item, its distribution is stopped either voluntarily by the producer or by a government ban.

While the government focused its testing on foods and areas that showed high levels of radioactivity in the past, the results painted a different picture.

More than 60 percent of the food samples tested were beef, as radioactive cesium had been detected in cows that were fed rice straw immediately following the Fukushima No. 1 accident. But none of the roughly 17,000 tests conducted on beef in January exceeded the government limit.

On the other hand, only 1,493 commercially distributed food items, including vegetables and fruits, were tested. Of those, only one item, dried mushrooms, were found to have had radioactive levels exceeding the government standards.

While the risk of radiation-contaminated food escaping the tests and appearing on store shelves has been sharply reduced, it is still not zero.

Since April 2012, the government has introduced new shipping bans on more than 130 food items in 14 prefectures.

On the other hand, shipping bans on many other items have been lifted after their radiation levels dropped below the government standards.

The government plans to review food items to be tested from fiscal 2013, which starts in April.

(This article was written by Senior Staff Writer Fumikazu Asai and Akiyoshi Abe.)

March 10, 2013

Fukushima: Mountains of waste but no plans

Fukushima Toxic Waste Swells as Japan Marks March 11 Disaster

By *Jason Clenfield - Mar 10, 2013 4:01 PM GMT+0100*

http://www.bloomberg.com/news/2013-03-10/fukushima-toxic-waste-swells-as-japan-marks-march-11-disaster.html

Every morning, 3,000 cleanup workers at the Fukushima disaster site don hooded hazard suits, air-filtered face masks and multiple glove layers. Most of the gear is radioactive waste by day's end.

Multiply those cast-offs by the 730 days since a tsunami wrecked the Dai-Ichi nuclear station two years ago and the trash could fill six Olympic swimming pools. The tens of thousands of waste bags stored in shielded containers illustrate the dilemma of dealing with a nuclear accident: Everything that touches it becomes toxic.

The utility estimates it may be eight years before radiation levels fall enough to let workers start the main task of removing 260 tons of melted nuclear fuel. Photographer: Issei Kato/Pool via Bloomberg

March 11 (Bloomberg) -- Kawauchi village in Fukushima, Japan, wondered how it would carry on farming following the nation's worst atomic disaster in 25 years and the radiation that followed. Now, it has figured out that farming can be done without soil. Bloomberg's Yuriy Humber reports. (Source: Bloomberg)

Workers wearing protective suits and masks conduct radiation screening on a bus during a media tour of Tokyo Electric Power Co.'s (Tepco) Fukushima Dai-Ichi nuclear power plant in Okuma, Fukushima Prefecture, Japan. Photographer: Issei Kato/Pool via Bloomberg

Contaminated clothing represents just a fraction of the waste facing Tokyo Electric Power Co. (9501) in a cleanup that may take four decades. A tour of the plant last week went past rows of grey and blue tanks holding enough irradiated water to fill 100 Olympic pools on the plateau overlooking Dai-Ichi's four ruined reactors. And the water keeps coming.

The utility estimates it may be eight years before radiation levels fall enough to let workers start the main task of removing 260 tons of melted nuclear fuel. That process took more than a decade at the U.S. accident on Three Mile Island, a partial meltdown at a single reactor containing about one fifth the amount of fuel at Fukushima.

"The things they have to do now are measured in years rather than days and months," Gregory Jaczko, the former chairman of the U.S. Nuclear Regulatory Commission, said in a telephone interview. "What they have to do is very, very challenging. It's hard to put a grade on how well it's going because it's so unprecedented."

Some Progress

Still, little more than a year after the plant's stricken reactors were brought into a controlled state known as cold shutdown, progress is visible.

A steel structure is being built to hold a crane for removing Unit 4's spent fuel and Unit 1 is covered in a vinyl- coated shroud to help contain its radiation. Workers are preparing to drive a steel wall into the seabed to prevent water leaking from the plant into the ocean.

At Unit 4, which avoided a meltdown, steel braces have been added to reinforce a storage pool that holds 1,533 spent fuel rods five floors above the ground. By November workers will start to lift out the assemblies, removing one more source of risk.

"We have a lot of damaged fuel but we'll make every effort to maintain safety while we push on with the decommissioning process," site manage Takeshi Takahashi told reporters.

'New Nuclear Age'

A poster at Dai-Ichi's command center reads: "This is not the end. This is the beginning of a new nuclear age."

Radiation danger prevents workers from approaching a tangle of metal and upturned cars surrounding Unit 3, which was ripped apart by a hydrogen gas explosion after the tsunami. Remote controlled cranes are used to pull steel and concrete rubble from the top of the structure.

Dosimeters register a jump to 1.7 millisieverts during a bus ride past the rubble, indicating a 60-minute exposure would equal eight months of natural radiation. It will be years before even robots can work inside the steel- and concrete-encased core, according to Arnie Gundersen, chief engineer at Burlington, Vermont-based energy consultant Fairewinds Associates Inc.

"Unit 3 is in a condition that none of us has ever imagined," he said by phone. "The entire structure is inaccessible to human beings right now."

Mountain of Waste

While clearing debris helps reduce radiation levels, it's also filling the plant with toxic waste for which the utility has no ultimate disposal plan. More than 73,000 cubic meters of contaminated concrete, 58,000 cubic meters of irradiated trees and bushes, and 157,710 gallons of toxic sludge has built up, according to the utility.

Then there's the water.

Tanks of it now cover an area equal to 37 football fields and the utility is clearing forest to make room for more. Some 400 tons of ground water each day seeps into reactor buildings and is contaminated.

There are 480 cesium-clogged filters, each weighing 15 tons, already warehoused in what the utility calls temporary storage.

"These filters will have to be stored for 300 years because cesium has a 30-year half-life and the rule of thumb is 10 half-lives," Fairewinds' Gundersen said.

Tokyo Electric has built a second plant it hopes will be able to extract the more than 60 radio-nucleotides remaining in the water after cesium is removed. Assuming the equipment works as intended, it will generate yet more contaminated filters.

'No Plans'

Still, even in the best case, Tokyo Electric acknowledged the system won't be able to strip out tritium, a radioactive hydrogen isotope. Tritium contamination will make it difficult to convince local fishing unions to agree to any release into the ocean as no matter how diluted the actual water molecules remain radioactive.

Tokyo Electric has "no plans" for what to do with the water once its filtered, plant manager Takahashi said. It will probably wind up back in tanks, spokesman Yoshikazu Nagai said, standing in front of the new treatment facility.

Some 700 vehicles leaving the plant each day are scanned for radiation. One in ten exceeds safety standards and must be washed, adding a few more buckets to the deluge of toxic water.

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AP: Over 30 million tons of nuclear waste in Fukushima alone — Smoking mounds of disaster debris, possibly from spontaneous combustion

http://www.blacklistednews.com/AP%3A_Over_30_million_tons_of_nuclear_waste_in_Fukushima_alone_%E2%80%94_Smoking_mounds_of_disaster_debris,_possibly_from_spontaneous_combustion_/24663/0/38/38/Y/M.html

Two years after the triple calamities of earthquake, tsunami and nuclear disaster ravaged Japan's northeastern Pacific coast, debris containing asbestos, lead, PCBs — and perhaps most worrying — radioactive waste due to the crippled Fukushima Dai-Ichi nuclear plant looms as a threat for the region.

[...] It will leave Fukushima, whose huge farm and fisheries industry has been walloped by radiation fears, with 31 million tons of nuclear waste or more. Around Naraha, huge temporary dumps of radioactive waste, many football fields in size and stacked two huge bags deep, are scattered around the disaster zone

The cleanups extend beyond Fukushima, to Iwate in the north and Chiba, which neighbors Tokyo, in the south. And the concerns are not limited to radiation. A walk through areas in Miyagi and Iwate that already were cleared of debris finds plenty of toxic detritus, such as batteries from cell phones, electrical wiring, plastic piping and gas canisters.

Japan has the technology to safely burn up most toxins at very high temperatures, with minimal emissions of PCBs, mercury and other poisons. But mounds of wood chips in a seaside processing area near Kesennuma were emitting smoke into the air one recent winter afternoon, possibly from spontaneous combustion.

Workers at that site had high-grade gas masks, an improvement from the early days, when many working in the disaster zone had only surgical masks, at most, to protect them from contaminated dust and smoke. [...]

March 11, 2013

Seafood not contaminated any more?

Radiation in most seafood products from disaster areas below limit: agency http://mainichi.jp/english/english/newsselect/news/20130311p2a00m0na001000c.html

Two years after the Fukushima nuclear disaster, most marine products from the disaster-affected areas fall beneath national radiation limits, data from the Fisheries Agency shows -- though contamination appears to persist in some areas.

The agency said 24,848 seafood products from ocean waters and rivers in eastern Japan had been tested for radiation from the disaster as of Jan. 31 this year. Of these 90.1 percent were at or below the national radiation limit of 100 becquerels per kilogram.

Restricted to Fukushima Prefecture, the corresponding figure fell to 77.9 percent, while the average for prefectures other than Fukushima rose to 97.3 percent.

In the weeks after the March 2011 quake and tsunami that triggered the nuclear disaster and brought fishing to a halt, the government adopted a system to bolster radiation testing of seafood products before shipment. Thanks to this system, there has only been one time, last summer, when seafood products exceeding the national limit were released to the market and couldn't all be recalled.

Japanese fish farmers have refrained from using feed produced after the nuclear disaster, and besides a few exceptions within Fukushima Prefecture, radiation levels in farmed fish have remained under the national limit. Migratory fish like Pacific saury have also stayed below the limit.

Due to the influence of the Kuroshio Current there has been little contamination of fish south of the waters off Choshi, Chiba Prefecture, but there have been high contamination levels for bottom-dwelling fish like fat greenlings, olive flounders, and black rockfish taken from waters between the south side of the nuclear plant and northern Ibaraki Prefecture.

Jota Kanda, a professor of ocean chemistry at the Tokyo University of Marine Science and Technology who continues to test fish, says, "Radioactive cesium gets into fish through water or their feed. When you move them to clean water, their concentrations of radioactive cesium fall by a half or more after a month."

In July 2011, Kanda's team captured plankton within three kilometers of the coastline of Iwaki, Fukushima Prefecture. Plankton taken from near the shore was contaminated with radiation reaching hundreds of becquerels per kilogram, while plankton collected further out to sea had lower radiation levels. The radiation in seawater was too low to register a reading.

"It is important to discover how the feed of fish gets contaminated," Kanda said.

At the same time, fat greenlings caught between August last year and February this year in waters some 20 kilometers north of the Fukushima nuclear plant and from the plant's bay itself were contaminated with levels of radioactive cesium ranging between 20,000 and 510,000 becquerels per kilogram. Experts strongly suspect that some fish were contaminated in the bay soon after the nuclear disaster began, then swam to other areas. Tokyo Electric Power Co. aims to replace fishing nets separating the bay from outside waters with metal blocks around the middle of this year to stop contaminated fish from escaping.

Freshwater fish take three to four times as long as saltwater fish to see the amount of radioactive material in their bodies drop by half. However, according to research by the Fisheries Research Agency, radioactivity in the Japanese samelt, a freshwater fish, fell greatly a year after the nuclear disaster. These fish live for about a year, so it is thought that those born after the disaster have low levels of contamination. In future research, the Fisheries Agency plans to mark fish that are not contaminated, release them into rivers or oceans in contaminated areas, and investigate the radiation levels of new generations of fish.

Radiation level within 80 km radius "washed away by rain"

Radiation within 80-km radius of Fukushima plant fallen by half

http://www.japantimes.co.jp/news/2013/03/11/national/radiation-within-80-km-radius-of-fukushima-plant-fallen-by-half/

Kyodo

The radiation level in areas within an 80-km radius of the crippled Fukushima No. 1 nuclear plant have fallen by nearly half over a 20-month period between April 2011 and last November, a government-affiliated body said.

The level is declining at a faster pace than originally forecast apparently because radioactive substances spewed after the three reactor core meltdowns triggered by the March 2011 quake-tsunami disaster were washed away by rain, the Japan Atomic Energy Agency said Sunday.

Radiation depleted particularly rapidly in areas with many buildings and asphalt roads, according to the agency.

The agency analyzed radiation 1 meter above ground, using data collected by the Ministry of Education, Culture, Sports, Science and Technology.

The radiation level is estimated to have fallen 30 percent from the April 2011 reading by November the same year and to half by last November, according to the agency.

As of November, the dosages were still high in the town of Namie and other localities northwest of the atomic plant, but locations registering a radiation dose of more than 19 microsieverts per hour have decreased, the agency said.

If 20 microsieverts are recorded, curbs would be placed on consuming local food and people would be told to temporarily relocate within a week.

The agency believes the reduction in the radiation dosage owes much to the effects of the elements rather than man-made decontamination efforts.

The pace of radiation depletion as of last November compared with April 2011 slowed, however, because cesium-137, with a half-life of 30 years, remained after cesium-134, with a half-life of two years, first depleted, the agency said.

"There have been no data on radiation depletion in countries with rainfall levels like Japan's," an agency official said, adding it will further study developments.

See also: Radiation halves within 80-km radius of Fukushima plant

http://mainichi.jp/english/english/newsselect/news/20130311p2g00m0dm031000c.html

March 12, 2013

Radioactive contamination of food

Ministry: Radioactive cesium dose drops 66% in Fukushima meals

http://ajw.asahi.com/article/behind_news/social_affairs/AJ201303120107

The annual dose of radioactive cesium in meals in Fukushima Prefecture decreased by at least two-thirds last year and was well within the government's safety standard, the health ministry said March 11.

The maximum annual dose in typical meals tested was 0.0066 millisievert, according to the ministry's study in three areas of Fukushima Prefecture in February and March 2012.

The central government's maximum allowable annual dose for food is 1 millisievert.

Specifically, 0.0063 millisievert of radioactive cesium was detected in food in the Hamadori area of eastern Fukushima Prefecture, 0.0066 millisievert was found in the Nakadori area of central Fukushima Prefecture, and 0.0039 millisievert was recorded in the Aizu area in the western part of the prefecture.

The previous study by the Ministry of Health, Labor and Welfare was conducted only in the Nakadori area, where 0.0193 millisievert was detected in food in autumn 2011, about half a year after the accident started at the Fukushima No. 1 nuclear plant.

March 15, 2013

TEPCO wrong again

Experts: Cesium leak may be continuing

http://www3.nhk.or.jp/daily/english/20130315_15.html

Researchers say contaminated water from the damaged Fukushima Daiichi nuclear power plant could still be leaking into the port. They are calling for a thorough investigation.

A team from Tokyo University of Marine Science and Technology has been studying data on seawater directly in front of the plant. Tests of the port water show levels of radioactive cesium of up to 100 becquerels per liter. That level exceeds the government's safety standard.

Researchers calculated the total amount of radioactive substances in water spilling from the plant over a one-year period.

According to their calculation, about 16.1 trillion becquerels of cesium 137 may have leaked into the sea in the year since June 2011. That's about 73 times the safety discharge limit imposed before the accident in March 2011.

Experts say that amount of contamination won't threaten marine creatures in the open sea. But they say those in the port could be accumulating the radioactive substance.

Radioactive water began leaking into the sea soon after the accident in March 2011. Plant operator TEPCO took steps to block the spillage. TEPCO officials said the leaks stopped around June 2011.

Professor Jota Kanda, one of the team members, said that based on the data, it is unlikely the contaminants resulted from rainwater draining through the soil. He said groundwater may be the source. He said another possibility is damaged pipes in the compound.

TEPCO officials have conducted their own surveys. They say they don't think that radioactive substances are leaking into the sea from the plant compound. They say the reasons for high cesium levels have yet to be clarified. They say they will continue to investigate.

March 16, 2013

All-time high contamination

Record radioactivity found in Fukushima fish

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201303160048

A new all-time high radiation level has been detected in a fish near the Fukushima No. 1 nuclear plant. A fat greenling, Hexagrammos otakii, a high-end delicacy in Japanese cuisine, was found to contain radioactive cesium 7,400 times the government's food safety standard.

The fish was caught at the port adjacent to the nuclear site, the plant's operating company said March 15. Tokyo Electric Power Co. said the reading of 740,000 becquerels per kilogram is the highest ever recorded in its sampling surveys of marine life since the March 2011 disaster.

Record cesium level detected in fish caught near Fukushima plant

http://mainichi.jp/english/english/newsselect/news/20130316p2g00m0dm004000c.html

TOKYO (Kyodo) -- Tokyo Electric Power Co. said Friday it detected a record 740,000 becquerels per kilogram of radioactive cesium in a fish caught in waters near the crippled Fukushima Daiichi Nuclear Power Station, equivalent to 7,400 times the state-set limit deemed safe for human consumption.

The greenling measuring 38 centimeters in length and weighing 564 grams was caught near a water intake of the four reactor units in the power station's port on Feb. 21 during the utility's operation to remove fish from the port.
TEPCO has installed a net on the sea floor of the port exit in Fukushima Prefecture to make it hard for fish living near the sediments of contaminated soil to go elsewhere.

According to TEPCO, the previous record of cesium concentration in fish was 510,000 Bq/kg detected in another greenling captured in the same area. Currently, fishermen are voluntarily withholding operations off the coast of the prefecture except for some experimental catches of some fishes.

March 26, 2013

Nuclear waste in South Korea: Pyroprocessing? Long-term storage?

Nuclear waste a growing headache for South Korea

http://ajw.asahi.com/article/asia/korean_peninsula/AJ201303260105

THE ASSOCIATED PRESS

ULSAN, South Korea--North Korea's weapons program is not the only nuclear headache for South Korea. The country's radioactive waste storage is filling up as its nuclear power industry burgeons, but what South Korea sees as its best solution--reprocessing the spent fuel so it can be used again--faces stiff opposition from its U.S. ally.

South Korea fired up its first reactor in 1978 and since then the resource poor nation's reliance on atomic energy has steadily grown. It is now the world's fifth-largest nuclear energy producer, operating 23 reactors. But unlike the rapid growth of its nuclear industry, its nuclear waste management plan has been moving at a snail's pace.

A commission will be launched before this summer to start public discussion on the permanent storage of spent nuclear fuel rods, which must be locked away for tens of thousands of years. Temporary storage for used rods in spent fuel pools at nuclear power plants is more than 70 percent full.

Undeterred by Japan's Fukushima disaster or recent local safety failings, South Korea plans to boost nuclear to 40 percent of its energy needs with the addition of 11 new reactors by 2024.

South Korea also has big ambitions to export its nuclear knowhow, originally transferred from the U.S. under a 1973 treaty that governs how its East Asian ally uses nuclear technology and explicitly bars reprocessing. The treaty also prohibits enrichment of uranium, a process that uranium must undergo to become a viable nuclear fuel, so South Korea has to get countries such as the U.S. and France to do enrichment for it.

That treaty is at the heart of Seoul's current dilemma. It wants reprocessing rights to reduce radioactive waste and the right to enrich uranium, which would reduce a hefty import bill and aid its reactor export business. The catch: the technologies that South Korea covets can also be used to develop nuclear weapons.

Accommodating Seoul's agenda would run counter to the Obama administration's efforts to prevent the spread of nuclear weapons and also potentially undermine its arguments against North Korea's attempts to develop warheads and Iran's suspected nuclear weapons program. South Korea, with its history of dabbling in nuclear weapons development in the 1970s and in reprocessing in the early 1980s, might itself face renewed international suspicion.

"For the United States, this is a nonproliferation issue. For South Korea, this is the issue of high-level radioactive waste management and energy security," said Song Myung-jae, chief executive officer of state-run Korea Radioactive Waste Management Corp. "For a small country like South Korea, reducing the quantity of waste even just a little is very important."

President Park Geun-hye made revision of the 38-year-old treaty one of her top election pledges in campaigning last year. The treaty expires in March 2014 and a new iteration has to be submitted to Congress before the summer. The two sides have not narrowed their differences on reprocessing and enrichment by much despite ongoing talks.

South Korea also argues that uranium enrichment rights will make it a more competitive exporter of nuclear reactors as the buyers of its reactors have to import enriched uranium separately while rivals such as France and Japan can provide it. It is already big business after a South Korean consortium in 2009 won a $20 billion contract to supply reactors to the United Arab Emirates. Former President Lee Myung-bak set a target of exporting one nuclear reactor a year, which would make South Korea one of the world's biggest reactor exporters.

Doing South Korea a favor would be a huge exception for the U.S. Congress, which has never given such consent to non-nuclear weapon states that do not already have reprocessing or enrichment technology.

"It is not the case that we think Korea will divert the material. It's not a question of trust or mistrust," Sharon Squassoni, director of the Proliferation Prevention Program at the Center for Strategic and International Studies in Washington, said on the sideline of Asian Nuclear Forum in Seoul last month. "It's a question of global policies."

Nuclear waste storage is highly contentious in densely populated South Korea, as no one welcomes a nuclear waste dump in their backyard. Temporary storage for spent nuclear fuel rods at South Korea's nuclear plants was 71 percent full in June with one site in Ulsan, which is the heartland of South Korea's nuclear industry, to be at full capacity in 2016.

To accommodate the 100,000 tons of nuclear waste that South Korea is expected to generate this century, it needs a disposal vault of 20 square kilometers in rock caverns some 500 meters underground, according to a 2011 study by analyst Seongho Sheen published in the Korean Journal of Defense Analysis. "Finding such a space in South Korea, a country the size of the state of Virginia, and with a population of about 50 million, would be enormously difficult," it said.

The country's first permanent site to dump less risky, low level nuclear waste such as protective clothes and shoes worn by plant workers will be completed next year after the government pacified opposition from residents of Gyeongju city, South Korea's ancient capital, with 300 billion won ($274 million) cash, new jobs and other economic benefits for the World Heritage city. The 2.1 million square meter dump will eventually hold 800,000 drums of nuclear waste.

"Opponents were concerned that the nuclear dump would hurt the reputation of the ancient capital," said Kim Ik-jung, a medical professor at the Dongguk University in Gyeongju.

To make its demands more palatable to the U.S., South Korea is emphasizing a fledgling technology called **pyroprocessing** that it hopes will douse concerns about proliferation because the fissile elements that are used in nuclear weapons remained mixed together rather than being separated.

South Korea's Atomic Energy Research Institute said pyroprocessing technology could reduce waste by 95 percent compared with 20 to 50 percent from existing reprocessing technology.

The U.S. has agreed to conduct joint research with South Korea on managing spent nuclear fuel, including pyroprocessing, but some scientists say the focus on an emerging technology that may not be economically feasible is eclipsing the more urgent need to address permanent storage of spent nuclear fuel.

"Even under the most optimistic scenario, pyroprocessing and the associated fast reactors will not be available options for dealing with South Korea's spent fuel on a large scale for several decades," said Ferenc Dalnoki-Veress, Miles Pomper and Stephanie Lieggi in a joint report for James Martin Center for Nonproliferation Studies, Monetary Institute of International Studies. "With or without pyroprocessing, South Korea will need additional storage capacity."

But for South Korea, researching and developing the technology is a bet worth making.

"The U.S. does not need nuclear energy as desperately as South Korea," said Sheen, a professor at Seoul National University.

April 6, 2013

Reducing the volume of radioactive sludge

New Fukushima facility shrinks nuclear sludge

http://www3.nhk.or.jp/nhkworld/english/news/20130406_22.html

The city of Fukushima now has Japan's first facility capable of reducing the volume of the radioactive sludge from the 2011 nuclear disaster.

The facility was installed by the Environment Ministry in a municipal sewage treatment plant. A ceremony was held in the city on Saturday.

It will dry the sludge at a temperature of 450 degrees Celsius and reduce it to about one-fifth of its original volume.

The Environment Ministry expects the facility to treat 30 tons of sludge daily.

Such sludge has been accumulating in sewage treatment plants in Fukushima and neighboring prefectures due to a lack of progress in the building of interim storage facilities.

The volume of such sludge in Fukushima Prefecture alone has risen to more than 68,000 tons.

The ministry plans to transfer the dried and shrunken sludge to interim storage facilities and permanent disposal sites, although it is unclear when these facilities will be built.

Environment Minister Nobuteru Ishihara says his ministry will work to build interim storage facilities as soon as possible.

April 7, 2013

New blow for fishermen

Fishermen alarmed by water leak at nuclear plant

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201304070030

News of the leak of contaminated water from a storage tank at the Fukushima No. 1 nuclear power plant is the latest blow to local fishermen who had hoped to restart their livelihoods.

Toshimitsu Konno, a fishing skipper who belongs to the Soma-Futaba fishermen's union in Fukushima Prefecture, said he was disheartened by the leak that occurred in an underground storage tank and may have reached underground water. Tokyo Electric Power Co., the plant operator, insists that contaminated water has not seeped into the sea.
But Konno, 54, is not reassured by the utility's comments, when it acknowledged April 6 the leaking of about 120 tons of contaminated water.

"I am afraid that we will continue to be plagued by this kind of problem until the reactors are finally decommissioned," Konno said. "Decontamination operations got under way in areas surrounding the plant, but we fishermen are the ones that will have to suffer until the end due to the increasing amount of contaminated water at the plant."

Commercial fishing for about 40 marine species has been banned after some varieties caught in waters near the crippled plant were found to have radiation levels exceeding the food safety limit.

Those in coastal fisheries say they have no idea when they can return to full operations.

Local fishermen resumed fishing in June last year on a trial basis, starting with octopus and a shellfish called Tsubu.
These species are considered less vulnerable to the effects of radiation. In Soma, a city to the north of the plant, trial fishing of sand eel was launched in late March.

Sand eel is one of the 14 species fishermen are allowed to catch on a preliminary basis.

The marine product was shipped twice to the Tsukiji fish market in Tokyo for sale, the second time fetching a higher price than the initial offering.

Konno said he was happy to be able to return to fishing on the first day of trial operations.

In the city of Iwaki to the south of the plant, members of the Iwaki fishermen's union have cooperated with officials over the monitoring of radiation levels of young sardines and sand eels in the hopes that it may lead to an initial resumption of fishing.

Shoichi Yabuki, 76, who heads the union, said the latest leak comes at a time fishermen are preparing for a tentative restart of their livelihoods after a two-year hiatus since the nuclear accident that unfolded in March 2011 following the Great East Japan Earthquake and tsunami.

"If leaks reoccur, I am afraid that an increasing number of fishermen will quit," Yabuki said. "That is what I am concerned most."

April 9, 2013

Nahara best candidate for nuclear waste depository?

Gov't starts pre-survey on candidate site for contaminated soil storage in Fukushima

http://mainichi.jp/english/english/newsselect/news/20130409p2a00m0na011000c.html

NARAHA, Fukushima -- The government started to conduct a preliminary survey on April 9 on a candidate site for a temporary storage facility here for soil contaminated with radioactive materials from the crippled Fukushima No. 1 Nuclear Power Plant.

Two officials of the Environmental Management Bureau at the Ministry of the Environment visited the branch office of the Naraha Municipal Government in Iwaki, Fukushima Prefecture, to report the start of the survey to Hiroshi Aoki, head of the radiological countermeasure department. According to the ministry, officials plan to patrol some of about 20 locations in administrative sections of the municipality where contaminated soil and other waste has been temporarily kept in order to confirm shipping routes for contaminated soil.

In a meeting on April 9 with Mitsuru Yamamoto, former ward mayor of Namikura in Naraha, a candidate site for a temporary facility, Naraha Mayor Yukiei Matsumoto said, "Before a full-scale survey is conducted, we will certainly set up an occasion to have staff from the Ministry of the Environment give explanations to the townspeople and secure their approval."

On April 8, Senior Vice Environment Minister Shinji Inoue had asked Naraha Mayor Matsumoto to accept a government proposal to start a preliminary survey on April 9 aimed at selecting a candidate site for a temporary storage facility for contaminated soil and to begin to conduct a full-scale drilling survey after the "Golden Week" holiday period, which ends on May 6. After the meeting, Matsumoto expressed his intention to allow the government to conduct the preliminary survey. There are a total of nine candidate sites for temporary storage facilities for contaminated soil: one in Naraha, six in Okuma, and two in Futaba -- all in Fukushima Prefecture. Naraha is the only municipality where the preliminary survey has been conducted.

The April 8 meeting between Inoue and Matsumoto was closed to the media, except for the outset of the talks. The Ministry of the Environment plans to build a temporary storage facility in Naraha for contaminated soil not only from Naraha itself but also for soil from Iwaki and Hirono in the same prefecture. Naraha had previously demanded that the government build a "depository" only for contaminated soil from the municipality. After the meeting, Inoue quoted Matsumoto as saying, "We want to have an on-the-spot research contingent on building a depository." Such being the case, the preliminary survey kicked off while the central government and the Naraha Municipal Government remained divided over the nature of the facility to be built in the town.

Senior Vice Environment Minister Inoue stopped short of clarifying on April 8 whether the preliminary survey was aimed at building a depository or a temporary facility. He only said, "Whether it is a depository or a temporary storage facility, the structure and the safety problem involved with such facilities are the same. We would like to consider what is possible while actually conducting the survey."

Naraha Mayor Matsumoto said on April 8, "We have consistently insisted on a 'depository.' If our premises were to collapse, the town would never accept the survey and we have no intention of accepting it in the future."

Naraha has been designated as a "zone preparing for the lifting of the evacuation order" since last August when a no-entry zone designation was lifted for the municipality. Many of the townspeople are opposed to the idea of building a temporary storage facility there, with some citizens saying, "Why will such a facility be built in the town to which we can return?" and "It will become a permanent disposal site."

April 17, 2013

Deadly cargo

Nuclear cargo leaves France for Japan

http://www.english.rfi.fr/asia-pacific/20130417-nuclear-cargo-leaves-france-japan

A cargo of radioactive fuel was ready to leave France for Japan on Wednesday after arriving in the Channel port of Cherbourg overnight. Anti-nuclear campaigners claim the Mixed oxide fuel (MOX), produced by French nuclear giant Areva, is the "most radiotoxic in the world".

A group of about 30 Greenpeace activists protested at the convoy of three lorries' arrival, guarded by about 1,000 police officers, in Cherbourg before loading started on the British shop *Pacific Egret* at about 5.30am.

The cargo, which was loaded onto one ship and will be accompanied by another, consisted of 10 tonnes of MOX, **between 650 and 800 kg of plutonium**, according to Greenpeace which says that it is a smaller consignment than the five previous ones.

Opponents, including the Green party, which is part of the ruling coalition, demanded that the dispatch be cancelled, claiming that it is "extremely dangerous" and could be used to make nuclear weapons.

Areva says that it is "almost impossible" to make bombs with the plutonium, which is "recycled" from plutonium produced in nuclear power stations, and insists that is packed in 98 tonnes of protective material for every 10 tonnes of MOX.

April 22, 2013

Do not empty the pools?

Radioactive mud in Fukushima school pools tops 100,000 becquerels

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201304220072

By MASAKAZU HONDA/ Staff Writer

FUKUSHIMA—Radioactive cesium levels exceeding 100,000 becquerels per kilogram were measured in mud accumulated at the bottom of swimming pools at two high schools in and around Fukushima city.

Mud in the pool of a third high school in Minami-Soma, which is closer to the crippled Fukushima No. 1 nuclear plant, showed at least 8,000 becquerels per kilogram.

Under a special measures law, the central government must remove mud and other substances with radioactivity levels of more than 8,000 becquerels caused by the meltdowns at the plant.

The three high schools have not discharged the water from their swimming pools since the nuclear crisis started on March 11, 2011. The water has apparently blocked the spread of contamination from the mud; air radiation levels near the three school pools are almost the same as those of other locations.

"Mud under the water, even if highly contaminated, would not become an issue unless it was taken out of the water," said Kunikazu Noguchi, an associate professor of radiation protection at Nihon University.

However, 63 of the 70 public high schools in Fukushima Prefecture that have swimming pools have already released the water, often into rivers and irrigation canals, according to the Fukushima prefectural board of education.

The central and local governments will likely have to conduct surveys to check whether mud released from school pools has polluted rivers and canals beyond government safety levels.

The Asahi Shimbun obtained the mud with the help of the three schools and teachers, and had the Citizen's Radioactivity Measuring Station (CRMS), a Fukushima-based nonprofit group, measure the radioactivity levels.

In March 2012, the CRMS tested mud collected from the pool of the high school in Fukushima. The radioactive cesium level was 65,900 becquerels, according to the results released on April 1 this year.

The prefectural government has measured radioactivity levels of water in the school pool, but not the mud. The latest results for mud from the high school swimming pool in Fukushima showed 104,100 becquerels per kilogram.

"We have concentrated on decontamination of the pools and not thought about the mud," said a senior Fukushima prefectural government official in charge of decontamination efforts.

The Asahi Shimbun also obtained mud from the two schools with the consent of principals and vice principals. The test results showed 119,461 becquerels for the high school pool outside the prefectural capital and 8,468 becquerels for the pool in Minami-Soma.

"We are conducting verification experiments to find practical decontamination measures," said an official of the prefectural government. "We will inform the Environment Ministry and discuss possible measures after reviewing the results of the experiment."

The CRMS was established in July 2011 amid complaints the central and local governments were not offering sufficient monitoring systems.

The CRMS has measured radioactivity levels of 15,000 food and other items, which citizens brought to its 10 affiliated measuring stations in Fukushima Prefecture, Tokyo and elsewhere. The test results were released on April 1.

April 25, 2013

Who wants contaminated rice?

Fukushima's 'contaminated' rice still in storage two years on

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201304250099

By TETSUYA KASAI/ Staff Writer

FUKUSHIMA--Officials are still struggling to dispose of some 17,000 tons of contaminated rice produced in Fukushima Prefecture after the nuclear disaster there two years ago.

Most of the rice, called "kakurimai" (rice separated for disposal), was produced in 2011.

The central government wants to incinerate the rice, but disposal facility operators have been reluctant to do so for fear that harmful rumors could start circulating if they handle contaminated material.

Some farmers have proposed using the rice for purposes other than human consumption.

At a private warehouse located in an inland area of the prefecture, rice bags labeled "kakurimai" and marked with an X are piled up in a small room. They are among the 71 bags--2 tons in total--of rice produced in 2012 that were found to contain radioactive cesium above the national standard of 100 becquerels per kilogram.

But that amount is dwarfed by the 2011 total. When rice produced at one farm in a district that year was found to contain more radioactive cesium than the government limit, all rice harvested across the district were left in limbo.

As a result, a total of 17,000 tons of rice harvested in 71 districts in 13 municipalities was banned for shipment.

However, more than 95 percent of the unshipped rice was eventually found to have contained less radioactivity than the government standard, sources said.

Kakurimai produced in 2011 is being handled by an association jointly set up by an affiliate with the farm ministry and the Japan Agriculture Group.

The association has purchased kakurimai from producers at 10,800 yen ($109) to 12,500 yen per 60 kg.

However, it was not easy to find storage facilities for the rice as warehouse owners often refused to accept it.

"If people learn we have 'contaminated' rice in storage, we would suffer from harmful rumors," an official at the association quoted one owner as saying.

It was only late last year that all the bags of rice ended up in storage at several warehouses in the prefecture.

Fukushima prefectural authorities decided to treat kakurimai as general waste for disposal.

The association initially tried to dispose of the waste at incinerators run by municipalities, but found that their incinerators were structurally incapable of burning the rice grains.

It turned to private operators of incinerators that were capable of burning rice grains, but negotiations were difficult since they, too, were reluctant to accept the request, saying they would suffer from harmful rumors if they burned radioactivity-contaminated material.

In February, an operator started incinerating rice on a trial basis and began full-scale incineration of rice from a municipality in March.

Still, it has so far incinerated only about 10 percent of the 17,000 tons of rice, far from the association's goal of completing disposal of the kakurimai rice produced in 2011 by the end of this year.

Additionally, farmers and shipment service operators have fundamental reservations about incinerating rice.

"I think it would be a waste (to dispose of) the rice when most of it is below the government standard," a man in the shipping business said.

Some farmers suggest using the rice for bio fuel or as a feedstuff for livestock.

A rice farmer in his 60s in Fukushima said, "I hope they will find a way to effectively use the rice."

But the farm ministry says that is impossible.

Citing the fact that kakurimai producers have already been paid compensation by Tokyo Electric Power Co., operator of the stricken Fukushima No. 1 nuclear power plant, an official said, "It would be difficult to find an option other than disposal."

May 8, 2013

Overlooked hot spots remain

Fukushima closes 2 parking lots for emergency decontamination work

http://ajw.asahi.com/article/behind_news/social_affairs/AJ201305080058

By MASAKAZU HONDA/ Staff Writer

FUKUSHIMA—Two parking lots in the city of Fukushima were declared off-limits to the public on May 7 after high concentrations of radioactive cesium were detected in the exposed soil there.

Local authorities shut down the parking lots for emergency decontamination operations after a nonprofit organization found a maximum of 430,000 becquerels per kilogram of radioactive cesium during a survey conducted between April 29-May 2 at the behest of local residents.

The **Citizen's Radioactivity Measuring Station** also detected a maximum level of airborne radiation at 3.8 microsieverts per hour, above the benchmark for evacuation, at the two sites.

"It's the first time that soil with cesium levels exceeding 100,000 becquerels was found on the grounds of an urban area, not in sludge accumulated in ditches," said a city official in charge of decontamination work.

The CRMS measured exposed soil radiation levels at three locations in a parking lot for a municipal library and public hall in Matsuki, and at four locations in a parking lot for a prefectural library and museum in Moriai.

The exposed soil had accumulated to a height of 1 to 3 centimeters around the edges of the parking lots or in sunken parts of the surface, mixed with fragments of dead leaves and other material.

The survey at the Matsuki parking lot found radioactive cesium concentrations of 220,000 or more becquerels per kilogram of soil, with the highest level at 433,772 becquerels.

The survey at the Moriai parking lot detected concentrations of 120,000 or more becquerels per kilogram, with the maximum level of 289,144 becquerels.

Airborne radiation levels at a height of 1 meter ranged between 0.6 and 3.8 microsieverts per hour at the two sites.

The CRMS was established in July 2011 after complaints were raised that the central and local governments were not offering sufficient monitoring systems.

According to the Environment Ministry, the central government plans to dispose of sludge, incinerator ash and other substances with radioactive levels of more than 8,000 becquerels caused by the accident at the Fukushima No. 1 nuclear power plant. It plans to keep those containing radioactive levels of more than 100,000 becquerels at a temporary storage facility.

After the nuclear disaster, decontamination operations were conducted in gutters and other areas at the Matsuki site and on grass at the Moriai site. But the parking lots themselves at the two sites were not decontaminated.

In addition to visitors to the facilities, local residents, including students, usually enter the sites for walking and extracurricular activities.

Ikuro Anzai, professor emeritus at Ritsumeikan University versed in radiation protection, has been involved in decontamination operations at nursery schools and other facilities in Fukushima city.

Anzai warned that radiation hotspots still remain that were overlooked after decontamination work was conducted.

"The public and private sectors must cooperate to keep people's exposure to radiation to a minimum by frequently measuring radiation levels and removing radioactive materials," he said.

May 17, 2013

Decontamination makes little progress

Little progress in Fukushima radiation cleanup

http://www3.nhk.or.jp/nhkworld/english/news/20130517_33.html

An NHK survey has found that little progress is being made to clean up radioactive material in areas near the Fukushima Daiichi nuclear power plant.

Work is underway in 47 municipalities in Fukushima Prefecture. The national government is in charge of restricted areas near the plant. Municipalities take charge of outer areas.

The government has carried out cleanup in around 4 percent of the land in the restricted areas.

Municipalities have cleaned up nearly 5 percent of houses that need to be decontaminated.

NHK also analyzed data for 21 municipalities and found that the cleanup does not necessarily lower radiation levels.

The data shows that radiation levels have not fallen to the government-set standard of one millisievert per year on 77 percent of the land.

Junko Nakanishi of the National Institute of Advanced Industrial Science and Technology is calling for a review of the cleanup operations.

Nakanishi says the current method can cut radiation levels only in a small percentage of the areas. She urges authorities to tell residents of the limits of the work and provide support for relocation.

The government plans to analyze data on decontamination in the coming months and study ways to proceed.

Reasons for slow progress of decontamination

http://www3.nhk.or.jp/nhkworld/english/news/20130517_36.html

Local authorities say the work by hand takes a lot of time and workers often have to suspend their activities due to weather, like heavy snow in winter.

Sometimes the authorities cannot contact owners of houses that have been evacuated.

Local governments have difficulty in finding temporary storage sites for soil they have removed, and other contaminated materials.

Officials and experts say radioactive material gets into extremely small gaps in asphalt or roofs, making it difficult to completely remove it by washing or wiping.

They also say radioactive material remains in forests, farmland or vacant lots that have not been decontaminated, or are outside the target areas, and this is another reason radiation levels remain relatively high.

No, it’s not finished

Studying the sea of Fukushima

http://www3.nhk.or.jp/nhkworld/newsline/201305171808.html

May 20, 2013

Can grow rice, but can't live there

District in Tamura first to resume farming near Fukushima No. 1

JIJI

http://www.japantimes.co.jp/news/2013/05/20/national/rice-planted-in-former-no-go-zone/#.UZnk2EpsFEs

TAMURA, FUKUSHIMA PREF. – Farmers in the city of Tamura, Fukushima Prefecture, have begun planting rice in a district once designated a no-go zone because of radioactive fallout ejected by the disaster-hit Fukushima No. 1 power plant.

It is the first time since the March 2011 core meltdowns that rice intended for sale has been planted in any former hot zone within 20 km of the power plant.

Saturday's rice planting was carried out in Tamura's Miyakojimachi district, about 15 km from the plant. In all, three farms are planning to seed 6 hectares there.

Miyakojimachi was reclassified in April 2012 as an area where evacuation orders might be lifted. Residents can enter without permission during the daytime but aren't allowed to stay overnight.

In their rice paddies, work to clean up radioactive fallout ejected by crippled power station has already finished. The farmers use fertilizer containing potassium to help reduce the amount of cesium absorbed by the rice plants.

All of the rice grown in the paddies will be given radiation checks before shipment.

Hisao Tsuboi, 62, one of the farmers, plans to plant Hitomebore and two other rice varieties on 2.5 hectares this year.
"Looking at the paddies turning green, I finally got the feeling that I have engaged in farming," Tsuboi said with a smile.

On Saturday, his eldest son planted rice using a tractor. Five local policemen and a man from Miyagi Prefecture who has been a buyer of Tsuboi's rice helped out.

But Tsuboi said that he is concerned because he has to leave his temporary house for his rice paddies at 4 a.m. every day and return home late at night. It takes an hour to drive from the temporary house to the rice paddies. Therefore, Tsuboi says he is not sure if he can continue working until the harvest in autumn.

"I want to ask the municipal authorities to allow me to stay at my own house for several days a week," Tsuboi said.

Controlling water supply in the paddies is very important for growing rice, and the work is difficult if the farmers live far away, an official at the Fukushima Prefectural Government said, adding that allowing farmers to stay overnight is a task it needs to consider.

Among the former no-go zones, Miyakojimachi is the only district where decontamination has been completed, according to Fukushima Prefecture and the agriculture ministry.

May 21, 2013

IAEA will help with decontamination

IAEA to support radioactive decontamination in Fukushima from July

http://mainichi.jp/english/english/newsselect/news/20130521p2g00m0dm037000c.html

VIENNA (Kyodo) -- Experts from the International Atomic Energy Agency will visit Fukushima Prefecture for five days from July 22 to support radioactive decontamination following the 2011 nuclear disaster, a senior IAEA official said Monday.

The experts will be provided with local radiation data, tour disaster-hit areas and support Fukushima's compilation of radiation maps, and radioactive decontamination and waste disposal efforts under the IAEA's three-year agreement with the prefecture, the official said.

The IAEA agreed with Fukushima Prefecture last December to implement joint projects for radioactive decontamination and residents' health, and sent experts for coordination of the projects in late February.

In April, the IAEA and Fukushima signed the three-year agreement to jointly look into the spread of radioactive substances and decontamination know-how.

No decision has been made regarding how to decontaminate forests that account for around 70 percent of the prefecture as assessing radioactive contamination in such areas is difficult.

The experts include some who were involved in handling the 1986 Chernobyl nuclear plant disaster in the former Soviet Union, the IAEA official said.

The U.N. agency plans to provide radiation data online to help ensure local residents' safety, the official said.

The IAEA experts are expected to consult with Fukushima officials on the safe incineration of waste suspected of radioactive contamination and on decontamination measures, and to propose specific measures based on international standards.

May 22, 2013

All plankton checked contaminated with cesium

Researchers find high cesium in some Pacific plankton

Kyodo

http://www.japantimes.co.jp/news/2013/05/22/national/researchers-find-high-cesium-in-some-pacific-plankton/#.UZuiIkpsFEs

Scientists said Tuesday they have detected radioactive cesium from the Fukushima No. 1 nuclear plant in plankton collected **from all 10 points** in the Pacific they checked, with the highest levels at around 25 degrees north latitude and 150 degrees west longitude.

Researchers from the Japan Agency for Marine Earth Science and Technology were among the team members who released a report on the findings at a meeting of the Japan Geoscience Union at the Makuhari Messe international convention center in Chiba Prefecture.

Minoru Kitamura, a marine ecologist and senior researcher at the agency, said plankton are thought to play a key role in the dispersion of the cesium because they are eaten by bigger fish.

Kitamura said his team will continue to study the accumulation of radioactive cesium.

The researchers collected plankton at 10 points in the Pacific from off Hokkaido to Guam between January and February 2012.

They detected cesium-134 in plankton at all 10 points. The density of radioactive cesium was the highest at 8.2 to 10.5 becquerels per kilogram in samples collected from waters around 25 degrees north latitude and 150 degrees west longitude. The lowest concentration at any of the 10 points was 1.9 becquerels per kilogram.
The density of cesium in seawater was highest in waters at around latitude 36 to 40 degrees north, the team said.

Cesium highest in plankton gathered at 25 degrees N. latitude

http://mainichi.jp/english/english/newsselect/news/20130522p2g00m0dm040000c.html

May 23, 2013

Why plankton?

Cesium levels in water, plankton baffle scientists

http://www.japantimes.co.jp/news/2013/05/23/national/cesium-levels-in-water-plankton-baffle-scientists/#.UZ0KyUpsFEs

by Mizuho Aoki
Staff Writer

Plankton and seawater sampled at 10 points less than a year after the Fukushima meltdowns found concentrations of radioactive cesium were highest at different locations in the Pacific, puzzling scientists.

The group collected zooplankton and surface seawater at 10 points between Hokkaido and Guam, 500 to 2,100 km from the crippled power plant, between Jan. 14 and Feb. 5, 2012.

Cesium 134, with a half-life of two years, and cesium 137, with a half-life of 30 years, were detected in plankton and seawater at all 10 locations, according to their report. Plankton with the highest concentrations of cesium 134, at 10.5 becquerels per kilogram, and cesium 137, at 14.9 becquerels, were found around 25 degrees north latitude and 150 degrees east longitude, the report said. The samples were taken from the surface to a depth of 200 meters.

"Plankton are thought to play a key role in the dispersion of the cesium because they are eaten by bigger fish. We want to study further what is influencing the accumulation of radioactive cesium," said Minoru Kitamura, a marine ecologist and senior researcher at the Japan Agency for Marine Earth Science and Technology, who led the group.

The plankton could have been contaminated by eating even smaller plankton and through seawater, Kitamura said.

Meanwhile, the concentration of radioactive cesium in surface seawater was highest — at 41.5 becquerels per kilogram — from around latitude 36 to 39 degrees north, where the Oyashio Current meets the Kuroshio Current from the south, the report said.

The amount of radioactive cesium in seawater at other locations was low, it said.

Kitamura said they haven't figured out why the concentrations of contamination differed in plankton and seawater.
"Our concern is the high level of (radioactive cesium found in plankton) taken from waters around latitude 25 degrees north, and we don't know why the level got high around that area," Kitamura said. "We need to study whether the concentration will decline, or stay the same."

The finding was released at the Japan Geoscience Union at the Makuhari Messe international convention center in Chiba Prefecture on Tuesday.

Kitamura said he and his fellow members plan to conduct a followup study in July in the Pacific.
He said they have no plans to study contamination of bigger ocean fish because they lack the equipment to catch them in statistically significant amounts.

The survey was conducted alongside a study on ocean circulation by another group on board.
Information from Kyodo added

May 24, 2013

NHK video on Fukushima waters

Nuclear Watch NHK: Studying waters at Fukushima

http://www3.nhk.or.jp/nhkworld/newsline/201305242019.html

amongst other things, the international team present on-board wants to check how much groundwater from the Fukushima site gets into the ocean (contaminating it).

ALPS: not before Autumn

Water decontamination device to be used in fall

http://www3.nhk.or.jp/nhkworld/english/news/20130524_34.html

The operator of the damaged Fukushima Daiichi nuclear power plant is expected to start full operations this year of a system to remove accumulated radioactive wastewater.

The Advanced Liquid Processing System, or ALPS, can filter 62 types of radioactive material.

Tokyo Electric Power Company has 3 such systems. Operators have carried out a performance test for one of them since late March.

TEPCO reported to the Nuclear Regulatory Authority on Friday at a meeting of experts that the test met with no problems.

The Nuclear Regulatory Authority authorized TEPCO to test the remaining 2 systems from mid-June.

The ALPS systems are expected to go fully operational in several months, barring any problems.

The system operations have been delayed partly because containers were not strong enough to hold radioactive waste water.

Each system is capable of treating 250 tons of contaminated water daily.

About 400 tons of contaminated water is accumulated every day at Fukushima Daiichi.

The government and TEPCO hope to enable operation of the ALPS systems as soon as possible by ensuring the safety of storage tanks and minimizing risks arising from the decontamination process.

May 27, 2013

Radioactive waste disposal - But where?

Tochigi mayors oppose nuclear waste site proposal

http://www3.nhk.or.jp/nhkworld/english/news/20130527_31.html

Japan's government has met more opposition from local municipalities over a proposal on final disposal sites for radioactive waste from the Fukushima nuclear accident 2 years ago.

The Environment Ministry on Monday held the second meeting of mayors in Tochigi Prefecture, which neighbors Fukushima Prefecture, to explain new guidelines for selecting disposal sites for contaminated mud and incinerator ash.

The meeting came after the government reviewed its selection process due to opposition from municipalities proposed as candidate disposal sites.

At the meeting, ministry officials explained the new procedures.

But some mayors said obtaining local consent is difficult due to ongoing insufficient explanations from the central government about its basic policy for building such facilities.

Others said final disposal sites should be positioned around the troubled Fukushima nuclear plant.

Tochigi Governor Tomikazu Fukuda said he wants ministry officials to provide convincing explanations to mayors why they think it is difficult to dispose of radioactive waste within Fukushima.

June 4, 2013

TEPCO finds groundwater contaminated with radioactive cesium

http://mainichi.jp/english/english/newsselect/news/20130604p2g00m0dm041000c.html

TOKYO (Kyodo) -- Tokyo Electric Power Co. said Monday that it has detected radioactive cesium in groundwater samples taken from the premises of the crippled Fukushima Daiichi nuclear complex, reversing an earlier announcement that any contamination was negligible.

The announcement came as TEPCO is trying to secure the understanding of local fishermen over the dumping in the Pacific Ocean of groundwater that has been pumped out from wells at the site, saying it has confirmed that concentrations of radioactive substances are sufficiently low.

TEPCO had said radioactive cesium in the groundwater was at a level that could not be detected by an instrument at the Fukushima Daiichi complex. But the same sample was found to contain 0.22 becquerel of cesium-134 and 0.39 becquerel of cesium-137 per liter when checked at the Fukushima Daini plant, where radiation levels are lower.

According to the utility, there was a problem in accounting for background radiation.

The revised amount of cesium-137 is still below the level that TEPCO views as the upper limit for releasing groundwater, which is less than one becquerel.

Currently, about 400 tons of groundwater seeps into the crippled reactor buildings every day, where it becomes contaminated with radioactive substances. This means that the total volume of toxic water is increasing by the same amount daily.

To slow the rate of accumulation of polluted water, TEPCO has created a system to direct part of the groundwater into the ocean by pumping it out before it flows into the reactor buildings. The groundwater is stored in tanks before it is discharged.

But the utility has not been able to fully operate the system amid concern from local fishermen that dumping groundwater may affect the marine environment.

The latest revelation could undermine the credibility of related data presented by TEPCO, possibly making it hard for the utility to get the nod to discharge the groundwater and standing in the way of the overall plan to tackle the massive amounts of radioactive water at the plant.

Tepco finds groundwater contaminated with radioactive cesium

Kyodo

http://www.japantimes.co.jp/news/2013/06/04/national/tepco-finds-groundwater-contaminated-with-radioactive-cesium/#.Ua39jNhBpg4

June 5, 2013

Fishermen furious with TEPCO about cesium contamination

Radioactive cesium found in groundwater at Fukushima plant; fishermen furious

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201306050093

Tokyo Electric Power Co. has detected radioactive cesium in groundwater previously deemed clean at the stricken Fukushima No. 1 nuclear plant, dealing a blow to plans to dump the water into the ocean.

TEPCO, the plant's operator, on June 3 acknowledged that it miscalculated the influence of background radiation when it measured radioactivity levels of the groundwater in storage tanks in mid-April. At that time, the company said contamination of the water was negligible.

However, new measurements found a low level of cesium at 0.61 becquerel per liter, a TEPCO official said. Although that level is still lower than the utility's standard for dumping the water into the ocean, fishermen operating in the area of the plant were furious about TEPCO's latest mistake.

"(Our approval for the plan to) discharge groundwater into the sea has certainly taken a step backward," Masakazu Yabuki, who heads the Iwaki city fisheries cooperative, said angrily.

The Fukushima prefectural government has instructed TEPCO to take thorough and proper measurements of the water.
Groundwater continues to pour into the basement levels of damaged nuclear plant buildings that are already flooded with contaminated water. TEPCO is running out of storage space for the water used to cool the reactors, and some of its underground tanks have been leaking.

To alleviate the water-storage problem, TEPCO plans to pump up the groundwater from wells on the plant's premises, confirm the safety of the water, and dump it into the ocean.

The central government and TEPCO on May 30 said the groundwater contamination was negligible in a meeting with local fishermen.

Radioactive waste - Help!

Editorial: Cooperation needed on radioactive waste disposal facilities

http://mainichi.jp/english/english/perspectives/news/20130605p2a00m0na024000c.html

The construction of final disposal facilities for waste contaminated with radioactive substances from the tsunami-hit Fukushima No. 1 Nuclear Power Plant has proven a challenge in many areas. The Environment Ministry drafted a new procedure for selecting sites for disposal facilities last month and began to explain the system at meetings of mayors of cities, towns and villages in five prefectures where such facilities are being planned. However, many of these municipalities are reluctant to host disposal facilities for radioactive substances largely because of harmful rumors and fears that underground water could be contaminated with radioactive substances contained in waste stored at such facilities.

Incinerated ash, sludge, rice straw and other substances containing more than 8,000 becquerels of radioactive cesium per kilogram will be stored at such facilities. Currently, these substances are being temporarily stored at waste incineration facilities and other sites. However, it is necessary to permanently bury such waste in order to ensure long-term safety. The national government and local bodies concerned should cooperate closely to fundamentally solve the problem as an inevitable task.

Radioactive substances leaking in a nuclear plant accident are condensed in the process of incineration and sewage treatment. As of the end of March this year, approximately 120,000 metric tons of waste containing over 8,000 becquerels of radioactive cesium was stored in 11 prefectures. In principle, such waste is supposed to be disposed of in each prefecture under the special measures law on environmental contamination with radioactive substances from the nuclear plant that fully came into force last year. However, the government will build a final disposal facility in Miyagi, Ibaraki, Tochigi, Gunma and Chiba prefectures, which currently do not have such a facility, or face challenges in disposing of waste tainted with radioactive substances.

The Environment Ministry once selected a state-owned land lot in Yaita, Tochigi Prefecture, and Takahagi, Ibaraki Prefecture, as sites for final disposal facilities. However, the ministry was later forced to withdraw the selection after these cities sharply protested the decision, which had been made without disclosing the decision-making process for fear of sparking opposition from local residents.

Under the draft of the new procedure for selecting sites for disposal facilities, the government would conduct a detailed survey on candidate sites and make a final decision on the sites while taking into account discussions at meetings of the mayors of relevant municipalities. It is only natural for the central government to respect local communities' opinions, considering how the Environment Ministry had been forced to retract its earlier selection of sites.

When the Environment Ministry explained the draft of the new procedures, some mayors voiced opposition to building disposal sites in the five prefectures, with one of them saying that such facilities should be concentrated in Fukushima Prefecture, which hosts the crippled nuclear power station. Tokyo Electric Power Co., the operator of the nuclear plant, is primarily responsible for generating waste contaminated with radioactive substances.

It is understandable that mayors in the five prefectures are reluctant to host disposal sites for radioactive waste from Fukushima Prefecture. Still, it should not be recognized as a justifiable reason for bringing waste generated in these prefectures into Fukushima Prefecture. Each municipality concerned should settle the matter as their own regional issue while listening to the opinions of local residents. Some municipal governments are demanding that the national government implement measures to revitalize their economies in return for hosting disposal facilities.

However, such influence peddling could raise doubts in local communities about the safety of disposal facilities that they are asked to host and draw protests from local residents. One of the mayors who attended a Chiba Prefecture meeting insisted that multiple facilities should be installed in different municipalities so that they can share the burden of hosting such facilities. This proposal is worth considering.

Each of such disposal facilities will be surrounded by concrete walls and constantly monitored for possible radiation leaks. The Environment Ministry pledged to do its best to ensure the safety of each site. It is necessary to create a system under which anybody can access radiation data at such facilities and receive an explanation in order to reassure local residents in areas hosting disposal facilities. Moreover, the national and local governments should discuss how to pay compensation if businesses in affected areas suffer from financial losses as a result of groundless rumors about radiation contamination.

The national government must provide a thorough explanation of its policy of disposing of waste contaminated from radioactive substances from the Fukushima nuclear plant. At the same time, the governors of the prefectures concerned should play a leading role in ensuring these local bodies proactively respond to the issue.

June 6, 2013

Radiation levels around Fukushima

Radiation levels fall 40 percent in Fukushima evacuation zones

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201306060087

By JIN NISHIKAWA/ Staff Writer

Radiation levels have dropped by 40 percent on average in each of the four types of evacuation zones around the crippled Fukushima No. 1 nuclear power plant, the government's nuclear watchdog said.

The Nuclear Regulation Authority said June 5 it used airborne radiation measurement data to estimate variations in air dose rates over the 17-month period from November 2011 to March 2013. It is the first time that the NRA has released such estimates by zoning category.

NRA officials attributed the decrease partly to physical decay and partly to rainwater washing radioactive materials into the ocean.

The Fukushima nuclear disaster was triggered by the Great East Japan Earthquake and tsunami in March 2011.

In the "difficult-to-return zones," where evacuees are not allowed to return for at least five years counting from March 2012, the average radiation level fell from 14.5 microsieverts per hour to 8.5 microsieverts per hour. The annual dose estimates in November 2011 exceeded 100 millisieverts in 27 percent of the land area of the difficult-to-return zones, but that ratio had dropped to only 6 percent by March 2013.

The average dose rate declined from 5.7 microsieverts per hour to 3.4 microsieverts per hour in the "no-residence zones," where evacuees are expected to be able to return in a few years.

In the "zones preparing for the evacuation order to be lifted," where evacuees are expected to be able to return sooner, that figure dropped from 2.0 microsieverts per hour to 1.1 microsieverts per hour.

The average radiation level fell from 2.7 microsieverts per hour to 1.5 microsieverts per hour in the "planned evacuation zone," a high-risk zone to the northwest of the plant and outside the 20-kilometer radius that is yet to be reclassified into any of the three other categories

High-level radiation zones reduced to 1/4 after 2011 crisis

http://mainichi.jp/english/english/newsselect/news/20130606p2g00m0dm037000c.html

TOKYO (Kyodo) -- Areas most seriously contaminated by the 2011 Fukushima Daiichi nuclear power plant disaster saw the size of high-level radiation zones in March reduced to less than one-fourth of the level of November 2011, the Nuclear Regulation Authority said Wednesday.

About seven months after the nuclear accident occurred, zones with radiation over 19 microsieverts per hour accounted for 27 percent of the total area that has been designated as "difficult to return to for at least five years."

But the proportion of the zones dropped to 16 percent as of June 28, 2012, and to 6 percent as of March 11 this year, according to aircraft monitoring surveys.

The government is expected to use the data in its planning to enable evacuees to return to their homes following the world's worst nuclear crisis since the 1986 Chernobyl disaster.

After the Fukushima Daiichi complex achieved a stable state of cold shutdown in December 2011, the government has been reclassifying evacuation zones to places designated as "difficult-to-return," or "habitation-restricted."

The difficult-to-return zones, which are defined as areas with radiation over 50 millisieverts per year, currently total about 320 square kilometers, excluding the 3-km radius from the plant.

The NRA also decided to further revise its nuclear disaster mitigation guidelines compiled in the wake of Fukushima crisis by adding details over the preparation of iodine tablets, which help prevent thyroid cancer.

In the guidelines, people living within a 5-km radius of a nuclear power plant will be given a supply of iodine tablets so they can promptly take the pills after an accident occurs.

Local governments are asked to purchase the tablets and conduct explanatory meetings to residents before distribution. Doctors will attend the meetings to explain about the side effects, the timing of taking the pills and other precautions.

Japan currently does not have iodine formula for infants that can be distributed ahead of time, so the NRA urges in the guidelines to evacuate infants before the plant's situation reaches a stage where citizens in general are asked to flee, an official said.

June 8, 2013

Decontamination of housing - A very sad statement

Data reveals that 75 percent of decontamination work in housing areas remains unfinished

http://mainichi.jp/english/english/newsselect/news/20130608p2a00m0na012000c.html

Only one-fourth of work to decontaminate housing areas following the 2011 Fukushima nuclear power plant crisis had been completed in seven prefectures in the Kanto and Tohoku regions by this March, the Ministry of the Environment said.

The government targeted 58 municipalities in regions outside Fukushima Prefecture as decontamination areas, whose progress would be regularly monitored.

According to the latest data, decontamination work had been completed on 98 percent of schools and daycare facilities -- as well as 80 percent of parks and public gymnasiums -- by the end of March.

In the area of housing, however, the process has been slow. While the number of decontaminated houses increased by 10,000 from December last year to reach a total of 34,500, this figure is still only one-fourth of the 138,700 total homes that have requested the work.

In addition, only 1 percent of the cleaning has been completed on forests near residential zones, even after municipal governments reviewed the original plan and reduced the size of the areas that were originally scheduled to be decontaminated.

Meanwhile, radiation levels in 14 districts of Fukushima Prefecture that were designated as model decontamination zones were revealed for the first time after the government monitored them for over one year. According to the data, radiation levels were reduced by an average of 60 percent after the decontamination work was performed at the end of 2011, and then dropped a further 19 percent in October last year, and still another 25 percent in March this year.

Officials said the decreases in radiation levels occurred mainly as radioactive cesium naturally decayed, and was also washed away by rains.

June 10, 2013

Rice planted in uninhabitable part of Iitate

Rice planted in decontaminated paddy in Nagadoro

http://www3.nhk.or.jp/nhkworld/english/news/20130610_24.html

People in a village in Fukushima Prefecture have planted rice seedlings in a decontaminated paddy to see if they can resume commercial farming there.

The test planting took place in a 500-square-meter paddy in the Nagadoro District of Iitate Village on Monday.

Nagadoro is the only district in the village listed as uninhabitable for the next 5 years by the central government. Radiation readings top 50 millisieverts per year.

All villagers have evacuated following the 2011 disaster at the Fukushima Daiichi nuclear plant.

Last August, decontamination workers removed 5 centimeters of topsoil from the surface of the paddy. Radioactive cesium in the soil reportedly fell more than 90 percent, from about 20,000 to 1,600 becquerels per kilogram.

Iitate officials plan to harvest rice from the paddy in September. They will dispose of it after analyzing how much cesium the crop contains.

Nagadoro District mayor, Yoshitomo Shigihara, says he is excited about the planting, which is the 1st for the district in 3 years. He says it is tough for farmers to dispose of their produce, but he hopes the test will yield positive results.

Namie and Futaba to be cleaned up?

Decontamination trials for Fukushima no-entry zone

http://www3.nhk.or.jp/nhkworld/english/news/20130611_06.html

Officials from Japan's environment ministry say they plan to conduct trial clean-ups in the no-entry zone near the Fukushima nuclear power plant.

The government has designated parts of 7 municipalities as areas in which radiation is still too high for residents to return.

Officials have delayed major clean-up operations for fear of exposure to the high radiation.

But environmental officials say they will now ask local governments and landowners to approve decontamination trials in the towns of Namie and Futaba.

They hope to begin working on residential areas, roads and agricultural fields in Namie Town in August. They aim to work on kindergartens and hospitals in Futaba Town from September.

They will examine how the procedures affect radiation levels and publish the results by the end of this year.

June 11, 2013

Don't know where to start

Status of melted fuel in Fukushima reactors uncertain despite push for early removal

http://mainichi.jp/english/english/newsselect/news/20130611p2a00m0na010000c.html

Uncertainty over the location of melted fuel inside the crisis-hit Fukushima No. 1 Nuclear Power Plant continues to cast a shadow over plans to remove the fuel at an early date, as envisaged in a draft version of a revised road map for decommissioning the plants' reactors.

A draft announced by the government and Tokyo Electric Power Co. (TEPCO) on June 10 outlines plans to start removing the melted fuel about 18 months earlier than originally forecast. But the proposed length of time it will take to decommission the reactors has been left unchanged at "30 to 40 years."

Reactor Nos. 1-3 at the plant contained a total of 1,496 rods of nuclear fuel in their cores. Another 3,106 rods of spent fuel are stored in the pools of the No. 1-4 reactors. The melted fuel inside the reactors has been labeled "debris," and is believed to have hardened after mixing with metal and other substances. Each fuel rod weighs about 300 kilograms, and a high level of technical expertise would be required when undertaking a remote control operation to cut up and retrieve clumps of scattered radioactive materials weighing a combined 450 tons or thereabouts.

The bid to remove the melted fuel earlier than planned hinges on whether workers can succeed in filling the reactor cores with water. This method to screen off radiation was used in the Three Mile Island accident that occurred in 1979. However, the cores of reactors at the Fukushima plant have holes, and the task at hand is finding which parts have been damaged and repairing them.

It took about six years before fuel began to be removed in the Three Mile Island accident, but in Fukushima, even if the melted fuel is removed earlier than planned, the work won't start until about 10 years from the onset of the disaster.

The government and TEPCO plan to conduct a detailed investigation next fiscal year on the technology needed to decommission the Fukushima plant's crippled reactors, then make a final decision on whether it is possible to start the removal work earlier.

In a news conference on June 10, a representative of the Ministry of Economy, Trade and Industry's Agency for Natural Resources and Energy said that bringing forward the plans would be dependent on developing technology, and suggested that the plans might even end up being delayed.

Minister of Economy, Trade and Industry Toshimitsu Motegi played a leading role in revising the roadmap. This has raised suggestions that announcing plans to start removing the fuel earlier than originally forecast is a way for the government administration to underscore its achievements since taking over the reins of government last year, ahead of the upcoming House of Councillors election.

University of Tokyo professor Satoru Tanaka, who is familiar with the decommissioning of nuclear plants, commented, "There is merit in bringing the plans forward to speed up residents return (to areas contaminated by the nuclear accident). But there remains a lot of unchartered technology, and the government needs to support research and development in the future."

June 19, 2013

Hasn't yet reached the sea... Wishful thinking?

Tepco trying to keep flow from reaching sea, will build bank

http://www.japantimes.co.jp/news/2013/06/19/national/strontium-in-groundwater-at-no-1-soars/#.UcHECNhBpg4

Strontium in groundwater at No. 1 soars

by Reiji Yoshida
Staff Writer

Groundwater contaminated with highly radioactive substances has been detected from a monitoring well just 27 meters from the seashore within the compound of the crippled Fukushima No. 1 nuclear plant, Tokyo Electric Power Co. said Wednesday.

Wednesday's announcement is the latest in a series of difficulties Tepco has faced as it struggles to manage contaminated water at the wrecked plant, posing a great risk to the environment.

Testing revealed strontium-90 readings of 1,000 becquerels per liter, 33 times more than the legal limit, as well as tritium readings of 500,000 becquerels per liter, 8.3 times the limit.

Tepco said it believes the radioactive groundwater has yet to reach the ocean, as radiation readings in seawater samples from near the shore have not shown significant shifts.

Tepco first found a spike in the readings of radioactive strontium-90 and tritium on May 24. The readings in the previous study in December was 8.6 becquerels per liter and 29,000 becquerels per liter, respectively, both well below the legal limits.

Tepco will soon begin building a bank protection along the shore that will be strengthened with waterproof liquid glass in an effort to prevent the contaminated groundwater from reaching the sea.

The utility plans to start construction by the end of this month and finish the project in about 90 days, a Tepco spokesman told reporters at the firm's Tokyo head office.

If introduced into the food chain, radioactive strontium-90, with a half-life of 28.8 years, can remain in the human body for long periods and eventually cause cancer. Tritium is discharged from the body much quicker and is believed to pose less of a threat in general, but could still pose risks to human health.

Tepco has not determined where those radioactive materials came from, but believes they were in water discharged in April 2011 from a damaged pit located south of the monitoring well.

In March 2011, the Fukushima plant suffered meltdowns at three of its six reactors. On April 2, Tepco found highly contaminated water of 1,000 millisieverts per hour flowing into the sea from the pit, which was connected to a turbine building via a covered trench.

The utility managed to stop the flow by injecting liquid glass into the soil under the pit.

Tepco theorized that radioactive materials from that leak might still remain in the soil and could have seeped into the monitoring well in May.

Tepco plans to dig four other monitoring wells around the one in question to assess the environment.

The well in question is located about 28 meters north of the pit from which highly radioactive water leaked in April 2011.
"The density of radioactive materials in the seawater are within the fluctuation range of the past. We don't think (contaminated water) leaked into the sea," Toshihiko Fukuda, a Tepco executive and spokesman, said during the news conference.

The Nuclear Regulation Authority plans to order Tepco to beef up monitoring and take measures to prevent the water from reaching the Pacific, according to Kyodo News.

High radioactivity levels detected in groundwater at Fukushima plant

http://mainichi.jp/english/english/newsselect/news/20130619p2g00m0dm088000c.html

TOKYO (Kyodo) -- Tokyo Electric Power Co. said Wednesday it has detected very high radioactivity levels in groundwater from an observation well at its Fukushima Daiichi nuclear power plant crippled by the March 2011 earthquake and tsunami.

In the water sampled May 24, the strontium 90 level stood at 1,000 becquerels per liter, about 30 times as high as the maximum allowable standard, and the toritium level at 500,000 becquerels, some eight times higher, it said.

The groundwater at the well some 27 meters from the sea may not have affected nearby seawater, whose radioactivity levels have remained within the range of past levels, a TEPCO official said.

TEPCO set up the observation well on the Pacific side of the No. 2 reactor turbine building last December to look into why radioactivity levels in seawater near the plant remained high.

The well is about 29 meters north of a pit from which highly radioactive water was found flowing into the sea on April 2, 2011, just after the disaster.

The sampled groundwater could be from the contaminated water that might have penetrated into the ground, TEPCO said.

The company plans to dig four more wells around the observation well to check any spread of radioactive contaminated water and improve the seawall to prevent contaminated water from flowing into the sea.

June 21, 2013

What happened in Tokai Hadron facility

Tests continued for 37 hours after radiation leak at neighboring lab

http://ajw.asahi.com/article/behind_news/social_affairs/AJ201306210061

By AKIRA HATANO/ Staff Writer

Scientists continued to conduct beam bombardment experiments in a nuclear physics laboratory last month for 37 hours after radioactive materials leaked in an adjacent lab, sources said.

The leak occurred around 11:55 a.m. on May 23 at the Hadron Experimental Facility of the Japan Proton Accelerator Research Complex in Tokai, Ibaraki Prefecture.

J-PARC informed the Nuclear Regulation Authority, the Ibaraki prefectural government and others of the leak around 9:30 p.m. on May 24, but the Materials and Life Science Experimental Facility laboratory next door to the Hadron lab continued with its beam experiments until 12:46 a.m. on May 25.

Both laboratories share the same system of particle accelerators, or synchrotrons.

The NRA is investigating the case, which may constitute a violation of J-PARC's in-house operation manual, which says beams and equipment should be turned off in the event of a serious accident.

"Our senior officials, busy dealing with the aftermath of the accident, took time in instructing individuals in charge of the synchrotrons to stop the experiments," a J-PARC public relations official said.

The Materials and Life Science Experimental Facility is used in experiments for protein analysis, drug discovery and development of new materials.

At J-PARC, particle beams first travel around a rapid cycling synchrotron, which has a perimeter length of 350 meters, and are then guided into a 1,600-meter main ring synchrotron for further acceleration. The Hadron Experimental Facility was using beams from the main ring, whereas the Materials and Life Science Experimental Facility was using beams from the smaller ring.

J-PARC suspended experiments along the main ring about four hours after the leak started, but it did not halt the experiments using the smaller ring.

An NRA official said J-PARC was apparently late in stopping the experiments because it initially did not realize how serious the leakage was.

The High Energy Accelerator Research Organization and the Japan Atomic Energy Agency, which jointly operate the synchrotrons, were expected to convene a meeting of a third-party expert panel on June 21 to investigate and evaluate safety controls.

Keep your "own" waste!

Radioactive waste to be disposed of in originating prefectures: Environment Ministry

http://mainichi.jp/english/english/newsselect/news/20130621p2a00m0na008000c.html

The government will stand by its plans to dispose of "designated waste" contaminated with radioactive materials from the Fukushima nuclear disaster within the individual prefecture where the waste originated, deputy environment minister Shinji Inoue announced on June 20.

Some municipalities that are being asked to build disposal sites have argued that the radiation-tainted waste should be gathered together in Fukushima Prefecture, which houses the site of the disaster -- the Fukushima No. 1 Nuclear Power Plant. However, the Fukushima Prefectural Government has informed the Environment Ministry that it will not accept waste from outside the prefecture.

The ministry plans to build facilities to store designated waste such as sludge and ash with a radiation level of over 8,000 becquerels per kilogram in Tochigi, Miyagi, Gunma, Ibaraki and Chiba prefectures. In May, it unveiled a draft of the process to select disposal sites, and has been explaining it at meetings of municipal government heads in each prefecture.

The ministry had planned to advance the selection process after receiving approval from officials, but municipalities in prefectures including Tochigi have refused the idea of burying waste in their own prefectures. It is likely that the large gap in perception between the ministry and local bodies will create further difficulties in deciding where to build the disposal sites.

In a news conference, Inoue said the Fukushima Prefectural Government had told the ministry, "There is not even a clear outlook for disposal of waste that originated within our prefecture. The government should dispose of waste according to its basic outline."

"Even if the discussion (on the pros and cons of disposing the contaminated waste within the prefecture) continues, there won't be any progress," Inoue commented, saying that this won't happen since Fukushima Prefecture is refusing to collect all contaminated waste.

"Temporary storage continues, and residents ar feeling uneasy," Inoue added. "I trust the city, town and village heads will make a sensible decision on this issue."

The central government decided in November 2011 to dispose of waste in individual prefectures. In September 2012, it selected the Tochigi Prefecture city of Yaita and the Ibaraki Prefecture city of Takahagi to host disposal sites. Locals opposed the plans, however, saying they hadn't received a sufficient explanation in advance. The government responded by drafting selection procedures that placed an emphasis on the opinions of local bodies.

June 22, 2013

Health ministry study about cesium food contamination

Radioactive cesium in foods drops to one-fifth in Fukushima

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201306220047

Radiation exposure through food items consumed by residents in central Fukushima Prefecture continues to remain far below the legal safety limit, according to a health ministry study.

The dose of radioactive cesium from average meals in the region last year dropped to one-fifth of the level a year earlier, the health ministry said June 21.

The ministry's finding showed that annual dose of radiation amounted to 0.0038 millisievert as of autumn 2012, down from 0.0193 millisievert a year earlier.

Japan's annual radiation dose is set at up to 1 millisievert under law.

The ministry calculated the annual figures based on readings of radiation from rice, seafood and processed foods produced in local areas.

The central part of the prefecture includes Fukushima city, the prefectural capital, which is about 60 kilometers from the crippled Fukushima No. 1 nuclear power plant.

June 24, 2013

Let people back and measure radiation again afterwards

In Fukushima first, district declared decontaminated

http://ajw.asahi.com/article/0311disaster/recovery/AJ201306240107

By NORIYOSHI OTSUKI/ Staff Writer

Decontamination work has been completed for the first time in an area in the 11 municipalities in Fukushima Prefecture where the central government is responsible for removing radioactive materials in a step toward the lifting of an evacuation order.

In a June 23 meeting with residents, officials of the Cabinet Office and the Environment Ministry said radioactive materials released from the crippled Fukushima No. 1 nuclear power plant have been successfully removed in the eastern part of Tamura's Miyakoji district and that 380 former residents will be able to return to their homes as early as mid-August.

The government plans to determine when to lift the evacuation order after consulting with city officials and residents.
The eastern Miyakoji district lies within a 20-kilometer radius of the Fukushima No. 1 plant, which suffered a triple meltdown following the March 11, 2011, Great East Japan Earthquake and tsunami.

The government concluded that infrastructure, such as roads, electricity and water, and services such as medical care have almost been fully recovered in the district.

The government has been conducting decontamination work in a 3.42-million-square-meter area in the district since July.

According to the Environment Ministry, average airborne radiation levels in a 230,000-square-meter residential area have fallen 24 to 56 percent to 0.32 to 0.54 microsievert per hour.

The figures are still above the government's long-term goal of 1 millisievert per year, or 0.23 microsievert per hour.
But a Cabinet Office official said the radiation levels do not pose a health risk.

During the June 23 meeting, some residents called for additional decontamination work.

The Environment Ministry said it will decide whether to conduct additional work based on radiation levels to be measured in autumn.

In April 2012, the eastern Miyakoji district was designated as a "zone preparing for the evacuation order to be lifted," where former residents were expected to be able to return at a relatively early date.

The former residents have already been allowed to stay in their homes for several days during long holidays around the end of the year and on other occasions.

The district will be the first where former residents will be allowed to stay in their homes at any time.

The government plans to allow such stays in other zones preparing for the evacuation order to be lifted, as soon as decontamination is completed.

June 28, 2013

Decontamination fails to achieve expected results

'Cleaned' Fukushima municipalities find radiation failing to drop

http://www.japantimes.co.jp/news/2013/06/28/national/fallout-decontamination-efforts-falling-short/#.UcyPjNhSb9k

JIJI

FUKUSHIMA – Decontamination efforts in Fukushima are failing in some areas, prompting increasing calls from radiation-tainted municipalities for a second round of government-sponsored cleaning work.

Although many residential areas tainted by the meltdown-stricken Fukushima No. 1 power plant have supposedly completed decontamination work, some haven't seen their dosage level drop below the central government's long-term goal of 1 millisievert per year.

Some concerned municipalities are even conducting their own field surveys to ferret out radioactive substances ejected by the heavily damaged plant, which in March 2011 became ground zero for Japan's worst nuclear complex disaster. Three of the six-reactor Tokyo Electric Power Co. facility suffered core meltdowns.

In the village of Kawauchi, some 480 of the 1,061 houses in the emergency evacuation advisory zone still had atmospheric radiation doses over 1 millisievert following decontamination.

So the village started doing its own surveys in April.

Village officials used a gamma camera to identify radioactive areas and had surveyed 130 houses by mid-June.
The gadget's readout, which displays radiation levels in different colors, helped them determine where accumulations of dangerous substances remain.

"Radioactive substances often may not be removed from the soil below eaves, moss and U-shaped gutters," Kawauchi official Shinichi Endo said.

The village plans to finish the survey before winter, compile the results by next April and ask the central government for a second round of decontamination.

In the town of Hirono, where most of the 1,908 households have supposedly been decontaminated, many are finding the radiation levels haven't changed at all.

After conducting joint inspections in February with some of the companies hired to do the decontamination, the town found that fallout had been missed in such places as rain gutters.

Now Hirono as well is seeking financial help to do field surveys and relaunch its decontamination.

"The ministry is now focusing on the first round of decontamination work," said Senior Vice Environment Minister Shinji Inoue.

If radiation levels don't drop enough in the first round, more decontamination may have to be considered, he said, suggesting a second round might be offered after the program is reviewed this summer.

But since the ministry hasn't explicitly promised to do such work again, municipalities are increasingly concerned about the future of the decontamination process.

July 2, 2013

Map of iodine levels 3 months after 3/11

Map shows iodine-131 levels in Fukushima shortly after disaster

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201307020068

By FUMIKAZU ASAI/ Senior Staff Writer

Estimated levels of iodine-131 at 800 locations show how radiation likely spread as a result of the disaster that occurred at the Fukushima No. 1 nuclear power plant just over two years ago, according to a map released by researchers July 1.

Because the half-life--the time needed for the amount of radioactivity to be reduced in half--of iodine-131 is as short as eight days, it becomes difficult, once several months have elapsed following a nuclear accident, to determine how iodine-131 spread in the early stages of the disaster.

Instead, the researchers, led by Yasuyuki Muramatsu, an analytical chemistry professor at Gakushuin University, and Hiroyuki Matsuzaki, an applied engineering associate professor at the University of Tokyo, have estimated the amount of iodine-131 deposited in soil based on the soil concentration of iodine-129.

An advanced method was used to calculate the amount of deposited iodine-129, which has a half-life of 15.7 million years.

Though iodine-131 levels in soil do not directly show how much radiation a person has been exposed to since the disaster, Muramatsu said their investigation is rewarding.

"The map can be used as basic data to assess radioactive doses," Muramatsu said.

Iodine-129 is believed to have been released from the crippled plant following the nuclear meltdowns, along with iodine-131, which is said to increase the risk of thyroid cancer.

After measuring levels of iodine-129 in the soil at 400 locations within 80 kilometers of the plant to estimate levels of iodine-131, the research group made a map that includes data obtained from its latest investigation, as well as information released to the public previously.

The map's data is as of June 14, 2011, just over three months after the Great East Japan Earthquake and tsunami on March 11, 2011, triggered the accident at the Fukushima No. 1 nuclear plant.

It shows iodine-131 levels were relatively high in areas to the northwest of the plant, as well as sites to the south of the facility.

Even within 20 km of the plant, relatively low iodine-131 levels were detected in areas north of the crippled facility.

July 4, 2013

1.7 million becquerels in Fukushima

Scientists detect highest cesium levels in a year in Fukushima

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201307040081

FUKUSHIMA--Radioactive cesium levels found in moss on a rooftop in downtown Fukushima exceeded 1.7 million becquerels, the highest levels detected in a year, researchers said.

Ryoji Enomoto, an associate professor at the University of Tokyo's Institute for Cosmic Ray Research, who led the team, said radioactive cesium levels were unusually high in the samples collected.

The city is located more than 50 kilometers from the crippled Fukushima No. 1 nuclear plant.

"Decontamination works encompassing broad areas are important, but it is also important to find spots where radiation levels are locally high by using simplified measurement tools and to decontaminate the spots," Enomoto said. "It will help reassure people," he said.

Enomoto measured radioactivity levels there on June 8. The researchers used a simplified gamma camera to detect the radiation.

A nonprofit group based in the city confirmed the original results; their tests detected 1.78 million becquerels of cesium.
Radiation levels of about 0.5 microsievert per hour were also measured a meter above the moss.

The Fukushima city government plans to decontaminate the building.

July 9, 2013

90-fold surge in cesium levels

Groundwater contamination level soars at Fukushima plant

http://mainichi.jp/english/english/newsselect/news/20130709p2g00m0dm075000c.html

TOKYO (Kyodo) -- The operator of the crippled Fukushima Daiichi nuclear power plant said Tuesday that the density of radioactive cesium in groundwater by the sea at the plant has soared to around 90 times higher than three days ago.

According Tokyo Electric Power Co., the groundwater sample, collected Monday from an observation well located close to the Pacific Ocean, contained 9,000 becquerels of cesium-134 per liter and 18,000 becquerels of cesium-137 per liter. The reason for the sudden rise in toxicity is unknown.

"Mud that has absorbed radioactive cesium may have got mixed with the water. We will measure the (contamination level of the) water again," a TEPCO official told a press conference at the Fukushima prefectural government office.
The official also said the company will determine whether radioactive substances are seeping into the sea after studying its seawater survey.

The well is only a few meters from a pit from which highly radioactive water was found seeping into the sea in April 2011, shortly after the nuclear crisis began at the plant.

At another observation well about 100 meters south of the first well, the density of strontium and other radioactive substances in a groundwater sample collected Monday reached 1,700 becquerels per liter, 18 times the level in water taken four days before.

The data may indicate the possibility that contaminated water is spreading underground on the sea side of the plant's premises.

Cesium levels surge 90-fold over 3-day period at Fukushima nuke plant

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201307090059

By SHUNSUKE KIMURA/ Staff Writer

Tokyo Electric Power Co. said radioactive cesium levels in a well at the Fukushima No. 1 nuclear power plant on July 8 were 90 times higher than those measured at the same site just three days earlier.

TEPCO said July 9 that cesium levels of 27,000 becquerels per liter, the highest cesium levels found since the onset of the March 2011 nuclear disaster, were detected in water samples a day earlier from a well on the seaward side of the No. 2 reactor building.

"It is unclear whether the radioactive water is leaking into the sea," a TEPCO official said. "After gathering needed data, we will conduct analyses."

The unusually high cesium levels were found in a well near the water intake for the No. 2 reactor, from which highly radioactive water leaked into the sea in April 2011.

TEPCO said cesium-134 levels in the well water were 9,000 becquerels, 150 times the legally permitted level, while 18,000 becquerels of cesium-137, 200 times the legally allowed level, were also detected in the water.

Although total cesium levels in the water collected on July 8 were 90 times the levels measured on July 5, levels of other radioactive substances, including strontium levels of 890,000 becquerels, remained the same as three days ago.

"We do not know why only cesium levels have risen," a TEPCO official said.

On May 24, TEPCO also detected strontium levels of 1,000 becquerels and 500,000 becquerels of tritium or tritiated hydrogen, in water from a well 25 meters west of the shore protection.

Since the May 24 discovery, TEPCO has dug four new wells, located north, south, east and west of the original well, to measure levels of underground radioactive substance levels. The highest cesium levels since the disaster were found at one of the four new wells.

Although hundreds of thousands of becquerels of tritium have been detected at some of the wells, tritium levels differ from day to day.

Cesium levels soar in Fukushima plant groundwater

http://www3.nhk.or.jp/nhkworld/english/news/20130709_12.html

The operator of the damaged Fukushima Daiichi nuclear plant says radioactive cesium levels at one of the plant's observation wells have soared over the past 3 days.

Tokyo Electric Power Company regularly monitors groundwater around the reactor buildings to check

for radioactive substances and analyze the accident's affect on the environment.

On Monday, TEPCO recorded 9,000 becquerels of cesium 134 and 18,000 becquerels of cesium 137 per liter of water at a well between the No. 2 reactor building and the sea.

Both radioactive substances were up about 90 times from the level logged 3 days ago.

The same well also showed high levels of beta rays on Friday. The rays would have been emitted from strontium and other radioactive materials.

TEPCO officials say they do not know why cesium levels have risen suddenly, or what effect the spike is having on the nearby ocean.

Seawater in the port next to the Fukushima Daiichi plant has been showing increasing levels of radioactive tritium since May. A water sample taken Wednesday last week contained 2,300 becquerels of tritium per liter, the highest reading since June 2011.

July 11, 2013

TEPCO & Masao Yoshida's death

Press Release (Jul 10,2013)Follow-up Notification on the passing of Masao Yoshida

http://www.tepco.co.jp/en/press/corp-com/release/2013/1228882_5130.html

We would like to announce that the funeral and memorial service of Masao Yoshida (58), TEPCO Executive Officer (former Plant Chief of Fukushima Daiichi Nuclear Power Station), will be attended by his close relatives only, in accordance with the explicit wishes of his family.
We plan to conduct his "Final Farewell Service" later, and will make a separate announcement about this once details are confirmed.
[Request to members of the media]
* We have been contacted by the family and informed that they have suffered distress due to the intrusion of certain over-zealous members of the media. They request that the media does not contact them directly.
We deeply understand the feelings of the family, and would call upon all members of the media to respect their wishes fully and refrain from contacting them directly.

July 12, 2013

Naraha candidate for storage

Second Fukushima debris storage survey underway

http://www3.nhk.or.jp/nhkworld/english/news/20130712_28.html

Japan's Environment Ministry has started a land survey at a second candidate site for storing radioactive soil and debris near the Fukushima Daiichi nuclear plant.

The survey began on Friday in Naraha Town. It is one of 3 areas where the government wants to build intermediate storage facilities for contaminated debris.

Senior Vice Environment Minister Shinji Inoue observed workers using heavy machinery and taking soil samples.

He told reporters that the survey is behind schedule and that the ministry hopes to open the facility in early 2015.

Naraha officials have allowed the survey on condition that they will accept only debris that comes from the town. They have not agreed to build a storage facility.

Naraha became a no-entry zone after the nuclear accident in March 2011 and all residents have been evacuated. But the government has re-designated the town as an area where authorities will provide support to allow residents return home soon.

Many Naraha evacuees are worried that they won't be able to return if they give up their land for the facility.

The ministry started a similar survey in Okuma Town in early July. It says it will let residents know the results of both surveys.

The ministry has yet to start a survey in a third candidate site in Futaba Town. Officials plan to hold briefings for Futaba residents from next week.

July 23, 2013

Doubts about decontamination

Decontamination slow, effectiveness in doubt

http://www3.nhk.or.jp/nhkworld/english/news/20130723_37.html

Decontamination to reduce radioactive pollution caused by the Fukushima Daiichi nuclear accident has been slow, and its effectiveness has been called into question.

NHK compared data from before and after decontamination at 43 districts in 21 municipalities across Fukushima Prefecture.

In 33 of the districts, or 77 percent of the total, radiation levels were still higher than the government-set standard of one millisievert per year.

In areas near the Fukushima Daiichi nuclear plant, where decontamination has been carried out on an experimental basis, radiation levels remain 10 to 60 times higher than the official limit.

T**he Environment Ministry says decontamination had only been conducted in about 3 percent of residential areas in the evacuation zone as of the end of March.**

50 billion dollars and questionable effectiveness

Experts estimate decontamination costs at $50 bil.

http://www3.nhk.or.jp/nhkworld/english/news/20130723_34.html

Experts estimate that cleaning up radioactivity in Fukushima Prefecture would cost 50 billion dollars, more than 4 times the amount that has been earmarked.

Experts from the National Institute of Advanced Industrial Science and Technology studied the cost of decontamination for the Fukushima Daiichi nuclear accident.

They estimate that decontamination in no-entry zones will cost up to 20 billion dollars, and in other areas, 31 billion dollars.

The estimate is based on the government-set unit costs and information provided by municipalities. It includes the cost of removing, transporting and storing radioactive waste such as contaminated soil.

The central government has so far allocated about 11 billion dollars for the cleanup, but has not made clear what the total cost might be.

The project is substantially behind schedule. Critics question its effectiveness, as radiation levels remain high in some areas even after decontamination.

A member of the group, Junko Nakanishi, says the government is conducting the work without knowing how much it would cost to achieve the level that would meet residents' expectations.

She says the government should study cost performance before deciding whether to complete the decontamination or reallocate the money to help people rebuild their lives.

August 2, 2013

Municipalities asking for decontamination

Fukushima municipalities demand more cleaning

http://www3.nhk.or.jp/nhkworld/english/news/20130802_32.html

Municipalities around the stricken Fukushima Daiichi nuclear power plant have demanded that the central government continue decontamination work in the areas.

The mayors and assembly leaders of 8 municipalities around the Fukushima Daiichi nuclear power plant, Fukushima Prefecture, met Environment Minister Nobuteru Ishihara on Friday and handed him a letter of request.

Many residents of the towns and villages evacuated after the nuclear accident at the plant and still live away from their homes.

Their leaders demanded that the ministry continue removal of radioactive fallout until radiation levels meet the government's long-term goal of one millisievert or below per year.

The ministry reportedly said it would study their requests and quickly deal with the matter after discussions.

Decontamination work is almost complete in Hirono Town, where radiation levels were relatively low. But such work has not started in the towns of Tomioka, Futaba or Namie.

Representing the 8 towns and villages, Hirono Town Mayor Motohoshi Yamada demanded more decontamination, saying it's crucial for allowing former residents to return home safely.

August 3, 2013

Mysterious objects with high radiation levels

Mystery objects with high radiation found on Fukushima coast

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201308030015

By SHUNSUKAE KIMURA/ Staff Writer

In a coastal area long silent due to the Fukushima nuclear accident, the only sounds of human activity on June 18 were from workers removing rubble and continuing their decontamination efforts. But soon, their supervisor discovered something that broke up the monotony of the work and added to the eeriness of the atmosphere.

After a call to the Environment Ministry, Takeshi Kato, 55, a ministry specialist, immediately headed to the location about 15 kilometers south of the crippled Fukushima No. 1 nuclear power plant.

As he slowly walked around with a dosimeter, he reached a hot spot where radiation levels nearly doubled those of the surrounding areas. Using a fallen branch to clear away dirt, Kato uncovered a grayish pile about 3 centimeters long, about 1.5 cm wide and about 0.5 cm thick.

The surface of the pile, which looked like soil, had gamma ray readings of about 85 microsieverts per hour. The total reading, including beta rays, came to 1 millisievert per hour.

It was the first of four mysterious objects with high radiation levels found near the mouth of the Idegawa river in Naraha, Fukushima Prefecture.

Officials at the government and Tokyo Electric Power Co., the plant's operator, do not know where these objects came from or why they have high radiation levels. In fact, they are not sure what these objects actually are or were used for.

Kato thought the gray pile might have been radioactive materials used at a medical institution. That thought came to mind because of the incident in October 2011, when bottles of radium were found under the floor of an abandoned residence in Tokyo's Setagaya Ward.

Under the special measures law to deal with pollution by radioactive materials, TEPCO is responsible for processing any waste emerging from the grounds of the Fukushima No. 1 nuclear plant. Based on the law, the Environment Ministry asked TEPCO to gather up and study the mystery pile.

TEPCO workers later checked the Naraha area and discovered the other objects with high radiation readings. All three objects were small enough to be held in one hand.

On July 2, a fluffy object that looked like tree bark was found, followed by what looked like a black plastic sheet and wood chips with no elasticity on July 5.

One hypothesis is that the objects flowed down the Idegawa river, but that theory is highly implausible because all four objects were found at least 100 meters from the river.

Another theory is that the objects were swept out to sea from the Fukushima No. 1 plant and eventually washed ashore. The coastal levee that was once located in the area was destroyed by the tsunami that followed the Great East Japan Earthquake on March 11, 2011.

"Rubble likely was blown out into the ocean by the hydrogen explosions that occurred at the Fukushima No. 1 plant," an official with the Naraha municipal government said. "There is the possibility that lighter objects were washed back ashore."

Rumors are circulating among local residents that the objects were reactor building pieces that were blown away in the hydrogen explosions. But no similar objects have been found in areas further north that are closer to the nuclear plant.

The area of Naraha had been designated a no-entry zone due to its proximity to the nuclear plant. No residents currently live there, but the government has designated it as a place where preparations can begin to lift the evacuation order.

Trucks continue to navigate the narrow streets as part of efforts to decontaminate the area of radioactive fallout. The gray pile was discovered during work to prepare a space for the construction of wave-dissipating blocks.

TEPCO officials are studying the four objects at the Fukushima No. 1 plant.

The gray pile appears to be made of rubber.

The fragile object that looked like part of a black plastic sheet had an extremely high radiation reading of 36 millisieverts per hour when combining beta and gamma rays, TEPCO officials said.

Its ratio of radioactive cesium-134 and -137 was close to 1:2, leading TEPCO officials to conclude that cesium generated by the Fukushima nuclear accident likely attached to the object.

However, it is still unclear where and how the objects were contaminated by radiation. A further study will be required to determine what the materials were originally used for.

Tetsuji Imanaka, assistant professor of nuclear engineering at the Kyoto University Research Reactor Institute, said reliable experts should handle the study.

"Rather than leave the investigation up to TEPCO, which has lost the public's trust, a more appropriate agency, such as the Japan Atomic Energy Agency, should conduct a thorough investigation," Imanaka said.

TEPCO sources said they were considering asking an outside agency to conduct a detailed analysis, citing limitations on what the utility could investigate.

August 7, 2013

By SHUNSUKE KIMURA/ Staff Writer

Levels of radioactive substance on seabed surveyed

http://www3.nhk.or.jp/nhkworld/english/news/20130807_31.html

Researchers say the concentration levels of a radioactive substance are very high in the seabed near the crippled Fukushima Daiichi nuclear power plant that had an accident in 2011.

The researchers are from the University of Tokyo's Institute of Industrial Science. They spent a year, ending in July, measuring the concentration levels of radioactive cesium 137 in the mud in the seabed for 400 kilometers off Fukushima Prefecture.

They found that within 20 kilometers of the nuclear plant the radioactive cesium levels at 40 locations were more than 5 times the surrounding areas.

The researchers explain that these locations coincide with dips in the seabed.

They also say radioactive cesium levels near the mouth of the Abukuma River in Miyagi Prefecture, about 70 kilometers from the plant, were more than twice those of surrounding areas.

Researchers note radioactive cesium discharged by the nuclear plant disaster probably flowed into the river and was carried into the sea.

Project Associate Professor Blair Thornton at the Institute of Industrial Science says the researchers have been able to identify places where radioactive substances are likely to build up.

August 8, 2013

Cesium hotspots in seabed

Cesium hotspots found in seabed east of Fukushima

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201308080043

By SHUNSUKE KIMURA/ Staff Writer

Radioactive cesium has formed hotspots on the seabed east of the Fukushima No. 1 nuclear power plant, the site of reactor meltdowns following the earthquake and tsunami disaster of March 2011, scientists said.

Researchers from the University of Tokyo, the National Maritime Research Institute and other entities said Aug. 7 the hotspots are likely a result of highly radioactive water that leaked from the crippled nuclear plant in April and May 2011 and subsequently sank into seabed depressions. They say they are the first to have measured the distribution of radioactive substances on the seabed off the hobbled plant.

Continual seabed monitoring could provide clues to contamination mechanisms and cesium migrations, said Blair Thornton, a project associate professor of ocean perception systems at the University of Tokyo's Institute of Industrial Science.

The researchers developed equipment for measuring seabed gamma ray levels, which they lowered from aboard a vessel, to study the distribution of radioactive substance levels on a continual basis on the seabed off the stricken plant.
They detected about 10 times the background cesium-137 concentrations in seabed depressions located 5.9 kilometers and 3.2 km off the coast hosting the nuclear plant.

Cesium levels measured about 500 becquerels per kilogram of seabed soil on average in one rocky area 1.6 km off the coast, but several spots in that area showed readings in excess of 5,000 becquerels, with the maximum as high as about 40,000 becquerels, the scientists said.

The hotspots are unrelated to the recent findings of radioactive water leaking into the sea, which became a major issue following a June announcement that high radioactive levels had been detected in groundwater from a monitoring well on the stricken plant site, the scientists added.

Environment Ministry officials to accelerate decontamination

Govt. to add officials to aid decontamination

http://www3.nhk.or.jp/nhkworld/english/news/20130809_02.html

Environment Ministry is to accelerate decontamination work and the establishment of intermediate storage sites in Fukushima by expanding the government workforce.

The ministry said on Thursday they plan to add some higher-ranking officials to the workforce of 430 government employees, who are in charge of the clean up policy there.

The move comes as preparatory work for waste storage construction is gaining momentum this fall. The storage facility will keep radioactive soil and other waste for 30 years. The new staff will need to deal with building the facilities amid a large delay in decontamination work.

The ministry says the newly-arriving officials will include Director-General and counselor level personnel from other ministries. They have expertise in public works projects and land purchases.

The ministry says it will allocate 10 staff members to help these officials. It also plans to further increase the government workforce in Fukushima

August 12, 2013

How contaminated is the ocean?

With radiation fears rekindled, researchers seek truth off Fukushima coast

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201308120096

By YUMI NAKAYAMA/ Staff Writer

SHINCHI, Fukushima Prefecture--Although researchers have yet to confirm a trend in the radioactivity levels of marine life off the coast of Fukushima Prefecture, there have been reasons for optimism.

Studies showed that the waters around the stricken Fukushima No. 1 nuclear plant had become safer. Radioactivity levels in marine creatures greatly fluctuated, but the highest levels were attributed to cesium sticking to the seabed mud.

Beaches reopened, plans were announced to resume fishing operations, and coastal communities felt that a sense of normalcy could finally return to their lives.

However, Tokyo Electric Power Co. admitted on July 22 that contaminated water from its Fukushima plant had been flowing into the ocean. In fact, the radioactive spillage had likely continued since the meltdowns in March 2011.

Although studies show that marine animals with high radioactivity levels have been concentrated right next to the nuclear plant, TEPCO's belated announcement has rekindled fears that all waters off the Fukushima coast are filled with radioactive substances, dealing a further blow to fishermen in the area.

"The image of contamination started spreading again just as we were preparing to resume operations," said Yuichi Manome, an official with the Iwaki city fishing cooperative.

On May 28, nearly two months before TEPCO's announcement, all restrictions on entering the ocean off Fukushima were lifted. Only those who work within a 5-kilometer radius off the coast from the Fukushima No. 1 nuclear plant must report to the local coast guard office.

For researchers from two universities, their work to determine the full effects of the nuclear disaster on marine life started last fiscal year. It may still be a while before they can comfortably give an accurate assessment.

One team of researchers, from Tohoku University, departed from a harbor near Tsurushihama beach in Shinchi about 50 kilometers north of the Fukushima No. 1 plant on Aug. 9. The tsunami following the Great East Japan Earthquake on March 11, 2011, swept away buildings in the area around the harbor.

About 500 meters off the coast, the water temperature was 21 degrees and the ocean about 5.9 meters deep. The murky water and the swirling sand were reminders that radioactive cesium is known to attach to sand and mud particles. Mud tends to accumulate on the sea bed in areas like this that are close to a river mouth.

The three-member team led by Yukio Agatsuma, a professor of marine plant ecology at Tohoku University, collected about 20 types of seaweed and 30 kinds of marine creatures from three areas on the seabed. They remained in each area for 30 to 40 minutes.

Seaweed was pulled up by the roots. Sea urchins, abalone, starfish and "hoya" sea squirts were placed in separate bags.

Along with the water and dirt brought up, the total amount collected reached about 100 kilograms.

After returning to land, the marine life was sorted by type and sent by frozen delivery for measurement. A minimum of 200 grams of a particular type of marine life is required for a radioactivity test.

At Tokyo University of Marine Science and Technology, the marine plants and creatures are cut into smaller pieces and sent to an agency for analysis.

One difficulty in swiftly determining the effects of the radioactive substances on marine life is that it takes about two months for the results of the analysis to be returned.

Past studies by Fukushima Prefecture found that as time passed, radioactivity levels declined at a faster pace for fish and shellfish in deeper parts off the coast than those on the seabed closer to the coast.

The aim of the Tohoku University team was to test marine life in shallow seabeds near the coast that could only be collected by diving.

"We want to confirm where and to what extent cesium still remains, and to also allay concerns that the cesium will go up the food chain to larger fish," Agatsuma said.

Tohoku University researchers have focused their studies off the coast of Soma about 50 km north of the Fukushima No. 1 plant. Researchers from Tokyo University of Marine Science and Technology have handled the area off the coast of Iwaki 35 to 50 km south of the plant.

Both teams have been working with the Fukushima prefectural government since the last fiscal year to measure radioactivity levels in marine life.

The researchers have also attached transmitters to fish to track their movements.

"We have been unable to determine trends yet because **radioactivity levels have been different even for the same type of marine life depending on the sample and location where it was collected,"** said Agatsuma, who has made three dives off the Fukushima coast since the nuclear accident.

The highest level detected in samples collected by the Tohoku team was 74 becquerels of cesium per kilogram in a type of sea squirt.

Most marine life samples collected south of the Fukushima No. 1 plant have had levels of 50 becquerels or less. However, one type of sea urchin had a reading of 483 becquerels.

"It was likely due to the mud containing cesium that was collected at the same time," said Hisayuki Arakawa, a professor in the Ocean Sciences Department at Tokyo University of Marine Science and Technology.

Although marine life is washed and cut up into samples for measurement, it is difficult to remove all the sand and mud.

Studies by the prefectural government of the edible parts of sea urchin and sea squirts have not detected cesium. Experts also said it is unlikely for cesium to be transferred to fish that eat such marine life.

Among the seaweed collected, the highest radioactivity levels have been 59 becquerels.

CURRENTS DISBURSE CONTAMINATION

The level of radioactivity in water samples from the Pacific has fallen drastically since the accident because of the dispersal of the substances by ocean currents, according to the prefecture.

In May 2011, a water sample taken near the area of the latest dive by the Tohoku University team showed radioactive cesium levels of 6.37 becquerels per liter. By August 2011, the level could not be detected.

Although the readings showed the water is safe for swimming and diving, cesium has continued to be found in the seabed.

Before the Fukushima nuclear accident, the central government found cesium levels of between 0.19 and 3.5 becquerels per kilogram in samples collected from the seabed in 14 prefectures around the nation.

However, in June this year, dirt from the seabed off the coast of Soma showed a cesium level of 522 becquerels per kilogram. At the same time, samples from only a few kilometers away had cesium levels of only about 10 becquerels.

Tsuneo Fujita, an official with the Fukushima Prefectural Fisheries Experimental Station, said there were differences in cesium levels even 10 meters apart. He added that swells and waves affected the levels.

The radioactivity levels found in the seabed are much lower than on land. In wide areas of farmland in eastern Fukushima Prefecture, cesium levels of between 1,000 and 5,000 becquerels have been detected.

"When cesium is attached to inorganic materials, such as sand and mud particles, it is believed that the cesium will leave the body along with those materials," Fujita said. "There should be no concerns about swallowing the sand that may swirl up in the ocean."

FISHING DELAYED AFTER TEPCO ADMISSION

A totally different situation can be found in the port surrounded by a levee next to the Fukushima No. 1 nuclear plant.

TEPCO, which is in charge of radiation measurements within a 20-km radius of the plant, began testing fish in the port last October.

In December, a type of ocean perch caught in a net at the port had a radioactive cesium level of 254,000 becquerels. The net cannot capture all the fish because it has to be lifted whenever a boat passes through the area.

Later, a fat greenling was caught with cesium levels of 740,000 becquerels.

Outside of the 20-km radius, radiation measurements are conducted by the central and prefectural governments. The radioactivity levels in fish much further from the plant have significantly decreased. Only an occasional fat greenling, ocean perch or flounder now shows radioactivity levels exceeding the government standard of 100 becquerels, according to the researchers.

Amid that situation, moves have been made to resume fishing far off the coast of Fukushima.

One test fishing operation started in June 2012 in the northern part of the prefecture in waters about 150 meters deep. It began with three types of seafood, including octopus, and has since expanded to 15 types.

In the southern part of Fukushima Prefecture, plans were made to begin test fishing off the coast from September.

Closer to the coast, fishing for Japanese sand lance resumed this spring in northern Fukushima, and plans were announced to begin fishing for whitebait in September or October, even in the southern part of the prefecture.

A Fukushima prefectural government study did not find any sharp increase in radioactivity levels after TEPCO admitted on July 22 that contaminated water had been flowing into the ocean.

But fishing cooperatives in all parts of Fukushima decided to postpone the resumption of operations. Due to consumer fears about radiation poisoning, fishermen are worried that they will be unable to sell their catch even if the safety of the seafood is confirmed.

August 14, 2013

30% of houses decontaminated

Decontamination outside Fukushima shifts to houses

http://www3.nhk.or.jp/nhkworld/english/news/20130814_14.html

Work to reduce radioactive residue caused by the Fukushima Daiichi nuclear power plant accident in 2011 has now shifted from educational facilities to individual houses.

The Environment Ministry surveyed the progress of government-sponsored decontamination work as of the end of June in 58 municipalities from 7 prefectures, not including Fukushima Prefecture, where the nuclear power station is. The 7 are Iwate, Miyagi, Ibaraki, Tochigi, Gunma, Saitama and Chiba Prefectures.

The survey showed that decontamination of schools and kindergartens is now almost 96 percent -- or 1,531 out of 1,596 -- complete, because municipalities placed priority on such facilities.

It also showed that the work has now shifted to individual houses.

Orders for decontamination have been issued for 90,639 units of the 140,972 houses scheduled to be worked on. That's more than 1.8 times the number surveyed at the end of March.

But work has been completed on only 42,789 houses, about 30 percent the total.

The ministry says it hopes that decontamination will get into full swing soon.

August 23, 2013

What harm to marine life?

Tepco radioactive flow raises alarm over seafood safety

http://www.japantimes.co.jp/news/2013/08/23/national/tepco-radioactive-flow-raises-alarm-over-seafood-safety/#.UhhaAX9Sab0

by Mizuho Aoki
Staff Writer

Tokyo Electric Power Co.'s revelation that massive amounts of radioactive water are flowing into the Pacific further raised fears about the harm to marine life.

Tepco estimated that between May 2011 and this month, a staggering 40 trillion becquerels of radioactive tritium, 20 trillion becquerels of cesium and 10 trillion becquerels of strontium may have flowed into the sea in groundwater from under the Fukushima No. 1 nuclear complex.

The Nuclear Regulation Authority will set up an expert panel Sept. 6 to study the effect on marine life, focusing on tritium, which cannot be removed even with the advanced liquid processing system that Tepco plans to restart to clean contaminated water used to cool the crippled reactors as early as next month. ALPS extracts most radioactive materials from tainted water — but not tritium.

What is tritium?

Tritium is a radioactive isotope of hydrogen with a half life of approximately 12 years. Around 99 percent of tritium exists in the form of water and it emits very weak beta particles that can be stopped even with plastic wrap.

A small amount exists in nature, for instance in rainwater, rivers and oceans, as well as in the human body. On average, the body of a man weighing 65 kg contains about 100 becquerels of tritium, experts estimate.

According to the Citizens' Nuclear Information Center, a Tokyo-based anti-nuclear organization, 1 kg of rainwater contains about 1 to 3 becquerels of tritium. That level was about 100 becquerels per kilogram during the 1960s due to fallout from nuclear experiments around the globe, the group said.

What hazard does tritium pose to human health?

The potential harm of tritium to humans is much smaller than that of radioactive cesium — the major focus of concern following the three nuclear meltdowns at the No. 1 power plant in 2011. Experts say exposure to tritium is roughly one-thousandth as harmful compared with radioactive cesium.

The Citizens' Nuclear Information Center said that if a person were to drink 1 liter of water tainted with 2 becquerels of tritium every day for one year, the total radiation exposure would amount to 0.00004 millisieverts.

Because tritium exists mainly in water, it does not accumulate in any specific body organ and is discharged quickly through urine, experts say. In the human body, tritium levels drop by half in around 10 days, they say.

What about marine life?

The impact on marine creatures, for now, is believed to be small, Jota Kanda, oceanographer at Tokyo University of Marine Science and Technology, told The Japan Times on Friday.

The tritium-tainted groundwater discharged from the No. 1 plant into the Pacific was diluted by seawater, he said. Although the projected amount of tritium that leaked into the ocean is frightening, judging from water samples it likely won't pose a great risk to human health if a person were to eat fish caught outside the man-made harbor of the crippled nuclear plant, according to Kanda.

Just as with humans, tritium is discharged from fish through urine, he said.

What is more alarming, Kanda said, is contamination from strontium-90, which tends to accumulate in bones and can cause bone cancer or leukemia, and from cesium-137 and -134, which appear to remain in the ecosystem.

Does the government's standard sampling survey detect tritium in fish produce?

No. The Fisheries Agency only checks for radioactive iodine, cesium and strontium, and has no plan to expand the survey to tritium, one of its officials said, adding that detecting tritium from fish samples is almost impossible with the technology the agency currently has.

How contaminated are fish caught off Tohoku, and has the situation worsened recently?

Results from the Fishery Agency's sampling tests show no significant increase in contamination level of fish caught off the coast.

Just a few samples — mostly bottom fish caught off Fukushima and freshwater fish in the prefecture — exceeded the government limit of 100 becquerels of radioactive cesium per kilogram.

However, fish caught in the No. 1 plant's harbor have been found to be highly contaminated with radioactive cesium, according to Tepco's sampling data. For instance, a spotbelly rockfish caught July 4 contained 177,000 becquerels per kilogram of cesium, and a jacopever also caught in July contained 180,000 becquerels.

The utility set up a containment fence around the harbor to limit contamination of the sea.

According to Tepco's regular sampling test conducted in July outside the harbor but within 20-km of the plant, a few fish were discovered to exceed the 100-becquerel cesium limit and had levels of between 100 and 400 becquerels per kilogram.

August 26, 2013

New round of decontamination

Govt. plans new round of radioactivity clean-up

http://www3.nhk.or.jp/nhkworld/english/news/20130826_18.html

Japan's Environment Ministry plans to conduct new decontamination work in areas where radiation levels have risen again following the accident at the Fukushima Daiichi nuclear power plant.

Municipal governments and residents are demanding more clean-ups in areas where radiation levels have climbed following the initial decontamination.

The Environment Ministry originally said it would handle such matters on a case-by-case basis.

It now says it plans to re-clean sites where radiation levels are considerably higher than they were after the first round of cleaning, probably because of waste carried in rainwater and on fallen leaves.

It also says workers will return to sites where earlier decontamination efforts were incomplete.

The ministry says it plans to re-clean woodland areas within about 5 meters of residential zones. Workers removed tainted leaves from within 20 meters of homes in the first round of clean-ups. However, radiation levels remain high in some areas.

The ministry says it will seek the opinions of an expert panel on the plans on Tuesday.

Fukushima told of revision to decontamination plan

http://www3.nhk.or.jp/nhkworld/english/news/20130826_20.html

Japan's government has told Fukushima Prefecture it needs to revise its decontamination schedule for the evacuation zone around the Fukushima Daiichi nuclear power plant.

The government has been overseeing the clean-up work to remove radioactive substances in 11 municipalities following the 2011 accident at the plant. The current target is to finish the work by the end of next March.

Senior Vice Environment Minister Shinji Inoue notified Fukushima Governor Yuhei Sato of changes in the plan during a meeting on Monday.

Inoue said a delay of decontamination operations in some municipalities made it necessary to revise the plan.

He said the ministry will announce a new timetable, along with measures to speed up the work.

Sato said the change was regrettable because it would force his prefecture and municipal governments to alter their own reconstruction plans, which depended on the plan. He urged Inoue not to make any further changes.

During the closed-door meeting, Inoue is believed to have told Sato that decontamination work for 7 of 11 municipalities will have to continue beyond the target deadline of March next year.

Inoue is also believed to have explained a plan to repeat clean-up procedures should radiation levels rise after initial decontamination due to rain or other factors.

After the meeting, Inoue apologized for a failure to stick to the schedule. He said the reconstruction and revival of affected areas cannot start without decontamination.

Inoue revealed his ministry will publicize the plans, including a realistic timetable for decontamination, on Friday.

Decontamination behind plan in 7 municipalities

http://www3.nhk.or.jp/nhkworld/english/news/20130826_17.html

Japanese government officials say efforts to cut radiation levels around the Fukushima Daiichi nuclear plant are behind schedule.

The Environment Ministry was aiming to decontaminate 11 municipalities around the plant by the end of next March. The plan did not include areas with extremely high radiation levels.

But officials now say the clean-up will take longer in Minamisoma City, Iitate Village and 5 other municipalities.

They say it is proving harder than expected to get approval from residents.

They also say a lack of storage space for contaminated soil is contributing to the delay.

The ministry says it now plans to finish decontaminating Iitate Village by the spring of 2015. But it is unable to provide new deadlines for the other municipalities.

The ministry says it will consult local authorities before announcing a new timetable by the end of the year.

Temporary storage in Aomori

Storage facility for spent nuclear fuel in Aomori

http://www3.nhk.or.jp/nhkworld/english/news/20130826_36.html

A company that's building a temporary storage facility for spent nuclear fuel has opened the construction site to media.

The Recyclable-Fuel Storage Company has been constructing Japan's first spent fuel storage facility in Mutsu City in the northern prefecture of Aomori since 2010. The facility is designed to keep spent fuel rods for a maximum of 50 years.

One of the 2 buildings at the site is now almost complete after work was suspended following the March 2011 disaster.

Media was allowed on Monday to see the inside of the 28-meter-tall, reinforced-concrete building. The one-story structure can store 3,000 tons of spend nuclear fuel in floor space of about 8,000 square meters.

Spent fuel rods will be transported into the building after being sealed in containers that prevent fission chain reaction and radiation leakage. The containers will then be fixed with bolts to the floor.

It has yet to be decided when operations will start at the facility as the structure must now meet new government guidelines that go into effect in December.

A senior official of the facility operator says the company wants to proceed with preparations necessary to comply with the new guidelines.

August 27, 2013

Decontamination needed again

More cleanups planned in Fukushima where radiation levels have rebounded

http://ajw.asahi.com/article/0311disaster/recovery/AJ201308270087

Additional radioactive cleanup efforts could be offered for outdoor areas affected by the 2011 Fukushima nuclear disaster where radiation levels have gone up since initial cleanups ended, according to a senior government official.

"We will arrange measures with local municipal governments in areas where radiation levels have risen again," Shinji Inoue, a senior vice minister of the environment, said on Aug. 26. He also said the government may expand the forest areas eligible for decontamination as the need arises.

The central government is directly overseeing radioactive cleanup works in 11 municipalities in Fukushima Prefecture where residents were evacuated. Municipal governments in other areas are also overseeing their respective decontamination efforts.

The Environment Ministry has only said it is essential to "speedily clean up areas that are yet to be decontaminated." It has remained noncommittal on whether it would offer additional cleanups in areas that have already been decontaminated once.

In some residential areas, however, radiation levels have rebounded due to the accumulation of rain-washed radioactive substances after the cleanups were finished.

The Environment Ministry plans to monitor radiation levels following decontamination efforts and conduct additional cleanups in areas where new contamination has been recorded. Prompt measures will be taken on school grounds, parks and other areas that children typically frequent, officials said.

In forested areas, decontamination has so far involved removal of fallen leaves, the trimming of tree branches and other work within 20 meters of residences. Such cleanup works, however, have often failed to effectively reduce radiation levels on residential plots.

The ministry will therefore consider expanding, on a case-by-case basis, the eligibility for cleanups beyond the current 20-meter limit outside residences in forests where radiation levels are high, the officials said.

Ministry officials were to present these plans to a panel meeting on Aug. 27, where they were to hear expert recommendations ahead of implementation.

MIXED RESPONSE

The plan for additional measures, which came more than 18 months following the start of the cleanup project, reflects the Environment Ministry's decision to better respond to local needs and situations.

The cleanup works under direct central government oversight, being undertaken in the 11 municipalities in Fukushima Prefecture, are scheduled to be completed before the current fiscal year ends in March. But the projects are far behind schedule and progress varies from municipality to municipality.

There have also been unforeseen developments, such as the rebounds in radiation levels due to the accumulation of rain-washed radioactive substances. Officials said, therefore, the time was right for reviewing the approaches to decontamination, and the latest decision on the additional measures is based on an overhaul of what has been done to date.

But the additional measures are only expected to be implemented following the completion of decontamination under the current framework. The extent to which the Environment Ministry will actually put them to practice remains unknown.

Moreover, the additional measures do not mean all areas will be decontaminated a second time.

"The authorities should make sure (the initial round of cleanups) is done through and through before even thinking of an additional round," said one local government official who was briefed about the additional measures.

Municipal government officials in Fukushima Prefecture showed a mixed response to the Environment Ministry statement.

In June, Tamura became the first of all areas being decontaminated under direct central government oversight to have the cleanup process finished. Officials in the Tamura city government welcomed the ministry's positive stance toward additional cleanups, which its residents have long demanded.

But one senior city government official was skeptical about the new measures being offered.

"The measures will not be effective if they rely on the same methods," the senior official said.

Mitsugi Igari, the vice mayor of Kawauchi, said the offer of additional cleanups is only natural. The Kawauchi village government has been calling for broader areas to be made eligible for decontamination.

The cleanup process has ended for the 1,200 or so houses in the village, but the annual radiation doses, incremental to the natural background, remain above the central government's long-term target of 1 millisievert at more than 400 of those structures.

The Environment Ministry has yet to specify which areas are eligible for the additional cleanups. The Kawauchi village government will call on the ministry to make the new measures available to all houses where radiation levels exceed the government target, officials said.

Decontamination behind schedule

Measures planned to speed up decontamination work

http://www3.nhk.or.jp/nhkworld/english/news/20130827_13.html

The government plans to introduce high-performance equipment to speed up work to lower radiation levels in areas near the crippled Fukushima Daiichi nuclear plant.

The Environment Ministry was aiming to finish cleaning up 11 municipalities near the plant by the end of next March, except for areas with extremely high radiation levels.

But ministry officials say they have to push back the deadline for 7 municipalities where work is falling far behind schedule.

The ministry plans to speed up decontamination by introducing cleaners that can recover water they release to remove radioactive substances.

Officials also plan to hire more personnel to obtain residents' consent for the cleanup work.

Difficulty obtaining residents' approval and a lack of storage facilities for contaminated soil have been cited as key factors in the delay.

Official figures on exposure

Govt.: Radiation exposure goal met in many areas

http://www3.nhk.or.jp/nhkworld/english/news/20130827_19.html

Japan's Environment Ministry says it has met its target to reduce radiation levels in a wide area from the Tohoku region to around Tokyo, thanks to decontamination work and the passage of time.

The ministry aimed to lower exposure in areas with radiation readings of under 20 millisieverts per year by 50 percent among adults and 60 percent among children by the end of August, compared to 2011 levels.

The ministry conducted a provisional analysis of data on some 11,500 schools, homes and other spots that local municipalities had finished decontaminating by the end of March.

It found that exposure had fallen by 61 percent for adult residents and 64 percent for children.

The ministry says the passage of time probably accounted for 40 percent of the decline, and more than 20 percent was through clean up efforts.

However, decontamination work that the government is directly conducting in evacuated zones of Fukushima Prefecture is considerably delayed.

Many areas where local municipalities are undertaking decontamination of houses have also fallen short of the target. Officials face the task of speeding up the process.

August 28, 2013

Uncertainty of target date for decontamination increases distrust

Gov't decides to put off target date for decontaminating area near Fukushima plant

http://mainichi.jp/english/english/newsselect/news/20130828p2a00m0na012000c.html

The government has decided to push back the target date for completing its decontamination work in seven of the 11 municipalities around the crippled Fukushima No. 1 Nuclear Power Plant from the end of fiscal 2013 to sometime after fiscal 2014.

While making the decision to postpone the target schedule for decontamination work, which is under the jurisdiction of the central government, the government also demonstrated its stance to "speed up decontamination," by revealing plans to implement such measures as doing decontamination work again in some areas if deemed necessary. But it is certain that the government will not incorporate a new target date for completing decontamination work into a revised operation schedule to be released on Aug. 30, reinforcing a sense of distrust among the local communities in the central government.

Areas in the 11 municipalities near the crippled nuclear plant that were first designated as "evacuation zones" or "planned evacuation zones" in the wake of the outbreak of the nuclear crisis are subject to the decontamination work under the jurisdiction of the central government. The government has decided to push back the target date for the decontamination work in seven municipalities -- Iitate, Katsurao, Kawamata, Minamisoma, Namie, Tomioka, and Futaba.

The decontamination work in Tamura has already been finished, and all of the decontamination work, including that for residential lots, farm land and forests, is expected for completion in the three municipalities of Naraha, Kawauchi and Okuma by March next year.

Under the operation schedule released in January 2012 by the Ministry of the Environment, the decontamination work in the "areas on stand-by for lifting of evacuation orders," (with annual radiation exposure of up to 20 millisieverts) for which evacuation orders were to be lifted in stages, and "restricted residential areas" (with annual radiation exposure of more than 20 millisieverts to up to 50 millisieverts), had been scheduled to be completed in two years from fiscal 2012 to fiscal 2013. The rezoning of evacuation areas in the 11 municipalities finished this month, but the delay in the decontamination work will affect local residents' schedules to return home.

At a meeting of experts held on Aug. 27, meanwhile, the Ministry of the Environment unveiled a plan to conduct decontamination work again in spots where radiation levels rise after the first round of decontamination work. On its original plan to limit decontamination work for forests to within 20 meters of residential areas, the ministry said it would be able to expand the limit only in the case of mountainous areas where radioactive substances can be easily carried through the atmosphere by the wind.

The ministry decided to change the plan because some officials in the ruling coalition and the government said the review of the operation schedule should not only announce the postponement of the decontamination work but also send a positive message such as "acceleration of decontamination."

But although the ministry is showing its stance to take into account requests from municipalities, it remains cautious.
At the meeting of experts, the ministry said, "As for the model projects conducted in 14 districts in Fukushima Prefecture, effects of the decontamination are maintained." Thus it said there was no need to do decontamination work again in those districts. But it did not show specific radiation levels that would require the government to conduct decontamination work again.

On the issue of whether to expand the scope of decontamination work for forests, the ministry said the limit would be extended in "exceptional cases." Therefore, most of the forests in Fukushima Prefecture are expected to remain untouched. An official in charge of a decontamination team said, "If we accept exceptions here and there carelessly, we will not be able to secure storage sites for contaminated soil as well as workers on time."

There is also a cost-effective issue involved. The government is supposed to ask Tokyo Electric Power Co. (TEPCO), the operator of the crippled nuclear power station, to pay the bills for decontamination. But as of

the end of May, TEPCO had paid only 6.7 billion yen out of 21.2 billion yen the central government told the utility to pay. TEPCO has apparently been making decisions whether to pay the costs while strictly examining the effectiveness of the decontamination work.

Therefore, the government apparently is hesitant to put pressure on TEPCO over decontamination projects that are not clearly deemed effective in reducing radiation levels. If TEPCO's business conditions worsen, there is a possibility of the government shouldering the costs.

The Ministry of the Environment wants to work out a new operation schedule for decontamination by the end of this year after holding talks with local municipalities in Fukushima Prefecture. The ministry plans to have separate talks with each of the municipalities on a new decontamination schedule and the scope of areas that need to be decontaminated again. A senior ministry official said, "We will no longer be allowed to postpone the plan."

Decontamination target postponed in 7 municipalities

Gov't decides to put off target date for decontaminating area near Fukushima plant

http://mainichi.jp/english/english/newsselect/news/20130828p2a00m0na012000c.html

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August 30, 2013

New central Gov't office in Fukushima

Government to set up office in Fukushima to find sites to store radioactive soil

JIJI

http://www.japantimes.co.jp/news/2013/08/30/national/government-to-set-up-office-in-fukushima-to-find-sites-to-store-radioactive-soil/#.UiGSSn9Sb9k

The central government said Friday that it will set up an office next week in Fukushima Prefecture to deal with radiation-contaminated soil accumulated since the nuclear catastrophe started in 2011.

Reconstruction minister Takumi Nemoto and Environment Minister Nobuteru Ishihara will lead the office, which will be responsible for efforts to build temporary storage facilities for the contaminated soil. The office will be set up Wednesday.

The government faces local resistance to its plans to build the storage facilities in Futaba, Okuma and Naraha, municipalities near Tokyo Electric Power Co.'s crippled Fukushima No. 1 nuclear power plant.

The move to set up the office is designed to help win local acceptance of the storage plan, Nemoto told a news conference in Tokyo.

September 6, 2013

Two sites for nuclear waste

2 sites found fit for radioactive waste storage

http://www3.nhk.or.jp/nhkworld/english/news/20130906_31.html

Japan's Environment Ministry says 2 candidate sites for storing radioactive waste in Fukushima Prefecture are fit for the purpose as their bedrock is firm.

Ministry officials on Friday briefed a panel of experts on the results of land surveys at the sites in Oh-kuma and Naraha towns. Both are near the disabled Fukushima Daiichi nuclear power plant.

The officials said workers dug deep into the ground at the sites and confirmed the presence of strong bedrock beneath low-lying land, plateaus and hills.

They concluded that construction of intermediate facilities to store radioactive soil and debris is feasible at the sites.

The ministry has a 3rd candidate site in Futaba Town, also near the plant. Officials have finished briefing residents about the plan, and hope to request the start of a land survey soon.

Senior Vice Environment Minister Shinji Inoue told reporters that the assessments at the 2 sites are encouraging, and that the ministry hopes Futaba will also accept a survey as soon as possible.

September 7, 2013

New official calculations of disaster debris

Environment Ministry to rejig projections of disaster debris

JIJI

http://www.japantimes.co.jp/news/2013/09/07/national/environment-ministry-to-rejig-projections-of-disaster-debris/#.UiyhS39Sb9k

The Environment Ministry will review the way it estimates the amount of debris generated by major quakes and tsunami to improve the accuracy of its calculations, ministry officials said Saturday.
The ministry will establish up a panel of experts in late September to discuss the matter and will decide on a new method by the end of next March, the officials said.

Currently, the ministry multiplies the number of buildings it projects would be destroyed by disasters — such as quakes, tsunami and soil liquefaction — by their average weight, using data on the devastation caused in Kobe and nearby areas by the 1995 Great Hanshin Earthquake.

The Cabinet Office uses this technique to forecast the level of damage that will be caused by the next massive quake to strike Tokyo as well as the next major movement of the Nankai Trough, which stretches ominously down Japan's Pacific coast.

The amount of debris generated by the March 2011 quake and tsunami that laid waste to large parts of the northeast coast turned out to be less than projected under the current method because part of the rubble was swept away to sea.

On the other hand, the disposal costs initially exceeded the predicted levels because some of the debris was transported for incineration to municipalities outside the disaster areas.

The new method will enable the Environment Ministry to estimate how much debris would be washed out to sea by tsunami. In addition, it will take into account the type of materials involved, such as wood and metal, according to the officials.

The new calculations will also incorporate computer simulations to estimate the spread of tsunami debris in the sea, the officials added.

The ministry hopes such projections will allow local governments to more accurately forecast the costs of disposing of disaster debris and the amount of space necessary for its temporary storage, thereby facilitating the process, they said.

The 9.0-magnitude Great East Japan Earthquake and tsunami left 16.08 million tons of debris strewn across the three worst-hit prefectures, Iwate, Miyagi and Fukushima. **This figure excludes rubble in heavily contaminated areas around the stricken Fukushima No. 1 nuclear plant.**

Under the ministry's current method, the next major Nankai Trough temblor is estimated to generate a maximum of 250 million tons of debris, and the next big quake to hit Tokyo up to 96 million tons.

September 10, 2013

Decontamination delays

Decontamination delay affects evacuees

http://www3.nhk.or.jp/nhkworld/english/news/20130910_41.html

A major delay in the government's decontamination efforts in areas around the Fukushima Daiichi plant is seriously affecting the lives of evacuees who hope to return to their homes.

The Environment Ministry on Tuesday admitted that it cannot finish the project in 7 cities and towns by its initial deadline set for the end of next March.

The ministry attributes the delay to difficulty in obtaining agreements from evacuees living in different locations, and securing sites to store radioactive soil.

In Iitate Village, only 3 percent of the houses have been decontaminated despite the ministry's initial plan to finish the work for the village by next March.

Some people have expressed concern that the work for the village will not be done even by the end of March 2015.

59-year-old Koichi Sato reopened his concrete mold factory in the village last October. He was one of a few residents who returned to the village that early.

He had expected the ministry to clean up his factory by last March as scheduled. But the work has not started.

He says some firms have refused to do business with him for fear of high radiation levels. His factory's sales have dropped to one-third of the volume before the nuclear accident. Large piles of unsold molds occupy the factory compound.

Sato says he may have to close his factory if the decontamination work continues to be delayed.

The delay is also mentally affecting evacuees of the village.

67-year-old Masayuki Saito commutes to the village every other day from his shelter in Kawamata Town to maintain his house, which has not been decontaminated.

The radiation level in his garden remains above 1 microsievert per hour -- more than 4 times the government-set long-term target.

Saito's grandchildren, who used to live with him, no longer go to their house for fear of radiation.

He says he wants the ministry to start the decontamination work as soon as possible and hopes that he and other evacuees can return to their homes.

He says the delay is mentally affecting elderly people who endure difficulties at shelters while hoping to return to their hometowns.

He says the delay is also preventing young people from planning their futures.

Iitate Mayor Norio Kanno says he has expressed to the ministry his concern that it might not be able to meet the deadline. He says it's regrettable that the ministry is reviewing the cleanup schedule.

He urges the ministry to meet the deadline and warns that the minds and bodies of the evacuees will fall apart if its decontamination project is not completed.
Sep. 10, 2013 - Updated 10:34 UTC

Decontamination to continue after March deadline
http://www3.nhk.or.jp/nhkworld/english/news/20130910_32.html

Japan's government says work to decontaminate soil polluted by radioactive material will be delayed in 7 of 11 municipalities around the Fukushima Daiichi nuclear plant.

The government had said it would finish the decontamination by the end of March 2014.

But Environment Minister Nobuteru Ishihara said on Tuesday that the work will continue into next April in the 7 municipalities. They include Minamisoma City, Namie Town and Futaba Town.

The Environment Ministry attributes the delay to trouble in obtaining approval from residents and securing space to store radioactive soil.

The ministry plans to draw up a new timetable to complete the decontamination by the year-end, by consulting local municipalities.

The timetable would determine when residents could return to their hometowns.

Junko Nakanishi of the National Institute of Advanced Industrial Science and Technology has described the government's initial decontamination plan as overly optimistic.

Nakanishi said the government should have foreseen the difficulties in securing space for temporary storage of contaminated soil.

Nakanishi pointed out that the timetable as to when decontamination work would end is a key factor for evacuees in planning how to rebuild their lives.

She said if progress is slow, the government should not only take steps to speed up the process, but also present measures to support evacuees who are waiting to go back home.

September 11, 2013

Decontamination in Fukushima

Decontamination work delayed in 7 Fukushima municipalities

http://mainichi.jp/english/english/newsselect/news/20130911p2a00m0na039000c.html

The Ministry of the Environment announced Sept. 10 that radioactive decontamination of seven municipalities in Fukushima Prefecture is unlikely to be completed this fiscal year as scheduled -- to the anger of evacuated residents who are waiting to return.

The ministry announced that the roadmaps for decontaminating the municipalities -- among 11 in the prefecture that the government is cleaning up in the aftermath of the Fukushima nuclear disaster -- would likely be revised this year.

Plans were made to finish decontaminating all cities, towns and villages between fiscal 2012 and 2013. However, questions have been raised about the effectiveness of decontamination, and officials have struggled to find temporary storage areas for contaminated soil, resulting in significant delays.

Decontamination work went according to plan in the city of Tamura, finishing in June, while work in the municipalities of Kawamura, Okuma and Naraha is expected to be completed this fiscal year. However, in the seven municipalities of Iitate, Minamisoma, Kawamata, Namie, Katsurao, Futaba and Tomioka, plans to complete the work this fiscal year will be shifted to next year or beyond.

Takeko Konno, 72, who evacuated from the Yamakiya district of Kawamata, which the government has designated as an area preparing for the lifting of evacuation orders, was disappointed to hear of the delay.

"I was thinking I'd be able to return next spring. The decontamination work they said was going to start in August has been delayed," she said. "I want them to decontaminate the area as soon as possible. I can put up with the situation if I know when it's going to finish. Changing the date makes it tough for me."

Iitate Mayor Norio Kanno, who is seeking to have his town decontaminated by the end of fiscal 2014, commented, "The wishful plans to complete the decontamination work in fiscal 2013 probably stemmed from a lack of knowledge about the situation. Rather than saying, 'Temporary disposal sites haven't been selected,' and laying the blame on local bodies, they need to act while understanding how residents feel."

Fukushima Gov. Yuhei Sato said decontamination was closely linked to recovery and the return of evacuated residents, and he lamented the delay.

"The revision is regrettable," he said. "We want a flexible approach to be taken with re-decontamination and the decontamination of forests to match the circumstances in each area."

Fukushima debris disposal behind schedule

http://www3.nhk.or.jp/nhkworld/english/news/20130911_17.html

The Japanese government says it will be able to dispose of all debris from the 2011 massive quake and tsunami in Iwate and Miyagi prefectures by its March 2014 deadline, but says it will take more time to clean up Fukushima.

The Environment Ministry estimates that debris from the March 2011 disaster amounts to 26 million tons in the hardest hit prefectures of Iwate, Miyagi and Fukushima.

As of the end of July, 62 percent of the waste in Iwate Prefecture and 77 percent of the waste in Miyagi Prefecture had been disposed of. The government says work is progressing steadily in both areas and will probably be finished on schedule.

But in Fukushima Prefecture, only 42 percent of the disposal is complete, even in areas other than the evacuation zones. Of the 11 evacuation zones, intermediate storage facilities have been secured for only 4.

The ministry intends to move most of the debris in these 4 zones to their storage facilities by the end of

March 2014.

It also says it wants to obtain residents' approval to build intermediate facilities in the 7 other areas as soon as possible.

Decontamination posing challenges

http://www3.nhk.or.jp/nhkworld/english/news/20130911_14.html

Japan's national and local governments are struggling with decontamination efforts in areas affected by radioactive fallout from the Fukushima Daiichi nuclear plant 2 and half years after the accident.

The national government is responsible for the removal of radiation from 11 evacuation areas in Fukushima Prefecture by the end of March 2014.

Among the 11, work has only been finished in the city of Tamura.

The Environment Ministry admitted on Tuesday that it cannot complete decontamination in 7 cities and towns by the deadline.

They include Minamisoma City, Namie Town, and Futaba Town. The ministry says that by the end of the year, it will draw up a new timetable to deal with those areas.

It says difficulty obtaining residents' approval and a lack of storage facilities for contaminated soil are key factors in the delay.

100 local governments in 8 prefectures are in charge of cleaning up municipalities other than evacuation areas.
Among them, Iwate, Gunma, Saitama and Chiba Prefectures had cleaned up their educational facilities by the end of June.

But for residences, work is finished on only about 20 percent of the nearly 380,000 units listed for decontamination.

The Environment Ministry says the clean-up will probably take several more years.

September 20, 2013

METI wants radioactive waste to remain recoverable

Ministry wants nuke waste to be retrievable

JIJI, Kyodo
http://www.japantimes.co.jp/news/2013/09/20/national/ministry-wants-nuke-waste-to-be-retrievable/#.UjyciFM0_9k

The Ministry of Economy, Trade and Industry has decided to call for storing high-level radioactive waste in ways that make it accessible in the future, instead of the burying it underground for good, informed sources said.

METI officials believe radioactive waste should be retrievable because better disposal techniques could be discovered in the future.

The idea is apparently designed to make it easier for the ministry to convince municipalities to host disposal facilities. It is unclear, however, whether the new plan will help ease the public's concerns as the central government hopes.

METI will discuss the plan further at a working group of the Advisory Committee on Energy and Natural Resources, the sources said.

A law enacted in 2000 demands that high-level radioactive waste be buried at least 300 meters underground for final disposal.

The method assumes that spent nuclear fuel should be reprocessed to extract uranium and plutonium for recycling and that the leftover waste be vitrified and buried for good. The waste, which is usually mixed with glass, emits extremely strong radiation for tens of thousands of years.

However, the Japan Nuclear Fuel Ltd.'s trouble-prone Rokkasho reprocessing plant in Aomori Prefecture has yet to start operations, prompting the government to propose the rule change.

U.S. officials and experts have expressed strong reservations about the plan to run the nuclear fuel reprocessing plant in Aomori, because all of Japan's reactors remain idled by the crisis at the Fukushima No. 1 nuclear power plant.

Apart from making radioactive waste retrievable, the government will also study the option of "direct disposal," or the disposal of unprocessed spent nuclear fuel in the ground, the sources said.

The study is likely to be conducted at the Japan Atomic Energy Agency's strata study centers in Hokkaido and Gifu Prefecture.

The study will include possible effects that new disposal techniques could have on existing facilities.

Japan's nuclear power plants have accumulated 24,000 tons of spent nuclear fuel to date, making it important to develop safe and reliable disposal methods.

Government efforts to choose candidate sites for the disposal facilities have made little progress in the past 13 years due to staunch opposition in local communities leery of hosting radioactive waste.

New nuclear waste disposal plan presented to panel

http://www3.nhk.or.jp/nhkworld/english/news/20130920_30.html

Japan's Industry Ministry has proposed a new way of disposing of highly radioactive nuclear waste that can be retrieved, if needed, after it is buried underground.

Ministry officials made the new proposal to its panel of experts on Friday.

They explained radioactive waste might need to be recovered from an underground storage if something happens that requires a review of the method, or if new technology to lower its toxicity is developed.

The ministry plans to bury high-level radioactive waste more than 300 meters underground, where it would remain for tens of thousands of years.

The ministry has been considering storage sites for 13 years, but the process had been stymied by strong public concern.

The Science Council of Japan said last year that since Japan is prone to seismic and volcanic activity using current technology it is difficult to determine sites that will remain stable for tens of thousands of years.

The ministry began overhauling plans in May this year.

Ministry officials say a time limit cannot be placed on how long the new proposal will be discussed.

September 21, 2013

Radioactive waste dumped a regular waste

Chemical company dumped radioactive material as industrial garbage

http://mainichi.jp/english/english/newsselect/news/20130921p2a00m0na004000c.html

The secretariat of the Nuclear Regulation Authority (NRA) reprimanded a chemical manufacturer on Sept. 20 for dumping a radioactive substance as regular industrial waste by mistake.

According to the NRA secretariat, chemical company JSR Life Sciences Corp. in Tsukuba, Ibaraki Prefecture, mistakenly disposed of a disc of americium-241 about 2.5 centimeters in diameter and 1 millimeter thick, or about 3 million becquerels of the radioactive material. Though that's 300 times more than the upper limit listed in Japan's radiation hazard prevention law, the NRA secretariat issued assurances that the dumped material would not impact human health as it had already been processed along with other waste.

The americium disc was part of a particle measuring machine JSR Life Sciences discarded in March this year. The material was sealed within a metal coating at the time. The equipment company that had sold the machine to JSR Life Sciences informed the firm in August that the device could not be disposed of as regular industrial waste.
The equipment was shredded and has been recycled.

September 24, 2013

Guidelines for nuclear waste

Guidelines for radioactive waste storage drawn up

http://www3.nhk.or.jp/nhkworld/english/news/20130924_34.html

A Japanese government panel has drawn up guidelines to minimize the environmental impact of projects to build storage sites for radioactive waste near the Fukushima Daiichi nuclear plant.

The Environment Ministry plans to build intermediate storage facilities in Futaba, Okuma and Naraha towns for radioactive contaminated soil and debris collected around the plant.

The panel of experts said on Tuesday that the amount of exhaust and noise from trucks carrying such

waste should be minimized. They said they will draw up plans to regulate the trucks' operation and routes.

The experts also said construction could damage wild habitats, and suggested using existing facilities or setting up conservation areas where few buildings are available.

The guidelines cover only Okuma and Naraha towns, which have approved field studies. The town of Futaba has not approved such a survey.

The ministry plans to continue studying environmental measures while listening to experts' views.

October 1, 2013

Joint tuna survey on both sides of Pacific

Joint Tuna Survey in Pacific

http://www3.nhk.or.jp/nhkworld/newsline/201310010814.html

Teams on both sides o the Pacific are trying to track the effects of radioactivity on bleufin tuna.
Researchers from Standford University
+
Japanese researchers were shocked because theydidn't expect that the radioactivity could be high enough to be detected in the US.
They now want to sahre their dat with the Americans to try an dfigure out how tuna picks up radioactive susbstances.

Problems with customs regulations (regulations different for research so the American samples have been stuck for 6 months at the customs)

Decontamination starts in high-radiation areas

Decontamination tests start in high-radiation zone

http://www3.nhk.or.jp/nhkworld/english/news/20131001_38.html

Japan's Environment Ministry has started trial decontamination in high-radiation zones near the troubled Fukushima Daiichi nuclear power plant.

Parts of 7 municipalities near the plant have been designated as unsuitable for living due to radiation levels over 50 millisieverts per year.

The ministry on Tuesday began the trials at 5 areas in Namie and Futaba towns to find out how much radiation can be removed. Workers there mowed grass and removed soil. The trials are to continue until the end of the year.

The ministry also aims to determine the cost of the cleanup, as well as ways to control workers' radiation exposure.
Namie district leader Yoshito Konno received permission to enter his hometown once a month to measure radiation levels. He's been sending the results to former residents who evacuated out of the town.

Konno says he feels decontamination efforts would make little difference as radiation levels there have not fallen 2 and a half years after the nuclear accident at the plant.

He also says former residents cannot return home unless nearby mountains and rivers are decontaminated completely, and that they will have to settle elsewhere.

Konno urges the government to implement measures to help the evacuees rebuild their lives, rather than focus only on decontamination.

October 3, 2013

Still no disposal sites for 10s of thousands tons of contaminated waste

No decision yet on disposal sites for contaminated waste in 5 prefectures

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201310030065

Tens of thousands of tons of contaminated waste resulting from the Fukushima nuclear disaster still remain in fields and elsewhere in the affected region, with no final disposal sites found yet.
A panel of experts set up by the central government is expected to meet on Oct. 4 to determine a common rule for selecting candidate sites for final disposal facilities in five heavily affected prefectures.
For some, the decision cannot come quick enough, given that two and a half years have passed since the crisis unfolded.
In Tome, Miyagi Prefecture, one of the five prefectures with a huge accumulation of waste, a cattle farmer is near the end of his tether. He has 30 tons of contaminated rice straw in his field.

"In our community, I am treated like a troublemaker," said the farmer, 29.

The prefectural government and the Tome municipal government instructed farmers in the city to hold contaminated waste such as rice straw and other plants for two years until they could be transferred to a final dumping yard.

However, the storage period for farmers expires soon, starting from Oct. 25, and final dumping sites have yet to be selected.

Rice straw, which is fodder for cattle, became unusable after it was polluted by radioactive substances spewed by the wrecked Fukushima No. 1 nuclear power plant in 2011.

The waste kept at the man's farm includes some that other farmers asked him to store for them.

But the man said his neighbors openly show their displeasure with the stockpile.

"My rice paddies will also be contaminated if the wind blows in my direction," he quoted one of them as saying.

The central government is legally responsible for final disposal of the radioactive waste at his farm and any other "designated waste" measuring 8,000 becquerels or higher per kilogram.

That includes incinerated ash of household waste and sewage sludge.

As of late March, the contaminated debris totaled 121,180 tons in Tokyo and 10 prefectures.

In March last year, the Environment Ministry announced a plan for prefectures left with a large amount of waste. The plan stated that final disposal sites would be selected by the end of September 2012.

It also said work would get under way in January 2014 to transfer the waste to disposal sites.

But officials have yet to start the selection process after meeting fierce protests from the local governments of tentatively picked sites.

With no final disposal sites determined, the ministry requested the extension of the storage period at a meeting with Tome residents late August.

The residents did not give their consent.

Cattle farmers say they have suffered damage as producers of coveted Sendai beef due to the nuclear accident.

A 68-year-old cattle farmer said the farm gate price of his Sendai beef cattle is now around 90 percent of what it fetched before the reactor meltdowns.

Despite that, he has to spend more than before the disaster on obtaining feed from distant areas that are radiation free.

"I can hardly make any profit," he said.

In Tochigi Prefecture, the need to secure final disposal sites became increasingly urgent last month when a tornado hit Yaita and neighboring areas.

"If temporary storage sites had taken a direct hit from the tornado, they could have been destroyed," said an official with the Yaita municipal government.

There are 174 temporary storage sites scattered around the prefecture, of which 159 store rice straw and leaf mold compost.

Most of such waste is kept outdoors, where it is potentially vulnerable to a natural disaster.

The task to select final disposal sites, though, is proving a challenge for the Environment Ministry.

Those facilities will be built on state property in the prefectures, and the construction of the sites could require consent from host communities, a volatile issue.

The ministry's announcement of candidate sites in Ibaraki and Tochigi prefectures in September 2012 drew strong criticism from local governments, forcing the ministry to review its selection process.

A panel of experts met to set guidelines for assessing the safety of storage facilities and standards for selecting sites. The ministry created a framework for officials from the central and local governments to exchange opinions.

In the course of the discussion, some representatives suggested that contaminated waste should be shipped to Fukushima Prefecture for final disposal, instead of their prefectures.

That proposal was dismissed last June after officials concluded that placing additional burden on the embattled prefecture would not gain public support.

The ministry is expected to start the selection process after it sets a common rule concerning the selection of candidate sites and evaluates the conditions of each municipality at a meeting with local leaders in the prefectures concerned.

Fukushima Pref. to launch own investigation of seawater

Fukushima govt. to measure radiation in seawater

http://www3.nhk.or.jp/nhkworld/english/news/20131003_19.html

The Fukushima prefectural government has decided to launch its own inspection of the seawater around the crippled Fukushima Daiichi nuclear power plant, operated by Tokyo Electric Power Company.

Its decision came on Thursday following reports of another leakage of radioactive water from a storage tank at the nuclear complex the previous night. The water is suspected to be spilling into the ocean.

Speaking in an emergency meeting of senior officials, Governor Yuhei Sato said the latest leakage occurred just after TEPCO President Naomi Hirose pledged to give highest priority to containing wastewater when he attended the prefectural assembly.

Sato said he now questions the president's honesty. The governor harshly criticized the utility's sloppy management of contaminated water accumulating in the complex.

A prefectural official in charge of atomic power said they will measure levels of radioactive substances as early as Thursday in waters near the end of the drainage through which the leaked water is suspected to have seeped into the ocean.

Other prefectural officials voiced concern that the plant operator is not doing enough to prevent contaminated water from leaking, and urged it to quickly implement measures to stop the water from seeping into the ocean.

October 4, 2013

IAEA to send expert mission

U.N. nuclear agency sends new Fukushima expert mission

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201310040101

REUTERS

VIENNA--The U.N. nuclear agency said on Oct. 4 it would send an international team of experts to Japan later this month to look into efforts to clean up affected areas around the crippled Fukushima No. 1 nuclear power plant.

Japan's nuclear regulator earlier ordered the operator of Fukushima to draft in additional workers if needed to plug leaks of radioactive water from its tanks and report within a week on steps taken to fight the crisis.

The warning was the second in as many months issued to Tokyo Electric Power Co, or TEPCO, after the company found a second escape of contaminated liquids that probably entered the Pacific Ocean.

In Vienna, the U.N. International Atomic Energy Agency (IAEA) said the Oct. 14-21 mission would "review the implementation of remediation activities in areas affected by the accident ... and provide advice to address associated challenges."

It did not give details and an IAEA spokesperson was not immediately available for comment.

The 16-person mission of IAEA as well as other experts, a follow-up from one carried out in 2011, was sent at the request of Japan's government, the U.N. agency said in a statement.

In the world's worst nuclear accident in a quarter of a century, reactor meltdowns at the Fukushima facility after an earthquake and tsunami in March 2011 sent radiation spewing over large areas, forcing more than 160,0000 people to flee.

IAEA to send decontamination support team to Japan

http://www3.nhk.or.jp/nhkworld/english/news/20131004_45.html

The International Atomic Energy Agency will send a team of experts to inspect and give advice on the decontamination in and around the Fukushima Daiichi nuclear plant.

The international nuclear watchdog announced on Friday that 16 experts from inside and outside of the Agency will work in Japan from October 14th through 21st.

It will be the second such team to be sent to support the clean-up in Fukushima, following the team that came in October 2011.

Their mission is to verify whether decontamination work is being carried out properly and to provide Japan with recommendations.

The experts will meet officials from Japan's Environment Ministry and other organizations to share ideas.

They will visit Fukushima Prefecture between October 16th and 18th to inspect work sites.

The decontamination project is falling behind schedule due partly to lack of progress in securing space to temporarily store contaminated soil.

The work is unlikely to be completed by the state-set target of the end of next March in some evacuation zones where the central government is responsible for decontamination.

IAEA Director General Yukiya Amano announced last month that another team of experts will be sent to Japan this autumn to inspect the process of decommissioning reactors at the Fukushima Daiichi plant.

October 5, 2013

IAEA sends new expert mission (2)

IAEA to send second team of experts to check nuclear disaster cleanup

JIJI

http://www.japantimes.co.jp/news/2013/10/05/national/iaea-to-send-second-team-of-experts-to-check-nuclear-disaster-cleanup/#.UlBb4FM0_9

A team of experts from the International Atomic Energy Agency will visit Japan from Oct. 14 to 21 to check progress in decontaminating areas affected by the Fukushima meltdowns, the Environment Ministry said.

The 16-member team will visit Fukushima Prefecture, home to the wrecked Fukushima No. 1 nuclear complex, for three days from Oct. 16 to inspect decontamination work. It will also hold meetings with government officials, and then release a report on its findings Oct. 21.

It will be the second mission dispatched by the Vienna-based nuclear watchdog to inspect cleanup efforts related to the nuclear crisis. The first IAEA team visited Japan in October 2011, seven months after Fukushima No. 1 suffered three core meltdowns

S. Korea finds no radioactivity in sea

S.Korea says radioactivity undetected in waters

http://www3.nhk.or.jp/nhkworld/english/news/20131005_01.html

South Korean authorities have said they found no radioactive substances in the nation's territorial waters.

They say the radioactive water leakage at the damaged Fukushima Daiichi nuclear plant is so far not affecting the country.

The South Korean Nuclear Safety and Security Commission conducted tests last month on seawater in 6 locations around the southern island of Jeju and the eastern island of Ulleungdo.

Researchers say they couldn't find any significant amount of radioactive materials and that radiation levels were as low as before the nuclear accident.

Officials also said they found no radioactive substances in rainwater or air from samples collected at observatory stations across the country.

Last month, South Korea imposed a full embargo on Japanese marine products from Fukushima and 7 other prefectures.

October 7, 2013

Very uncertain future for storage facilities

Uncertainty shrouds storage facilities for radioactive waste in Fukushima

http://mainichi.jp/english/english/newsselect/news/20131007p2a00m0na015000c.html

FUKUSHIMA -- Two years after the onset of the disaster at Tokyo Electric Power Co.'s Fukushima No. 1 Nuclear Power Plant, bags of radioactive waste continue to sit on private land and at temporary storage sites here due to a lack of interim storage facilities that are supposed to store the waste for up to three decades.

The Ministry of the Environment is set to unveil plans for the construction of interim storage facilities as early as this month, but before construction can begin, officials must gain consent not only from local

bodies but also from landowners who have evacuated to other areas. As the situation stands, it remains unclear whether the government can start moving the waste into storage in January 2015 as planned.

In the Watari district of Fukushima, large bags filled with contaminated soil and other waste sit covered with a waterproof sheet at the home of 57-year-old resident Hidenori Sato. The radiation dosage at the entrance of his home is as high as 0.4 to 0.5 microsieverts per hour, far above the government-permitted limit of 0.23 microsieverts per hour (1 millisievert per year). Decontamination of about 6,000 buildings began in the district last spring, but there is nowhere to take the waste that is produced as an offshoot of the work. In late September workers came and placed a new waterproof sheet over the waste.

"So it's going to be here a while then," Sato sighed.

The Ministry of the Environment estimates that a massive **18.7 million to 28.15 million cubic meters of radiation-tainted waste** will be produced as a result of decontamination work within Fukushima Prefecture. In August 2012, officials listed up candidate sites to accommodate waste storage facilities in three municipalities where nuclear facilities currently stand, and sought permission to conduct local surveys. The municipalities of Naraha and Okuma agreed to the surveys in November last year, and drilling began this spring, after which officials judged it was possible to build storage facilities. The mayor of Futaba at the time voiced opposition to the idea, but resigned in February this year. The current mayor, Shiro Izawa, met with Senior Vice Environment Minister Shinji Inoue on Sept. 27 and told him that his town would allow the surveys to go ahead.

The ministry plans to draw up concrete plans for the interim storage facilities and propose locations to build them as early as this month. It aims to begin construction next fiscal year, and include construction expenses in next fiscal year's initial budget, which is to be compiled in December. However, before construction can commence, officials will need to overcome the hurdle of obtaining consent from local bodies.

Yukiei Matsumoto, the mayor of Naraha, has refused to accept highly contaminated soil from other municipalities, and has gone no further than calling for a "storage structure" for waste with radioactivity levels not exceeding 100,000 becquerels per kilogram. He has stated that he will seek the opinion of residents once a clear picture of the storage facility has been presented. The priorities for Matsumoto are measures to stimulate the municipality and negotiations on compensation and other issues.

Okuma Mayor Toshitsuna Watanabe, meanwhile, has taken a cautious approach, saying, "I'd like to hear residents' opinions in a briefing attended by a small number of people, and make a decision together with the town assembly."

In the towns of Okuma and Futaba, residents have generally been accepting of the plans, as large portions of the municipalities are already zoned as areas where return will remain difficult for a long time (areas

where radiation levels reach 50 millisieverts per year or more). In February this year, about 50 residents from the Shinsan district of Futaba, which is a candidate for housing an interim storage facility, penned a memorandum stating that they would cooperate with a survey, even though they considered the area one they had become attached to over several generations.

District head Takashi Takehara, 78, commented, "Mountains of contaminated soil have built up in various areas of the prefecture, but there's nowhere to take it besides Futaba. The young people who would've taken over the town in the future are starting new lives in other areas where they have evacuated. If we can get compensation, it could help elderly people rebuild their lives."

Residents of the town of Naraha don't necessarily share the same feelings. Last summer the government zoned the town as an area preparing for the lifting of evacuation orders -- a designation applied to zones where radiation dosages stand at no more than 20 millisieverts per year -- meaning that residents can expect to return in the future. Town administration meetings in Naraha have been flooded with questions from people asking why a storage facility for radioactive waste would be built in a town to which they could return. At the same time officials received a comment that it would be hard not to accept waste from other areas that had helped residents while they were evacuated.

In any case, if construction of temporary storage facilities does not move forward, then officials will not be able to decide on the extent of decontamination work and how long the work should continue.

Last summer Okuma official Jin Kowata, 63, handed the Ministry of the Environment a petition signed by about 1,700 residents -- over 10 percent of the town's population -- calling for the government to purchase land and construct a waste storage facility.

"I imagine they don't need to decontaminate areas where they're going to build a storage facility. Restoration funds should go to residents who have been burdened with double loans," he said.

October 8, 2013

Joint monitoring of radiation effects on ocean

Japan, S. Korea to probe effects of Fukushima radiation on surrounding ocean

http://mainichi.jp/english/english/newsselect/news/20131008p2a00m0na013000c.html

Japan will launch a joint investigation with South Korea and other neighbors into how radioactively contaminated water accumulating on the premises of the tsunami-hit Fukushima No. 1 Nuclear Power Plant is affecting the surrounding ocean, Japan's chief nuclear safety regulator said.

Shunichi Tanaka, chairman of the Nuclear Regulation Authority (NRA), announced the development at a meeting of the House of Councillors' Committee on Economy, Trade and Industry on Oct. 7, which was held while the Diet is not in session.

The joint investigation is aimed at dispelling the growing concerns of the international community that the radioactive water is contaminating the sea, as the South Korean government has placed a total ban on imports of marine products from Fukushima and its seven neighboring prefectures.

Tanaka said that International Atomic Energy Agency (IAEA) chief Yukiya Amano told him during an IAEA general meeting in September that radioactive water should be monitored jointly with South Korea and other relevant countries.

"We're preparing to launch a joint probe through the Foreign Ministry. We're considering ways to invite South Korea and Southeast Asian countries, which are concerned about the effect of the crisis, to participate in the monitoring, with the IAEA serving as a coordinator," Tanaka told the Diet panel.

Deliberations at the meeting also focused on a proposal made by Yasuhisa Shiozaki, the second-in-command at the ruling Liberal Democratic Party (LDP) Policy Research Council, on splitting plant operator Tokyo Electric Power Co. (TEPCO) into a power supplier and a firm to deal with the nuclear crisis.

Economy, Trade and Industry Minister Toshimitsu Motegi emphasized that bringing the nuclear crisis under control, decommissioning the Fukushima reactors and dealing with the contaminated water are undoubtedly the top priorities for TEPCO.

Still, he failed to make a clear-cut statement on the proposal, only saying, "Each power company should make judgment in an appropriate manner, based on prospects for the electric power business over the next four decades and changes in the environment surrounding the industry."

Motegi also stopped short of expressing his views on former Prime Minister Junichiro Koizumi's call for the elimination of Japan's dependence on atomic power. "There are a variety of opinions on the issue among members of the public," Motegi said.

In the meeting, TEPCO President Naomi Hirose apologized for a spate of problems occurring at the Fukushima No. 1 Nuclear Power Plant. "Undoubtedly, work at the scene is inadequate and we're so sorry about that."

Government and TEPCO officials only reiterated their official positions on Prime Minister Shinzo Abe's remarks at the International Olympic Committee general meeting last month that the situation at the nuclear plant was "under control" and on the division of roles between the government and TEPCO in handling the nuclear disaster.

The Oct. 7 upper house panel meeting follows those held on Sept. 27 and 30.

October 10, 2013

Iitate agrees to host temporary incinerator

Fukushima village agrees to host temporary incinerator for radioactive waste

http://mainichi.jp/english/english/newsselect/news/20131010p2a00m0na003000c.html

The nuclear disaster-hit village of Iitate in Fukushima Prefecture has agreed to host a **temporary incinerator to compress radioactive waste emanating from the disaster**.

The village, which has been entirely evacuated due to the Fukushima No. 1 Nuclear Power Plant crisis, and the Ministry of the Environment reached an agreement to construct the makeshift incinerator on Oct. 9. The facility will accept radioactive waste -- including tainted rice straw -- not only from Iitate but also from the city of Fukushima and five other municipalities in the prefecture. It is set to become the first such facility to aggregate radioactive waste from outside municipalities.

The incinerator will be accompanied by a temporary experimental facility to turn burned ash and contaminated soil **into materials for construction and other purposes by separating radioactive cesium from them**. Authorities are seeking to complete the construction of the facilities by the end of fiscal 2014.

The planned construction site is currently uninhabited as it is located in a "residency restriction zone" due to the nuclear disaster. The facility will in principle be operated for three years. Incinerated ash that couldn't be turned into construction and other materials will be temporarily stored in concrete boxes before being transported to an interim storage facility.

At a press conference in the city of Fukushima, Iitate Mayor Norio Kanno said, "We will aim to reduce the amount (of radioactive waste) as much as possible before transferring it to an interim storage facility." As to the plan for the facility to accept 30 percent of all radioactive waste generated in six other municipalities, Kanno said, "It is based on the idea of 'mutual assistance,' in which we do what we can."

October 18, 2013

Test fishing starts in Fukushima

Test fishing process in Fukushima

http://www3.nhk.or.jp/nhkworld/english/news/20131018_32.html

In the test fishing off the coast of Fukushima prefecture, fishermen are allowed to operate in limited waters and catch only certain types of seafood. This is to ensure the products' safety and win consumer trust.

In the immediate aftermath of the accident at the Fukushima Daiichi nuclear power plant, sea currents were flowing to south. Thus radiation levels were higher in marine products caught in the waters south of the plant.

Test fishing first began in June 2012 off the northern coast of the prefecture. Radiation levels in marine products caught there were the lowest among samples.

Test areas have gradually been expanded after regular checks by the prefectural government and others found that radiation levels in many products are falling.

In March this year, authorities allowed fishing by small boats closer to the northern coast.

Authorities initially limited test fishing to 3 types of seafood in which almost no radioactive materials were detected in sampling. Now fishermen are allowed to catch 18 types.

Local fishermen caught more than 100 types of marine products before the nuclear accident.

They can now go to the sea only once a week or so, as they are monitoring how consumers will react to products from Fukushima.

The prefectural association of fisheries cooperatives says it wants to catch more marine products, taking into account the results of regular radiation checks.

Test fishing starts off southern Fukushima

http://www3.nhk.or.jp/nhkworld/english/news/20131018_31.html

Fishermen have brought in their first catches off the southern coast of Fukushima Prefecture since a nuclear accident at a power plant occurred 2 years and 7 months ago.

13 trawlers from 2 fisheries cooperatives in Iwaki City set out on Friday morning.

They returned before noon with 1.3 tons of catch including octopus, hairy crab and a local specialty fish.

Fishery officials took samples and tested them for radioactivity. They say no radioactive materials were

detected.

The products will be shipped around the prefecture on Saturday.

The nuclear accident at the Fukushima Daiichi power plant forced local fishermen to stop their work due to concerns of marine products being contaminated with radiation.

Test fishing began off the northern coast of the prefecture in June last year.

But fishery workers in southern parts of the prefecture had to wait until the prefectural fisheries association concluded that seawater and marine products were safe.

Voluntary radiation checks

Radiation checks for Fukushima fish

http://www3.nhk.or.jp/nhkworld/english/news/20131018_12.html

Fishing cooperatives in Fukushima Prefecture will voluntarily check their hauls for radioactivity before shipment.

The national standard for radiation in marine products is 100 bequerels of cesium per kilogram.

The co-ops have set their own standard of 50 bequerels per kilogram and say that only fish below that level will be shipped to markets.

They say that they will dispose of all of a day's catch of a particular species if they detect radiation exceeding their limit.

The co-ops say that so far levels in the species they checked have been under 50 bequerels or undetectable.

But according to the government's Fisheries Agency results released this month, some bottom-dwelling fish such as flounder and cod off Fukushima Prefecture still have radiation levels higher than 100 bequerels per kilogram.

October 19, 2013

Decontamination will take much longer

Decontamination in Fukushima municipalities may take 3 years longer to complete
http://ajw.asahi.com/article/0311disaster/fukushima/AJ201310190042

Decontamination work is under way in Kawamata, Fukushima Prefecture.

Radiation removal work in six Fukushima Prefecture municipalities could take up to three years longer to complete than initially planned, according to a proposal put together by the Environment Ministry, further protracting the wait for evacuees to return home.

The central government has assumed responsibility for decontaminating 11 municipalities that were polluted by radiation after the 2011 Fukushima nuclear accident.

The initial plan called for decontamination to be finished by the end of the current fiscal year.

However, the work period has been extended for seven of those municipalities, and the Environment Ministry recently presented its proposed new road map for decontamination to six of those municipalities. Decontamination work in the four other municipalities has either been completed or is expected to be finished by March, the end of the fiscal year.

Under the new proposal, decontamination in Iitate would be delayed by as much as three years, while completion will be two years behind original plans in Minami-Soma.

The four other municipalities presented with new decontamination road maps were Kawamata, Namie, Tomioka and Katsurao.

According to ministry sources as well as those connected with the six municipalities, the ministry presented between two and four scenarios for the completion of decontamination work, depending on the number of workers that would be put in place.

The plan for decontamination work in Futaba has not yet been compiled.

The proposals have different assumptions for the number of workers, from about 1,000 a day to several thousand.

One proposal for Iitate called for using as many as 9,600 workers a day.

Those proposals led to complaints from municipal government officials who said the assumptions were unrealistic.

An Environment Ministry official said: "The new road maps show how many days would be needed depending on the number of workers used for the area that would have to be decontaminated. We are asking the municipalities to think together with us about what should be done."

The Environment Ministry plans to announce before the end of the year a new schedule for completion of decontamination work.

October 20, 2013

Radiation in fish: Strontium rarely tested - Worry about lakes &rivers

Experts play down fish radiation fear - Tests show cesium declining; less strontium believed released

http://www.japantimes.co.jp/news/2013/10/20/national/experts-play-down-fish-radiation-fear/#.UmTO1lM0_9k

by Reiji Yoshida
Staff Writer

The plague of radioactive water at the wrecked Fukushima No. 1 power plant has renewed fears both in Japan and abroad over the contamination of seafood and the habitat it comes from.

The government is trying to reassure consumers that all fish that find their way to market are safe, pointing to marine life sampling data and regulations regarding shipment of contaminated marine products.

But how safe — or dangerous — could fish caught in the Pacific be? On what data and safety standards is the government basing its claims of safety?

Let's hear from some experts and examine in more detail the radiation data the government is currently using.

Among 64 radioactive materials released from the melted nuclear fuel at the wrecked reactors, two are now considered the main threats as far as fish contamination is concerned: cesium, which can cause cancer through internal exposure, and strontium, which can accumulate in bones and lead to bone cancer.

Today, many mainstream experts agree the contamination from radioactive cesium has steadily decreased since the March 2011 meltdown crisis started, and now poses little danger to consumers.

However, fewer studies have been conducted on strontium due to the high cost of carrying out such tests, prompting experts to call for more wide-ranging surveys out across the ocean.

Still, compared with cesium, far less strontium is believed to have been released into the environment, and sampling data of fish and ocean water have yet to show any alarming signs, experts say.

"(Contamination levels) of fish now coming to the market are well below the government safety threshold. We consider them safe to eat," said Jun Misonoo, a consulting researcher at the Marine Ecology Research Institute, a government-linked nonprofit research body based in Tokyo.

Tokyo Electric Power Co. has turned up high strontium readings from groundwater samples taken from test wells. Tepco also believes that about 400 tons of radioactive groundwater is flowing into the Pacific every day.

But so far, it appears this flow has had only a minor impact on fish.

According to a Tepco estimate, up to 1.8 quadrillion becquerels of cesium-137 were released into the sea in a span of just six days in April 2011 shortly after the meltdown crisis began.

From May 2011 until today, however, between about 1 trillion to 20 trillion becquerels of cesium-137 have reached the Pacific, according to Tepco's estimates.

"Compared with the release of radioactive materials in the initial stage (of the crisis), the amount of material now is overwhelmingly small," Jota Kanda, a professor at Tokyo University of Marine Science and Technology and an expert on maritime movement of radioactive substances, said in a recent interview with The Japan Times.

"This is not something that has a big impact on fish in the sea," he said.

The Fisheries Agency has compiled and published data on a total of 14,773 samples of fishery products caught in and near Fukushima Prefecture and 24,360 samples from Pacific coastal areas in other parts of Japan from March 2011 through last month.

According to the data from the Fukushima coast, some 53 percent of the samples caught from March through June 2011 contained radioactive cesium exceeding the government safety threshold of 100 becquerels per kilogram. However, the ratio has consistently decreased, falling to 2.2 percent for the July-September period this year, despite the continuing flow of contaminated water from the plant.

The corresponding ratio for outside Fukushima Prefecture has similarly kept falling, from 6.5 percent early in the crisis to 0.4 percent in the last quarter.

Commercial fishing off Fukushima Prefecture has been suspended except for trial operations. It has been limited to 18 types of marine life, including “shirasu” whitebait, various shellfish species, squid and octopus, that have been found to contain little or no radioactive cesium in recent samples.

If any fish are found contaminated with cesium exceeding the safety threshold, shipment of that species from the areawould be stopped, according to the government.

Consumers may fear the possibility of eating tainted seafood that escapes through the net of sampling surveys and shipment regulations.

Misonoo argued this sort of fear is misplaced, as there is little chance one person would be so unlucky as to eat enough highly radioactive fish to suffer a health problem.

He pointed out that even if someone were to ingest 1 kg of fish contaminated with cesium of 100 becquerels per kilogram every day for a year, that person would receive an internal radiation exposure of 0.47 millisievert.

According to the International Commission on Radiological Protection, exposure of 100 millisieverts in total would increase the risk of death by cancer by 0.5 percent over the course of a lifetime.

Thus, exposure of 0.47 millisievert would pose only a minor health risk to a consumer, Misonoo said.

“And you would never keep eating 1 kg of fish every day. It’s quite unrealistic,” he said.

As for strontium, the Fisheries Agency itself tested only 40 samples from April 2011 to last December due to the high costs involved.

Yet the agency has claimed that as long as the level of radioactive cesium is below the acceptable maximum, the amount of strontium should likewise be below the safety threshold.

According to the now-defunct Nuclear and Industrial Safety Agency, the amount of cesium-137 released into the environment was more than 10 times that of strontium-90.

But the government set the safety thresholds for cesium and strontium on the assumption that a person would receive the same internal radiation exposure from the two isotopes — the reason the government claimed that the regulatory level has a high margin of safety and checking only for cesium levels is sufficient.

Misonoo also pointed out that strontium accumulates mainly in fish bones, and little goes into and stays in the meat.

According to the International Atomic Energy Agency, when fish take in radioactive cesium, the density of cesium in their meat is condensed to between 50 and 100 times more than when it is in seawater.

But for strontium, this rate is believed to be only between one and three times, meaning far less strontium is accumulated in fish meat than cesium.

“And you won’t eat much in the way of fish bones at any rate,” Misonoo added.

For people who are still worried about cesium and strontium in their seafood, reducing the risk is possible by avoiding certain types of fish.

Currently, most of the ocean fish exceeding the safety threshold of cesium are bottom fish such as “hirame” and “karei” flounder, “ainame” greenlings and “mebaru” rockfish.

On the other hand, squid and octopus are known to accumulate little cesium and strontium. This is one of the reasons fishermen in Fukushima first test-fished “mizu-dako” octopus and shipped their catches to markets on a trial basis last month.

On the other hand, **more care should perhaps be taken with freshwater fish from certain lakes and rivers, t**hough public attention has been pinned on fish from the Pacific.

Of the 5,706 fish samples taken from July to Oct. 2, 64 were found to contain cesium exceeding 100 becquerels per kilogram, according to data published by the Fisheries Agency.

Of the 64 fish, 29 were from rivers and lakes, including 17 samples from Fukushima, six from Gunma Prefecture, four from Lake Teganuma in Chiba Prefecture and one from Lake Chuzenjiko in Nikko, Tochigi Prefecture.

According to Hideo Yamazaki of Kinki University, freshwater fish tend to take in and retain more cesium than sea fish, and lakes are a much more closed environment than an ocean.

That has apparently pushed up the cesium density in fish in areas hit by radioactive plumes soon after the 2011 meltdown crisis started, Yamazaki said.

He warned that Japan will need to keep monitoring various radioactive materials from Fukushima No. 1 for 100 years — and possibly even longer — as work to scrap the four damaged reactors stretches on for decades.

October 21, 2013

IAEA reports on decontamination efforts

IAEA experts report on Fukushima decontamination

http://www3.nhk.or.jp/nhkworld/english/news/20131021_25.html

A team from the world's nuclear watchdog has presented a report that offers advice on how Japan can proceed with decontaminating the areas around the damaged Fukushima Daiichi nuclear plant.

In a weeklong mission to Japan, radiation experts from the International Atomic Energy Agency inspected decontamination work sites in Fukushima.

They also met officials of the environment ministry and local authorities to be briefed on efforts to manage the toxic waste and discuss issues to be tackled.

The team's leader, Juan Carlos Lentijo , submitted the report to Japan's Environment Minister Nobuteru Ishihara in Tokyo on Monday.

The report calls for further government efforts to inform local residents that its goal of reducing yearly radiation levels to one millisievert or below cannot be achieved quickly through decontamination work alone.

It also urges the government to continue to perform radiation checks on all residents in the area.

They say laying out a comprehensive blueprint for decontamination and reconstruction programs is the way to make local authorities and residents fully prepared for disasters, and to allow evacuees to return home.

Ishihara said the government will take the recommendations into full account.

Lentijo later told reporters that although there has been much progress in decontamination efforts, more thought should be given to achieving a balance between resulting benefits and required costs and burdens.

Residents may have to wait a few more years before returning

Japan delaying cleanup of towns near nuclear plant

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201310210100

THE ASSOCIATED PRESS

Radiation cleanup in some of the most contaminated towns around Fukushima No.1 nuclear power plant is far behind schedule, so **residents will have to wait a few more years before returning**, officials said Oct. 21.

Environment Ministry officials said they are revising the cleanup schedule for six of 11 municipalities in an exclusion zone from which residents were evacuated after three reactors at the Fukushima plant went into meltdown following the March 2011 earthquake and tsunami. The original plan called for completing all decontamination by next March.

Nobody has been allowed to live in the zone again yet, though the government has allowed day visits to homes and businesses in some areas after initial decontamination efforts, said Shigeyoshi Sato, an Environment Ministry official in charge of decontamination.

“We would have to extend the cleanup process, by one year, two years or three years, we haven't exactly decided yet," he said.

Sato cited several reasons for the delay, including a lack of space to store the waste that comes out of the decontamination process. Some residents have opposed dumping the waste in their neighborhoods.

The Asahi newspaper reported on Oct. 19 that the government is planning an extension of up to three years in areas including Iitate, a village northwest of the plant where a highly radioactive plume spread in the first few days of the crisis.

An International Atomic Energy Agency team is also finishing a weeklong visit to check cleanup progress in Kawauchi, a less-contaminated community that has been partially opened to living again. So far, about 40 percent of Kawauchi's population of 3,000 has returned to the village.

The government hopes to restore lost communities in some areas around the plant, but challenges remain in ensuring food safety and job security.

October 22, 2013

Koizumi is right: What about nuclear waste?

EDITORIAL: Abe should heed Koizumi's warning on nuclear waste

http://ajw.asahi.com/article/views/editorial/AJ201310220039

Former Prime Minister Junichiro Koizumi is waging a spirited crusade to move Japan away from nuclear power generation.

Koizumi argues it is irresponsible to continue generating electricity with nuclear energy because there is no feasible plan to dispose of radioactive waste from the nuclear plants.

He calls for new policy efforts to make Japan a recycling-oriented society by taking advantage of renewable energy and energy-saving technologies.

In our editorials, we have occasionally discussed the radioactive waste problem, which is often compared to "an apartment without a bathroom." Koizumi is making a strong and convincing case.

This is a formidable challenge demanding a fundamental and swift response in the process of reviewing Japan's traditional energy policy. The government needs to understand this completely.

During the current Diet session, Prime Minister Shinzo Abe, in response to questions from opposition lawmakers, has repeatedly pledged to reduce Japan's dependence on nuclear power generation as much as possible.

Despite Abe's remarks, however, the current energy policy debate within the government clearly shows the Abe administration's desire to return to a reliance on nuclear energy.

In work to revise the government's basic energy plan toward the end of the year, arguments stressing the importance of using nuclear energy have dominated the debate. Little progress has been made in developing specific plans to deal with radioactive waste and other byproducts from nuclear power plants.

There is still no candidate site for a deep geological repository that can store nuclear waste for a long time. The government has been publicly inviting municipalities to volunteer to host the facility since 2002, but not one has responded to the call.

It is even more difficult now to persuade a local community to accept such a repository after the nation watched what happened at the Fukushima No. 1 nuclear power plant.

During an Oct. 21 Diet session, Abe indicated his intention to consider additional measures for technological improvements on geological disposal. At the root of the problem, however, is the lack of national consensus on the nuclear power policy itself.

The government should start crafting concrete plans to dispose of radioactive waste combined with steps to phase out nuclear power generation.

From this point of view, recommendations made by the Science Council of Japan offer some valuable ideas.

The council has called on the government to switch its approach to dealing with radioactive waste to temporary storage on the surface or in shallow underground facilities. It should then set a ceiling on the total amount of such waste to prevent its continuous growth, the council said.

We think the government should also end the project to establish a nuclear fuel recycling system. Spent nuclear fuel should be transferred into reinforced containers called dry casks for temporary surface storage instead of being kept in vulnerable spent fuel pools.

After taking these steps to secure the safety of radioactive waste for the time being, the government needs to promote further research into final disposal methods and build a social consensus on the issue. That would be the most realistic approach.

Even for interim storage of nuclear waste, it would take time to establish safety standards, develop necessary legal infrastructure and manufacture and build the equipment and facilities. Therefore, it would be necessary to set up related regulations, such as prohibiting the operation of a nuclear power plant that fails to meet the conditions.

The government would act in a grossly irresponsible manner if it seeks to restart idled nuclear power reactors without mapping out an effective strategy for dealing with radioactive waste.

October 23, 2013

New nuclear waste technology will take decades

Japan pursuing new nuclear disposal technology

http://www3.nhk.or.jp/nhkworld/english/news/20131023_24.html

The Japanese government plans to develop new technology that would cut the environmental impact of highly radioactive waste from nuclear power plants.

The waste is believed to have an impact on the environment that lasts tens of thousands of years. The government's current plan involves burying it deep underground. But officials have yet to choose a site due to safety concerns.

The science ministry convened a panel of experts on Wednesday. Ministry officials told the panel that they will start to develop a technology that would reduce the amount of time the waste is considered harmful to hundreds of years. The experts agreed to the plan.

The plan involves extracting long-lasting radioactive substances from spent nuclear fuel. Officials say that by using neutrons created in particle accelerators, the substances can be changed into shorter-lasting materials.

They say that if the plan succeeds, it would also cut the disposal space needed for the waste to about a hundredth of current estimates.

However, there are many problems that must be overcome, including how to secure safety. Observers say **it will take decades before the plan can be put into action.**

Some experts said that Japan should ask other countries to help with the project. Others said the government should exercise caution in deciding whether to put the technology into use.

Hiroyuki Oigawa of the Japan Atomic Energy Agency says that, if Japan obtains international support, the plan could be put into practical use in about 20 to 30 years.

October 26, 2013

Gov't considering covering costs for contaminated soil storage

http://mainichi.jp/english/english/newsselect/news/20131026p2a00m0na008000c.html

The government is considering covering the 1 to 2 trillion yen cost of constructing interim storage facilities for radioactive soil and other waste in Fukushima Prefecture, it has been learned.

The measure would be aimed at speeding up Fukushima's recovery, with the money likely to come from energy-related sources such as revenues from a tax to promote the development of power sources. The government and the ruling Liberal Democratic Party are set to debate the measure, possibly including it within next fiscal year's budget.

Ground quality tests are already being undertaken at potential construction sites, and it is hoped that the storage facilities will be completed and ready for use in 2015. A lack of sites to store radioactively-contaminated soil has been a factor in delaying decontamination work, so the completion of storage facilities is expected to help speed up Fukushima's recovery and the return of its residents.

According to the present plan, the government is to temporarily cover the costs of the facilities -- but the Tokyo Electric Power Co. (TEPCO) is to pay the costs in the end. TEPCO is predicted to fall onto economic hardships, however, due to the increase in compensation payments that it must pay.

With the government permanently covering the costs, the new plan would ensure a payer for the storage facilities. By taking on the responsibility for the facilities itself, it is also hoped that the government would speed up the work of decontamination.

Drawing funds for this purpose from energy-related revenue sources would result in higher electricity prices, however -- and opposition in this regard could therefore possibly stall the plan.

Meanwhile, the government intends to have TEPCO continue to be responsible for covering decontamination-related costs.

October 27, 2013

Gov't might pay for storage of contaminated waste

LDP to seek gov't money to build radioactive waste storage facilities

http://mainichi.jp/english/english/newsselect/news/20131027p2a00m0na005000c.html

TOKYO (Kyodo) -- The ruling Liberal Democratic Party plans to propose the government use public funds to build and manage temporary facilities to store radioactively contaminated soil and other waste resulting from the nuclear crisis at the Fukushima Daiichi power plant, party sources said Saturday.

The move is aimed at alleviating financial burdens on Tokyo Electric Power Co., the operator of the crippled plant, and winning the understanding of local residents who oppose construction of the facilities, by increasing the government's role, the sources said.

Interim storage facilities for radioactive waste are scheduled to be built in Okuma, Futaba and Naraha towns in Fukushima Prefecture at a cost of several hundred billion yen. The facilities are expected to start operations in January 2015.

The Fukushima Daiichi plant straddles the towns of Okuma and Futaba, while Naraha hosts the Fukushima Daini nuclear power plant, also run by the utility known as TEPCO.

Final disposal of the waste is supposed to occur at locations outside Fukushima Prefecture within 30 years of operations starting at the interim storage facilities, but the site for final disposal has yet to be decided.

The LDP is set to call for the use of government money other than funds earmarked for reconstruction of the areas hit hard by the March 2011 earthquake and tsunami that triggered the nuclear accident, the sources said.

However, some government officials are cautious about the LDP's plan because a law stipulating that TEPCO will shoulder expenses for the interim storage facilities and decontamination works would need to be revised.

Under the law, the government is to initially pay for the temporary facilities and decontamination work and later ask TEPCO to reimburse the costs. The scheme is designed to prevent TEPCO's financial condition from affecting work to dispose of contaminated soil and other waste.

The utility which faces ballooning costs for compensation and management of radioactively contaminated water at the Fukushima plant apparently hopes the government will shoulder some of the cost of the decontamination work.

Some government officials and LDP members say TEPCO in principle should cover the necessary costs as its plant caused the radioactive contamination. In Fukushima Prefecture, about 140,000 evacuees cannot return home due to the accident.

October 28, 2013

Nuclear disposal - First Japanese study of underground disposal

Challenges to nuclear waste disposal

http://www3.nhk.or.jp/nhkworld/english/news/20131028_44.html

The disposal of highly radioactive waste is said to be the biggest challenges facing nuclear power generation.

Japan has not yet decided where to build its disposal sites.

The government in 2000 enacted a law on nuclear waste disposal, and has since been calling on communities around the country to be candidate sites.

But no applications have yet been submitted.

The spent fuel from nuclear plants in Japan is currently taken to a facility at Rokkasho Village in Aomori Prefecture.

The facility currently stores more than 1,700 rods. In addition, power stations across the country are storing spent nuclear fuel equivalent to 25,000 such rods.

The science and technology ministry has launched a study to develop technologies that would reduce the impact of radioactive substances on the environment.

The study also aims to reduce the space needed for nuclear waste disposal to about one-hundredth of what it is today.

Govt. reviewing underground nuclear disposal plan

http://www3.nhk.or.jp/nhkworld/english/news/20131028_42.html

Japan's industry ministry has long planned to bury spent nuclear fuel and other radioactive waste from power plants deep underground. But the search for storage locations has been in vain so far, leaving the permanent disposal of high-level waste in limbo.

The ministry has now set up a panel to reexamine the safety of the underground storage plan. It is the first review in 14 years.

On Monday, experts from 8 academic societies specializing in earthquakes, seismic faults, groundwater and other fields, held their first meeting.

At the panel, officials from a body in charge of nuclear waste management said that underground disposal is still considered safe, even with knowledge acquired after the 2011 earthquake and tsunami disaster in Japan.

But the panel's experts said that seismology cannot predict what might happen 100,000 years from now. They stressed that if magma were to hit a waste repository, leaked radioactive substances would affect other countries.

The head of the panel, Osamu Tochiyama, said the experts will reexamine the plan independently, from scientific viewpoints.

The ministry says the review process will continue until next March, and the panel's final report will be included in an study of nuclear waste disposal plans being conducted by another group.

Nuclear waste disposal tunnel shown to media

http://www3.nhk.or.jp/nhkworld/english/news/20131028_38.html

A Japanese nuclear power research agency has showed the media an underground test tunnel in northern Hokkaido where it is working to devise methods for nuclear waste disposal.

At its research site in Horonobe, the government-affiliated Japan Atomic Energy Agency is studying safe ways of disposing of highly radioactive nuclear waste more than 300 meters underground.

The research tunnel was bored horizontally in a sedimentary rock formation at a depth of 350 meters.

The figure-eight-shaped tunnel has a total length of 760 meters.

Next fiscal year, the agency plans to start storing simulated radioactive waste containers in caves that extend from the tunnel. The containers feature heat sources that simulate nuclear waste. Work is now under way to extend the caves.

Researchers will try to determine whether they can safely store such nuclear waste deep under the ground without being affected by heat, groundwater or other factors.

Senior center official Tomoo Fujita says that this study of disposal in a tunnel in sedimentary rock will be the country's first.

He says his team wants to develop safe disposal methods by experimenting under a variety of conditions.

October 29, 2013

Cesium from leaves stayed in soil

Study: cesium from plant staying in forest soil

http://www3.nhk.or.jp/nhkworld/english/news/20131029_40.html

A team of Japanese researchers says most of the radioactive cesium that was released from the crippled Fukushima Daiichi nuclear power plant and fell on forest soil remains there.

Researchers at the government-affiliated Japan Atomic Energy Agency installed monitoring equipment in woods of northern Ibaraki Prefecture, near Fukushima Prefecture, in May 2011, 2 months after the accident. They hoped to learn how the cesium moved from fallen leaves to soil.

The results of more than 2 years of research show that rain washed cesium off leaves 6 months after the accident, and that as the leaves decomposed, it moved to the surface of underlying soil.

The researchers found that only about 0.1 to 0.2 percent of the cesium went 10 centimeters deep into the

ground each year.

They concluded that underground water very likely has not carried cesium from the soil to nearby areas.

Researcher Takahiro Nakanishi said the results suggest that the cesium has not gone deep underground. He said the findings would be useful in efforts to decontaminate affected areas.

November 5, 2013

Reviewing long-term goals of decontamination?

Ishiba hints at review of decontamination goal

http://www3.nhk.or.jp/nhkworld/english/news/20131105_27.html

An executive of the ruling Liberal Democratic Party has hinted at a review of the long-term goals in the decontamination of areas around the crippled Fukushima Daiichi nuclear power plant.

LDP Secretary General Shigeru Ishiba on Tuesday referred to a report submitted last month to the Japanese government by an inspection team from the International Atomic Energy Agency.

The report calls for the government to better inform local residents that its goal of reducing yearly radiation levels to one millisievert or below cannot be achieved quickly through decontamination work alone.

As for the government's goals on radiation levels, Ishiba told reporters that it should closely analyze the report and also study standards in other countries.

He noted the present situation continuing without the prospect of change is not desirable.

He said the government and the LDP should hold a serious debate over how to improve the situation, hinting at a possible review of the decontamination goal.

November 6, 2013

IAEA marine monitoring experts in Fukushima

IAEA dispatches marine analysts to Fukushima

http://www3.nhk.or.jp/nhkworld/english/news/20131106_04.html

The International Atomic Energy Agency is sending marine monitoring experts to Japan. They will advise on handling radioactive wastewater leaking into the sea from the troubled Fukushima Daiichi power plant.

The world nuclear watchdog says two members from its Marine Environment Laboratory in Monaco will stay in Japan from Wednesday through next week.

The experts will visit Fukushima on Thursday and Friday. They'll test samples of seawater surrounding the plant and analyze them for radioactive materials.

They will also be briefed by relevant Japanese organizations about efforts to monitor seawater around the plant.

The IAEA plans to send another team of experts at the end of November. This group will inspect the decommissioning process of the plant reactors for the second time. The previous inspection was in April.

IAEA chief Yukiya Amano says Japan needs to cooperate with international organizations on the Fukushima plant problems. He says this will help regain the trust of the global community.

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November 7, 2013

Monitoring marine radiation

IAEA experts observe Japan's marine radiation monitoring activities

http://mainichi.jp/english/english/newsselect/news/20131107p2g00m0dm055000c.html

TOKYO (Kyodo) -- Two International Atomic Energy Agency experts on Thursday began observing Japan's marine radiation monitoring activities off the coast of Fukushima Prefecture, home to the crippled Fukushima Daiichi nuclear complex.

According to the IAEA, the experts came to lay the groundwork for another IAEA mission planned later this month to review the process toward decommissioning four severely damaged reactor units at Tokyo Electric Power Co.'s Fukushima plant.

As countries neighboring Japan remain concerned about the impact of radiation leaks from the crippled plant, the involvement of the U.N. nuclear watchdog in monitoring is expected to boost the credibility of the data Japan is releasing.

Hundreds of tanks have been set up at the plant to store the massive amounts of radioactive water produced as a result of continuing water injections into the three damaged reactors.

But leaks have occurred frequently.

Some of the groundwater, which is flowing through the plant's premises toward the ocean, is also believed to be contaminated.

David Osborn, director of the IAEA Environment Laboratories in Monaco, and Hartmut Nies, head of the IAEA Radiometrics Laboratory, left Onahama port in the city of Iwaki, Fukushima, at around 5:40 a.m. Thursday aboard TEPCO's ship used for water sampling.

The ship is expected to take water samples at more than 10 points within 15 kilometers of the Fukushima plant.

After observing the sea water sampling activity Thursday, the experts will visit a building at the Fukushima plant where water is analyzed on Friday.

They will also hold talks with officials of Japan's Nuclear Regulation Authority during their weeklong visit through Tuesday, according to Japanese officials.

November 11, 2013

"The most important and urgent task for Fukushima's recovery"

Coalition calls for state-led approach to Fukushima cleanup

http://ajw.asahi.com/article/behind_news/politics/AJ201311110071

Prime Minister Shinzo Abe indicated he will accept the ruling coalition parties' proposal to pour taxpayers money into decontamination efforts to speed up the recovery from the Fukushima nuclear disaster.

The package of proposals of the Liberal Democratic Party and junior coalition partner New Komeito also demanded that the government provide support to evacuees who abandon plans to return to their homes around the crippled Fukushima No. 1 nuclear plant.

"The government will step forward and work together with the ruling coalition," Abe said after receiving the proposal at the prime minister's office on Nov. 11.

The Abe administration will begin discussing how it will play a greater role in removing radioactive materials around the nuclear plant and supporting the livelihoods of the evacuees.

The ruling parties described decontamination and the construction of intermediate storage facilities for radioactive soil and debris as "the most important and urgent task for Fukushima's recovery."

They pressed the government to earmark taxpayers money for decontamination activities, beyond those already planned, from "the standpoint of public-works projects" to enable evacuees to return home at an early date.

They also urged the government to "take all possible measures," including funding, for the construction of the intermediate storage facilities.

Under the current system, Tokyo Electric Power Co., operator of the Fukushima No. 1 plant, is required to shoulder the costs for decontamination.

The government has spent billions of yen to decontaminate municipalities affected by the Fukushima nuclear disaster. But radiation levels have not decreased substantially, and many evacuees are reluctant to return home.

The two coalition parties asked the government to offer information on the predicted declines in radiation levels in difficult-to-return zones as well as dates when evacuees are expected to return there.

They said the government must explain by year-end what compensation the evacuees can expect if they decide not to go home. Such details will make it easier for them to buy homes in their new locations.

"Some evacuees want to choose a new life rather than return home," the proposal said.

The LDP and New Komeito also said radiation levels measured by dosimeters, instead of those estimated based on air dose rates, should be used for managing residents' health.

The proposal did not seek a review of the government's long-term goal of reducing the annual additional radiation exposure for residents to 1 millisievert or less through decontamination efforts.

Still, **the target would be effectively relaxed** because the readings of dosimeters carried by residents tend to be lower than the government figures derived from aircraft monitoring and other measures.

* * *

See related articles:
Government considers additional funds for Fukushima measures, blames DPJ
Lower radiation readings proposed to speed return of Fukushima evacuees

Ruling parties propose ideas for nuclear cleanup

http://www3.nhk.or.jp/nhkworld/english/news/20131111_23.html

Japan's ruling coalition parties have made a proposal for the clean-up and decommissioning of the Fukushima Daiichi nuclear plant. Party officials say the proposal would help accelerate recovery from the 2011 accident.

Senior officials of the Liberal Democratic and the New Komeito parties turned in the proposal to Prime Minister Shinzo Abe on Monday.

The plan identifies decontamination at the plant as the government's highest priority and imminent task. It asks the government to undertake the task as a public works project after current decontamination plans are carried out.

It also calls for legislative measures to allow the government to take the initiative in decommissioning and dealing with the radioactive water issue. Such measures would be needed to secure funds for such work.

On handing in the proposal, former LDP Vice President Tadamori Oshima urged Abe to lead recovery efforts to help communities and people affected by the nuclear accident. He asked Abe to work out details in line with the proposal.

Abe said the government will lead efforts in decommissioning and dealing with the contaminated water.

November 15, 2013

Parliamentarian group on nuke disposal

Lawmakers to explore nuclear waste disposal plan

http://www3.nhk.or.jp/nhkworld/english/news/20131115_16.html

Japanese lawmakers from both the ruling and opposition parties are set to launch a parliamentarians' group to discuss disposal of highly radioactive waste from nuclear power plants.

The move follows a call for a nuclear power-free society by former prime minister Junichiro Koizumi. Koizumi called on Prime Minister Shinzo Abe to decide promptly on a zero nuclear policy instead of restarting idled reactors.

Koizumi cited as a reason, difficulties associated with the construction of disposal sites for highly radioactive waste.

The new group will include lawmakers from the ruling Liberal Democratic and New Komeito parties and the opposition Democratic Party.

The members plan to study how other countries manage their radioactive waste and discuss a wide range of issues, including the possibility of new technological developments.

They also plan to look into ways to select the locations of disposal sites.

The lawmakers say they will face the issue head on to encourage public debate.

November 17, 2013

Decontamination: Why so slow?

News Navigator: Why has decontamination work in Fukushima been slow?

http://mainichi.jp/english/english/perspectives/news/20131117p2a00m0na003000c.html

The Mainichi answers common questions readers may have about decontamination work carried out in areas near the stricken Fukushima nuclear plant.

Question: Has the decontamination work been successful?

Answer: Not entirely. The national government has designated 11 municipalities in Fukushima Prefecture into three zones depending on the level of radioactive contamination: zones where the yearly dosage tops 50 millisieverts and returning to live there is deemed difficult; zones where living restrictions are in place (a yearly radiation level exceeding 20 millisieverts but no more than 50 millisieverts); and zones preparing for the lifting of evacuation orders (a yearly radiation level up to 20 millisieverts).

In June this year, the government completed the decontamination process in the Miyakoji district in the city of Tamura, which is designated as a zone preparing for the lifting of evacuation orders. However, average radiation levels in residential areas didn't drop to the annual permissible dosage of 1 millisievert, or 0.23 microsievert per hour -- the government-set long-term goal for the annual maximum dosage.

Q: How come it's not working?

A: Radioactive contaminated objects such as soil and leaves travel with the wind and rain from places where decontamination work hasn't been completed to decontaminated areas, raising radiation levels.

Since 70 percent of the prefecture is covered by forests, even if decontamination work is completed in one area, radioactive substances can move from the surrounding forests.

Q: When will we see radiation levels drop in those areas?

A: Even taking radioactive decay into account and also considering that rain washes away radioactive materials, annual radiation levels in the difficult-to-return zone are predicted to top 20 millisieverts even some six years after the nuclear plant accident. To reduce the level in the same zone to below 10 millisieverts per year, it is predicted to take over 15 years.

Q: How much would it cost to complete the decontamination work?

A: According to experts' calculations, decontamination work in Fukushima Prefecture alone would cost 5.13 trillion yen if the work was conducted in all the areas where radiation levels top 1 millisievert a year. Even if the work is limited to areas where the annual radiation level exceeds 5 millisieverts, it would still cost nearly four trillion yen.

A Fukushima recovery plan proposed on Nov. 11 by the ruling Liberal Democratic Party (LDP) and its coalition partner, New Komeito, suggested concentrating resources for decontamination work in areas where such efforts are proving effective.

Q: How is the government shifting its ways of conducting decontamination work?

A: The plan also suggested the use of personal dosimeters to help develop healthcare measures rather than monitoring radiation levels in the air at certain spots. While the goal to reduce radiation levels to 1 millisievert per year remains unchanged, the plan is to change the monitoring base from "places" to "people."

Currently, the amount of radiation exposure is calculated based on the assumption that an average person per day spends 16 hours inside buildings and eight hours outside. While personal dosimeters tend to

show smaller radiation doses than those monitored in the air, using personal dosimeters may be more practical as they show the amount of radiation to which a person is actually exposed.

Based on that data, the government aims to develop steps to reduce the amount of radiation exposure on an individual level in addition to decontamination work. (Answers by Ai Oba, Science & Environment News Department)

November 18, 2013

Michio Aoyama on radioactive substances dilution

POINT OF VIEW/ Michio Aoyama: Fukushima radiation circulating but diluting in Pacific

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201311180001

Radioactive substances from the Fukushima No. 1 nuclear plant will dilute to negligible levels in the ocean, but the area close to the site remains a problem, the chief researcher at the Meteorological Research Institute said.

Michio Aoyama reported his findings on the circulation of radioactive substances released into the sea at the Scientific Forum of the International Atomic Energy Agency (IAEA) in Vienna in September.

In a recent interview with The Asahi Shimbun, Aoyama said the crippled plant continues to spew radioactive water into the ocean, which is likely circulating eastward to North America.

Excerpts from the interview follow:
* * *
Question: Is contaminated water still leaking into the sea?

Aoyama: I've pointed out that the leakage has continued since just after the accident, when the concentration of radioactive substances began declining at a slower rate. You would expect the concentration to decrease in the waters right by the plant if there were no leaks, but the monitoring results show that is not the case.

Q: Why is that?

A: At present, the concentration of radiation in waters very close by is holding at a certain level. It is believed that new radioactive water is leaking in from the land and replacing what is flowing out to the open sea. Estimates suggest there are 30 gigabecquerels of cesium-137 and 30 gigabecquerels of strontium-90 flowing out to the ocean each day. (One gigabecquerel equals 1 billion becquerels). This is a negligible amount when you consider the Pacific Ocean as a whole.

Other than in the area right next to the nuclear power plant, the radiation should become diluted and have no effect on fish.

Q: Around how much cesium-137 has the accident released into the open sea?

A: Twelve to 15 petabecquerels (one petabecquerel equals 1,000 trillion becquerels) of cesium-137 released into the atmosphere fell into the Pacific Ocean via rainfall. It is believed that an additional 3.5 petabecquerels flowed into the ocean when water used to cool the melting fuel rods immediately after the accident was contaminated and released.

Q: What can we learn by comparing the nuclear accident with the spread of radioactive substances caused by nuclear weapons testing?

A: In 1970, a total of 290 petabecquerels of cesium-137 was released in the North Pacific due to nuclear weapons testing. The level was 69 petabecquerels in 2011, after the cesium-137 decayed over its 30-year half-life and some of it flowed into other waters.

In comparison, the amount released due to the Fukushima accident is around 15 petabecquerels.

There were 1 to 2 becquerels of cesium per cubic meter in the seas off Japan before the accident, but the level rose, on average, by 20 percent immediately afterward.

However, the additional cesium has not had a significant effect on the vast waters, and the concentration in the open ocean is returning to pre-accident levels.

Q: What will happen to the radioactive substances?

A: Ninety-nine percent of fission products produced by large-scale nuclear weapons testing rose into the stratosphere and got carried around by the winds. But some have fallen in large amounts in the ocean east of the Japanese archipelago.

Following that cesium, we have learned that they proceed eastward into the Pacific Ocean and sink into deep waters before reaching the North American continent. They then turn south and head into the Indian Ocean, the South Pacific or return to the Japanese archipelago.

Surveys conducted after the Fukushima accident have shown the same phenomenon. I believe the radioactive substances will follow a similar pattern of behavior in the future as well.

* * *

Born in 1953, Michio Aoyama graduated from Meteorological College and earned his Ph.D. from the Graduate School of Natural Science and Technology at Kanazawa University. He has served as a member of the Nuclear Regulation Authority's investigative commission on ocean monitoring.

November 19, 2013

Don't forget the overall picture

EDITORIAL: Fuel removal just one step in the challenge to clean up Fukushima mess

http://ajw.asahi.com/article/views/editorial/AJ201311190036

Tokyo Electric Power Co. has started removing spent and unused nuclear fuel from the No. 4 reactor building at the Fukushima No. 1 nuclear plant. This is an important step to lessen the danger posed by the nuclear complex, which was wrecked in the 2011 earthquake and tsunami disaster.

The operation will likely take more than a year to complete. Even then, it will not dramatically change anything. Underground water continues to flood the crippled No. 1 to No. 3 reactors, making it radioactive.

The electric power industry and the government must not attempt to delude the public by stressing progress in just one aspect of the huge challenge that lies ahead. They must make utmost efforts to explain the overall picture. There is no room for even the slightest exaggeration.

The No. 4 reactor was offline for a regular safety inspection when disaster struck. So unlike the No. 1 to No. 3 reactors, the No. 4 unit did not have a core meltdown. However, the No. 4 reactor building was ripped apart by an explosion of hydrogen that apparently leaked from the No. 3 reactor.

There are 1,533 nuclear fuel assemblies in the storage pool, located in the upper part of the No. 4 reactor building. The figure compares with the 1,496 assemblies that were in the No. 1 to No. 3 reactors.

These bundled pellets of uranium fuel in the assemblies must be kept cool as they generate intense heat. If the storage pool loses its water, the fuel assemblies could overheat and cause a fire. If this happened, a vast amount of radioactive materials--including plutonium--would be released into the atmosphere, causing the situation to spin out of control.

As aftershocks have continued to jolt the Fukushima plant, the need to remove nuclear fuel from the unstable No. 4 reactor building has taken on increased urgency.

To accomplish this task, special equipment had to be created from scratch to pull the fuel assemblies out of the pool as well as a crane to load them onto vehicles for transportation.

That is why it has taken 2 years and eight months after the accident for the fuel removal operation to begin.

The work involves sinking a cask receptacle that can hold 22 assemblies into the pool and arranging assemblies with utmost care into the container one by one. The receptacle must then be transferred to a more secure shared pool some 100 meters away. The utility plans to finish the transfer of all the fuel assemblies from the No. 4 unit by the end of 2014.

Experts have voiced concerns about the fuel removal operation, which “involves a high degree of risk potential,” according to Shunichi Tanaka, chairman of Nuclear Regulation Authority. “In a sense, it is more risky than the radioactive water crisis,” he said.

Workers engaged in the operation face a high risk of being exposed to radiation. To secure skilled workers for the operation, proper monitoring of the dose levels and management of working conditions are even more vital.

The priority must be on ensuring absolute safety, not on meeting the schedule.

As for the No. 1 to No. 3 reactors, it is still unclear when the removal of nuclear fuel in the storage pools can start. Dealing with the melted fuel in the reactor cores requires developing special technologies.

What has started at the No. 4 unit is actually just one risky and delicate part of the complicated, multifaceted challenge of cleaning up the mess at the Fukushima No. 1 plant.

Transferring the fuel assemblies to the shared pool is not the end of the story. Eventually, it will be necessary to figure out a safer way to store the nuclear fuel, such as dry cask storage, which doesn't carry the risk of the loss of water.

November 20, 2013

METI will draw map of "safe" potential sites for waste

No volunteers so government looks to pick, push radioactive waste disposal sites

http://www.japantimes.co.jp/news/2013/11/20/national/no-volunteers-so-government-looks-to-pick-push-radioactive-waste-disposal-sites/#.UozUViewT9k

Kyodo

The government should pick candidate sites nationwide that are suitable for building a high-level radioactive waste disposal facility and present them to an unwilling public, instead of waiting for a local government to step forward, the Natural Resources and Energy Agency proposed Wednesday.

The proposal was unveiled at a meeting of a panel that is reviewing the nation's stalled efforts to find an underground repository site for the massive amounts of waste created as a result of operating nuclear power plants.

The idea to change the site selection process, which has found no volunteer locations, is expected to be included in the new medium- to long-term energy plan that is being reconsidered in light of the Fukushima No. 1 reactor meltdown catastrophe that started in 2011.

The current selection process starts with a local government offering or accepting a government request to conduct a preliminary study of records and documentation related to the suitability of a specific locale.

But the agency realized local governments bear a heavy responsibility in that process, because of strong public opposition nationwide to hosting long-term nuclear waste facilities, due to safety fears.

An organization funded by contributions from utilities started seeking applications from local governments in 2002, but to no avail.

Under the newly proposed plan, the government would present areas that reportedly would not pose major concerns regarding radioactive leaks due to the movement of faults or groundwater flow, based on scientific findings.

The government will also set up a scheme to provide explanations to the public about any disposal facility before a documentation survey of the candidate site commences, while any government that agrees to host such a facility will receive subsidies.

Government changes tack on finding disposal site for radioactive waste

http://ajw.asahi.com/article/behind_news/politics/AJ201311200060

The government plans to abandon its ineffective policy of waiting for municipalities to volunteer to host a final disposal site for high-level radioactive waste, an industry ministry panel said Nov. 20.

According to the plan, the government will instead try to accelerate the selection process by listing candidate disposal sites for the waste generated from the reprocessing of spent nuclear fuel and considering support measures for potential host communities.

The Ministry of Economy, Trade and Industry is considering publishing a map as early as next year showing more than 100 locations that are at least scientifically suitable for hosting the disposal site, according to sources. The requirements include the absence of active fault lines and volcanic activity.

"The government must take a leading role in setting up a framework to form a consensus among residents and in formulating measures to support areas (that host the facility)," said Hiroya Masuda, a former internal affairs minister who serves as chairman of the Advisory Committee for Natural Resources and Energy's radioactive waste working group.

The committee is an advisory panel to the industry minister.

The policy will be incorporated in a new basic energy plan to be compiled by the end of the year.

The Nuclear Waste Management Organization of Japan, established by electric power companies and other organizations, has been seeking candidate sites since 2002.

However, no municipality has requested a study of whether they are suitable disposal sites due to opposition from local residents.

Although the central government can ask municipalities to conduct the studies, no such request has ever been made.

A document submitted during the working group's meeting Nov. 20 said it is necessary to scientifically show more qualified areas for the radioactive waste facility, a deep underground repository.

The document also showed that the government will consider comprehensive support measures that contribute to sustainable development for the areas that consider hosting the facility.

The government plans to solicit opinions not only from local government leaders but also residents. It is also considering how best to provide residents with necessary information before their local governments agree to the feasibility studies.

Former Prime Minister Junichiro Koizumi has cited the lack of a final disposal site for high-level radioactive waste in his repeated calls to immediately abolish all nuclear power facilities in Japan.

See also:

No volunteers so government looks to pick, push radioactive waste disposal sites

http://www.japantimes.co.jp/news/2013/11/20/national/no-volunteers-so-government-looks-to-pick-push-radioactive-waste-disposal-sites/#.UozUViewT9k

November 21, 2013

Changing the process of waste site selection?

Gov't proposes revealing candidate sites for radioactive waste disposal

http://mainichi.jp/english/english/newsselect/news/20131121p2g00m0dm027000c.html

TOKYO (Kyodo) -- The Natural Resources and Energy Agency proposed Wednesday that the government choose candidate sites across Japan that are suitable for building a high-level radioactive waste disposal facility and present them to the public, rather than waiting for local governments to offer to host it.

The proposal was unveiled during a meeting of a panel that is reviewing the nation's stalled efforts to find an underground repository site for waste created as a result of operating nuclear power plants.

The idea to change the process of site selection is expected to be included in Japan's new medium- to long-term energy plan that is being reviewed in the wake of the 2011 Fukushima Daiichi nuclear power plant disaster.

Currently, the selection process starts after a local government offers or accepts a government request to conduct a preliminary study of records and documentation related to the suitability of a certain region.

But the agency found local governments bear a heavy responsibility in that process.

An organization funded by contributions from utilities started seeking applications from local governments in 2002, but the process has not yielded results.

Under the newly proposed plan, the government would present areas that do not pose major concerns regarding radioactive leaks due to the movement of faults or groundwater flow, based on scientific findings.

The government will also set up a scheme to provide explanations to local residents about the disposal facility before a documentation survey of the candidate site commences, while local governments will receive subsidies if they agree to host the facility.

November 23, 2013

Gov't wants to buy land around Fukushima Daiichi to store waste

Fukushima land grab eyed

State wants to purchase 15-sq.-km track around No. 1 plant for waste storage sites

http://www.japantimes.co.jp/news/2013/11/23/national/fukushima-land-grab-eyed/#.UpEs3yewT9k

Kyodo

The state plans to buy 15 sq. km of land around the Fukushima No. 1 nuclear plant to build facilities to store radioactive soil and other waste generated by decontamination operations, government sources said.

Construction of the interim waste storage sites is expected to accelerate the sluggish cleanup activities in Fukushima Prefecture, the sources said Friday.

But the move will affect thousands of landowners, while evacuated residents who before the 2011 nuclear crisis used to live in areas to be placed under state control may not be able to return home. A large part of the No. 1 plant's vicinity has already been classified as a long-term zone that will remain off-limits.

Environment Minister Nobuteru Ishihara is expected to visit the prefecture in early December to seek official approval from Fukushima Gov. Yuhei Sato and the mayors of four local towns.

The government hopes to start operating some of the storage facilities from January 2015. It anticipates spending ¥1 trillion on the project, including ¥200 billion the Environment Ministry wants to set aside in the fiscal 2014 budget for the land acquisition.

The waste storage sites will be built in an area in the towns of Okuma and Futaba, which co-host the Fukushima No. 1 complex, as well as in a district of the town of Naraha, home to the Fukushima No. 2 nuclear plant, and in the town of Tomioka.

Several types of facilities will be built, including for the storage of tainted soil, for holding waste with radiation levels above 100,000 becquerels per kilogram, and for sorting the waste brought in.

The government is seeking to use part of this vast area of land as a buffer zone to try to allay the concerns of residents in surrounding areas about radioactive contamination from the Fukushima No. 1 plant's wrecked reactors.

However, the government also believes the vicinity of the storage facilities will not be suitable for habitation because it will be traversed by dump trucks carrying contaminated waste.

The government plans to keep the waste at the storage facilities for up to 30 years and to dispose of it outside the prefecture.

More than two years since Fukushima No. 1 experienced the nation's worst nuclear crisis, around 150,000 residents of the prefecture are still living as evacuees in temporary accommodations.

November 29, 2013

Typhoons strongly contribute to spreading radioactive contamination

Typhoons spread Fukushima fallout, study shows

http://www.japantimes.co.jp/news/2013/11/29/national/typhoons-spread-fukushima-fallout-study-shows/#.UphccSfij9k

AFP-JIJI

PARIS – Typhoons that hit Japan each year are helping spread radioactive material from the Fukushima nuclear disaster into the country's waterways, researchers say.

Contaminated soil gets washed away by the high winds and rain and deposited in streams and rivers, a joint study by France's Climate and Environmental Science laboratory (LSCE) and Tsukuba University in Ibaraki Prefecture shows.

When the crisis started in March 2011, a large amount of radioactive particles were flung into the atmosphere, dispersing cesium that typically clings to soil and sediment.

Studies have shown that soil erosion can move the radioactive varieties of cesium-134 and -137 from the mountains near Fukushima No. 1 into rivers and then out into the Pacific Ocean.

"There is a definite dispersal towards the ocean," LSCE researcher Olivier Evrard said Wednesday.

Typhoons "strongly contribute" to soil dispersal, said Evrard, though it can be months later, after the winter snow melts, that contamination actually passes into rivers.

People who escaped the initial fallout 2½ years ago could now find their food or water contaminated by cesium particles as they penetrate agricultural land and coastal plains, the researchers warned.

Last year, the radioactive content of rivers dropped due to fairly moderate typhoons. But more frequent and fierce storms in 2013 have brought a new flood of cesium particles.

This is, said Evrard, “proof that the source of the radioactivity has not diminished upstream.”

Tsukuba University has completed a number of studies on Fukushima since November 2011.

Scientists “concentrated mostly on the direct fallout from Fukushima, yet this is another source of radioactive deposits” that must be taken into account, Evrard warned.

Coastal areas home to fishermen or where people bathe in particular face potential risk.

Tens of thousands of people were evacuated from around Fukushima No. 1 following the disaster. Nearby towns remain largely empty.

The delicate process of decommissioning the site is expected to take decades.

December 2, 2013

Consumers must also accept to deal with the waste

Japan Political Pulse: Disposal of nuclear waste should fall to biggest consumers of power

http://mainichi.jp/english/english/perspectives/news/20131202p2a00m0na015000c.html

Shigeru Ishiba, secretary-general of the ruling Liberal Democratic Party (LDP), has declared that the government will propose a suitable site for a final disposal site for spent nuclear fuel on its own responsibility. Perhaps this move could be seen as a result of former Prime Minister Junichiro Koizumi's calls for the elimination of nuclear power.

The Nuclear Waste Management Organization of Japan (NUMO), capitalized mainly by electric power companies, has been soliciting local governments to host such a facility for more than 10 years, but none of them has come forward so far.

It is natural for people to demand more power but want others to accept radioactive waste. The site for a radioactive disposal facility could never be determined if NUMO is to continue asking local bodies to accept spent nuclear fuel in such a lukewarm way.

Such being the case, there is no choice but to rely on smaller facilities to dispose of spent nuclear fuel throughout the nation instead of asking a certain region to accept all of such waste generated across the country, regardless of whether the national government will play a leading role in selecting sites for such facilities.

A half century ago, novelist Shinichi Hoshi (1926-97) predicted such a dilemma for a society dependent on nuclear power in "Oi detekoi" ("Hey, come out"), one of his best short-short stories:

After a typhoon passes, a deep hole appears in the remains of a Shinto shrine in the outskirt of a village that was devastated by a landslide. A villager shouts, "Hey, come out," but nobody responds. He throws a stone into the hole but hears no sound. When villagers are about to bury the hole, which they feel is creepy, a spoiler buys the hole and converts it into a waste disposal site. A nuclear power plant operator pays a large amount of money to the spoiler to dump radioactive waste into the hole while a bureaucrat in the central government discards classified documents at the site.

The hole gives city dwellers a sense of security because people in urban areas are enthusiastic only about the mass-production of nuclear power but nobody is willing to consider ways to clear up the mess resulting from the mass-production of nuclear power.

One day, a construction worker taking a break on a steel frame he is building hears the words, "Hey, come out." He looks up but can see only blue sky. He thinks his ears are playing tricks on him, but a stone is dropped from the direction where he heard the voice. However, he fails to notice the stone as he was absorbed in the beautiful sky above the city.

This work has long been interpreted as a satire on civilization centering on the mass-production of nuclear power as well as environmental contamination. Since Japan experienced the outbreak of the Fukushima nuclear crisis on March 11, 2011, however, the work could also be read as a parable that predicted the arrival of a society relying on nuclear power and its subsequent failure.

The theme of the novel is the "natural results of one's deeds" and "punitive justice." It was released in 1958 when Japan still did not have a single atomic power station; the No. 1 reactor of the crisis-hit Fukushima No. 1 Nuclear Power Plant began operations in 1971. The hometown of the novelist happens

to be the Nakoso district of Iwaki, Fukushima Prefecture, which is within a 100-kilometer zone from the nuclear plant.

The Nov. 28 edition of the Asahi Shimbun national daily carried a letter from a reader that calls on Prime Minister Shinzo Abe, who is promoting the export of nuclear plants, and Hiroyuki Hosoda, head of the LDP's panel that promotes a stable supply of electric power, to build final disposal sites for radioactive waste in their own constituencies.

This may appear to some people an absurd opinion, but it is not. Of course, it would be unfair to force Yamaguchi Prefecture, where Abe has been elected, and Shimane Prefecture, where Hosoda's constituency is located, to host all such disposal sites. However, nothing can be called a sound view if the reader's opinion urging top politicians to take the lead in setting good examples for breaking the deadlock over selecting a final disposal site were not regarded as a reasonable request.

A petition based on a similar idea circulated in the political world in 2011. It proposed that all the nation's 47 prefectures be obligated to accept and store spent nuclear fuel but that they be allowed to trade in disposal quotas, just like transactions in greenhouse gas emission quotas. However, the government then led by the Democratic Party of Japan did not take up the proposal and a government official who wrote the petition has subsequently left the bureaucracy.

This rational reasoning was ignored because of the illusion that radioactive waste can be dumped around the Fukushima nuclear plant, as well as Mongolia or Siberia, among other locations. It would be risky if Japan is to promote the export of nuclear plants without casting off this illusion.

Japan must show the world a 21st century example in which those who consume massive amounts of electric power must accept highly toxic waste left as a result of generating such power. (By Takao Yamada, Expert Senior Writer)

How much decontamination for Toride City?

Radiation checks start on homes in Toride City

http://www3.nhk.or.jp/nhkworld/english/news/20131202_23.html

Toride City, northeast of Tokyo, has begun a radiation study to determine which homes require decontamination.

About 70 percent of the city was designated a government-funded clean-up area following the nuclear accident at the Fukushima Daiichi power plant in 2011.

The city began taking radiation measurements at about 35,000 homes on Monday. Contract workers made the rounds of private homes in the central town of Nakahara. They used special devices to measure radiation levels in backyards and rain spouts.

The city plans to complete the decontamination of all homes whose radiation levels are above allowable levels by next spring.

A woman whose home was checked says she is worried about the results.

A city official says he hopes completing the decontamination work will help ease the public concerns that linger more than 2 years after the accident.

The decontamination of schools and parks is already under way.

December 4, 2013

Are we surprised?

IAEA: Tritium may have to be discharged into sea

http://www3.nhk.or.jp/nhkworld/english/news/20131204_38.html

Experts from the International Atomic Energy Agency say tritium in wastewater at the damaged Fukushima Daiichi nuclear power plant may have to be discharged into the ocean.

The IAEA probe team released a preliminary report on Wednesday on its investigation, started on November 25th, to help in the decommissioning work at the plant. They interviewed government and plant operator officials from the Tokyo Electric Power Company and conducted on-site inspections at the plant.

The report says TEPCO should step up efforts to remove radioactive substances from wastewater accumulating in the plant's tanks and other places.

Referring to tritium, which is particularly difficult to remove from wastewater, the report says TEPCO should consider discharging the substance into the ocean by diluting concentration to the permitted government levels.

IAEA team leader Juan Carlos Lentijo explained the report to journalists.

He said it is necessary and indispensable to assess the impact the tritium discharge might have on human health and the environment, and to get government approval as well as consent from concerned people.

IAEA says Tepco should consider water release

http://www.japantimes.co.jp/news/2013/12/04/national/iaea-says-tepco-should-consider-water-release/#.UqCEbCfij9k

by Kazuaki Nagata
Staff Writer

A team of experts sent by the International Atomic Energy Agency suggested Wednesday that Tokyo Electric Power Co. should consider discharging toxic water from the Fukushima No. 1 plant into the ocean after lowering the level of radioactive materials to less than the legal limit.

The proposal by the international nuclear watchdog was part of its call on Tepco to improve its management of the increasing amount of radioactive water at the crippled facility and ensure a safe decommissioning process.
Such a step would draw an angry reaction from people, including commercial fishermen, worried about further contamination of the Pacific.

Controlled discharge is a regular practice at all nuclear facilities in the world," Juan Carlos Lentijo, director of the IAEA Division of Nuclear Fuel Cycle and Waste Technology, told a news conference in Tokyo as the team wrapped up its inspection of the plant.

Lentijo headed the team of 19 experts that arrived Nov. 25 to check the decommissioning efforts, including the radioactive water problem and the removal of fuel rod assemblies from the spent fuel pool high in the reactor building 4.

The team, which also inspected the plant in April, submitted a preliminary report Wednesday to the government.
If Tepco intends to implement the water discharge, the report says, it should conduct safety and environment assessments that would have to be reviewed by the Nuclear Regulation Authority.

There are about 1,000 tanks at Fukushima No. 1 storing a massive amount of tainted water, while another 400 tons of groundwater is seeping into the reactor buildings every day.

Tepco has been running a test operation of a high-tech water processing machine called ALPS that can remove all radioactive materials except tritium from the tainted water.

The utility hopes to discharge the processed water after diluting the level of tritium below the legal limit, but local fishermen are against this, as it would damage the public image of their catches and harm their business.

"Of course . . . public acceptance for this purpose is necessary," said Lentijo, adding strict monitoring of the impact of the discharge would also be essential.

The IAEA's report also points out that Japan should look into waste management solutions, such as creating facilities to store radioactive waste from the plant to support the decades-long decommissioning process.
The team will submit a final report in about two months.

December 5, 2013

Why aren't we surprised? The ocean as waste disposal method

IAEA recommends discharging Fukushima radioactive water to the sea

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201312050043

A visiting team of IAEA experts said Japan should weigh the possibility of discharging part of the growing stockpile of contaminated water at the crippled Fukushima nuclear power plant to the sea.

Its recommendation came with the caveat that radioactive levels would have to be below safety standards.

"It is necessary to find a sustainable solution to the problem of managing contaminated water at Tokyo Electric Power Co.'s Fukushima No. 1 nuclear power station," the International Atomic Energy Agency team said in its preliminary summary report released Dec. 4. "This would require considering all options, including the possible resumption of controlled discharges to the sea."

At the Fukushima No. 1 plant, the stockpile of radioactive water is growing by 400 tons every day as groundwater flowing into reactor and turbine buildings keeps adding to and mixing with water used to cool melted nuclear fuel. TEPCO is using an Advanced Liquid Processing System (ALPS), a purifier touted as capable of removing 62 types of radioactive substances, to treat the contaminated water.

But that does not help reduce the total amount of water that needs to be managed, because the ALPS cannot remove tritium, a radioactive isotope of hydrogen.

TEPCO said it was holding 390,000 tons of radioactive water in storage tanks as of Dec. 3, including 31,000 tons that have been treated with the ALPS.

Juan Carlos Lentijo, leader of the IAEA expert team, held a news conference in Tokyo on Dec. 4, where he said controlled discharges of contaminated water are a common practice around the world. He added that TEPCO should gather data on treated water for safety screenings by Japan's Nuclear Regulation Authority, and release the water to the sea if it is found to have cleared regulation standards.

Lentijo, at the same time, emphasized the importance of gaining understanding from the general public and the parties involved, and said controlled discharges should be allowed to take place only after discussions are held with relevant stakeholders and their approval is obtained.

The 19-member team of IAEA experts was visiting Japan from Nov. 25 to review Japan's effort to decommission the devastated Fukushima plant, including the removal of nuclear fuel from the No. 4 reactor's spent fuel storage pool and the monitoring of seawater. The preliminary summary report praised Japan for achieving "good progress" in preparing for the decommissioning process.

The team is expected to submit a final report to the government of Japan by the end of January.

Shunichi Tanaka, chairman of the NRA, reiterated his support for controlled discharges of treated radioactive water.
"I don't believe the technology is available for easy removal of tritium," Tanaka told a news conference Dec. 4. "The amount is not particularly mind-boggling from a global perspective. We can't help discharging water once it has cleared safety levels."

(This article was written by Akira Hatano and Ryuta Koike.)

Gov't to consider discharging Fukushima toxic water into sea

http://mainichi.jp/english/english/newsselect/news/20131205p2g00m0dm062000c.html

TOKYO (Kyodo) -- Japan's central government said Thursday it will carefully consider discharging into the sea some of the radioactive water accumulating at the site of the crippled Fukushima Daiichi nuclear power plant, as proposed by the U.N. watchdog.

"We will respond by considering the advice" from the International Atomic Energy Agency, Chief Cabinet Secretary Yoshihide Suga told a press conference. But the top government spokesman also said such a decision must follow careful consultations with relevant bodies.

The IAEA proposed Wednesday the so-called "controlled discharge" as one of options with which plant operator Tokyo Electric Power Co. would dispose of less harmful toxic water into the nearby ocean.

The agency, which had dispatched a mission to review Japan's ongoing efforts to scrap the damaged reactors at the plant impacted by the 2011 earthquake and tsunami, told a press conference in Tokyo the measure is regularly used in nuclear facilities around the world.

Tokyo Electric has been struggling to manage a massive amount of radioactive water that is increasing daily at the plant site, with groundwater seeping into the plant site mixing with water used to cool the three stricken reactors.

The utility has set up hundreds of tanks at the site to keep the highly radioactive water and is planning to significantly reduce the radiation level of the liquid by running a water treatment system, as accidental leaks from those tanks have been feared.

December 6, 2013

Storage of radioactive waste essential

U.S. top nuke regulator urges storage solution

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201312060105

THE ASSOCIATED PRESS

The top U.S. nuclear regulator on Dec. 6 said nuclear energy users, including Japan, must figure out how to ultimately store radioactive waste.

Allison Macfarlane, head of the Nuclear Regulatory Commission, said in Tokyo that finding an underground repository remains a challenge despite a global consensus on the need for such a facility to deal with high level waste coming out of nuclear power plants.

Japan has no final waste repository, not even a potential site. The U.S. government's plan for building a repository at Yucca Mountain in Nevada has been halted by strong local opposition due to safety concerns.

"In the nuclear community we of course have to face the reality of the end product, spent fuel,'' Macfarlane told reporters.
She urged countries that are contemplating or embarking on a nuclear power program to have back-end plans at an early stage.

Her comment came as Japan is finalizing its new energy policy that reverses a phase-out plan set by the previous government after the March 2011 Fukushima disaster.

The new policy under Prime Minister Shinzo Abe's pro-nuclear government is pushing to restart as many reactors as possible if deemed safe under the new, stricter safety standards that took effect this summer. The new policy, whose draft was discussed on Dec. 6 by a government panel, is also expected to stick to Japan's shaky fuel cycle program despite international concerns about Japan's massive plutonium stockpile.

Japan is stuck with nearly 45 tons of plutonium at home and overseas after unsuccessfully pushing to establish a fuel cycle, with its fast breeder reactor and a reprocessing plan never fully operated. Experts say Japan's plutonium stockpile poses a nuclear security threat and raises questions whether Japan plans to develop a nuclear weapon, which Tokyo denies.

December 7, 2013

Okuma, Nahara and Futaba chosen for storage of contaminated soil?

Ministry panel eyes three Fukushima towns for storage of tainted soil

http://www.japantimes.co.jp/news/2013/12/07/national/ministry-panel-eyes-three-fukushima-towns-for-storage-of-tainted-soil/#.UqSuSCfij9k

JIJI

An Environment Ministry panel said Saturday it is possible to build interim facilities in three towns in Fukushima Prefecture to store soil contaminated by the nuclear catastrophe.

On-site surveys show that the towns of Okuma, Naraha and Futaba have ground solid enough to build such facilities, the panel said.

The panel's conclusion is "a major step forward," Senior Vice Environment Minister Shinji Inoue told reporters.

However, officials of the three towns remain cautious about hosting the facilities.

The ministry will compile concrete plans to build the facilities and ask the three towns by the end of this year to host them. Detailed plans will be made public when the requests are put forward, Inoue said.

The facilities, which would commence operations in January 2015, would store tainted soil and incinerated ash from areas contaminated by the 2011 meltdowns at Fukushima No. 1.

The ministry plans to set up another panel to discuss measures to ensure the safe transportation of contaminated soil. That panel will select soil transportation routes to lessen the impact on the health of residents.

December 10, 2013

Will they have a choice?

Fukushima towns will be asked to host waste sites

http://www3.nhk.or.jp/nhkworld/english/news/20131210_13.html

Japan's Environment and Reconstruction ministers will visit Fukushima Prefecture on Saturday to ask local communities to host intermediate storage facilities for radioactive waste.

The government is planning to build the storage sites in the towns of Futaba, Okuma and Naraha, all of which are close to the damaged Fukushima Daiichi nuclear power plant. An expert panel judged that the towns are capable of hosting such sites.

The facilities are designed to hold contaminated soil and debris gathered during decontamination work for up to 30 years before it is disposed of outside the prefecture.

The Environment Ministry announced on Monday the visit by Environment Minister Nobuteru Ishihara and Reconstruction Minister Takumi Nemoto.

The 2 ministers will meet Fukushima Governor Yuhei Sato and mayors of the 3 towns.

The towns have so far accepted the feasibility study for the sites, but have not accepted the hosting plan itself. Some local residents have voiced opposition.

Senior Vice Environment Minister Shinji Inoue said the government wants to carefully explain the details of the construction plan. He said he hopes to receive consent from the towns soon so that the facilities' planned January 2015 completion can be met.

The 2 ministers will also meet the mayor of Tomioka, also in the prefecture. They plan to ask the town to dispose locally of sewage sludge and incineration ash contaminated with radioactive substances with levels of 100,000 becquerels or less per kilogram.

Japan gov't to seek consent for Fukushima waste storage facilities

http://mainichi.jp/english/english/newsselect/news/20131210p2g00m0dm040000c.html

TOKYO (Kyodo) -- Two Japanese ministers will visit Fukushima on Saturday to seek consent from local authorities for the construction of facilities to store radioactive and other waste created by decontamination work around the crippled Fukushima Daiichi nuclear plant.

The Environment Ministry on Monday announced the planned visit of its head Nobuteru Ishihara and Reconstruction Minister Takumi Nemoto, who will meet with Fukushima Gov. Yuhei Sato and the mayors of four towns near the Fukushima Daiichi complex.

The four towns are Okuma, Futaba, Naraha and Tomioka. Okuma and Futaba host the Fukushima Daiichi complex struck by the 2011 earthquake-tsunami disaster in northeastern Japan.

Uncertainty over the interim waste storage facilities has been the main cause of a delay in decontamination work, and the central government hopes to see the start of construction in April after obtaining local consent at an early date.
"The ministers will let the local authorities know about the government's basic ideas on the facilities," Senior Vice Environment Minister Shinji Inoue told a press conference. "We would like them to approve it as quickly as possible."

The government plans to purchase a vast area of land around the Fukushima Daiichi complex for the facilities and to start operating some of them from January 2015.

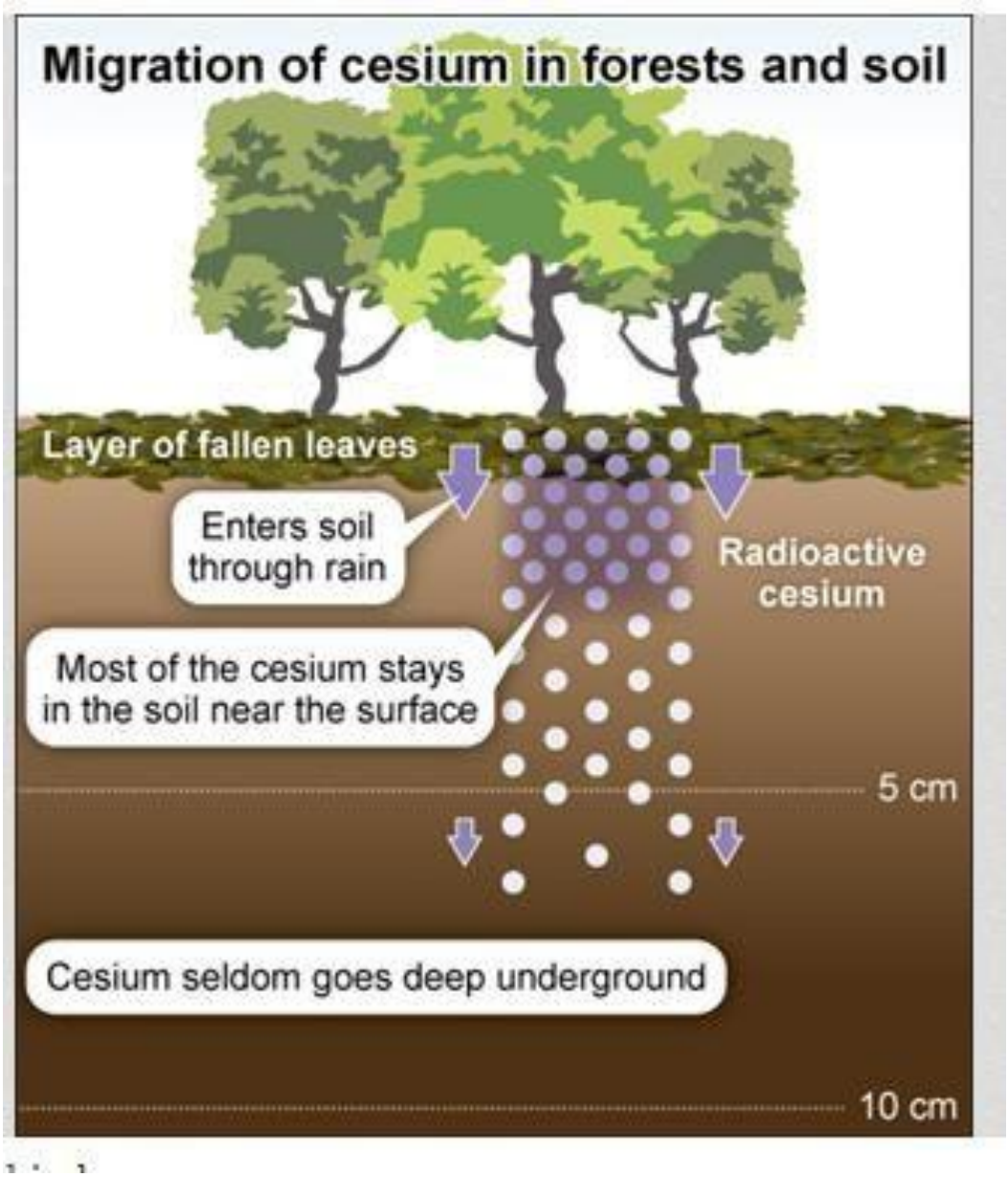
The government plans to keep the waste inside the storage facilities for up to 30 years and dispose of it outside the northeastern Japan prefecture, but it remains unclear where the final disposal site will be located.

A heated debate is expected between Tokyo and Fukushima due to a host of concerns among local citizens.

Cesium probably didn't reach groundwater

Study: Radioactive cesium in forests likely didn't reach groundwater

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201312100010



By JIN NISHIKAWA/ Staff Writer

Most of the radioactive cesium that spewed from the Fukushima No. 1 nuclear plant and fell in broad-leaf forests remained near the surface and likely did not spread to groundwater, researchers said.

The researchers at the government-affiliated Japan Atomic Energy Agency began a study in May 2011 to monitor how cesium migrates in the ground below deciduous forests in Ibaraki Prefecture.

The forests were about 65 kilometers southwest from the crippled plant, which sits on the Pacific Coast.

When the disaster unfolded at the nuclear plant in March 2011, huge amounts of radioactive cesium landed on woodlands in a vast area around the plant.

Early readings in the study showed an average of 20 kilobecquerels of cesium per square meter in the surveyed area. About 70 percent of the cesium was present in a layer of fallen leaves.

Seven months later, the research team found that readings were down to one-fourth of the initial level.

In contrast, cesium levels tripled in the soil up to 5 centimeters deep after most of the cesium on the leaves seeped into the earth.

When the researchers measured cesium levels in the same soil in August 2012, they discovered that most of the cesium had remained there.

They also monitored how much of cesium had descended to 10 cm from 5 cm in the soil. The results showed only about 0.2 percent of the cesium moved in fiscal 2011, while the figure for fiscal 2012 was about 0.1 percent.

By autumn 2011, most of the cesium on the leaves had been washed into the soil by rainfall. The researchers also believe that rising temperatures accelerated the decomposition of the fallen leaves, resulting in more cesium sinking into the soil.

But after that, there was little movement in the cesium.

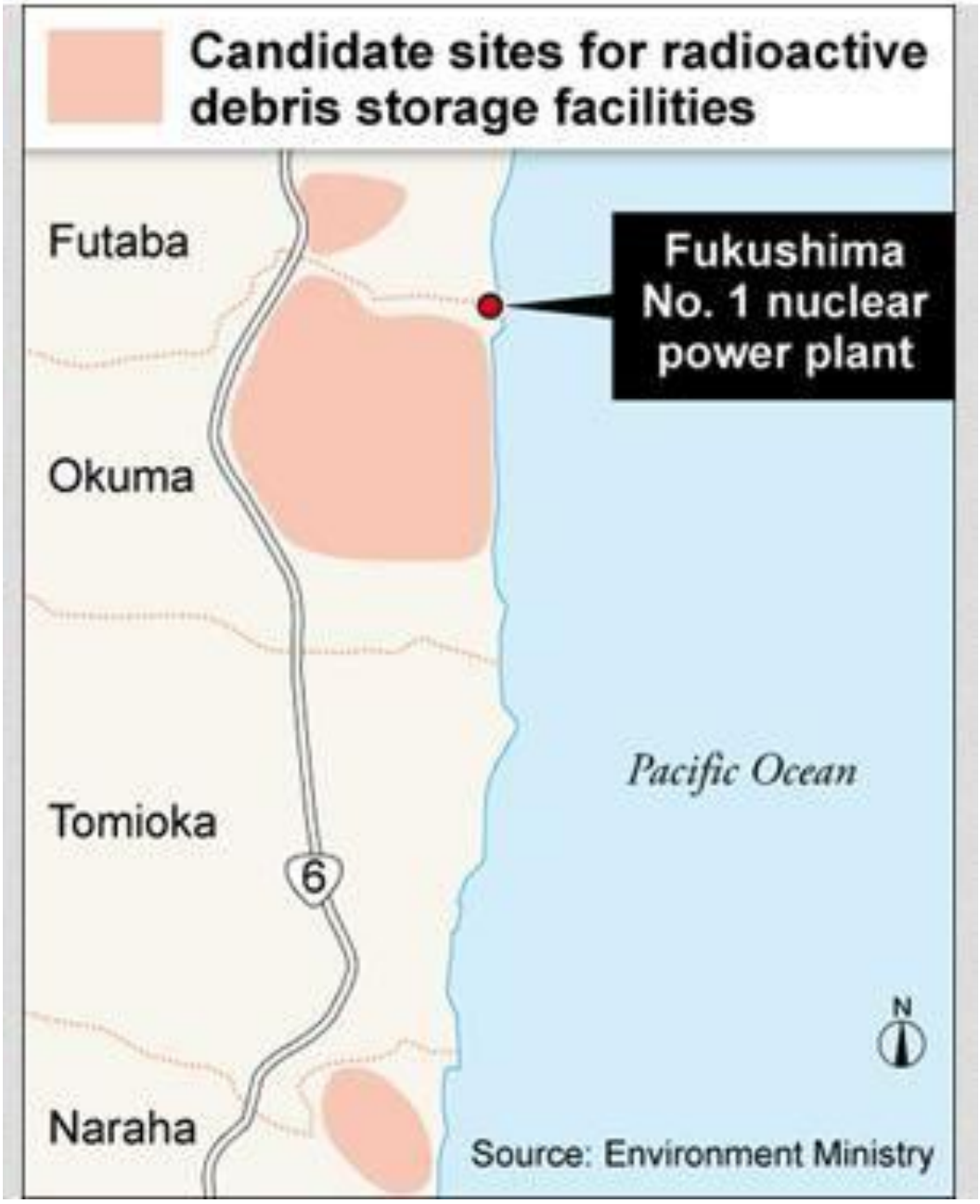
"In a future study, we want to look at cesium in the soil of needleleaf forests and forecast the impact on the nearby environment after monitoring the cesium's movements to forestry products and areas beyond woodlands," said Takahiro Nakanishi, a specialist of geoenvironmental science at the agency.

December 11, 2013

100 million yen in 2014 to store radioactive debris

100 billion yen planned for Fukushima storage facilities

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201312110055



By HIROBUMI OHINATA/ Staff Writer

The government plans to include 100 billion yen ($970 million) in the fiscal 2014 budget to buy land for intermediate facilities to store radioactive debris in Fukushima Prefecture, sources said Dec. 10.

The amount is seven times the figure earmarked for the current fiscal year.

Tokyo Electric Power Co., operator of the stricken Fukushima No. 1 nuclear power plant, was initially expected to cover all costs related to decontamination work in the prefecture.

But the Abe administration recently decided to use public money to cover part of the costs for decontamination work, including purchasing and developing sites for the intermediate storage facilities. Government officials said having financially struggling TEPCO bear all the expenses would further delay cleanup work around the nuclear plant and hamper recovery in disaster-ravaged areas.

Cleanup work has been behind schedule partly because no intermediate storage facilities have been constructed.
According to the Abe administration, the facilities would be used to store radioactive soil, leaves and other materials collected through decontamination work for up to 30 years before being transferred elsewhere.

The government plans to start storing the debris as early as 2015, but local municipalities have been reluctant to give their approval to host the facilities.

Experts have calculated that 3 to 5 square kilometers of land would be needed to store an estimated total of 15 million to 28 million cubic meters of radioactive debris.

Construction and operation costs for the storage facilities are estimated at about 1 trillion yen.

For this fiscal year, 14.6 billion yen was budgeted to examine ground conditions at candidate sites in the towns of Futaba, Okuma and Naraha, all in Fukushima Prefecture.

Next fiscal year's budget will be used to purchase the candidate sites after obtaining their owners' consent.

Environment Minister Nobuteru Ishihara and reconstruction minister Takumi Nemoto are scheduled to visit the prefecture on Dec. 14 to ask the municipal governments to accept the intermediate storage facilities.
But Yuhei Sato, the governor of Fukushima Prefecture, and the mayors of the three towns have yet to decide whether to accept the facilities.

Although the Abe administration has explained that the radioactive debris will be transferred out of the prefecture after 30 years, the local government leaders are worried the facilities may end up being permanent disposal sites for the contaminated materials.

Land and money

Govt. to acquire land for radioactive waste

http://www3.nhk.or.jp/nhkworld/english/news/20131211_39.html

Japan's Environment Ministry has decided to acquire land to build intermediate storage facilities for radioactive waste in Fukushima Prefecture.

The facilities are designed to hold radioactive soil and debris collected during decontamination work for up to 30 years.

The ministry hopes to start bringing waste to the facilities in January 2015.

It plans to acquire a total of 18 square kilometers in Futaba, Okuma and Naraha. The 3 towns are located near the damaged Fukushima Daiichi nuclear power plant.

The ministry estimates that the project will cost about 10 billion dollars. It will earmark about 1 billion dollars in its budget for the next fiscal year.

Environment Minister Nobuteru Ishihara and Reconstruction Minister Takumi Nemoto will visit Fukushima on Saturday to ask the 3 towns and the prefecture to accept the facilities.

However, officials of the 3 towns insist that they have agreed only to a feasibility study for the sites, not to the hosting plan itself.

December 12, 2013

Using simpler methods for decontamination

Govt. recommends simpler cleaning up methods

http://www3.nhk.or.jp/nhkworld/english/news/20131212_29.html

NHK has learned that the Environment Ministry has advised some Fukushima municipalities to adopt simpler methods in cleaning up radioactive materials from residential areas.

The decontamination work is slow in these municipalities.

In a meeting last week, the ministry officials told local officials that they can omit roof cleaning or topsoil removing from their set of cleaning up procedures if they want to speed it up.

In Fukushima Prefecture, the government carries out decontamination in areas with relatively high radiation.

But in other less contaminated areas where people are living, local municipalities are doing the cleaning up.

However, their work is not proceeding as hoped, due to lack of waste sites for contaminated soil and other materials. Residents do not like to have such sites near their homes.

The ministry officials reportedly said the simpler methods would take less time and produce less soil requiring disposal and have been used outside Fukushima Prefecture with relatively low radiation levels.

Some local officials supported the idea, but others pointed out that residents who worry about radiation are unlikely to accept the simpler methods.

Ministry officials say they will try to persuade residents that the simpler methods will be quicker and can help reduce their long-term exposure to radiation.

December 14, 2013

Fukushima waste storage

Ministry unveils plan to buy 19 sq. km of land around Fukushima No. 1 for waste storage

http://www.japantimes.co.jp/news/2013/12/14/national/ministry-unveils-plan-to-buy-19-sq-km-of-land-around-fukushima-no-1-for-waste-storage/#.UqyXqifij9k

Kyodo

FUKUSHIMA – The Environment Ministry officially announced Saturday that the government aims to buy 19 sq. km of land around the Fukushima No. 1 nuclear complex to build facilities for the long-term storage of radioactive and other waste churned up in decontamination work.

The plan was unveiled as Environment Minister Nobuteru Ishihara and reconstruction minister Takumi Nemoto visited Fukushima to ask local authorities to approve the storage sites' construction in the four towns hosting Tokyo Electric Power Co.'s two nuclear plants in the prefecture.

Under the plan, the government will build storage and volume reduction facilities on land bought around the Fukushima No. 1 plant host towns of Futaba and Okuma, as well as a small facility in Naraha, while utilizing an existing disposal site in Tomioka. Those two towns co-host the Fukushima No. 2 power station.

Up to 28 million cu. meters of waste could be stored in the envisaged facilities, whose total cost is estimated at about ¥1 trillion, the officials said.

Providing local consent is secured, the government will take legislative action to ensure that the waste's final disposal will take place outside the prefecture within 30 years from the start of storage, the ministry said.

With the dim prospects of building interim storage facilities delaying decontamination of areas affected by the March 2011 nuclear disaster, the government hopes to start using the planned facilities in January 2015.

Desperate to begin construction in April, the government will seek ¥100 billion in the fiscal 2014 budget for related expenses, including the cost of acquiring the land, ministry officials said.

Fukushima towns asked to host waste storage

http://www3.nhk.or.jp/nhkworld/english/news/20131214_20.html

The Japanese government has officially asked communities near the Fukushima Daiichi nuclear plant to host intermediate storage facilities for radioactive waste from the 2011 accident.

Environment Minister Nobuteru Ishihara and Reconstruction Minister Takumi Nemoto visited Fukushima Prefecture on Saturday.

The ministers asked Governor Yuhei Sato of Fukushima Prefecture and mayors of 3 towns -- Futaba, Okuma and Naraha -- to accept the construction plan.

The intermediate storage facilities would be designed to hold radioactive soil and debris collected from decontamination work for up to 30 years. The government views such storage facilities as indispensable for accelerating the decontamination work.

The ministers told the officials that the government would legislate its pledge to remove the radioactive waste to outside the prefecture for permanent disposal if the local communities agree to host the facilities.

The government plans to acquire 19 square kilometers in the 3 towns and nationalize the land with a view to start bringing waste to the facilities by January 2015.

Before that, the government needs to obtain the consent of local landowners.

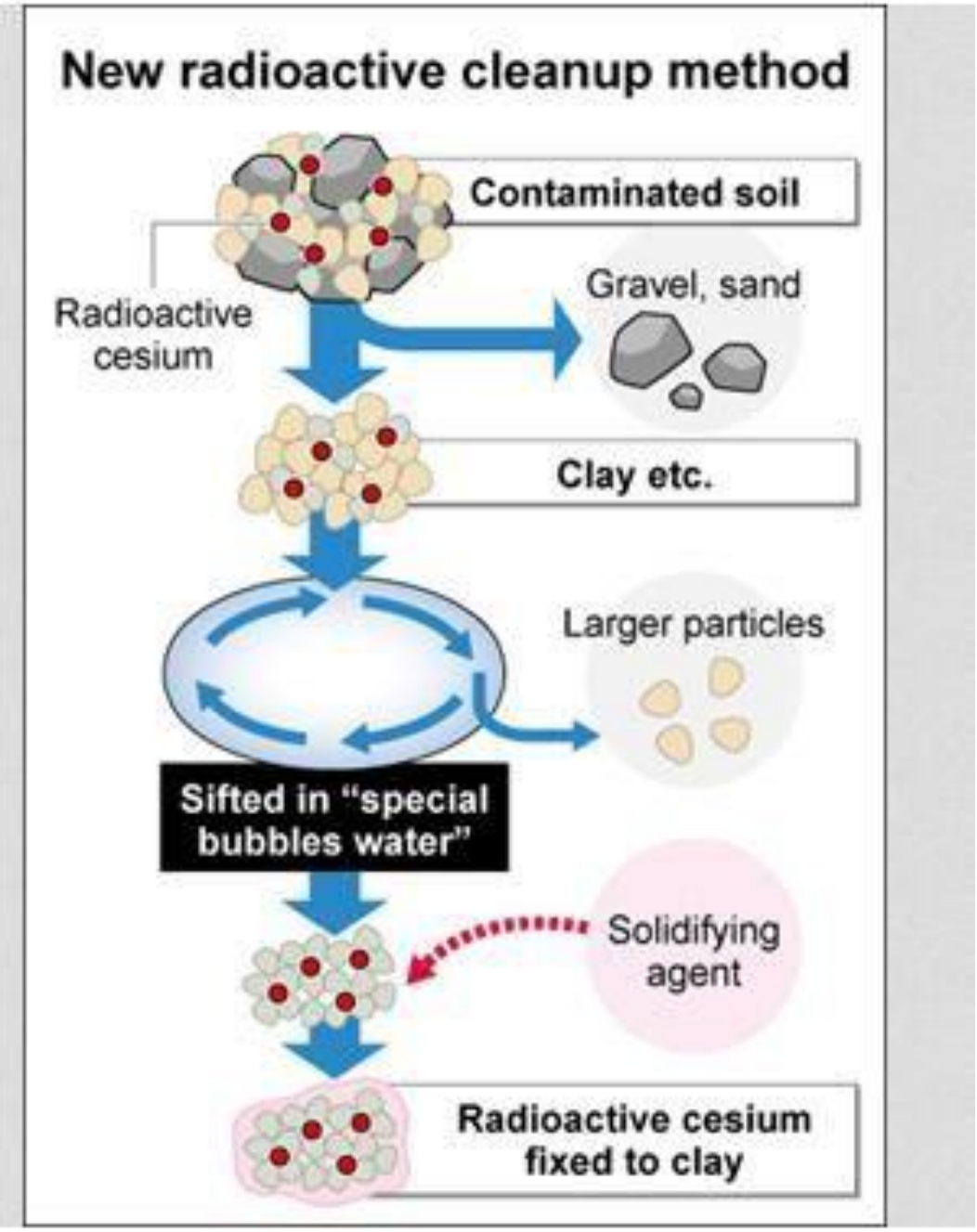
But residents who have evacuated from the towns oppose the plan as they do not want to give up land that has been handed down from their ancestors for the facilities. The residents are also concerned about the safety of such facilities which they say could discourage evacuees from returning to their hometowns.

The central government plans to hold briefings for residents next year to convince them of the need to build the facilities.

New method to remove cesium from soil

Scientists develop method to wash most radioactive cesium from farm soil

http://ajw.asahi.com/article/0311disaster/recovery/AJ201312140053



By NOBUTARO KAJI/ Staff Writer

KYOTO--Researchers say they have developed a new technology for efficiently isolating and removing fine particles that contain radioactive cesium from farm soil.

The team of scientists from Kyoto University and other institutions said Dec. 13 that during a demonstration in Fukushima Prefecture their method cut the levels of radioactive substances by 90 percent in farm soil.

Until now, that had been considered a daunting challenge.

Most radioactive cesium that exists in soil is strongly bonded with fine clay particles with diameters of 0.005 millimeter or less. Technology to efficiently separate radioactive cesium from clayey farmland soil and fine-particle incinerator ash has yet to be developed.

Haruhiko Toyohara, a Kyoto University associate professor of marine biological function, and co-workers developed equipment that washes soil with "nano-bubble water," which contains extremely small bubbles, and uses a vortex to separate the particles that stir up in the water. They successfully separated soil components with diameters of up to 0.075 mm into fine clay particles and larger particles.

The fine clay particles can be solidified with an agent to be disposed of as radioactive waste, whereas the other soil components can be reused in coastal levees and other objects, the researchers said.

The team said its equipment, worth between 350 million yen ($3.38 million) and 400 million yen, can treat 10 tons of contaminated soil per hour.

The researchers said they removed 92 percent of the initial radioactive cesium content of 13,800 becquerels per kilogram of farmland surface soil during the demonstration test in Fukushima Prefecture, with the solid radioactive waste having only 15 percent of the initial bulk.

December 15, 2013

Fukushima waste storage (follow-up)

Government asks Fukushima to accept intermediate storage facilities

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201312150018

FUKUSHIMA--Environment Minister Nobuteru Ishihara and reconstruction minister Takumi Nemoto on Dec. 14 asked the Fukushima governor and mayors of three towns in the prefecture to accept facilities to temporarily store soil and other materials contaminated with radioactive substances.

The government hopes to buy a total of 19 square kilometers of land in Futaba, Okuma and Naraha for the construction of the intermediate storage facilities and start hauling the materials there from January 2015. However, the effort could face opposition from residents and local officials.

"I will judge whether to accept the construction of the intermediate storage facilities after examining the safety of those facilities and the local revitalization plans shown by the central government," Fukushima Governor Yuhei Sato said.

Currently, radioactive soil and other materials produced by the decontamination work in Fukushima Prefecture in the aftermath of the Fukushima No. 1 nuclear power plant accident are temporarily piled up in various locations. As it is difficult to find more places to take those soil and materials, decontamination work has made little progress in recent months.

If the intermediate storage facilities are constructed, decontamination efforts could resume unimpeded, leading to the acceleration of reconstruction activities.

In the three towns, however, some residents have strong anxieties that the construction of those facilities could adversely affect their plans to return to their hometowns and that the intermediate facilities will become permanent.

The government pledged in a Cabinet meeting that the contaminated soil and other materials will be sent to final disposal sites within 30 years after they have begun to be stored in the intermediate facilities.

To finalize the decision, Ishihara said for the first time on Dec. 14 that the government will enact a law for that purpose.

According to the government's plan, it will buy five square kilometers of land in Futaba, 11 square kilometers in Okuma and three square kilometers in Naraha. On each site, the government plans to construct not only facilities to store soil and other materials, but also ones for sorting and burning to reduce the amount.

The total amount of soil and other materials that will be stored in the intermediate facilities will be about 28 million cubic meters, equivalent to the capacity of 23 Tokyo Dome stadiums.

The government considered not only buying the land but also renting it. However, the administration of Prime Minister Shinzo Abe decided to buy the land and nationalize it to demonstrate that the government is actively engaged in local decontamination efforts.

If those facilities are constructed on those lands, large trucks will frequently run in those areas. As a result, the environment impact on the surrounding areas could be worsened. In addition, buffer zones will be set up between facilities. Because of that, the total size of land subject to governmental purchase has been expanded to four times that initially planned.

The purchase prices of the land will be calculated based on the values at the times of the agreements and on the assumption that reconstruction will be achieved on those sites after evacuation orders are lifted in the future for residents living near the Fukushima No. 1 nuclear plant.

The purchase prices will not be influenced by the amount of compensation to the landowners from Tokyo Electric Power Co., the operator of the crippled nuclear plant.

The number of landowners is expected to reach into the several thousands. In the budget for the next fiscal year, which begins in April 2014, the government plans to earmark about 100 billion yen ($1 billion) for the construction of the intermediate storage facilities.

New seabed contamination research

Seabed contamination research to start on Monday

http://www3.nhk.or.jp/nhkworld/english/news/20131216_01.html

Researchers plan to investigate radioactive contamination in the seabed off the coast of the crippled Fukushima Daiichi nuclear power plant.

Officials at Japan's Nuclear Regulation Authority asked University of Tokyo researchers to cooperate to map out how radioactive substances are distributed on the sea bottom.

Scientists will conduct the research at sea 20 kilometers from the Fukushima Daiichi plant. They will lower a device that measures radiation from their boat onto the sea bottom.

Then they will slowly drag the tool over the seabed to measure the level of radioactive cesium.

The research group conducted the same kind of test last fiscal year. They found 40 highly contaminated spots.
This time, the research will cover about 700 kilometers, which is 5 times wider than the last test.

Members of the research group say the investigation could contribute to discovering the level of contamination among fish living on the sea bottom.

Associate Professor Blair Thornton at the University of Tokyo Institute of Industrial Science says they want to conduct further investigation at highly radioactive spots to learn how fish are affected.

The research starts on Monday.

December 16, 2013

Hazards of nuclear waste

Radioactive waste: a now and forever threat?

http://www.japantimes.co.jp/news/2013/12/16/reference/radioactive-waste-a-now-and-forever-threat/#.UrA-5Sfij9k

by Reiji Yoshida
Staff Writer

In recent months, former Prime Minister Junichiro Koizumi has rekindled the public debate on atomic power, drawing attention to perhaps the most critical question about its future: Is there a safe place and way to dispose of high-level radioactive waste?

Koizumi lashed out at the fact that the government has no plan to build a permanent waste repository, even though it is eager to restart the 50 remaining viable commercial reactors if they meet new safety standards.

Amid growing criticism, the government said it will draw up a basic nuclear energy policy by the end of January.

How much nuclear waste does Japan have and what risk does it pose? Following are some questions and answers about the hazards of nuclear waste:

What is radioactive waste?

The International Atomic Energy Agency defines it as any material that contains a concentration of radionuclides greater than those deemed safe by national authorities, and for which no use is foreseen.

Japan classifies radioactive waste mainly into two categories: high level, or that generated from reprocessing spent fuel by separating the plutonium and uranium for recycling, and low level, which refers to all other waste.

Low-level waste can vary from used control rods and reactor parts to used filters, liquid waste, used gloves and other gear.

How is the high-level waste processed?

High-level waste is a byproduct of fission in the reactor core, which is very hot and dangerous. It is mixed with glass and solidified before being placed in robust heat-resistant stainless steel canisters that are 130 cm high, 40 cm in diameter and weigh 500 kg each.

A full canister emits about 1,500 sieverts per hour — an extremely lethal biological level — and has a surface temperature in excess of 200 degrees.

Its radioactivity starts at 20,000 trillion becquerels. It will take about 1,000 years to fall to one-thousandth of that level, and tens of thousands of years to weaken to the same intensity as natural uranium ore, the Natural Resources and Energy Agency says.

How much high-level waste does Japan have?

Before the Fukushima disaster started in 2011, the nation had been generating atomic power for some five decades, with more than 50 reactors all generating nuclear waste.

According to the Nuclear Waste Management Organization of Japan (NUMO), there were 1,664 canisters in Japan as of December 2009, each capable of holding 500 liters of vitrified high-level waste.

In addition, power plants across the country are keeping vast amounts of fuel in their spent fuel pools — enough to fill 23,100 canisters.

If Japan reactivates and keeps running its 50 commercial reactors, it would generate enough waste to fill 40,000 canisters by 2021, according to NUMO.

What risks does it pose?

High-level waste needs to be stored for tens of thousands years before it reaches a safe radiation level. Critics say no one knows if humankind will be able to manage such dangerous substances in the far-distant future.

At first, spent fuel rods must be kept submerged on-site for several years before their temperatures decline enough to be transported and reprocessed.

But Japan's fuel reprocessing effort hasn't even started because its experimental reprocessing plant, in the village of Rokkasho, Aomori Prefecture, has been plagued by trouble.

This means power plants must leave thousands of spent fuel assemblies in the storage pools, where they are vulnerable to natural disasters like those that wrecked the Fukushima No. 1 plant.

At the time of the crisis, the plant had 4,546 spent fuel assemblies in pools, including 1,331 in the spent fuel pool of reactor 4, which was exposed to the atmosphere by a hydrogen blast.

When the cooling systems for those pools were knocked out by the quake and tsunami, the crisis fueled fears that the pools might dry up, exposing the rods and releasing vast amounts of catastrophic fallout that could force Tokyo to evacuate.

How much spent fuel is in the power plants?

According to the Natural Resources and Energy Agency, some 14,000 tons of spent fuel is stored in pools and dry cask facilities at 15 plants nationwide, not counting Fukushima's No. 1 and No. 2 plants.

The 15 have a total storage capacity of only 20,000 tons, and some have almost run out of space. For example, the Kashiwazaki-Kariwa complex in Niigata Prefecture, the Genkai plant in Saga and the Tsuruga plant in Fukui will all be full in three years if they are restarted.

The government plans to create permanent underground repository for high-level waste somewhere in stable bedrock so the canisters can be stored for tens of thousands of years.

But before that, they must spend 30 to 50 years cooling down at an intermediate storage facility in Rokkasho.

Where does the government plan to build the repositories and is there any way to guarantee their long-term safety?

The government has yet to find a community willing to host such dangerous depositories. It claims certain bedrock locations in seismically active Japan will be stable enough to last a millennium.
The government claims it can find a place devoid of earthquake threats but experts and activists, including Koizumi, disagree. No one can guarantee the canisters' safety for 10,000 years, they say.

December 17, 2012

Gov't to take initiative on disposal sites

Gov't decides on new process to find radioactive waste disposal site

http://mainichi.jp/english/english/newsselect/news/20131217p2g00m0dm070000c.html

TOKYO (Kyodo) -- The government on Tuesday officially decided to change the current process for selecting a final radioactive waste disposal site, saying the state will start by showing candidate sites that are scientifically suitable rather than wait for local governments to offer to host disposal facilities.

The decision was reached during a gathering of ministers involved in the handling of high-level radioactive waste, Economy, Trade and Industry Minister Toshimitsu Motegi told a press conference after the meeting.

The government is gearing up to finalize a mid- to long-term national energy plan, based on a draft compiled on Friday by a panel that labeled nuclear power an "important" source of electricity even after the 2011 accident at the Fukushima Daiichi complex.

The draft also said the state should play a more proactive role in resolving the stalled process to find a final repository for high-level radioactive waste, produced through spent fuel reprocessing.

Up to now, the government has been waiting for local governments to offer to host disposal facilities in principle, but there has currently been no candidate site offered.

Under the new plan, the government will first present areas that are suitable, based on scientific findings, and actively try to obtain a local consensus, government officials said.

The government is legally required to review the Basic Energy Plan at least every three years by taking into consideration changes in the energy situation.

The next energy plan will be the first to be compiled since the Fukushima disaster threw Japan's energy policy into disarray.

The previous plan compiled in 2010 aimed to boost the nation's reliance on nuclear power to some 50 percent of its energy needs in 2030 from around 30 percent before the Fukushima disaster.

December 19, 2013

NHK video : Cleaning up Farms

Decontaminating Fukushima: Cleaning up Farms

http://www3.nhk.or.jp/nhkworld/newsline/201312190500.html

Restrictions on food are slowly being lifted. But most farmers are waiting for the Gov't to clean their lands.
Mostly top soil is being removed. People are not yet allowed to live where the fields are (they can only come during the day, eg. in Iitate)

Quality soil is where it all begins…Dilemma: How to remove radioactive substances but keep the nutrients?
"Not being able to farm… is like losing your life"

How to grow crops without top soil?

Experiments in Iitate with binding properties of clay – cesium bound in clay float – but not suitable for heavy machinery – so hand-held tools are used over and over

Sharing their finding with locals and authorities

December 20, 2013

NHK video: Cleaning-up forests

Forest Contamination Concerns

http://www3.nhk.or.jp/nhkworld/newsline/201312200500.html

70% of Fukushima Pref. is covered by forests
The Gov't still has to find a way of decontaminating them
Measures have been carried out in the ground 1 –5 and 10 cm deep
Radiation levels remain high and leaves in particular continue to emit radiation
The soil contains twice the level of radioactive substance found in radioactive waste
Rain helps spread the contamination to rivers and populations living along them
Radioactive particles trickle down (with water) in villages that have already been decontaminated and where some people have returned
The homes are not safe unless forests are cleaned up.

December 21, 2013

New cleanup plan set for areas with high radiation

http://www3.nhk.or.jp/nhkworld/english/news/20131222_04.html

Japanese government officials say the clean-up operation around the crippled nuclear plant in Fukushima is 3 years behind schedule. They say they are now aiming to complete the work by March 2017.

Environment Ministry officials said in January last year the decontamination would be finished by March 2014, except in areas with very high radiation levels.

But the clean-up has fallen behind in the restricted zones of 6 out of 11 municipalities.

Officials have had trouble getting communities to approve of temporary storage sites for contaminated soil.

They say they will prioritize work in residential areas so people can return home as soon as possible.

There is still no decontamination plan for the town of Futaba, where the nuclear plant is based.

Environment Ministry officials are still trying to negotiate a schedule with locals.

December 23, 2013

Three more years of decontamination work

Japan to extend Fukushima radiation cleanup work by up to 3 yrs

http://mainichi.jp/english/english/newsselect/news/20131222p2g00m0dm109000c.html

TOKYO (Kyodo) -- The government will have to extend its decontamination work following the 2011 crisis at the Fukushima Daiichi nuclear power plant by a maximum of three years, government officials said Sunday.

The Environment Ministry will shortly release a new schedule for radiation cleanup work, which was scheduled to be completed by the March 31 end of fiscal 2013 under the initial plan, according to the officials.

The government will try to complete the work before reorganizing in fiscal 2017 areas around the crippled plant, currently divided into three zones based on radiation levels.

The cleanup work has been completed as scheduled only in the city of Tamura, out of 11 municipalities in Fukushima Prefecture subject to the work, with work in three other areas heading for completion by the end of the current fiscal year.

The ministry believes that a three-year extension would be enough to complete the work for most of the municipalities, but as for Futaba, it remains uncertain when the work will be concluded as most parts of the town are classified as areas difficult to return to for a long time, the officials said.

On Dec. 14, the government announced plans to acquire around 19 square kilometers of land chiefly around the Fukushima Daiichi plant to build facilities for the long-term storage of radioactive and other waste piling up in the decontamination process.

The government aims to start using the planned facilities in January 2015.

See also :

Fukushima cleanup to take three extra years

http://www.japantimes.co.jp/news/2013/12/23/national/fukushima-cleanup-to-take-three-extra-years/#.Urh3Xfvij9k

Kyodo

Decontamination work stemming from the 2011 crisis at the Fukushima No. 1 nuclear power plant will take up to three years longer than originally planned, government officials say.

The Environment Ministry will shortly release a new schedule for radiation cleanup work at the plant, which was scheduled to be completed by March 31 under the initial plan, the officials said Sunday.

Instead, the government will try to complete the work by fiscal 2017, when areas around the crippled plant, currently divided into three zones based on radiation levels, are reorganized.

Of the 11 municipalities undergoing cleanup in Fukushima Prefecture, work has only been completed in the city of Tamura. Three other areas are heading for completion by March 31, which marks the end of the current fiscal year.

The ministry believes that a three-year extension would be enough to complete the decontamination work in most of the municipalities.

An exception is Futaba, one of the towns hosting the crippled plant, where many of the areas are classified as “difficult to return to for a long time,” the officials said.

On Dec. 14, the government announced plans to acquire 19 sq. km of land, chiefly around the Fukushima No. 1 plant, to build facilities for the long-term storage of radioactive and other waste piling up in the decontamination process.

The government aims to start using the planned facilities in January 2015.

The ministry has earmarked a total of ¥1.5 trillion for radioactive decontamination through fiscal 2013, ending next March, and has asked plant operator Tokyo Electric Power Co. to pay back ¥40 billion of the

funds it has so far used. But the utility has only returned ¥6.7 billion, citing delays in clerical work and tough business conditions.

December 24, 2013

Decontamination successful?

Radiation levels drop after trial decontamination

http://www3.nhk.or.jp/nhkworld/english/news/20131225_05.html

A government survey shows that radiation levels dropped by more than half after trial decontamination in residential areas severely affected by the nuclear accident at the Fukushima Daiichi power plant.

The Environment Ministry started trial decontamination in October in areas designated as unsuitable for living due to radiation levels of more than 50 millisieverts per year. Officials had not begun full-scale decontamination because they estimated that residents would face difficulties in returning home for a long time.

The trial decontamination was conducted to check its effectiveness. NHK was able to access the preliminary data.

The survey shows the average radiation level in 3 residential districts in Namie Town after the trial ranges from 3.51 to 6.56 micro-sieverts per hour. That's less than half the figure before the decontamination was carried out.

The radiation level at a kindergarten in Futaba Town fell by nearly 70 percent.

The results in some spots satisfy the criteria for easing the evacuation zone restrictions. But these areas will still require decontamination as the radiation levels significantly exceed the government's safety standard.

The ministry will study the trial results and requests from residents to decide how to proceed with the decontamination work.

Three more years of decontamination work (2)

Fukushima decontamination effort extended up to 3 years

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201312240062

Soil contaminated by radiation is stored on a temporary basis in the grounds of a junior high school in the town of Tomioka, Fukushima Prefecture, in November. (Takuro Negishi)

By HIROHIKO NAKAMURA/ Staff Writer

The Environment Ministry has decided to extend state-run radiation removal work for some municipalities in Fukushima Prefecture by up to three years, according to a well-placed source.

The government has been doing decontamination work since 2012 in 11 municipalities where residents were forced to evacuate due to the accident at the Fukushima No. 1 nuclear power plant.

The ministry held talks with the municipalities on revising its original road map that called for decontaminating all the areas by the end of fiscal 2013. The source cited delays in the decontamination work as the reason for the revisions and said the ministry's decision will be announced shortly.

The maximum of three-year extensions will affect the municipalities of Minami-Soma, Iitate, Kawamata, Katsurao, Namie and Tomioka.

The decontamination effort was completed in the city of Tamura in June. The municipalities of Naraha, Okuma and Kawauchi are scheduled, barring unforeseen problems, to be completed by March 31, which closes out fiscal 2013.

For Futaba, which hosts the crippled nuclear plant with the town of Okuma, the decontamination effort is still in the planning stages due to the high levels of radiation there. No date on when the work there will finish has been determined.

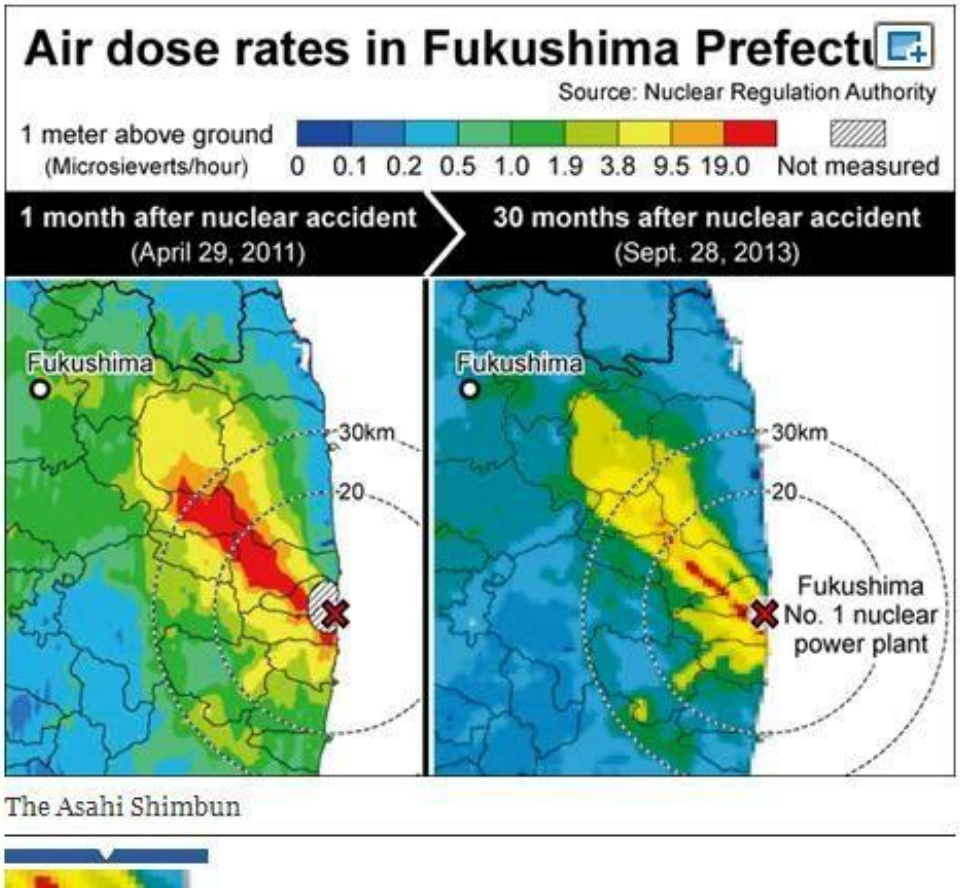
The reasons given for the delays include the differing degrees of contamination in the individual municipalities, which range from below 20 millisieverts annually to 50 millisieverts, and the lack of progress in building intermediate facilities to store the recovered radioactive debris.

December 25, 2013

Reduction of air contamination?

Air dose rates halved 30 months after Fukushima accident

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201312250062



THE ASAHI SHIMBUN

Air dose levels in an 80-kilometer area surrounding the crippled Fukushima No. 1 nuclear power plant have dropped by 47 percent since November 2011.

The latest readings for September were announced on Dec. 25 by the Nuclear Regulation Authority, the government's nuclear watchdog.

"Two and a half years after the accident, radiation levels have steadily decreased," an NRA official said.
NRA officials attributed the drop primarily to natural decay. They said rainwater has also washed some of the radioactive materials into the ocean and some into the surrounding soil.

The air dose rates 1 meter above ground are estimated from airborne radiation levels measured by aircraft. Comparable figures have been available since November 2011, seven months after the Great East Japan Earthquake and tsunami triggered the Fukushima nuclear accident.

Readings in November 2012 showed a 40 percent decrease from November 2011.

December 26, 2013

Plans revised for Fukushima clean-up

Plan revised for Fukushima debris disposal

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Japan's government says it will take more time than originally scheduled to dispose of debris from the 2011 massive quake and tsunami in Fukushima prefecture.

The Environment Ministry had planned to complete the disposal by the end of next March in 11 municipalities in evacuation areas in the prefecture. These areas do not include high-radiation zones near the troubled Fukushima Daiichi nuclear power plant.

But the ministry on Thursday announced a revised proposal, saying that it has yet to secure enough intermediate storage facilities.

The ministry wants to move most of the debris from 4 municipalities, including Minami-soma City, to storage facilities by the end of next March.

Timelines for achieving similar goals have been set for 4 towns and villages at the end of March 2015, as well as for other 2 towns, at the end of March 2016.

It plans to discuss with the municipalities the new proposed timelines for the completion of the disposal.

The ministry also revised its estimate for the amount of debris generated in the 11 evacuation areas at around 802,000 tons.

Plan revised for cleaning up some Fukushima areas

http://www3.nhk.or.jp/nhkworld/english/news/20131226_34.html

Japan's Environment Ministry says it will be at least three years late in completing the clean-up of radioactive substances in some evacuated areas near the crippled Fukushima nuclear plant.

The ministry announced on Thursday that it will complete cleaning operations at evacuated areas in 2

municipalities by March 2016 and in 4 other municipalities by March 2017.

The schedule is based on the condition that locations can be secured for the temporary storing of soil accumulated during the clean-up.

The ministry reviewed the clean-up operations in 6 of the 11 municipalities in which the government is directly involved.
Under the ministry's original plan, the work was due to be finished by March next year, except for areas where officials say it will be difficult for quite some time for evacuees to return home.

Operations in the 6 municipalities are far behind schedule because of delays in securing local agreements on temporary locations for storing contaminated soil.

Environment Minister Nobuteru Ishihara said the ministry has drawn up a more realistic schedule after consulting with local municipalities.

He said the ministry will give priority to houses and infrastructure as they are vital for making it possible for evacuees to return home.

TEPCO reviewed plans should be "realistic"

Japan eyes completion of Fukushima radiation cleanup by March 2017

http://mainichi.jp/english/english/newsselect/news/20131226p2g00m0dm061000c.html

TOKYO (Kyodo) -- The Environment Ministry said Thursday that it now aims to complete radiation cleanup activities in the most seriously contaminated areas outside the accident-stricken Fukushima Daiichi nuclear complex by the end of March 2017.

The ministry had hoped to finish the work at 11 cities, towns and villages in Fukushima Prefecture by the end of next March, or about three years after the nuclear crisis began. But the schedule has been delayed due to the difficulties of securing enough places to temporarily store the contaminated soil and other waste.

"We reviewed the plans so that they will be realistic. We will proceed with the decontamination work, offering a detailed response to local needs," Environment Minister Nobuteru Ishihara told a press conference.

According to the ministry, seven municipalities, including the cities of Kawamata and Minamisoma, will be unable to finish the cleanup activities by the end of March.

But six of them, excluding the town of Futaba, which hosts the Fukushima Daiichi plant, are expected to complete the work over the next three years, assuming that a sufficient number of temporary storage sites and workers are secured.

The ministry said it plans to prioritize the remediation of residential areas, water and sewage systems and major roads that are important to bring back evacuees to their homes.

The town of Futaba, however, has not been able to compile its decontamination plan and the government said that arrangements will continue.

Areas where evacuation orders are in place are currently divided into three categories based on radiation levels -- a zone where evacuation orders are ready to be lifted, a zone where habitation is restricted and a zone where residents will face difficulties in returning for a long time. The population of these areas totals about 81,000.

About 96 percent of the town of Futaba is designated as a difficult-to-return zone.

To accelerate the sluggish decontamination activities, the government has proposed to Fukushima Prefecture a plan to purchase land around the Fukushima Daiichi complex and elsewhere to build proper storage facilities to keep waste generated in the process.

Under the work flow, waste is first collected at temporary storage sites prepared inside each municipality and will be transferred to the planned storage facilities, where the waste is expected to be stored for up to 30 years.

But there are still not enough temporary storage sites amid local opposition, as some have feared that the waste could be left there permanently.

A government panel working on compensation payment guidelines, meanwhile, decided Thursday that Tokyo Electric Power Co., the operator of the Fukushima Daiichi plant, should pay an additional 7 million yen each to people who have their homes in the difficult-to-return zone.

The lump-sum payment is intended to compensate for the emotional distress of not being able to return to their homes and region over a long period of time.

Fukushima decon deadline delayed until ’17

Evacuees unable to return home to get ¥7 million for emotional strains

http://www.japantimes.co.jp/news/2013/12/26/national/fukushima-decon-deadline-delayed-until-17/#.UrxMQ7T8nIU

Kyodo

The Environment Ministry said Thursday it now aims to finish cleaning up areas outside the Fukushima No. 1 nuclear complex most seriously tainted by radiation by the end of March 2017.[…]

January 1, 2013

Win people's approval

Govt. to seek local consent for storage facilities

http://www3.nhk.or.jp/nhkworld/english/news/20140101_19.html

Japanese government officials are getting ready to explain to people in Fukushima the details of a plan to store radioactive waste collected from decontamination work.

The intermediate storage facilities would be designed to hold contaminated soil and debris for up to 30 years.
Last month, the central government asked three towns around the damaged Fukushima Daiichi nuclear plant to host them.

Officials plan to spend two months telling local people about the safety of the facilities. They will also explain how they plan to compensate for land or buildings they need to expropriate.

They're aiming to win approval for the plan as soon as possible so they can start using the facilities in January 2015.

But some locals say they don't want to give up land their families have owned for generations. Others say they're afraid the existence of the facilities would hamper rebuilding efforts.

Radioactive waste and public trust

Japan to set new policy for nuclear waste disposal

http://www3.nhk.or.jp/nhkworld/english/news/20140102_03.html

The Japanese government plans to revise a basic policy for disposing of nuclear waste so that it can play a more active role in selecting disposal sites.

The industry ministry says starting early this year it will act on proposals submitted in November by a panel of experts.

The government plans to store highly-radioactive waste from nuclear power plants deep underground. It has been asking local governments to come up with candidate sites under a law that came into effect in 2000.

But no municipalities have stepped forward, and the government has still not secured any candidate sites.

Under a new policy, the government plans to draw up a list of locations that are deemed scientifically suitable for disposal, and ask relevant municipalities to agree to the project.

The government hopes to pave the way by the end of this year for finding sites for the disposal of nuclear waste.

But some experts are calling on the government to handle the issue more carefully. They say the public has not fully accepted the idea of storing radioactive waste underground, or in their localities.

They are concerned that trying to proceed with the new policy in a haphazard way could cause doubts among the public, and make the disposal issue harder to resolve.

Assistant Professor Kota Juraku of Tokyo Denki University, who was a member of the advisory panel, says he doesn't believe the public has reached full agreement on nuclear waste disposal.

He says it will take time for the government to regain public trust and support for the use of nuclear power.

Juraku calls on the government to listen closely to people's opinions and change the policy if necessary.

January 6, 2013

Safety will be top priority...

Nuclear waste incinerator to be built in Ibaraki

http://www3.nhk.or.jp/nhkworld/english/news/20140107_02.html

Workers at an accident-hit nuclear processing plant northeast of Tokyo are preparing to conduct an operation to treat nuclear waste.

The personnel of JCO, a subsidiary of Sumitomo Metal Mining, began constructing an incinerator to dispose of low-level radioactive substances at its plant in Tokai Village, Ibaraki Prefecture, on Monday.

The firm lost its business license for such processing after 2 workers died of radiation poisoning during the disposal process in September, 1999. More than 660 others in and around the plant, including residents, were exposed to radiation.

JCO has been allowed to conduct work to store nuclear waste that was produced from processing procedures before the firm lost the permit.

The firm is hoping to begin using the incinerator in November to burn low-level radioactive materials such as waste oil. Used work clothes and documents are among the item to be treated.

The materials the company plans to destroy amount to about 700 metallic barrels, each with a capacity of 200 liters. The firm's officials say the facility's air-filtering system will prevent any radioactive substances from leaking outside.

The plant's head, Hirokazu Miyauchi, said the workers will make safety the top priority when they operate the incinerator.

January 10, 2014

More radiation from tanks

Radiation rises from Fukushima water tanks

http://www3.nhk.or.jp/nhkworld/english/news/20140110_17.html

Nuclear regulators will discuss measures to prevent the increase of radiation levels around the crippled Fukushima Daiichi plant.

The level of radiation at the plant's border rose to more than 8 milisieverts in annualized figures in December, from less than 1 milisievert in March in the same year.

The regulators say that's due to the increasing number of storage tanks for radioactive water at the plant. There are now about 1,000 tanks at the site.

They explained that the water basically emits beta-rays, which are too weak to penetrate the steel tanks. But they say, when beta-rays hit metals, stronger X-rays come out of the tanks, affecting the environment.

Japan's Nuclear Regulation Authority sets the limit for radiation doses at the plant's border at less than 1 milisievert per year. The current reading is 8 times the targeted limit.

On Friday, the regulators are holding a meeting of experts to discuss measures against the increase.

The officials say they have been aware of the problem for a certain period of time, but could not deal with it as they were occupied with the issue of contaminated water.

They said they will come up with measures against the rise as it is needed to reduce the radiation dose plant workers are exposed to.

Nahara should have referendum on waste site

Excerpt from:

Tepco overpaying to procure goods, services: contract-screening panel

http://www.japantimes.co.jp/news/2014/01/10/national/tepco-overpaying-to-procure-goods-services-contract-screening-panel/#.Us_wu7TrV1s

Waste site referendum
NARAHA, Fukushima Pref.

JIJI

A group of Fukushima residents in the fallout-hit town of Naraha on Friday requested that a local ordinance be drafted to hold a referendum on accepting interim nuclear waste storage in the municipality.

Such a facility would be a disincentive for young residents to return, said Keiichi Matsumoto, who is leading the group. Matsumoto, 65, stressed that residents should be given an opportunity to make a decision on the issue.

The group issued the request directly to Naraha Mayor Yukiei Matsumoto. The mayor will convene a municipal assembly within 20 days and submit a draft ordinance to enable the proposed vote along with his own opinion on the ordinance.
Last month, the group presented a petition for such an ordinance to the municipal board of election. The board confirmed there were 2,151 valid signatures, far more than the 126 (one-50th of the voting population) required for an ordinance.

Naraha is one of the municipalities the central government has asked to host interim facilities for storing radioactive soil and other waste.

The Naraha government is ready to consider accepting an interim facility for low-level radioactive waste but not high-level contaminated soil.

January 11, 2013

Very high cesium in Fukushima fish

Fish with very high levels of cesium found near Fukushima

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201401110029

A fish contaminated with extremely high levels of radiation was found in waters near the crippled Fukushima No. 1 nuclear power plant, a government-affiliated research institute said.

The Fisheries Research Agency said Jan. 10 the black sea bream had 12,400 becquerels per kilogram of radioactive cesium, 124 times the safety standards for foodstuffs.

The fish was caught at the mouth of the Niidagawa river in Iwaki, Fukushima Prefecture, on Nov. 17. The site is 37 kilometers south of the stricken power plant.

It was one of 37 fish-–all black sea bream--that researchers caught in waters in and off Iwaki in October and November to study the level of radiation to which they were exposed.

The research institute said it will study the fish further to try and determine when it became contaminated with such high levels of radioactive cesium.

Two other fish also exceeded the safety standards of 100 becquerels per kilogram, at 426 becquerels and 197 becquerels, respectively.

The readings of the remaining 34 fish were within the safety limits, according to the Fisheries Research Agency.
Officials said black sea bream in the region that was covered by the recent study have not been circulated as food in fish markets.

Black sea bream fishing in coastal waters off Fukushima and Miyagi prefectures is currently restricted.
They are also on the list of fish that local fishermen are asked to voluntarily refrain from catching in the northern municipalities of Ibaraki Prefecture, which is located just south of Fukushima Prefecture.

January 20, 2014

Govt. lists candidate sites for radioactive debris

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Japan's Environment Ministry has chosen 3 possible locations for disposing highly radioactive materials spread by the Fukushima Daiichi nuclear disaster.

The 3 are in Miyagi Prefecture, north of Fukushima.

Ministry officials made the announcement at a meeting attended by local mayors from the prefecture on Monday.

Storage built on the site will contain contaminated ash and mud with more than 8,000 becquerels of radioactive cesium per kilogram.

Ministry officials say they chose the sites after taking into account the distance from water sources and residential areas. Environmental protection was also considered. Geological surveys will be conducted.

The government drew criticism after presenting candidate sites in 2 prefectures in 2012 without consulting local authorities.

The government reviewed its selection process and agreed to involve the mayors.

Miyagi is the first prefecture that has chosen candidate sites under the revised process.

The final plan is to build a storage site in Miyagi and sites in 4 other prefectures in eastern Japan.

January 21, 2014

Chosen municipalities not happy about it

Gov't seeks to designate Miyagi Pref. municipality as final nuke waste disposal site

http://mainichi.jp/english/english/newsselect/news/20140121p2a00m0na003000c.html

SENDAI -- The Ministry of the Environment said on Jan. 20 that it wants to designate three municipalities in Miyagi Prefecture as candidate sites for permanently storing so-called "designated waste" including radioactive materials, asking them to accept its plan to conduct geological surveys there with an eye to singling out the most suitable site.

The municipalities selected for candidate disposal sites are **Kurihara, Kami and Taiwa**. The government wants to bury such waste, produced in Miyagi Prefecture in connection with the outbreak of the Fukushima nuclear crisis, underground in one of the municipalities. The waste does not include radioactive soil produced in Fukushima Prefecture in the process of decontamination efforts.

It is the first time the government led by the Liberal Democratic Party and New Komeito has shown a list of candidate disposal sites for designated waste. The government plans to eventually select one municipality as the final disposal site.

The proposal was presented to Miyagi Gov. Yoshihiro Murai and mayors of all municipalities in the prefecture at a mayors' meeting held at a hotel in Sendai. Senior Vice Minister of the Environment Shinji Inoue said, "We will put an enormous burden on municipalities that are selected as candidate sites, but we want to ask for your cooperation in disposing of designated waste from across the prefecture."

In selecting candidate sites, the government initially ruled out those areas that could suffer from natural disasters such as tsunami and landslides as well as areas near tourist spots which had attracted at least 500,000 visitors annually over five years prior to the 2011 Great East Japan Earthquake. The government then selected a government-owned site in each of the three municipalities from among 17 locations in six municipalities owned by the central government and the Miyagi Prefectural Government that could each provide 2.5 hectares of land necessary for the project.

The selection of the three candidate sites was based on assessments of **three factors -- distance from local communities, distance from water sources and the availability of nature**. After conducting underground excavations to confirm the safety of the sites, the government plans to eventually pick one location. For any municipality that accepts the government proposal, the government promised to take measures to promote the local economy and prevent harmful rumors.

Kami Mayor Hirobumi Inomata said, "This is the worst location as local residents strongly opposed even a plan to store pasture grass contaminated with low levels of radiation. We can't cooperate."

The mayors of the other two municipalities also expressed reservations about the plan, saying in part that they had already been receiving a flood of protests against the scheme. But on the morning of Jan. 21, Kurihara Mayor Isamu Sato expressed his intention to accept the government's plan to conduct a geological survey on condition that the two other municipalities do the same and a resident briefing is held. Miyagi Gov. Murai, meanwhile, expressed his intention to play a mediator role, saying, "Nothing will move forward if we say 'no' because of opposition from residents."

Separately, the government plans to store soil contaminated with more than 100,000 becquerels of radiation per kilogram, which has been produced in the process of decontamination efforts in Fukushima Prefecture, for 30 years in interim storage facilities in three municipalities -- Okuma, Futaba and Naraha -- near the crippled nuclear complex in the prefecture. However the government plans to ultimately bury and dispose of the soil outside the prefecture, although no final storage sites for the waste have been decided.

Three candidate sites picked in Miyagi for radioactive waste disposal

http://www.japantimes.co.jp/news/2014/01/21/national/three-candidate-sites-picked-in-miyagi-for-radioactive-waste-disposal/#.Ut5Kt7TjJ1s

JIJI

SENDAI – Three state-owned candidate sites for the final disposal of radioactive waste have been selected in Miyagi Prefecture, the Environment Ministry said Monday.

The three municipalities involved are the city of Kurihara and the towns of Kami and Taiwa, the ministry said at a meeting in Sendai.

Facilities to be built on one of the sites will dispose of waste tainted with over 8,000 becquerels per kilogram of radioactive fallout from the March 2011 triple meltdown at Tokyo Electric Power Co.'s Fukushima No. 1 nuclear power plant.

The meeting was attended by representatives from all municipalities in Miyagi.

The ministry plans to eventually select one site after conducting extensive surveys. But participants from the three municipalities denied involvement in the selection process.

The ministry said the sites were chosen based on their risk of being affected by natural disasters and how far they are from sources of water.

The ministry excluded municipalities that hosted more than 500,000 tourists a year from 2006 to 2010, in line with criteria set out by Miyagi.

After the meeting, Kami Mayor Hirobumi Inomata said his town cannot cooperate with a plan worked out behind a desk.
Kurihara Mayor Isamu Sato complained that the site chosen in his city had suffered landslides caused by earthquakes in the past.

Taiwa Mayor Hajimu Asao said he wants to know how and why the site in his town was selected, adding that he has many more questions to ask the ministry.

The government also plans to pick final disposal sites in Ibaraki, Tochigi, Gunma and Chiba Prefectures.

Why us?

Official asks for survey of waste storage sites

http://www3.nhk.or.jp/nhkworld/english/news/20140121_26.html

A senior Environment Ministry official has visited 3 candidate municipalities for storage of radioactive waste caused by the Fukushima disaster to seek consent for field surveys. But one mayor called the site selection process defective, and said he cannot agree to a survey.

The ministry plans to build final disposal facilities to store sewage sludge, incinerated ash and other waste contaminated with more than 8,000 becquerels of radioactive cesium per kilogram. The proposed facilities would be located in 5 prefectures, including Miyagi.

On Tuesday, Senior Vice Minister Shinji Inoue visited candidate municipalities Kurihara, Kami and Taiwa in Miyagi Prefecture, north of Fukushima. He asked the mayors for their cooperation in a geological survey that would narrow the candidate locations down to one in the prefecture.

But Kami Mayor Hirobumi Inomata said the site selection process is flawed, and he cannot accept a survey unless the ministry clarifies why his town was chosen.

The mayor pointed out that the ministry has said areas near sightseeing spots visited annually by more than 500,000 people should be exempt from becoming candidate sites. He stressed that more than 1 million tourists a year visit a mountain near the proposed site in his town.

Kurihara City Mayor Isamu Sato also expressed concern about hosting a storage facility, noting that the flow of water from the candidate site may flow into a reservoir.

Questions still have to be answered - first

Japan's nuclear waste problem

http://www.japantimes.co.jp/opinion/2014/01/21/editorials/japans-nuclear-waste-problem/#.Ut6xC7TjJ1s

The government plans to step up its efforts to select the final disposal site for high-level radioactive waste from nuclear power generation, after having failed to find any willing host community for more than a decade. But the long-stalled process will have little prospect of moving forward unless doubts and questions surrounding nuclear power — including those highlighted by the 2011 Fukushima nuclear disaster — are answered.

In 2000, the government decided that high-level radioactive waste, produced after spent fuel from nuclear power plants is reprocessed, should be vitrified and buried deeper than 300 meters underground. Two years later, it started soliciting municipalities around the country that would volunteer to host a

disposal site, offering hefty subsidies in exchange for preliminary research. One town in Kochi Prefecture came forward in 2007, only to withdraw the offer after its mayor resigned in the face of local opposition.

In December, the Abe administration decided that the government, rather than waiting for offers from municipalities, will identify scientifically suitable areas where stored high-level radioactive wastes are deemed safe from the effects of seismic and volcanic activities or underground water, and then approach municipalities in the areas for research as possible candidates for storage sites.

Japan's nuclear power generation has often been likened to a "condominium without a toilet" due to the lack of a final disposal site for radioactive waste that piles up as more fuel is used for power generation at nuclear plants.
The issue is cited by many as one reason for opposing nuclear power. The Abe administration, in its bid to maintain nuclear energy as the nation's key source of energy, apparently hopes to accelerate the process to choosing a disposal location.

But the government's push for expediting the process bypasses all the concerns raised over radioactive waste disposal, including a report by the Science Council of Japan in 2012 that called for a thorough review of the disposal method itself.

Prime Minister Shinzo Abe has told the Diet that technology for safely burying nuclear waste deep underground has been established, but doubts have been raised as to whether the technology is viable in quake-prone Japa

The head of the Science Council's expert panel said it is difficult to predict what changes would occur in the structures of ground layers at a disposal site in the next 100,000 years — the estimated time needed for the radiation emitted by the high-level waste to reach safe levels. It is therefore impossible, he said, to convince people of the safety of the disposal method.

The council observed that disposal site selection was going nowhere because the government pushed ahead with the process without a public consensus on the nation's nuclear energy policy, including the final disposal of high-level radioactive waste. It urged the government to fundamentally review the disposal method and set a direction of nuclear energy policy that can win broad public support and then specify what amount of radioactive waste needs to ultimately be disposed.

No such discussions seem to have since taken place within the government. Rather, the Abe administration appears bent on seeking a return to the pre-Fukushima disaster nuclear power policy without any public discussions, even though much of the mess from the 2011 Fukushima meltdowns remains unresolved and people continue to harbor fears over the safety of nuclear power, as indicated by media opinion polls.

Japan does need a permanent disposal site for its nuclear waste given that there already exist piles of spent fuel from past nuclear power generation, which will further increase if idled reactors are restarted. We urge the Abe administration to first consider ways to reduce the production of radioactive waste — by decreasing the nation's reliance on nuclear power as the prime minister has repeatedly pledged — and then review the entire disposal scheme and seek to build a public consensus on the issue.

January 22, 2014

River major source of cesium contamination

Large amount of cesium flowed into ocean after 2011 typhoon

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201401220010

By TATSUYUKI KOBORI/ Staff Writer

The amount of radioactive cesium that flowed into the sea through a river running across central Fukushima Prefecture when a powerful typhoon hit in September 2011 totaled 6.2 trillion becquerels, about 60 percent of the total for a 12-month period, researchers say.

The number was measured from Sept. 19 to Sept. 27, 2011, when Typhoon No. 15 swept through the region surrounding the Abukumagawa river.

Heavy rainfall and strong winds contributed to the high volume of cesium during the nine-day period, researchers say.

Cesium released from the crippled Fukushima No. 1 nuclear power plant in a triple meltdown in March 2011 landed in the soil in the region, which measures some 5,000 square kilometers wide. The fallout is gradually finding its way into the river through storm-water runoff.

A team of scientists from Kyoto University, the Meteorological Research Institute and other research bodies monitored water levels, depth of rainfall, the turbidity of the water and the concentration of cesium at six sites along the river from June 2011 to May 2012.

Based on the results, the researchers estimated the volume of cesium that flowed into the sea at the mouth of the Abukumagawa river in Iwanuma, Miyagi Prefecture.

In the 12-month period, the amount of cesium that reached the ocean was about 10 trillion becquerels, almost the same as the figure for cesium that directly flowed into the ocean from the crippled plant during the same period.

"Most of the cesium was attached to fine sediments in the river," said Yosuke Yamashiki, associate professor of environmental engineering at Kyoto University. "It was not absorbed by living things, meaning the cesium is not significantly impacting marine life."

He added that monitoring should be stepped up during typhoon season.

January 27, 2014

Science Council studies ways of storing radioactive waste

Council to study temporary nuclear waste storage

http://www3.nhk.or.jp/nhkworld/english/news/20140127_26.html

The Science Council of Japan has begun studying ways to store highly radioactive nuclear waste on a temporary basis.

The country's leading scientists resumed discussions on Monday for the first time since they made a proposal on the matter in September 2011.

Back then, they said the government's policy of burying nuclear waste deep underground permanently had come to a dead end. The council says the government should brace itself for an overhaul of the current plan.

The council proposed to store waste from nuclear power stations in a retrievable way for up to several hundred years to give time to develop new technologies and form consensus among the public.
Some members said the council needs to clarify technological issues for temporary storage. Others said people won't accept temporary storage unless the council makes clear how long nuclear waste will be kept.

The council plans to continue discussions and come up with ways for temporary storage by around May.

The government has started reviewing its policy in response to the proposal as it has not found a single candidate site for final disposal.

Nahara's qualms about accepting interim facility

Naraha Town asks to revise waste storage site plan

http://www3.nhk.or.jp/nhkworld/english/news/20140127_21.html

A town near the Fukushima Daiichi nuclear power plant has asked for a review of the central government's plan to build an interim facility in the municipality to store radioactive soil and debris from the 2011 accident.

Naraha Mayor Yukiei Matsumoto handed the request in writing to Fukushima Governor Yuhei Sato on Monday.

Japan's government last month asked 3 towns near the plant --- Naraha, Futaba and Okuma --- to allow construction of storage facilities for radioactive debris amassed within the prefecture. The waste would have radioactive levels of more than 100,000 becquerels per kilogram.

But Naraha wants the government to limit the town's proposed facility to, in principle, storing waste collected within the municipality and containing radiation of 100,000 becquerels per kilogram or less.

On Monday, the town's mayor told the governor of Fukushima Prefecture that conditions for evacuated residents to return to their homes are gradually being met. But he said the storage facility could derail the town's restoration, and asked for a review of the plan.

The Fukushima governor expressed his readiness to convey the request swiftly.

Some Naraha residents oppose storing debris of even lower radioactivity. The town will hold a public assembly on Wednesday to discuss whether it should have a referendum on the issue.

January 28, 2014

Hirono testing new method of decontamination

Forest decontamination test begins in Hirono town

http://www3.nhk.or.jp/nhkworld/english/news/20140128_36.html

Officials have begun testing a new technique to reduce radiation levels in a town within 30 kilometers of the Fukushima Daiichi nuclear power plant.

Hirono in Fukushima Prefecture has been removing contaminated soil and leaves from forests near houses, but progress has been slow due to a lack of places to store the waste.

All of the town's residents were evacuated after the March 2011 accident. Only 20 percent of them have returned, due to fears of radiation.

Town officials, with the backing of the prefectural government, began on Tuesday a trial of a decontamination system that does not produce waste.

The system involves covering a 200-square-meter forest area with 10-centimeter thick bags of uncontaminated soil. The town hopes the soil cover will shield the ground from radiation and reduce its levels above.

Officials will take radiation readings at the test site until Wednesday and analyze the data. Results of the trial are expected to be made public around April.

A local official says that although Hirono is testing the new method, the town will continue to ask for national government action to remove radioactive substances, as the municipality contains a large area of forests.

Not so much please

Fukushima to ask govt. to reduce waste sites

http://www3.nhk.or.jp/nhkworld/english/news/20140128_46.html

Fukushima Prefecture has decided to propose a review of a government request for the prefecture to host intermediate storage facilities for radioactive soil and other waste from the 2011 nuclear accident.

A panel of prefectural officials on Tuesday met for the first time to discuss last month's government request for the prefecture and 3 of its municipalities to host the facilities.

The three municipalities are Okuma, Futaba, and Naraha towns. They are **either demanding a review of the government plan or opposing it outright.**

Naraha Town has asked the prefecture to call on the government not to bring into the town radioactive

waste over a certain level.

At the meeting, Vice Governor Masao Uchibori said it is necessary to consider consolidating the sites of the planned facilities and to reduce their size from the government plan. He suggested developing new technologies to decrease the amount of contaminated soil.

Taking local opinions into account, Fukushima Prefecture decided to call on the government to discuss a review of the facilities construction plan.

February 1, 2014

Sludge in Kanagawa now officially radioactive waste

Sludge designated radioactive waste for 1st time in Kanagawa

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201402010038

Radioactive sludge from water purification plants has been placed in temporary storage facilities in Tochigi Prefecture. (Provided by Tochigi prefectural government)

THE ASAHI SHIMBUN

The Environment Ministry has classified 2.9 tons of sludge from Kanagawa Prefecture as radioactive waste derived from the Fukushima nuclear disaster, the first such designation for the prefecture on the southern border of Tokyo.

The designation, made in December, means the ministry is responsible for disposing of the radioactive sludge.

The ministry on Jan. 31 stopped short of disclosing the origins of the waste, but Yokohama city government officials said the designation covers sludge from rain collection and storage facilities at 17 municipal elementary, junior high and other schools.

The city applied for the designation of the sludge as radioactive waste in September.

The designation also included sludge collected from roadside ditches and elsewhere, for which the city had filed similar applications, the city government officials added.

Waste containing more than 8,000 becquerels of radioactive cesium, spewed from the crippled Fukushima No. 1 nuclear power plant, per kilogram is eligible for the designation.

A total of 140,000 tons had been designated by the end of 2013 from Tokyo and 11 prefectures, including Kanagawa.
The Environment Ministry plans to dispose the waste within the prefecture of its origin.

The ministry plans to build final disposal sites in five prefectures, including Miyagi, where there is a dearth of storage sites.

In the other prefectures, the waste remains in limbo in temporary storage in the absence of decisions on the disposal method.

Ministry officials said the limited volume of radioactive waste from Kanagawa Prefecture means no disposal site will have to be built.

February 4, 2014

Leave Nahara out

Fukushima governor wants waste storage plan change

http://www3.nhk.or.jp/nhkworld/english/news/20140204_35.html

The governor of Japan's Fukushima Prefecture has proposed that storage facilities for highly radioactive waste be built in 2 of its municipalities, not 3 as requested by the central government.

Yuhei Sato made the proposal on Tuesday when he met the mayors of Okuma and Futaba towns for the first time since the government in Tokyo announced its storage plan in December.

The plan calls on the prefectures and the 3 municipalities to allow building of intermediate storage facilities in Okuma, Futaba and Naraha towns. It says the central government will buy 19 square kilometers of land in the towns for construction sites.

Tuesday's talks were held behind closed doors.

Officials who took part said Sato explained his idea of asking the government to drop Naraha from the plan, and proposed that the 2 other towns provide the land. The officials said he also asked the mayors to consent to his proposal.

Naraha has already rejected the government's plan for it to store soil contaminated with more than 100,000 becquerels of radioactive cesium per kilogram.

After the meeting, Sato said putting the facilities in the 2 municipalities would help accelerate decontamination and environmental restoration of the region.

Prefectural government officials plan to hold more talks including Naraha's mayor. They want to compile an alternative to the government's plan as soon as possible, to start negotiations with Tokyo.

February 5, 2014

Fukushima storage plan

Fukushima governor proposes new waste storage plan

http://www3.nhk.or.jp/nhkworld/english/news/20140205_32.html

The governor of Japan's Fukushima Prefecture says he will propose that storage facilities for highly radioactive waste be built in 2 of its municipalities, not 3 as requested by the central government.

Yuhei Sato was speaking on Wednesday about a storage plan that the government in Tokyo announced in December.

The plan calls on the prefecture and the 3 municipalities to allow building of intermediate storage facilities in Okuma, Futaba and Naraha towns. It says the government will buy 19 square kilometers of land in the towns for construction sites.

Sato said he told officials of the 3 towns about his idea of asking the government to drop Naraha from the plan.

He noted that putting the facilities in the 2 other towns would help in rebuilding areas around the Fukushima Daiichi nuclear power plant.

Sato said Okuma and Futaba town officials told him that all municipalities around the plant should discuss the matter apart from whether they will accept construction of facilities. The governor said he wants to hear from them soon.

Naraha has already rejected accepting radioactive debris. It says it's preparing to allow former residents of the town to return after government designation of it as an area where radiation levels are relatively

low.

Sato says he wants to ask the government to discuss an alternative storage plan after making arrangements with mayors of municipalities around the plant.

Fukushima gov. to propose storage facilities for radioactive soil in 2 towns

http://mainichi.jp/english/english/newsselect/news/20140205p2a00m0na014000c.html

FUKUSHIMA -- Fukushima Gov. Yuhei Sato is poised to submit a plan to the central government to build interim storage facilities for radioactive soil in two towns where radiation levels remain high.

Sato informed Okuma Mayor Toshitsuna Watanabe and Futaba Mayor Shiro Izawa that he intended to urge the national government to build interim storage facilities in their towns. He came up with the proposal after the fellow candidate town of Naraha, where the radiation level is relatively low, refused to accept radioactive waste. The prefectural government would reduce the volume of waste before storing it in the two towns. Watanabe and Izawa withheld their answers on whether to accept the governor's proposal.

Sato explained to the mayors that reducing the scale of the facilities would be an essential part of recovery of the Futaba county following the March 2011 earthquake, tsunami and ensuing nuclear disaster. The two mayors, on the other hand, said the integration of the facilities and the decision on whether or not to accept construction in their towns were separate issues. Futaba Mayor Izawa said that he would make a decision after consulting with town assembly members and residents.

At the end of last year, the Ministry of the Environment proposed a plan to build facilities in towns of Okuma, Futaba and Naraha to store 22 million to 28 million cubic meters of contaminated soil for 30 years.

In both Okuma and Futaba, areas where 96 percent of residents previously lived have been designated as zones where return will be "difficult." This designation applies to areas where the yearly radiation dosage exceeds 50 millisieverts. Meanwhile, in Naraha, all the areas in which residents lived have been designated as "areas preparing to lift evacuation orders" (with a yearly radiation level less than 20 millisieverts), and the municipal government aims to present possible dates for residents' return as early as this spring. At the same time, opposition to building interim storage facilities in the town has grown strong among residents who hope to return.

February 7, 2014

New disposal plan

Fukushima Gov. unveils new disposal plan

http://www3.nhk.or.jp/nhkworld/english/news/20140207_42.html

The Fukushima Prefectural government has announced a new plan to dispose of soil and debris contaminated with radioactive substances from the Fukushima Daiichi nuclear power plant.

The move comes after the central government announced its own plan in December. They want to build intermediate storage facilities in the towns of Okuma, Futaba and Naraha.

But the Fukushima prefectural government opposes the idea, saying Naraha should be excluded. Radiation levels are relatively low in Naraha, where preparations are underway to bring former residents back home.

The local government plans to construct a disposal facility in Naraha for debris and garbage with radiation levels of 100,000 becquerels or less per kilogram. The waste would be encased in cement and later moved to a disposal facility in a neighboring town.

On Friday, Fukushima Governor Yuhei Sato met mayors of 8 towns and villages near the nuclear plant to explain the prefecture's plan.

Governor Sato said that local communities now have a basic understanding of the plan, and he hopes to convey it to the central government as soon as possible.

February 12, 2014

Fukushima storage plan

Fukushima asks govt. to review debris storage plan

http://www3.nhk.or.jp/nhkworld/english/news/20140213_01.html

The governor of Fukushima prefecture has asked the central government to consider scaling down planned temporary storage facilities for radioactive debris. He wants to reduce the affects on local towns near the Fukushima Daiichi nuclear plant that are hoping to rebuild their communities.

Governor Yuhei Sato met Environment Minister Nobuteru Ishihara and Reconstruction Minister Takumi Nemoto in Tokyo on Wednesday.

The government is planning to store radioactive debris and soil from decontamination work in 3 towns close to the crippled Fukushima Daiichi plant. They are the towns of Futaba, Okuma and Naraha.

The governor stressed that the scale of the storage sites should be as small as possible.

He raised a recent agreement between the prefecture and the 3 towns.

It proposes reducing the number of host municipalities to two by excluding the town of Naraha from the plan.

Naraha logs lower radiation levels compared to the other two towns, and more evacuees are hoping to return to their homes as soon as possible.

He suggested building only a limited facility in Naraha that would solidify ash from the incinerated debris from the 2011 disaster. The radiation levels of the debris treated there would be lower.

The governor also asked the government to swiftly draw up measures that would allow the owners of the land where the facilities will be constructed to rebuild their lives, as well as their neighbors.

He also requested development measures be drawn up for host communities.

Ishihara said he will fully consider the request from the prefecture and the towns, although reviewing the plan will be difficult.

February 13, 2014

Fukushima's disposal sites

Fukushima seeks limit on radioactive waste disposal sites

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201402130062

Fukushima prefectural authorities have asked the Environment Ministry to reduce from three to two the number of sites it plans for the temporary storage of radioactive debris generated by the Fukushima No. 1 nuclear power plant disaster.

Fukushima Governor Yuhei Sato on Feb. 12 submitted a request to Environment Minister Nobuteru Ishihara and Takumi Nemoto, the minister in charge of post-quake reconstruction, asking them not to build a storage facility in the town of Naraha so that its residents can return home earlier.

Based on the request, Ishihara said the Environment Ministry will review the initial plan to erect facilities in Naraha, as well as the towns of Okuma and Futaba.

"It will be hard work to go over the plan, but we will consider the proposal promptly and offer an explanation," said Ishihara.

The central government intended to construct intermediate storage facilities in the three towns, all in Fukushima Prefecture, that are capable of storing 13.1 million, 12.4 million and 2.5 million cubic meters of debris, respectively. The smallest of the sites was to be built in Naraha.

However, Sato argued in his request that if collected debris were burned to reduce its volume, the two larger sites could accommodate all the waste.

The governor also proposed that the ministry build a plant to process the ash from debris with radioactive values at 100,000 becquerels per kilogram or lower in Naraha instead.

The central government first asked the prefecture and the three municipalities in December to accept the construction of the intermediate storage facilities. But Naraha asked the Fukushima prefectural government to call on the central government to hold off on the site in their town, arguing that radiation levels there were relatively low and erecting a storage facility would hamper its efforts to help displaced residents return.

Elsewhere though, many other municipalities in the prefecture have urged the prefectural government to quickly facilitate the building of those facilities because radioactive soil and other associated waste generated by the Fukushima nuclear disaster are filling up temporary storage sites throughout the prefecture.

The Environment Ministry estimates that 1.6 million cubic meters of debris was stored across Fukushima Prefecture as of the end of last October.

Starting in mid-December, the prefectural government began discussing Naraha's request with the local authorities in Okuma and Futaba.

On Jan. 22, the day Fukushima Governor Sato declared the prefectural government would play a leading role in deciding how to implement the central government's plan, Masao Uchibori, a vice governor of Fukushima Prefecture, informally met with mayors of Okuma and Futaba to finalize the contents of the request that would be submitted to the environment minister.

The Environment Ministry has vowed to remain flexible when handling requests from local governments. Until Sato submitted his plea neither the prefectural government nor the municipalities had responded to the ministry's request.
"A path to dialogue has finally opened," said a senior ministry official.

Another senior official said the latest request from the prefectural government will create a need for the ministry to redesign the planned facilities and revise routes to transport radioactive soil.

"We will be able to show a revised plan to local governments in early March at the earliest," the official said.

Fukushima urges gov't to revise decontamination waste storage plan

http://mainichi.jp/english/english/newsselect/news/20140213p2g00m0dm052000c.html

TOKYO (Kyodo) -- Fukushima Gov. Yuhei Sato on Wednesday urged the central government to exclude one of the three towns where facilities are to be built to store highly radioactive material from the Fukushima Daiichi nuclear power plant disaster.

"We want the government to consider...building the waste storage facilities in the towns of Okuma and Futaba," Sato said in a written request which called for revising the government's proposal to also build a storage site in Naraha to store soil and other radioactive material removed during decontamination work outside the plant.

The government has planned to acquire a total of about 19 square kilometers of land inside the three towns to build facilities to store waste containing over 100,000 becquerels per kilogram of radiation.

But the town of Naraha, which is less contaminated than the two other towns that host the disaster-struck plant, has refused to accept highly radioactive waste, saying it does not want to disrupt efforts to bring back residents.

So Sato decided to exclude Naraha from the plan, while also saying he does not want the move to increase the burden borne by the towns of Futaba and Okuma.

"We expect the government to consider revising the plan without leading to an increase in the size of areas needed for the construction of the facilities in the two towns," Sato said in the request.

The government expects about 28 million cubic meters of waste from decontamination work to be stored in the facilities, of which 2.5 million cubic meters was to be stored in Naraha.

The waste is supposed to be disposed of outside Fukushima Prefecture within 30 years.

Environment Minister Nobuteru Ishihara, who received the request along with Reconstruction Minister Takumi Nemoto, said, "It is not easy to change the plan, but I want to take it seriously as it is the consensus of local opinions."

The Environment Ministry may present a revised plan to the local governments later in the month. The local governments will decide whether to accept the proposal after hearing explanations from the central government.

Decontamination work is taking place in a vast land area outside the Fukushima Daiichi plant, which saw three reactors suffer core meltdowns. Around 140,000 Fukushima Prefecture residents still live as evacuees.

February 16, 2014

Job half-done?

Decontamination at over 50% outside Fukushima

http://www3.nhk.or.jp/nhkworld/english/news/20140217_03.html

Officials at Japan's Environment Ministry say more than 50 percent of homes outside Fukushima Prefecture have undergone government-funded decontamination following the March 2011 nuclear accident.

The officials say the work was done on nearly 80,000 homes at the end of last year.

The figure represents 59 percent of homes marked for decontamination in 58 municipalities.

The number is more than 13,000 higher from the previous survey 4 months earlier. The rate has exceeded 50 percent for the first time. The rise is attributed to increased clean-up efforts.

Officials say the increase was partly because more homes were found not to have needed decontamination after radiation monitoring was conducted.

They say the work has almost been completed in Gunma and Chiba prefectures. But the completion rate remains at around 30 percent in Miyagi and Ibaraki prefectures.

Many municipalities outside Fukushima Prefecture plan to finish the decontamination by the end of March this year.

But ministry officials say some municipalities may need to review their plans.

February 18, 2014

Fukushima Recovery Forum with US experts

Japanese, US experts discuss decontamination

http://www3.nhk.or.jp/nhkworld/english/news/20140218_37.html

Experts from US nuclear technology firms are presenting their know-how at a meeting in Tokyo to promote decommissioning of the Fukushima Daiichi plant and decontamination in the prefecture.

26 US companies with expertise in nuclear waste disposal are participating in the 2-day "Fukushima Recovery Forum," which began on Tuesday.

Officials from Japanese firms --- such as construction companies involved in the cleanup work --- are also attending the event.

The forum was jointly organized by the Japanese and US governments to exchange opinions on what kind of cooperation may be possible for Fukushima recovery efforts.

Experts from a US environmental consultancy proposed creating an underground facility to chemically remove radioactive substances. The facility would be part of measures to prevent contaminated water from seeping into the sea from the Fukushima plant. The US firm has experience in removing radioactive substances from around the Chernobyl plant in Ukraine.

An official from a US company said the cleanup projects in Fukushima appear to be going slowly, and that US technology would be able to help speed up the pace of work.

February 25, 2014

Fukushima request rejected

Government refuses to limit sites for final disposal of radioactive debris

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201402250051

By SAWAAKI HIKITA/ Staff Writer

The central government rejected a request by the governor of Fukushima prefecture to introduce legislation guaranteeing that the final disposal facilities for radioactive waste from the Fukushima No. 1 nuclear power plant disaster would be located outside the prefecture.

"Where to build intermediate storage facilities for radioactive debris has yet to be determined," Environment Minister Nobuteru Ishihara said at a Feb. 24 Lower House Budget Committee session.

Ishihara implied that the central government would put top priority on completing intermediate facilities to store radioactive materials collected through decontamination work, and that once the intermediate facilities are determined, he would consider introducing the new legislation.

At a December meeting with Ishihara, Fukushima Governor Yuhei Sato asked the minister to introduce legislation that would prohibit the government from selecting Fukushima Prefecture as the final disposal site for radioactive debris. Ishihara promised to make efforts to enact a law after the prefecture and local municipalities agree to allow intermediate facilities. He asked Sato and the mayors of Futaba, Okuma and Naraha to accept the construction of intermediate storage facilities in the three municipalities.

Although the local governments have not determined whether to accept the intermediate storage facilities, the prefecture has demanded that the central government pledge in the new legislation to transfer radioactive materials out of Fukushima Prefecture within 30 years.

"Unless we gain the support of (local people), we will not be able to build intermediate storage facilities," Ishihara also said Feb. 24. "After I get an opportunity to explain that fact to (local governments), I will tackle the issue (of introducing the new legislation)."

Do you know NUMO?

Govt. panel approves nuclear disposal guidelines

http://www3.nhk.or.jp/nhkworld/english/news/20140225_03.html

A government-commissioned panel of experts has endorsed a proposal on how to choose locations for burying radioactive nuclear waste.

The Nuclear Waste Management Organization, or NUMO, submitted the proposal to the panel on Monday. The organization is responsible for building disposal facilities.

The government panel, including experts in the fields of seismology, volcanoes and groundwater, discussed how NUMO plans to select sites to permanently store the waste deep underground.

The guidelines say the waste should not be buried near active geological faults or within 15 kilometers of volcanoes.

They recommend avoiding places that water could permeate.

The government will use the guidelines to screen candidate sites.

But some members of the panel called for more discussions on whether it is ever safe to store nuclear waste underground.

Gov't changes its mind on storage

Gov't panel gives up scientifically singling out areas for storing high-level nuclear waste

http://mainichi.jp/english/english/newsselect/news/20140225p2a00m0na012000c.html

An expert panel of the Ministry of Economy, Trade and Industry effectively abandoned its efforts on Feb. 24 to scientifically single out "proper areas" that can host underground permanent storage facilities for high-level radioactive waste.

The industry ministry panel presented draft criteria for selecting proper areas in which high-level radioactive waste from nuclear reactors could be buried deep underground. The panel showed the criteria for improper areas for storing highly radioactive nuclear waste: areas within a 15-kilometer radius from nuclear reactors; areas around active faults; areas that have risen in elevation at least 300 meters over the last 100,000 years; and so on. The panel called for excluding those areas from the list of candidate sites. But proper areas that do not meet the criteria apparently account for 70 percent of Japan's total soil, and therefore the ministry panel has effectively abandoned its attempt to apply scientific criteria to single out proper areas in which high-level nuclear waste could be stored permanently in facilities build deep underground.

The central government abandoned its conventional plan in December last year to publicly solicit candidate sites and switched to a scheme to "select promising areas based on scientific grounds as well as asking multiple areas." The industry ministry's expert panel, which is comprised of 12 experts on geology, seismology, groundwater and other fields, has held six rounds of meetings since last October, discussing the validity of reports compiled by the Nuclear Waste Management Organization of Japan (NUMO), which is in charge of projects to dispose of nuclear waste.

As a result, the panel judged that it is important not to expose metal containers for radioactive waste and clay buffers to highly acidic groundwater to prevent them from being damaged. Earth temperatures should be sufficiently low, it says. The panel added that areas within a 15-kilometer radius from nuclear reactors are inappropriate.

The experts said the construction of storage facilities should be avoided in areas within certain ranges from major well-known active faults, depending on the length of the faults. At the same time, it suggested that the data on the location of active faults and their activities remain insufficient. The panel said, however, that it is possible to turn areas near small and fuzzy faults into proper ones by carefully laying out the disposal facilities. Whether or not to build facilities in such areas should be decided when detailed research is conducted, it said. Furthermore, in light of the possibility that even if the facilities are built underground, they could move up close to the surface of the earth or they could be eroded by rain and wind, the panel excluded areas that have risen in elevation at least 300 meters over the last 100,000 years from the "proper area" category.

There are fewer active faults in areas along the pacific coast of the Tohoku district and the Chugoku region as well as in the Kii Peninsula, and it is believed to be difficult for volcanos to emerge in Hokkaido's

Hidaka region, Sanriku coastal areas and the eastern parts of Kyushu. "Proper areas" are so extensive that the panel has not drawn up a nationwide map of such areas.

NUMO is to exclude inadequate areas from the list of candidate areas across the country in accordance with the criteria proposed by the expert panel. NUMO will then start operating permanent storage facilities for high-level radioactive waste about 30 years later after conducting three-step surveys and the like. The size of underground facilities would be about 10 square kilometers. **The facilities are scheduled to be operated for 50 years and they will be monitored for 300 years after being shut down.**

February 28, 2014

Contaminated fish

High radioactive materials detected in fish

http://www3.nhk.or.jp/nhkworld/english/news/20140228_16.html

Fishermen in Fukushima say high levels of radioactive materials have been detected in fish caught off the prefecture.

The prefectural fisheries association said on Thursday that 110 becquerels per kilogram of radioactive materials was detected in scorpion fish caught in test-fishing off Iwaki City.

The government safety limit is 100 becquerels. This is the first time radiation levels have exceeded the limit in the test-fishing program.

The association halted regular commercial fishing in March of 2011 due to the Fukushima nuclear accident. Test-fishing began in June of 2012.

Catches are now limited to 32 marine products, and sample tests are conducted to check radiation levels.

Marine products are marketed only if their radiation levels are less than 50 becquerels, as set by the association.

The association said the 13.2 kilograms of scorpion fish will not be marketed. It also said it will recall the 2.5 kilograms sold on the previous day, although their radiation levels were below the association's safety limit.

The association will exclude scorpion fish from test fishing for the time being, but will continue to catch other marine products.

March 7, 2014

Radioactive waste piling up in Tokyo area

THREE YEARS AFTER: Radioactive waste piles up in Tokyo area with no place to go

http://ajw.asahi.com/article/behind_news/social_affairs/AJ201403070026

Bags of radioactive waste lie under a tent at the garbage incineration site in Nagareyama, Chiba Prefecture. (Kazuhiro Nagashima)

Kikuji Enomoto wanted to live his retirement in peace while helping to beautify his neighborhood, but he is now stuck residing near more than 500 tons of radioactive waste.

The waste, consisting of incinerator ash, is being stored at the Teganuma disposal site, about 800 meters from Enomoto's home in Abiko, Chiba Prefecture. It is part of the thousands of tons of radioactive waste that remain in temporary storage in the Tokyo area nearly three years after the triple meltdown at the Fukushima No. 1 nuclear power plant.

Enomoto, 73, has run out of patience waiting for the prefecture to decide on a final disposal site for the waste.

He heads a group of 32 residents who filed a lawsuit in January against the Chiba prefectural government, demanding that the radioactive waste temporarily stored in their neighborhood be removed immediately.

"A major problem would arise if the incinerator ash leaked out due to the effects of a natural disaster and contaminated the surrounding rice fields," Enomoto said.

The temporarily stored waste contains more than 8,000 becquerels of radioactive cesium per kilogram and has been designated for special processing.

At the end of last year, 12 prefectures were storing a total of 140,843 tons of the waste. The basic rule is to have each prefectural government find a final disposal site for radioactive waste produced within its jurisdiction through garbage incineration or sewage treatment.

The central government plans to build final disposal sites in five prefectures--including Chiba--that have a dearth of storage sites, but no significant progress has been made. The other seven prefectures have still not decided how to handle radioactive waste within their boundaries.

Chiba Prefecture designated 3,612 tons of radioactive waste, mainly from the northwestern part of the prefecture, where many hot spots with high radiation levels were detected following the 2011 Fukushima nuclear accident.

The three cities of Kashiwa, Matsudo and Nagareyama incinerated a large part of that waste, producing 2,564 tons of ash that could not be sufficiently stored. The prefectural government allowed 526 tons of the ash to be brought to the Teganuma site at the end of 2012.

Incineration does not destroy radioactive substances, so the ash still falls under the designation for special disposal.

The central government plans to construct a final disposal site in Chiba Prefecture by the end of March 2015, the deadline set under an agreement between the prefectural government and the three municipal governments to end temporary storage at Teganuma.

However, the selection process has not gone smoothly, and the residents filed the lawsuit because they feared the temporary storage site would become the permanent one.

Enomoto, who has won an award from the Abiko government for his efforts to beautify the city, said the central government must become more involved.

"Unless a final disposal site operated by the central government is constructed, there would be no place to keep the incinerator ash," he said. "I want them to take back this waste as soon as possible."
Kashiwa Mayor Hiroyasu Akiyama stressed the urgency of the situation.

"If a location for the final disposal site is not chosen by around September, we will have to begin considering a temporary storage site for the waste that will be returned," Akiyama said.

The Tokyo metropolitan government has designated about 982 tons as radioactive waste. All but one ton is now being temporarily stored at a land reclamation site.

"We were lucky to have a disposal site surrounded by the ocean," an official in charge said. "There has been no strong opposition from residents. We want to now wait for the central government to take care of the matter."

Saitama is the only prefecture in the greater Tokyo area that has not designated any radioactive waste. But that does not mean there is no such waste in the prefecture just north of the capital.

In fact, the prefecture is temporarily storing 245 tons of incinerator ash with radiation levels that would qualify it as radioactive waste at its sewage processing facility in Toda.

Saitama Prefecture has not applied for the designation to avoid being obliged to process the waste within the prefecture.

"If we received the designation, we would have to ask a municipality to bear the burden of being chosen for the final disposal site," a prefectural government official said.

An official with the prefectural government section in charge of sewage management said if radiation levels of the waste decreased to a certain level, it could be turned over to a company handling industrial waste for transport outside of Saitama.

March 10, 2014

Fukushima reservoirs will be decontamined

THREE YEARS AFTER: Decontamination planned for agricultural reservoirs in Fukushima

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201403100060

The central government plans to start decontaminating hundreds of long-neglected reservoirs for agricultural use in Fukushima Prefecture that have shown unusually high radioactivity levels.

"We have been discussing the issue with the agriculture and environment ministries since last fall, and I intend to conduct the decontamination of the reservoirs," Takumi Nemoto, the minister in charge of post-disaster reconstruction, told reporters in Tokyo on March 9.

The state's decontamination program has cleaned up towns and communities since the 2011 Great East Japan Earthquake and tsunami triggered the triple meltdown at the Fukushima No. 1 nuclear power plant. But the program does not cover reservoirs in the prefecture.

However, cesium levels exceeding 8,000 becquerels per kilogram were detected in mud at the bottom of 576 agricultural reservoirs in the prefecture, including 14 sites with readings topping 100,000 becquerels per kg, according to a survey by Fukushima Prefecture and others.

Local municipal leaders have asked the central government for additional decontamination measures because some of those reservoirs are located within residential areas and are used to supply water to irrigate farmland.

Nemoto also said the state is considering extending its subsidy system to help local governments recover from the disaster. The subsidy program is scheduled to terminate at the end of fiscal 2015.

March 15, 2014

Expecting to see ocean radiation soon

Scientists expect traces of ocean radiation soon

http://mainichi.jp/english/english/features/news/20140315p2g00m0fe019000c.html

(AP) -- Scientists have crowdsourced a network of volunteers taking water samples at beaches along the U.S. West Coast in hopes of capturing a detailed look at low levels of radiation drifting across the ocean since the 2011 tsunami that devastated a nuclear power plant in Japan.

With the risk to public health extremely low, the effort is more about perfecting computer models that will better predict chemical and radiation spills in the future than bracing for a threat, researchers say.
Federal agencies are not sampling at the beach. The state of Oregon is sampling, but looking for higher radiation levels closer to federal health standards, said state health physicist Daryl Leon.
Washington stopped looking after early testing turned up nothing, said Washington Department of Health spokesman Donn Moyer.

The March 2011 tsunami off Japan flooded the Fukushima Dai-Ichi nuclear plant, causing radiation-contaminated water to spill into the Pacific. Airborne radiation was detected in milk and rainwater in the U.S. soon afterward. But things move much more slowly in the ocean.

"We know there's contaminated water coming out of there, even today," Ken Buesseler, a senior scientist at the Woods Hole Oceanographic Institution in Massachusetts, said in a video appealing for volunteers and contributions.

In fact, it is the biggest pulse of radioactive liquid dropped in the ocean ever, he said.
"What we don't really know is how fast and how much is being transported across the Pacific," he added. "Yes, the models tell us it will be safe. Yes, the levels we expect off the coast of the U.S. and Canada are expected to be low. But we need measurements, especially now as the plume begins to arrive along the West Coast."

In an email from Japan, Buesseler said he hopes the sampling will go on every two or three months for the next two to three years.

Two different models have been published in peer-reviewed scientific journals predicting the spread of radioactive isotopes of cesium and iodine from Fukushima. One, known as Rossi et al, shows the leading edge of the plume hitting the West Coast from southeast Alaska to Southern California by April. The other, known as Behrens et all, shows the plume hitting Southeast Alaska, British Columbia and Washington by March 2016.

The isotopes have been detected at very low levels at a Canadian sampling point far out to sea earlier than the models predicted, but not yet reported at the beach, said Kathryn A. Higley, head of the Department of Nuclear Engineering and Radiation Health Physics at Oregon State University. The Rossi model predicts levels a little higher than the fallout from nuclear weapons testing in the 1960s. The Behrens model predicts lower levels like those seen in the ocean in the 1990s, after the radiation had decayed and dissipated.

The models predict levels of Cesium 137 between 30 and 2 Becquerels per cubic meter of seawater by the time the plume reaches the West Coast, Higley said.

The federal drinking water health standard is 7,400 Becquerels per cubic meter, Leon said.
Becquerels are a measure of radioactivity.

The crowdsourcing raised $29,945 from 225 people, enough to establish about 30 sampling sites in Alaska, British Columbia, Washington and California, according to Woods Hole. The website so far has not reported any radiation.

Sara Gamble of Washington state, the mother of a young child, raised $500 because she thinks it is important to know what is really going on. Woods Hole sent her a bucket, a funnel, a clipboard, a UPS shipping label, instructions and a big red plastic container for her sample. She went to Ocean Shores, Washington, a couple of weeks ago, collected her sample and shipped it off. No results have come back yet. To do another sample, she will have to raise another $500.

"I got lots of strange looks at the beach and the UPS Store, because it's labeled 'Center for Marine and Environmental Radioactivity,' and it's a big red bin," she said. "But it's funny; nobody would ask me anything out on the beach. I was like, 'Aren't you curious? Don't you want to ask?'"

Taking the sample has allayed her initial fears, but she still thinks it is important to know "because it affects our ecosystems, kids love to play in the water at the beach, and I want to know what's there."
(Mainichi Japan)

March 20, 2014

No numerical standard for 2nd clean-up

http://www3.nhk.or.jp/nhkworld/english/news/20140321_06.html

Japanese officials say they will decide on a case-by-case basis whether to conduct decontamination work again at high-radiation areas near the Fukushima Daiichi plant.

Some residents around the damaged nuclear power plant are worried about high radiation spots in areas where workers previously cleaned up radioactive substances.

Environment Ministry officials said on Thursday that the entire area will not be cleaned up again.

They said they will monitor radiation levels, detect hot spots and examine each situation.

Senior Vice Environment Minister Shinji Inoue said it is difficult to set a numerical standard at this stage.

He said officials will decide whether to decontaminate an area again after examining radiation levels around the spot and how the radiation levels change as time passes.

March 22, 2014

Contamination of Fukushima reservoirs

Radiation high in Fukushima reservoirs

http://www3.nhk.or.jp/nhkworld/english/news/20140323_02.html

State and local government officials say they have detected radioactive substances exceeding government safety limits in soil at the bottom of agricultural dams and reservoirs in Fukushima Prefecture.

The agriculture ministry and the Fukushima prefectural government found 8,000 becquerels or more per kilogram of radioactive substances in 568 out of the 1,940 dams and reservoirs they inspected between last June and December.

108 were in the evacuation zones around the Fukushima Daiichi power plant, and 460 were further away.

Officials detected 370,000 becquerels per kilogram in the soil of a reservoir 58 kilometers away from the plant.

It is the highest reading so far recorded outside the evacuation zones, and more than 46 times the government limit of 8,000 becquerels for radioactive waste.

The state government is obliged to dispose of radioactive waste beyond this limit.

Prefectural officials say rain may have carried radioactive substances into the waters from surrounding forests.

Water from the reservoir with the highest reading outside the evacuation zones is being used for rice paddies nearby. But officials say they have not found radiation levels exceeding food safety limits in locally-produced rice, probably because radioactive substances in the soil barely dissolve in water.

The head of an association of residents says officials have told them they will not be exposed to radiation as long as there is water in the reservoir.

But he says they fear radioactive levels may surge if it dries up. He is urging the state government to address the problem as soon as possible.

The entire area will not be cleaned again

What about all that nuclear waste?

Nuclear waste buildup relentless

http://www.japantimes.co.jp/news/2014/03/22/national/nuclear-waste-buildup-relentless/#.Uy3bd4XrXIU

JIJI

In excess of 496,000 cu. meters of low-level radioactive waste would need to be disposed of through burial if every nuclear reactor in the country is decommissioned, according to government officials.

It is the first time a specific volume for radioactive waste stemming from reactor decommissioning has been disclosed, the officials from the Natural Resources and Energy Agency, under the Ministry of Economy, Trade and Industry, said Friday.

The hunt for a disposal site for the waste is ongoing.

The total covers 48 commercial reactors operated by nine regional utilities and Japan Atomic Power Co., as well as eight slated for decommissioning: the six units at Tokyo Electric Power Co.'s disaster-hit Fukushima No. 1 plant, and reactors 1 and 2 at the Hamaoka plant run by Chubu Electric Power Co. in Shizuoka Prefecture.

In addition to high-level radioactive waste represented by the spent nuclear fuel, low-level waste must be buried for disposal and kept apart from residential settlements for up to 400 years.

To pass the costs of reactor decommissioning on to electricity users, power companies estimate the volume of low-level radioactive waste that needs to be disposed of and submit the figures to the Natural Resources and Energy Agency.

Of the low-level waste, pressure vessels, which contain nuclear fuel in reactors, and fuel control rods are among the most dangerous. They are categorized as L1 waste, which must be buried deeper than 50 meters and managed for an estimated 300 to 400 years.

According to estimates by the power companies, reactors 1 through 4 at Kansai Electric Power Co.'s Oi nuclear plant in Fukui Prefecture would generate the largest amount of L1 class waste, at 936 cu. meters. Units 1 to 7 reactors at Tepco's Kashiwazaki-Kariwa plant in Niigata Prefecture came in second, at 849 cu. meters.

The total amount of L1 waste from all 56 reactors, including the eight scheduled for decommissioning, comes to 7,613 cu.meters.

Radioactive waste designated as L2 has a lower radioactive concentration and includes filters and waste fluid, while even lower-ranked L3 waste includes concrete.

Tepco's Kashiwazaki-Kariwa plant is predicted to produce the largest volume of L2 and L3 waste.

The total amount of L2 waste at all 56 reactors is estimated at 95,652 cu. meters; for L3 waste, the figure stands at 393,174 cu. meters.

Postponing a decision on where to bury such waste in turn delays decommissioning work or means the waste will need to be stored temporarily on the premises of nuclear power stations.

Once new reactors under construction enter into operations, including at Electric Power Development Co.'s Oma plant in Aomori Prefecture, Japan's mountain of nuclear waste will only continue to grow.

March 23, 2014

Shrinking contaminated biomass

Radiation-hit village may OK overnight stays

http://www.japantimes.co.jp/news/2014/03/23/national/radiation-hit-village-may-ok-overnight-stays/#.Uy86GYXrXIW

Kyodo
[....]

Machine shrinks biomass

JIJI

Osaka — A team of researchers at Kinki University in Osaka Prefecture and a local machinery maker have developed a machine that can compress radiation-tainted plants, including trees, to one-tenth their original volume, sealing in the radioactive substances.

They hope to use the equipment, which is transportable, to help move the enormous amount of tainted plants being stored at the crippled Fukushima No. 1 power station to new temporary storage facilities expected to be built later.

The machine is based on technology for making biofuel from grass and trees. It compresses the plants so tightly that they can stably contain cesium and other radioactive materials for a long period of time, the team says.

The machine compresses contaminated plants under high temperatures.

By shrinking the bulky material, fewer trucks will be needed to transfer it to the new storage facilities, the university said.
The university plans to conduct a demonstration of the machine using uncontaminated plants in May in the town of Kawamata, Fukushima Prefecture.

The machine can process 300 kg of plants a day, but a larger version can do 10 tons.

Noting that there are 3 million tons of tainted biomass in Fukushima, Tamio Ida, a researcher at the university, said that 1,000 units of the larger machine would be able to dispose of it in just a year.

March 27, 2014

New Gov't plan to build interim storage in Fukushima

Govt.'s new plan for Fukushima waste storage sites

http://www3.nhk.or.jp/nhkworld/english/news/20140327_31.html

Japan's government has shown Fukushima officials a new plan to build interim storage facilities for contaminated soil and other radioactive waste.

The plan calls for reducing the number of towns to host the facilities in Fukushima Prefecture from 3 to 2, following demands by local governments.

Environment Minister Nobuteru Ishihara and Reconstruction Minister Takumi Nemoto visited the prefectural government office on Thursday.

The ministers handed the plan to Fukushima Governor Yuhei Sato and representatives from 8 municipalities, and asked them to accept it.

The plan was revised after Fukushima officials demanded changes last month.
The facilities will store soil and other waste from cleanup work in areas contaminated by the Fukushima nuclear accident in March 2011. They are to be used until final disposal sites are ready.

The government originally planned to build the facilities in 3 towns near the plant -- Futaba, Okuma and

Naraha.

The revised plan dropped Naraha because radiation levels there are lower and evacuees hope to return to their homes as soon as possible.

The plan calls instead for building a facility in Naraha to solidify ash from incinerating debris.

The government says it will purchase land plots for the interim facilities. But local governments favor renting the plots from their owners.

Government officials say they will explain their plans in detail to residents of Futaba and Okuma. But the residents are concerned because they have not been offered programs to help rebuild their lives and revitalize the local economy.

The focus now shifts to whether the government can develop convincing programs as well as acceptable prices for land purchases.

March 28, 2014

Government's plans for waste disposal

Government agrees to radioactive waste facilities in 2 Fukushima towns

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201403280045

THE ASAHI SHIMBUN

FUKUSHIMA--The government has agreed to the prefecture's request to build intermediate storage facilities for holding radioactive waste in just two towns, instead of the three originally proposed.

Environment Minister Nobuteru Ishihara and Reconstruction Minister Takumi Nemoto presented the revised plan to Fukushima Governor Yuhei Sato at the prefectural government office on March 27.

“We, again, ask for your cooperation based on the new plan to consolidate the facilities in two towns,” Ishihara told Sato and representatives from eight municipalities located near the Fukushima No. 1 nuclear power plant that was crippled by the 2011 Great East Japan Earthquake and tsunami.

The central government's original plan, presented in December, called for building intermediate storage facilities in the towns of Okuma, Futaba and Naraha to handle waste generated by decontamination work in the prefecture.

The prefectural government asked Naraha to be excluded as a candidate site because residents from the town are expected to be allowed to return in the not-too-distant future.

According to the revised plan by the Environment Ministry, new facilities will only be built in Okuma and Futaba, which co-host the Fukushima No. 1 plant. Those facilities will take the waste that was to be stored in Naraha.

After the meeting with Ishihara and Nemoto, Sato told reporters that it is still premature to hold meetings to explain the plan to residents, something the government said it is planning.

Prefectural government officials said more discussions are needed on the grounds that the government's replies to other prefectural requests were unsatisfactory.

Futaba Mayor Shiro Izawa, who was present at the meeting, was critical about regional development proposals from the government.

Even though the government said it will "take necessary fiscal measures" for regional development, it only said it will present concrete steps as soon as possible.

"We were looking forward to more concrete measures," Izawa said. "But the government's reply lacks specifics. That is not acceptable."

Gov't seeks local approval of new decontamination waste storage plan

http://mainichi.jp/english/english/newsselect/news/20140328p2g00m0dm041000c.html

FUKUSHIMA (Kyodo) -- The government on Thursday sought the approval of Fukushima Prefecture to build facilities to store waste generated from radiation cleanup activities around the disaster-struck nuclear complex, after accepting some local requests to alter the plan.

The storage facilities are now expected to be located in the towns of Okuma and Futaba, the two municipalities hosting Tokyo Electric Power Co.'s Fukushima Daiichi nuclear power plant.

The government proposed in December a plan to acquire about 19 square kilometers of land inside the two towns as well as the town of Naraha for facilities to store soil and other waste containing over 100,000 becquerels per kilogram of radiation, generated through decontamination work in Fukushima Prefecture.

But Naraha, where the radiation level is lower than the two other towns, has refused to accept highly contaminated waste, saying it does not want to disrupt efforts to bring back evacuees to their homes. As a result, the government decided to exclude Naraha from sites picked for waste storage.

The government, however, has said it will not change its plan to purchase the land needed for building the facilities, rejecting requests for facility construction on leased land.

March 30, 2014

Reducing radioactive contamination by freezing?

Researchers say freezing cuts radioactive contamination in water to 1/25th concentration

http://mainichi.jp/english/english/newsselect/news/20140330p2a00m0na008000c.html

Freezing water contaminated with radioactive cesium reduces the element to just 1/25th of its pre-freezing concentration, according to researchers at the University of Toyama.

The research team -- including professor Masao Matsuyama of the university's Hydrogen Isotope Research Center and professor emeritus Katsutoshi Tsushima, Japan's leading glaciology researcher -- added that the method could help reduce the amount of radioactively contaminated water at the Fukushima No. 1 nuclear plant.

The researchers contaminated water with 1,500 becquerels per liter of radioactive cesium to simulate the levels seen at the Fukushima plant. They put 10 liters of the water in a special freezing container, which they froze to minus 4 degrees Celsius, forming a 5.4 kilogram icicle with cesium concentration reduced to

61 becquerels per liter. The drop was particularly pronounced in the outer parts of the icicle, down to a maximum 1/270th the original concentration.

The method takes advantage of the fact that freezing the water slowly into a "single crystal" -- a crystal where the direction of the crystallization is uniform -- produces ice without impurities. Should this method be applied at the Fukushima plant, it could cut down the amount of contaminated water.

"I recalled icicles in nature, (and how pure they are even in mud), and though I was skeptical, our experiment produced results. This method should be able to assist the ALPS system," said Matsuyama, referring to the decontamination system at the Fukushima plant.

March numbers put the amount of contaminated water at the Fukushima plant at around 530,000 metric tons. With full-scale operation of ALPS not expected for the foreseeable future, plant workers are coping by adding more storage tanks to hold the contaminated water.

April 1, 2014

Okuma, Nahara, Kawauchi: decontamination "completed"

Decontamination completed in 3 Fukushima towns

http://www3.nhk.or.jp/nhkworld/english/news/20140401_23.html

Japan's government says decontamination has been completed in 2 towns and a village in Fukushima Prefecture near the crippled Fukushima Daiichi nuclear power plant.

The government has been decontaminating areas in 11 municipalities near the plant where residents were ordered to evacuate, except for areas where radiation levels remain too high for people to return.

Environment Minister Nobuteru Ishihara told reporters on Tuesday that the government completed the work in the towns of Okuma and Naraha and the village of Kawauchi by a deadline for the work on the same day.

The announcement came after an evacuation order was lifted for Tamura City, another of the 11, also on Tuesday. Decontamination in the city was completed last June.

The deadline for decontaminating areas in the 7 remaining municipalities has been postponed to 3 years from now at the latest, except for Futaba Town, most of which has high radiation levels.

Ishihara said the government will continue watching whether the decontamination effect is maintained in the area toward the goal of rebuilding the communities. He added that the government will also accelerate efforts to decontaminate the remaining areas as scheduled.

April 21, 2014

A problem of space

Storage space for nuclear waste an issue for Japan's smaller plants

http://mainichi.jp/english/english/newsselect/news/20140421p2a00m0na004000c.html

FUKUSHIMA -- Disaster-related equipment and facilities at the Fukushima No. 1 Nuclear Power Plant already take up more space than the entire grounds of most regular nuclear plants in Japan, it has been learned.

The finding has sparked concern that other nuclear power plants may not have enough space to cope with a similar nuclear disaster.

The grounds of the Fukushima plant, where two additional reactors were originally due to be built, span 3.5 million square meters. Before the disaster, over 90 percent of this property was unused.

Roughly 2.55 million square meters is now devoted to the disaster response, outsizing the grounds of 13 of the 16 regular nuclear power plants in Japan. Meanwhile, contaminated water continues to pile up at the plant at the rate of 400 tons per day.

Nuclear plants are required to store radioactive waste on their own premises in the event of a nuclear accident if they receive a special designation under the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors, as the Fukushima plant did.

The Mainichi asked the 10 major power companies that operate Japan's 16 regular nuclear plants how much space each plant could devote to an accident response. Only Shikoku Electric Power Co. replied, saying its Ikata Nuclear Power Plant had 440,000 square meters available. When the Mainichi looked up the areas of the other plants, it found that 13 of them were smaller than the space being used at the Fukushima No. 1 plant.

About 1,000 tanks have been set up to hold contaminated water at the Fukushima plant.

Decontamination equipment like the Advanced Liquid Processing System (ALPS) has also been prepared. Additional water storage tanks and facilities to store high-density waste removed by the ALPS are expected to be necessary in the future. Tokyo Electric Power Co. (TEPCO), the plant's owner, has said it plans to devote about another 700,000 square meters of unused land to the response.

When the Mainichi asked other plant operators how they would respond to a disaster, Japan Atomic Power Co. -- owner of two nuclear plants including Tokai No. 2 Nuclear Power Plant, the smallest of Japan's regular nuclear plants -- and Kansai Electric Power Co., which operates three nuclear plants including the Mihama Nuclear Power Plant, refused to comment on what they said was a hypothetical scenario.

Many other companies stressed that they had taken such measures as preparing against tsunamis and securing backup power sources. A representative for Chubu Electric Power Co. said, "We are determined to avoid an accident like the one at the Fukushima No. 1 Nuclear Power Plant."

A representative for Shikoku Electric Power Co. stressed that the plant could handle an accident, saying, "Even if we had an issue with contaminated water, there would be little flow of underground water (into the nuclear reactor buildings)."

Shigeaki Tsunoyama, former dean of the University of Aizu and overseer of decommissioning work on the Fukushima No. 1 Nuclear Power Plant, said, "The Fukushima disaster taught us that power companies should prepare for the leak of radioactive material. Part of that involves preparing for contaminated water. Power companies should publicly announce how much area they can devote to a disaster response and discuss how much they would be able to do within the boundaries of their plants."

Around 15 minutes by car from the "important seismic isolated building" at the Fukushima No. 1 Nuclear Power Plant are the cylindrical, two-meter tall "High Integrity Containers" (HICs) that hold radioactive material removed from contaminated water. The plant has over 120 HICs, stored within concrete facilities stretching around 200 meters long. Within each HIC are 260,000 becquerels of cesium-134, 360,000 becquerels of cesium-137 and 70 trillion becquerels of strontium. Each year the plant is expected to set up 600 to 700 more HICs.

At the ALPS building around 10 minutes away by car from where the HICs are located, a worker who was involved with the quake-resistance evaluation of the Kashiwazaki -Kariwa Nuclear Power Plant before the March 11, 2011 disasters commented, "This is the first time in the world that attempts have been made to process this much contaminated water."

Another 15-minute drive from the ALPS building is a temporary storage site for debris from the hydrogen explosions at the Fukushima plant, which is covered with dirt. North of the plant's No. 5 and 6 reactor buildings is an expanse of logged and prepared land that is to be the site of new, welded storage containers for contaminated water. These tanks are expected to grow in number by one per every two to three day, and they each will measure 8.1 meters in diameter and 15.6 meters in height.

A TEPCO employee added, "The radiation suits are thrown out after use, so the more workers that come on-site, the more radioactive waste (contaminated radiation suits) there will be. If we don't think of a fundamental countermeasure, we will eventually run out of space on the plant grounds."

April 25, 2014

Who's for nuclear waste?

Central, local governments have no takers for radioactive waste

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201404250001

With nobody wanting to give it a permanent home, a large amount of waste contaminated with radioactive materials due to the accident at the Fukushima No. 1 nuclear power plant has remained in eastern Japan.

By last December the Environment Ministry had ruled that a total of about 140,000 tons of waste fell into the category of "designated waste" in 11 prefectures and Tokyo. The central government is responsible for the final disposal of designated waste, including rice straw and sludge, which is contaminated with more than 8,000 becquerels of radioactivity per kilogram.

It plans to set up five final disposal sites for the tonnage--one each in five prefectures.

However, the locations have yet to be decided. Because of that, the designated waste is currently being held in temporary storage sites, causing dissatisfaction among residents living around it.

On March 27, an executive of the Miyagi prefectural government visited an explanatory briefing in the Tsukidate district of Kurihara in the prefecture and apologized to residents there.

A total of about 930 tons of contaminated rice straw, including one that has yet to be officially designated as such, are currently being kept in five temporary storage sites in Kurihara. However, the two-year storage periods for the five sites, promised by the Miyagi prefectural government and the Kurihara city government, will start expiring from May.

"The schedule to find a final disposal site is delayed. We cannot keep the promise that we will close the temporary storage site here in two years. We are very sorry," the Miyagi official said.

In the meeting, residents expressed their anger in succession. "It is unforgivable to cheat residents," one said. Another said, "We cannot endure it (the temporary storage site) anymore."

The prefectural government and the Environment Ministry have made efforts to find a final disposal site.

Starting in autumn 2012, the prefectural government held meetings with all the municipalities in the prefecture and confirmed that one final disposal site is necessary in the prefecture.

After that, the ministry announced three candidate sites for the final disposal site in the prefecture in January this year. The three, all of them on state-owned lands, are located in Kurihara, Kami and Taiwa.

Kurihara's candidate site, the mountainous Fukayamadake area, is located near the border with Akita and Iwate prefectures.

The Kurihara city-operated stock farm next to the candidate site was closed soon after the Fukushima nuclear accident due to contamination by radioactive materials. It was reopened in August 2013 after decontamination work was completed.

Dairy farmer Kyoichi Suzuki, 65, who entrusted seven head of cattle to the stock farm in 2013, has anxiety over the candidate site.

"If radioactive materials leak from the site, it will cause serious damage," he said.

Takeo Oba, 75, who runs an inn-cum-restaurant at the side of a nearby dam lake, is participating in a signature-collecting campaign against a final disposal site.

Due to contamination by radioactive materials, “iwana” mountain trout caught in the upper stream of the dam are now under shipment restrictions. Because of that, Oba is serving farm-raised "safe" trout in his restaurant.

“Unless I explain to my customers, they do not understand that the trout are safe. I am fed up with that,” he said.
In an area north of the dam lake, a large landslide occurred in 2008 due to the powerful Iwate-Miyagi inland earthquake.

At the disaster site, measuring one kilometer in width and 150 meters in height, the inner brown soil layer is still exposed.

The Kurihara city government is trying to use the location as a sightseeing spot to bring back tourists, whose number has declined since the earthquake. It is aiming to win recognition of the area, including geologically important faults and a volcano, as a geopark. Despite such plans, the state-run land in the city was chosen as a candidate for the final disposal site.

“I will risk my own political life to oppose the final disposal site,” Kurihara Mayor Isamu Sato said.
The other two municipalities of Kami and Taiwa are also opposed to the construction of the final disposal site in their areas.

When they were chosen as candidate sites in late January, Senior Vice Environment Minister Shinji Inoue visited the Kami town office. At that time, Kami Mayor Hirobumi Inomata told him, “You lack awareness of the damage caused by rumors (of possible contamination).”

Expressing anxiety over the possible influences on the local rice, called “Seiryumai” (limpid stream rice), Inomata said, “If the final disposal site is constructed here, consumers will not have faith in the name of the rice.”

The local agricultural cooperative has received inquiries about the construction plan of the final disposal site from at least five of seven companies that are purchasing rice from the cooperative.

For its part, Taiwa cast doubts on the safety of the candidate site as it is only two kilometers from the Ground Self-Defense Force's Ojojihara training area.

"Bullets could mistakenly land on the final disposal site," the town said in its written opinion to the ministry.

The Environment Ministry wants to start detailed surveys on the three candidate sites in Miyagi Prefecture before choosing one. However, it does not even have a prospective timetable for doing so.

"As no one wants to host the final disposal site, there are various opinions on it. But unless we construct it, (contaminated waste such as rice straw) will be kept (in the temporary storage sites) forever. That will be the worst case. So we have to explain politely (to residents)," said Environment Minister Nobuteru Ishihara.

Ibaraki, Tochigi, Gunma and Chiba prefectures are also facing difficulties in selecting final disposal sites.

In autumn 2013, the Environment Ministry chose candidate sites in Ibaraki and Tochigi prefectures. However, the sudden announcements of those locations elicited anger from local residents. As a result, the ministry retracted the proposed sites.

After that, it was decided that the selection method of candidate sites would be determined through meetings of mayors in each prefecture.

However, a different method to choose a candidate site was decided in Tochigi Prefecture in December 2013. Unlike Miyagi Prefecture, which chose three candidate sites as the first step, Tochigi adopted a method in which the Environment Ministry will show only one potential site after a process lasting several months.

"Before announcing the candidate site, the central government should release measures to prevent damage from rumors and revitalize the local economy," said Tochigi Governor Tomikazu Fukuda.
In Ibaraki, Gunma and Chiba prefectures, the mayors in each have met two or three times. However, they have yet to even settle on the method for choosing candidate sites.

(This article was compiled from reports by Hiroshi Shimada and Yoshinobu Motegi.)

April 30, 2014

Govt. nuclear waste plan draws public criticism

http://www3.nhk.or.jp/nhkworld/english/news/20140430_25.html

A Japanese government panel says it will review its proposal for disposing of highly radioactive nuclear waste based on public criticism and concerns.

The expert panel of the Economy, Trade and Industry Ministry on Wednesday heard a report on more than 200 public opinions about the proposal regarding the disposal of highly radioactive waste from nuclear power plants.

The plan says the government should pick scientifically viable candidate sites for burying such waste deep underground.

The government's policy so far has been to wait for municipalities to volunteer to serve as disposal sites. But no municipality has done so.
Over the past month, the ministry widely solicited public opinions on the plan. Of the 218 it received, 83 said the government cannot expect public support for such disposal unless it shuts down nuclear plants that produce more waste.

31 expressed concern as to whether safe disposal of nuclear waste is possible in earthquake-prone Japan.

At Wednesday's meeting, ministry officials said discussions on the future of nuclear plants should be separate from those on nuclear waste disposal because the waste already exists.

The panel aims to come up with a final proposal by mid-May.

See also:

Central, local governments have no takers for radioactive waste

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201404250001

May 1, 2014

Nuke waste disposal in the future

Gov't panel eyes system for future generations to recover radioactive waste

http://mainichi.jp/english/english/newsselect/news/20140501p2a00m0na006000c.html

The Natural Resources and Energy Agency's expert panel compiled an interim report on April 30, featuring a system in which future generations can utilize leading-edge science and technology to recover and dispose of high-level radioactive waste from nuclear reactors.

The report constitutes a shift from the government's conventional policy of keeping radioactive waste buried permanently. But if the condition in which radioactive waste can be recovered continues, it could run the risk of being exposed to such problems as nuclear terrorism and environmental pollution. The government has made little headway in selecting candidate sites for storing nuclear waste -- the very "entrance" to its nuclear waste disposal plan -- in the first place. Therefore, there is no solution in sight to the "problem of radioactive waste."

Under the government's disposal scheme, high-level radioactive waste that is produced in the process of reprocessing spent nuclear fuel from nuclear reactors is first vitrified, put in a steel container after a certain period of cooling, and buried more than 300 meters deep underground. It is a method called a "deep geological repository" which did not assume the retrieving of radioactive waste that has been buried. Underground repositories are connected to the surface of the ground through tunnels, but once the tunnels are closed, it becomes impossible to recover the radioactive waste from the repositories.

However, the Natural Resources and Energy Agency's expert panel proposes in the interim report to set an interval of about 100 years between the start of repository operations and the closure of the tunnels. The report calls for "reversibility" that will allow for retroceding or changing the original plans, including those for changing disposal sites, by reviewing overall disposal programs spanning from research based on expert documents through the closure of the tunnels, At the same time, the report calls for leaving open the "possibility of recovering" in which future generations can retrieve and reprocess high-level radioactive waste by using leading-edge science and technology.

But a senior official of the Natural Resources and Energy Agency said specifics about the "reversibility" and the possibility of recovering" are still "on the drawing board." Because it is possible for someone to enter repositories before tunnels are closed, such facilities are exposed to human-induced risks such as nuclear terrorism and war. Earthquakes could cause radioactive substances to reach the surface together with ground water. The question also remains as to who will manage and guard such repositories for 100 years.

At the expert panel meeting on April 30, one expert questioned the credibility of the report, saying, "We can't see how the report will be handled in the future." Expert panel Chairman Hiroya Masuda said at a

news conference after the meeting, "A decision on a concrete plan will likely be made in the far-distant future."

With respect to cases abroad, France has unveiled a plan to introduce facilities from which radioactive waste can be recovered for at least 100 years. Canada has decided to maintain conditions for a total of 300 years in which radioactive waste can be retrieved from nuclear plants and repositories. To what extent Japan can reflect measures taken by foreign countries such as France and Canada in its program holds the key to a successful implementation of the ambitious scheme.

On the issue of selecting candidate sites for storing nuclear material, the report says, "Areas that are deemed highly appropriate scientifically should be selected." But the "appropriate area," which excludes areas adjacent to volcanoes and active faults covers 70 percent of Japan's total land. It is certain that the government will be forced to get engaged in lengthy work to select sites for storing high-level nuclear waste.

But still no concrete plan to store waste

As I See It: Gov't needs to look at options on handling, disposal of radioactive waste

http://mainichi.jp/english/english/perspectives/news/20140501p2a00m0na012000c.html

A photo shows the Tono Geoscience Center's Mizunami Underground Research Laboratory in Gifu Prefecture, where geological disposal of high-level radioactive waste is being researched. (Mainichi)
拡大写真

Selection of a final disposal site for high-level radioactive waste from Japan's nuclear power plants has proved a difficult task. Under a basic energy plan approved by the Cabinet in April, the government promised to "stand at the forefront and tackle the issue." But it provided no concrete plans. It appears the government is merely trying to pave the path toward restarting the nation's nuclear reactors.

The catastrophe at the Fukushima No. 1 Nuclear Power Plant destroyed trust in Japan's nuclear power policies, and it will take a long time for that trust to be restored. Hastiness is counterproductive. The government must go back to the drawing board on existing policy and set about tackling the issues at hand.

The government's basic energy plan states that the current generation is responsible for solving the problem of nuclear waste. It says the government will propose scientifically viable sites to bury radioactive waste deep underground and "seek local understanding." Apparently, government officials have realized they cannot get far by simply waiting for local bodies to come forward to host facilities.

A panel of experts from the Ministry of Economy, Trade and Industry (METI) discussed the issue and it was hoped they would settle on a final disposal site. However, when they met in March, all they settled on were geological conditions, such as making sure the disposal site was well away from active faults, volcanoes and other potentially hazardous locations. Many members commented that they had not actually discussed in concrete terms which locations were best. However, the government adopted the basic energy plan while ignoring the progress of deliberations at the panel.
Due to a lack of natural resources in Japan, the government had set a national policy of reprocessing spent nuclear fuel to extract uranium and plutonium that could be used again in a nuclear fuel cycle. The waste produced after reprocessing was to be solidified in glass and buried deep underground for good. However, there are no prospects for starting operations of the reprocessing facility in Aomori Prefecture, and with 17,000 tons of spent nuclear fuel on its hands, Japan is running out of storage space.

The basic energy plan left the policy of reprocessing all spent nuclear fuel unchanged. But as things stand, officials urgently need to come up with a replacement policy as a top priority.

The disaster at the Fukushima plant has flung a spanner in the works. In technical terms, it is impossible to reprocess the melted fuel at the crippled Fukushima plant. An option other than reprocessing, adopted by countries including Finland, is to place radioactive waste in special containers and directly bury it. But Japan is not considering such an option. In February, the Economy, Trade and Industry Ministry told a gathering of the ruling Liberal Democratic Party that when directly burying waste there is a risk of

explosions and damage to containers. The ministry indicated that it would stand by its final disposal method, which assumed all spent nuclear fuel would be reprocessed.

But even if reprocessing were to go ahead, problems would emerge: If reprocessed fuel were used in the Monju fast-breeder reactor in Fukui Prefecture, or if a MOX fuel combining plutonium and uranium were used, this would produce other types of nuclear waste, and new reprocessing facilities would have to be built.

Under the government's basic energy plan, the Monju reactor is to be used in research to reduce long-lived radioactive materials. According to METI, "nuclear waste would become harmless in 300 years, not 100,000."

However, Osamu Tochiyama, director of the Radioactive Waste Disposal Safety Research Center at the Nuclear Safety Research Association, says, "If our aim isn't to utilize resources, then it would be better to dispose of the waste directly without reprocessing it." That's because officials still haven't considered how to deal with waste produced through reprocessing that is difficult to handle.

To make it easier for local bodies to host radioactive waste disposal facilities, the government settled on a new policy that would make it possible to retrieve waste even after it is buried underground. But this approach has no technical basis, and officials have not considered where the retrieved waste would be stored.

In a separate meeting of ministry experts on April 30, panel members accepted the policy, but warned, "The government should be aware that is does not have sufficient public support to proceed with final disposal as a foregone conclusion."

A proposal from the Science Council of Japan in 2012 is pertinent. "Current science and technology is limited in its ability to find stable geological strata. Japan should not become fixated on reprocessing all fuel, and store the waste aboveground for a specified period," the council said.

In January this year, I participated in a class at Chiba University that took up the issue of nuclear waste. The words of one student stuck with me: "I have a feeling we'll forget about it if we bury it."

At this point in time, when society is still skeptical about burying radioactive waste, it would be nothing but a tragedy for a local body to be named by the government as a prospective site for burying waste.

The ministry and the Nuclear Waste Management Organization of Japan say there is a need for "calm discussion" of the issue. They plan to proceed with negotiations with a limited number of local bodies and officials after the designation of prospective sites. However, this would amount to the government forcing a local body to host a troublesome facility.

The Tokyo gubernatorial election in February, in which freedom from reliance on nuclear power became an issue, was a chance for voters in an area that consumes a large amount of electricity to think, in light of the Fukushima nuclear disaster, about the harsh reality in areas hosting nuclear facilities, and to turn their eyes toward the issue of nuclear waste. Taking the opportunity, officials should work toward a conclusion that the public can understand and which also benefits areas that host the nuclear facilities. To achieve this, it is necessary to adopt a safer method of storage, thereby gaining time so technological advances can be made.

Japan also needs to put forward policies to prevent a further increase of harmful waste. I believe this is the first step in the path to restoring people's confidence. (By Daisuke Yamada, Tokyo Bureau)

Interim storage facilities, but where?

Briefing on waste soil sites to be held

http://www3.nhk.or.jp/nhkworld/english/news/20140501_34.html

The assemblies of 2 towns near the Fukushima Daiichi nuclear plant have agreed to allow central government officials to brief residents on proposed facilities to store radioactive soil.

The government hopes to build the temporary facilities in Okuma and Futaba towns. But the towns blocked the briefing sessions, saying the government's efforts were inadequate.

The government renewed the request last month.

Assembly members in both towns separately met on Thursday to discuss the request. The soil is a byproduct of decontamination work in the area.

Okuma assembly chairperson Yukio Chiba told the meeting that residents are increasingly calling for an explanation about the interim storage facilities.

After closed-door discussions, the assembly agreed to the briefing session. Town officials reportedly explained the government's development measures for the town and its stance in deciding on final disposal sites outside the prefecture.

Futaba Town also agreed to the briefing.

Seiichi Sasaki, chairperson of Futaba assembly, said the agreement did not mean the assembly has accepted the interim facilities. He said he wants the government to also brief the assembly.

The 2 towns will discuss with the government when and how to hold the session.

Soil storage plans

Cohosts of Fukushima No. 1 OK meetings on soil storage plan

http://www.japantimes.co.jp/community/2014/04/30/issues/tackling-the-empathy-deficit-toward-non-japanese/#.U2NqfVfi91s

JIJI
IWAKI, FUKUSHIMA PREF. – The assemblies of the two towns that cohost the wrecked Fukushima No. 1 nuclear plant on Thursday approved the central government’s request to hold meetings to explain its plan to build storage facilities there for soil tainted by the March 2011 nuclear disaster.

Now that the Okuma and Futaba municipal assemblies have agreed to permit the meetings, the central government could start holding briefing sessions to persuade residents to accept the storage plan as soon as this month.

The government hopes to win backing for the storage project by explaining the details of the facilities and its measures for promoting local community development.

The prefecture is home to Tokyo Electric Power Co.'s aging Fukushima No. 1 plant, where the 9.0-magnitude earthquake and subsequent tsunami of March 11, 2011, triggered three core meltdowns that heavily damaged the poorly protected facility.

After the assembly meeting, Okuma Mayor Toshitsuna Watanabe said the central government needs to show concrete plans because residents' opinions are mixed.

Futaba Mayor Shiro Izawa said his town will make a decision on whether to allow the facilities after watching how the government responds to residents' opinions.

In March, Fukushima Prefecture and the two towns refused to permit the briefing sessions because the central government had given insufficient explanations about its compensation and regional development plans.

After the central government announced a plan Friday to create a subsidy program to promote local development, the prefectural and municipal governments approved the meetings on the condition that the town assemblies also give their nods.

The central government intends to reach a decision soon on the size of the subsidy program and speed up discussions on establishing a new law for final disposal of the radiation-tainted soil outside the prefecture within 30 years in line with requests from residents.

May 5, 2014

Forest radiation contamination down?

Fukushima forest radiation down 50% in 2 years

http://www3.nhk.or.jp/nhkworld/english/news/20140505_13.html

The prefectural government in Fukushima says radiation levels in local forests in the year ending in March are down by half compared to 2 years ago.

Officials released the data in a meeting with people who work in the forestry industry in Fukushima. They have been monitoring radiation levels at 362 sites in the prefecture's forests.

They say the average radiation for the sites was 0.91 microsieverts per hour in the year following the March 11, 2011, nuclear disaster, which was triggered by a massive earthquake and tsunami.

The officials found that the average radiation level fell by about half to 0.44 microsieverts during the year ending in March 2014.

They say the amount of radioactive materials in new leaves was about one fifth of those contained in leaves that started growing before the disaster.

The prefectural government forecasts forest radiation will drop to around 30 percent from the current level over the next 20 years.

One official from the prefecture's forestry planning department says workers' fear of radiation has caused some forests to be abandoned. That's causing concern about long-term management of forestry resources.

He added the prefecture will continue to monitor radiation and provide more information.

May 9, 2014

Briefing populations on interim storage

Waste storage briefings planned outside Fukushima

http://www3.nhk.or.jp/nhkworld/english/news/20140509_14.html

The environment ministry is planning to hold briefing sessions outside Fukushima Prefecture on planned interim facilities to store waste materials from the ongoing decontamination work in the prefecture.

Environment Minister Nobuteru Ishihara said on Friday that briefings are planned later this month for the local communities Okuma and Futaba towns near the crippled Fukushima Daiichi nuclear power plant. The central government has asked the municipalities to host storage facilities. Ishihara said he will soon be able to announce the briefing sites and other details.

The municipal assemblies of the two towns agreed earlier this month to allow the government to brief residents on the proposed facilities.

Ishihara said that, in response to the municipal governments' request, the ministry is working to hold briefings at locations closer to where many evacuees are currently living.

He said it would be a great inconvenience for many evacuees living in Tokyo and elsewhere if they had to return to Fukushima Prefecture to attend the sessions.

May 10, 2014

Japanese scientists come up with figures 1.5 times higher than TEPCO

Cesium from Fukushima plant up to 20,000 terabecquerels: study

http://mainichi.jp/english/english/newsselect/news/20140509p2g00m0dm082000c.html

VIENNA (Kyodo) -- The total amount of radioactive cesium released into the atmosphere and seawater from the crippled Fukushima Daiichi nuclear power plant in Japan is estimated at between 17,500 and 20,500 terabecquerels, a study by a Japanese team of researchers showed Friday.

The team's finding on the cumulative amount of cesium-137 is nearly **1.5 times more than the estimate by plant operator Tokyo Electric Power Co. of less than 13,600 terabecquerels.**

The team announced its findings on cesium-137 during an academic session of the European Geosciences Union in Vienna on geoscience processes related to the Fukushima nuclear accident.

Michio Aoyama, a professor at Fukushima University's Institute of Environmental Radioactivity who is part of the team, told Kyodo News that TEPCO "underestimates" the amount of cesium-137 which was released into the atmosphere and later fell into the sea.

Scientists are trying to detect the levels of radioactive cesium due to the potential, long-term risks it brings to the land and sea. Cesium-137, which has a half-life of around 30 years, can cause cancer.

The total amount of cesium-137 differs based on researchers' estimates but Aoyama has expressed confidence about the data his team gathered and analyzed after the Fukushima crisis, saying theirs is the "most probable" figure as it is based on actual measured data.

The study estimates that 14,000 to 17,000 terabecquerels of cesium-137 were released into the atmosphere, while about 3,500 terabecquerels directly flowed into the ocean. A terabequerel is equal to 1 trillion bequerels.

In the 1986 Chernobyl nuclear disaster, 85,000 terabecquerels of cesium-137 were released.

But in the case of the Fukushima nuclear disaster, Aoyama said the release of radioactive cesium has **a "big impact on the ocean"** since the Fukushima nuclear complex is located near the coast.

The study also found that 12,000 to 15,000 terabecquerels of cesium-137 released into the atmosphere fell into the sea, while the remaining amount fell into the soil. Of the amount that fell on land, up to 400 terabecquerels fell on North America, while Europe was hardly affected.

Making sure

Fukushima residents measuring seabed radiation themselves

http://mainichi.jp/english/english/newsselect/news/20140510p2a00m0na015000c.html

Fukushima Prefecture residents are taking radiation measurements from the ocean floor near the disaster-stricken Fukushima No. 1 Nuclear Power Plant to provide a second opinion to figures released by Tokyo Electric Power Co. (TEPCO), the plant's owner.

Riken Komatsu, 34, who works at a seafood processing firm in Iwaki, Fukushima Prefecture, is a founding member of the "Iwaki Kaiyo Shirabetai Umilabo" (Iwaki ocean investigation squad sea lab). The organization receives aid from fishermen in the disaster-hit Fukushima town of Tomioka. Komatsu launched the group's radiation measurement project out of concern for his industry's future, as the nuclear disaster has affected not only the local fishing industry but also the seafood processing industry.

Residents quickly started measuring radiation levels in parks and farmland after the nuclear disaster, but not in the ocean. Komatsu and others sought help from Seiichi Tomihara, a 41-year-old veterinarian at Aquamarine Fukushima, an aquarium near Iwaki's Hisanohama Port. They also asked for help from Hirokazu Ishii, 37, the captain of a fishing boat called the Choei Maru. The boat was the only one at Tomioka Port -- located about 10 kilometers from the Fukushima plant -- to avoid damage in the tsunami triggered by the March 11, 2011 Great East Japan Earthquake, as Ishii had been out at sea when the devastating waves rolled in.

Although Ishii's boat made it through the disaster, he lost his 18-month-old daughter Kanna to flooding, and his home near the port was destroyed. Following the outbreak of the nuclear disaster, fewer fishing customers used his boat. He agreed to use his vessel for Komatsu's project.

On April 27, project members set out from Hisanohama Port for a round of measurements, arriving at their destination off of the coast of the plant after about an hour. From the boat, the Fukushima No. 1 Nuclear Power Plant could be seen roughly 1.5 kilometers away.

"It's smaller than you think, isn't it?" Ishii says. "Everyone asks, 'Is this tiny thing getting the world stirred up?"

The airborne radiation level stood at just 0.05 microsieverts per hour, supposedly thanks to the ocean water lowering the level. The team took up a sample of seabed soil and brought it back to Aquamarine Fukushima to examine its radioactive contents.

At the aquarium, a scan of the soil revealed it to have a radiation level of 417 becquerels per kilogram, around 100 becquerels per kilogram more than ocean soil taken near the aquarium.

"It seems to be a high number when comparing the soil samples, but I think that considering it was taken from right in front of the nuclear plant, this number does not justify the view that Fukushima's fishing industry is doomed," says Tomihara.

May 8 marked the first shipment to Tsukiji Market in Tokyo of fish unloaded in Iwaki since the nuclear disaster. Their radiation levels are deemed safe.

"By taking regular measurements, we're showing TEPCO that residents are also taking action. We'd like to create opportunities to think about the ocean off Iwaki and about Fukushima's fishing without people's interests getting in the way," Komatsu says.

Video: The Fukushima No. 1 Nuclear Power Plant as observed from the ocean.

http://mainichi.jp/movie/movie.html?id=821879797002

May 14, 2014

Edible wild plants in Fukushima: Still radioactive

Fukushima edible wild plants still contaminated

http://www3.nhk.or.jp/nhkworld/english/news/20140514_16.html

Fukushima Prefecture has restricted shipment of 7 varieties of edible wild plants after detecting high levels of radioactive materials in them.

Officials checked samples of the harvested plants on Tuesday. They found radioactivity exceeding the government safety limit of 100 becquerels per kilogram.

The testing showed contamination of 700 becquerels in fiddleheads, 430 becquerels in varieties of bracken, and 460 becquerels in Japanese spikenard.

Municipalities restrict shipments when they find high levels of radioactivity in the product.

Of the 383 samples tested this season, 16 items or 4.2 percent exceeded the safety limit.
The percentage of samples with high levels of radioactivity has fallen from 11.4 percent last year, and 19.5 percent in 2012.

Prefectural officials say the high levels can be attributed to the radioactive substances still remaining on the surface of mountains in the area.

May 15, 2014

Clean-up delayed

12 municipalities seek decontamination extension

http://www3.nhk.or.jp/nhkworld/english/news/20140515_09.html

Three years after the March 2011 nuclear accident, the cleaning up of radioactive fallout is facing many delays in Fukushima Prefecture and elsewhere.

Japan's Environment Ministry says 12 municipalities in neighboring prefectures have extended the government-funded decontamination effort.

The ministry has been monitoring the program in 58 municipalities in 7 prefectures in eastern Japan. These prefectures include Miyagi, Ibaraki and 2 others bordering on Fukushima, as well as Saitama and Chiba located near Tokyo.

The ministry says 42 of the municipalities, or about 70 percent, had completed or almost completed decontamination by the end of March this year.

But of the remaining 16 that failed to meet the initial deadline, 12 cities and towns have sought extensions of government funding for the clean up.

The ministry says the extension requests ranged from one to 3 years.

Ministry officials say the delays have been caused by more homes needing decontamination than was initially projected.

May 19, 2014

Nuclear waste: Govt. has final say

Govt. decides final disposal of Fukushima waste

http://www3.nhk.or.jp/nhkworld/english/news/20140519_12.html

Japan's government has decided that a state-owned company will be responsible for the disposal of contaminated soil and other radioactive waste outside Fukushima Prefecture.

The government plans to purchase land plots in Futaba and Okuma towns in Fukushima Prefecture in order to build interim storage facilities there.

The interim facilities will store soil and other waste from cleanup work in areas contaminated by the Fukushima nuclear accident in March 2011.

But local people fear the facilities will become final disposal sites.

The government promised last month to stipulate legally that the final disposal must take place outside of Fukushima Prefecture.

Now it plans to revise a law so that the Japan Environmental Safety Corporation, or JESCO, can operate the interim facilities and execute final disposal outside of Fukushima Prefecture within 30 years. JESCO

currently treats PCB waste in Japan.

The government will purchase the land where the interim facilities are to be built and compensate the property owners for moving expenses. It will also cover the costs of relocating family graves if property owners wish to move them.

Government officials say they will explain their plans to local residents at meetings from later this month through next month.

May 27, 2014

Government's promises

Gov't to dispose of contaminated soil outside Fukushima within 30 years

http://mainichi.jp/english/english/newsselect/news/20140527p2a00m0na013000c.html

The government has decided to state clearly that a government-owned company will dispose of contaminated soil outside Fukushima Prefecture within 30 years after keeping it in temporary storage facilities in the prefecture.

The government will revise laws related to the Japan Environmental Safety Corporation (JESCO) to make clear that it will commission its wholly-owned special company to operate temporary storage facilities to be built in Fukushima Prefecture and eventually dispose of the soil permanently outside the prefecture within 30 years. The contaminated soil has been produced in the process of decontamination work in the wake of the outbreak of the crisis at the Fukushima No. 1 Nuclear Power Plant.

Environment Minister Nobuteru Ishihara met and conveyed the decision to mayors and other officials of the Fukushima Prefecture towns of Okuma and Futaba -- candidate sites for temporary storage facilities -- in Koriyama in the prefecture on the morning of May 27. The government wants to secure understanding about the decision from local residents at briefing sessions due to start on May 31 by showing compensation plans for land owners.

With respect to temporary storage facilities, the Fukushima Prefectural Government had strongly demanded that the central government stipulate by law that contaminated soil will be permanently disposed of outside Fukushima Prefecture. JESCO has been engaged in detoxifying and treating polychlorinated biphenyl (PCB) waste since 2004. The Ministry of the Environment plans to clarify its responsibility and submit to the Diet revised legislation designed to commission JESCO to operate

temporary storage facilities for up to 30 years on condition that the Fukushima municipalities accept the construction and operation of temporary storage facilities there.

Under the compensation scheme, meanwhile, the government will evaluate tracts of land located in candidate sites for temporary storage facilities that are designated as difficult-to-return zones as plots of land that can be used after evacuation orders are lifted and the communities are restored. Government officials say that those tracts of land will be evaluated more highly than those evaluated as being unusable at all.

The government will also calculate amounts of compensation for houses on the assumption that similar buildings will be constructed in the future. As for furniture, cemeteries, shrines and temples, in addition to relocation expenses the government will shoulder the costs of storing them until the lifting of evacuation orders as well as memorial service fees as a result of reburying the remains of local residents.

As for cemeteries in particular, the government will consider building new ones at alternative sites in line with requests from local residents after securing cooperation from local municipalities. These measures will be handled separately from damage compensation being offered by Tokyo Electric Power Co., the operator of the crippled Fukushima nuclear power station.

Ishihara seeks cooperation for nuclear waste sites

http://www3.nhk.or.jp/nhkworld/english/news/20140527_26.html

The government is seeking cooperation from 2 towns in Fukushima Prefecture to build intermediate storage facilities for waste material from decontamination work in the prefecture.

The towns of Futaba and Okuma are located near the damaged Fukushima Daiichi nuclear power plant.

On Tuesday, Environment Minister Nobuteru Ishihara met the mayors of the towns ahead of scheduled public briefings for residents.

Ishihara said the coming meetings will be important occasions and that he will work to gain public understanding for the planned facilities.

Ishihara referred to requests by Fukushima Prefecture and other local authorities to establish legal measures that require removal of the waste from the prefecture within 30 years. The waste would be moved to final disposal sites.

He said the government will draw up legislation that establishes a state corporation to manage the facilities and fulfill their requests.

The minister also said opinions of local residents would be taken into account when deciding how the area would be used after the facilities are dismantled. He promised the plans would be part of the region's recovery and development.

After the meeting, Ishihara told reporters the government will study ways to develop the local economy and rebuild lives and then present its findings to the affected communities.

Futaba Mayor Shiro Izawa said the public briefings will not be an occasion for local residents to say yes or no to the plans. He says he expects progress to depend on how the government responds to the feedback.

The government hopes to begin shipping nuclear waste to the towns in January of next year.

May 28, 2014

More promises to Fukushima residents

Govt. explains plan to move contaminated waste

http://www3.nhk.or.jp/nhkworld/english/news/20140528_26.html

Japanese government officials say they'll try to minimize people's exposure to radiation when workers move contaminated waste to intermediate storage facilities to be built near the Fukushima Daiichi plant.

Environment Ministry officials on Wednesday briefed experts on how they plan to transport soil, leaves and mud removed during decontamination work in Fukushima Prefecture.

The officials said that when they set routes they will avoid schools and densely populated areas.

They said they plan to keep annual radiation exposure of residents along the routes below one millisievert.

The officials say all transport vehicles will have GPS equipment to help workers quickly recover the cargo in case of accidents.

The measures are expected to be included in the ministry's basic transport plan to be compiled in a few months.

Senior Vice Environment Minister Shinji Inoue said the government will consult municipalities to determine detailed routes, while addressing the concerns of local residents.

May 31, 2014

Fukushima evacuees unhappy about storage plans

Fukushima people criticize waste facilities plan

http://www3.nhk.or.jp/nhkworld/english/news/20140531_16.html

Evacuees from 2 Fukushima towns have sharply responded to a government plan to build intermediate storage facilities for radioactive soil and waste in their hometown.

The government held a meeting to give a briefing on the plan to evacuees from Futaba and Okuma. Those towns host the stricken Fukushima Daiichi nuclear plant.

About 400 people attended the meeting held on Saturday in Iwaki City, 40 kilometers south of the plant.

Environment ministry officials explained their plan to acquire 16 square-kilometer plots of land in the 2 cities to build facilities to store contaminated soil and debris.

They said they will calculate the compensation for the land based on prices not largely less than those before the nuclear crisis.

The officials also said the government will legislate that the intermediate storage facilities will end their roles within 30 years from the launch and the nuclear waste will be buried outside Fukushima Prefecture.

The plan is to address residents' concerns that the facilities could stay there eternally.

Some residents said they are against the proposal as the storage facilities would harm the towns' image and make it difficult for residents to restart farming there.

Others said no other prefectures will accept a final storage site for Fukushima's nuclear waste, even if the government had such a plan.

The government hopes to bring in contaminated soil and debris from January of next year. Officials will hold related meetings inside and outside Fukushima through the middle of June.

June 8, 2014

Gov't still trying to convince Fukushima people

Fukushima evacuees oppose nuclear waste facilities

http://www3.nhk.or.jp/nhkworld/english/news/20140608_15.html

Evacuees from Fukushima Prefecture have expressed concern over a government plan to use a site in their town for the final disposal of nuclear waste.

The debris and other types of waste were collected during cleanup work in areas contaminated by the Fukushima Daiichi plant nuclear accident in March 2011.

The Environment Ministry plans to dispose of waste containing up to 100,000 Becquerels per kilogram of radioactive materials at a private-sector waste disposal facility in Tomioka Town.

About 70 evacuees living in Iwaki City attended a briefing session on the disposal plan on Sunday.

Ministry officials explained that ash and other waste that could easily leak radioactive substances will be covered with cement at a facility in Naraha Town before being brought to Tomioka Town.

They also said that water to be generated from the prospective site will be removed if it contains more than the permitted amount of radioactive substances.
They said the water will not be released until the levels of these substances fall below the official limits following decontamination.

Some evacuees asked why the government had come up with such a plan when they are trying to return to their hometown. Others requested a framework that will allow the residents to monitor the facilities themselves.

The officials responded that they will proceed with the plan while seeking the residents' understanding.

The ministry plans to hold briefing sessions for evacuees until June 15th in the prefecture and other locations.

June 10, 2014

Radiation still high

Radiation levels remain high in unlivable areas

http://www3.nhk.or.jp/nhkworld/english/news/20140610_81.html

A government survey shows radiation levels in some areas near the damaged Fukushima Daiichi nuclear plant have been more than halved due to experimental decontamination, but they remain high.

The survey was conducted in areas where annual exposure to radiation would exceed 50 millisieverts. These areas are regarded as unsuitable for living.

On Tuesday, the Environment Ministry disclosed the results of experimental decontamination at 6 locations that was carried out from October through January.

Radiation levels in residential districts of Namie Town averaged 3.26 to 8.47 microsieverts per hour, about 40 to 50 percent of the pre-decontamination levels.

In Futaba Town, measurements near public buildings averaged 3.01 to 4.46 microsieverts per hour, about 20 to 30 percent of the pre-decontamination levels.

Despite the reductions, all the figures were more than 10 times higher than the government-set level of 0.23 microsieverts per hour that requires decontamination.

The government will now consider whether to carry out full-scale decontamination of these areas after asking former residents whether they hope to return to their hometowns.

Namie Town Mayor Tamotsu Baba says the survey shows that considerable time would be needed to thoroughly clean up the tainted areas and that the current decontamination technology has its limits.

But he stressed that the government should not give up its plan for full-scale decontamination.

Baba said the government has a responsibility to decontaminate these areas so that children and grandchildren can return to their hometowns, even if the clean-up work takes a lot of time.

See also:

Radiation levels remain high in unlivable areas

http://www3.nhk.or.jp/nhkworld/english/news/20140610_81.html

Decontamination not proceeding as planned

Decontamination not going as planned

http://www3.nhk.or.jp/nhkworld/english/news/20140610_32.html

Decontamination is not proceeding as planned in about half of the municipalities in the evacuation zone for the 2011 nuclear disaster in Fukushima, northeastern Japan.

The Environment Ministry had planned to finish decontaminating 11 cities, towns and villages by the end of March. But the ministry had to extend the decontamination period for 6 of them by 2 to 3 years.

In December last year, the government compiled new guidelines for helping people affected by the nuclear accident.

These include financial assistance for residents who plan to return home because their evacuation orders have been lifted and those who need to move elsewhere.

For residents of areas where evacuation orders are still in place, the government will cover the cost of purchasing homes if people want to start new lives elsewhere. They will also receive lump sum compensation for the mental distress they could suffer after 2017.

The government will draw up more assistance plans by taking into consideration the estimates of future radiation levels and the opinions of residents in areas regarded as unsuitable for living.

Decontamination costs

Estimates of decontamination costs

http://www3.nhk.or.jp/nhkworld/english/news/20140610_29.html

The National Institute of Advanced Industrial Science and Technology estimates it will cost 6.6 billion US dollars to clean up areas designated as uninhabitable.

The amount includes fees for transportation and storing contaminated soil.

But the government has not decided whether to conduct cleanup operations in such areas.

Last year, it estimated the cost of decontaminating other areas would be 19.2 billion dollars. This figure includes spending for setting up the initial storage sites and follow-up checking of radiation levels.

The government also calculated that building intermediate storage facilities to keep contaminated soil for up to 30 years would cost about 10.4 billion dollars. This amount includes the funds needed to buy land for such facilities.

June 11, 2014

Radiation still high (2)

Despite decontamination, radiation levels too high for many Fukushima residents to return

http://mainichi.jp/english/english/newsselect/news/20140611p2a00m0na006000c.html

Radiation levels in many areas of Fukushima Prefecture designated as zones where it is difficult for residents to return in the foreseeable future remain too high for residents to come back even after decontamination, the Environment Ministry said.

Areas near the crippled Fukushima No. 1 Nuclear Power Plant where the annual radiation levels are over 50 millisieverts and are unlikely to fall below 20 millisieverts within five years after the March 2011 nuclear accident have been designated as zones where it is difficult for residents to return.

The ministry decontaminated six designated areas in the Fukushima Prefecture towns of Namie and Futaba between October last year and January this year as model projects. In the decontamination work, the surface of soil was stripped away, soil was cleaned with high-pressure water and weeds were removed.

As a result, the average airborne radiation levels in residential areas, on farmland and roads, which had stood at 7.65 to 19.12 microsieverts per hour, fell about 60 percent to 3.35 to 7.09 microsieverts following decontamination.

Still, residents would be exposed to more than 20 millisieverts per year in many of these areas if they are to live in wooden houses and stay outdoors for eight hours a day.

Radiation levels in forests in these areas declined only about 20 percent even after decontamination.

June 14, 2014

Seabed radioactivity off Fukushima

NRA reveals cesium readings for seabed off Fukushima No. 1

http://www.japantimes.co.jp/news/2014/06/14/national/nra-reveals-cesium-readings-seabed-fukushima-1/#.U5xDCyji91s

JIJI

The Nuclear Regulation Authority has disclosed the results of its fiscal 2013 research into seabed radioactivity off the leaking, heavily damaged Fukushima No. 1 power station.

Ocean soil collected about 6 km away from the crippled power plant, run by Tokyo Electric Power Co., contains as much 2,000 becquerels of cesium-137 per kilogram. The half-life of cesium is about 30 years.

The nuclear watchdog said Friday that it is difficult to assess the figure because there is no standard to compare it with. The NRA said it will continue its research.

The March 2011 mega-quake and tsunami triggered three core meltdowns at the aging, poorly protected power plant that polluted much of Fukushima and other parts of eastern Japan with radiation.

About 4 km off the facility, soil with 1,000 becquerels of cesium-137 was collected from about 20 locations, the NRA said, noting that soil tainted with cesium tends to accumulate in depressed places.

The seabed distribution of the isotope roughly matched the findings of the Fisheries Agency, which conducted similar research in fiscal 2012, the NRA said.

Cesium-137 was particularly high near the mouth of the Abukuma River, which flows through Fukushima and Miyagi prefectures. The highest reading found was 2,700 becquerels in soil 2.5 km east and 2.3 km south of the river's mouth in Sendai Bay. But cesium concentrations in the areas did not fluctuate much during the year, the NRA said.

The research, conducted by the University of Tokyo and the National Maritime Research Institute, covered a 1,000-sq.-km area off the Fukushima No. 1 plant as well as areas around the Abukuma River.

June 23, 12014

Government & decontamination

Govt. estimates efficacy of decontamination

http://www3.nhk.or.jp/nhkworld/english/news/20140623_36.html

A government report suggests decontamination work may reduce radiation levels at no-entry zones near the Fukushima Daiichi nuclear plant below the maximum annual threshold in 10 years.

The Cabinet Office has made its first estimate of the efficacy of decontamination in the heavily contaminated residential areas near the crippled plant. Radiation exposure in these areas currently exceeds 50 millisieverts per year.

Full-scale cleanup operations have yet to begin in these areas.

The report proposes a hypothetical model in which a person spends 8 hours a day outdoors and lives in a house built of wood.

It says that in places with an annual radiation reading of 100 millisieverts, decontamination would lower levels to a range of 9 to 19 millisieverts by 2021, one decade after the nuclear accident.

Areas with 50 millisieverts would see a drop in readings to between 6 and 11 millisieverts.

In both cases, decontamination would help cut levels below the maximum allowable annual threshold of 20 millisieverts, which is one of the government's conditions to lift evacuation orders to residents.

When decontamination does not take place, an annual radiation reading of 100 millisieverts would naturally drop to 37 millisieverts by 2021, and a reading of 50 millisieverts would drop to 19.

The International Commission on Radiological Protection, or ICRP, says the average person should not be

exposed to more than one millisievert annually.

The estimates show that radiation levels in no-go zones are expected to remain far above this level even a decade after the nuclear disaster.

Cabinet Office officials say the estimates are hypothetical, so they should be interpreted loosely.

The Cabinet Office will use the estimates in making cleanup plans of contaminated areas.

Decontamination in no-entry areas

http://www3.nhk.or.jp/nhkworld/english/news/20140623_25.html

All 24,500 former residents in 7 municipalities in Fukushima prefecture remain evacuees as of April this year.

9,100 homes have been in the government designated no-entry areas since the 2011 Fukushima Daiichi nuclear accident.

No-entry areas are considered unsuitable for living for a long period of time. Radiation exposure there exceeds 50 millisieverts per year.

The government has yet to decide whether to conduct full-scale operations to remove the radioactive materials.

It is unclear whether decontamination will be effective. It is also feared that workers may be

exposed to high levels of radiation.

The Environment Ministry conducted trial decontamination at 6 locations in the no-entry areas between last October and January.

The ministry says radiation levels fell almost by half. Figures in some of locations fell below 20 millisieverts per year. This is one criterion for lifting evacuation orders.

The government says it will ask evacuees for suggestions on reconstructing the no-entry areas.

Govt estimates efficacy of decontamination

http://www3.nhk.or.jp/nhkworld/english/news/20140623_08.html

A Japanese government report suggests decontamination work could significantly lower radiation levels by 2021 in no-entry areas after the Fukushima Daiichi nuclear plant disaster.

The Cabinet Office has made its first estimates of the efficacy of decontamination in no-entry and evacuation zones near the crippled plant. Radiation exposure in these areas exceeds 50 millisieverts per year.

Full-scale cleanup operations have yet to begin in these areas.

The report proposes as a hypothetical model a person who spends 8 hours per day outdoors and lives in a house built of wood.

In places with an annual radiation reading of 100 millisieverts, it says decontamination would reduce levels to a range of 9 to 20 millisieverts by 2021, one decade after the nuclear accident.

Areas with 50 millisieverts would see a decline to between 6 and 11 millisieverts.

In both cases, decontamination would help cut levels to below the maximum allowable annual threshold of 20 millisieverts, which is one of the government's conditions to lift evacuation orders.

When the figures are multiplied by factors to better simulate actual conditions, the annual radiation exposure of adult male individuals would stand between one and 12 millisieverts.

The Cabinet Office says it will refer to the estimates in considering a cleanup of contaminated areas.

June 24, 2014

Gov't estimates everything will be fine by 2021

Please note that the Japanese Government is still only aiming at reducing the yearly admissible exposure to **20 millisieverts**

Government estimates all Fukushima areas safe for living by 2021

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201406240055

FUKUSHIMA--Evacuees can return home in the hardest-hit areas around the stricken Fukushima No. 1 nuclear plant by 2021, after decontamination work sufficiently reduces radiation levels there, according to government estimates released on June 23.

The Cabinet Office's working team in charge of assisting the lives of nuclear disaster victims estimated that cleanup efforts and "natural decontamination effects" will cut annual radiation doses by 54 to 76 percent in the "difficult-to-return" zones around the plant.

The numbers were presented to local government leaders at a meeting in the prefectural capital of Fukushima. The meeting was held by the industry ministry's panel that is promoting reconstruction of coastal areas in Fukushima Prefecture.

The government intends to use the latest estimates to reassure evacuees so that it can lift evacuation orders as early as possible.

But Jin Kowata, director of the Nogami No. 1 administrative district of Okuma town, raised doubts about the Cabinet Office's estimates.

"The results are too optimistic," he said. "I want (the central government) to release **more accurate estimates for the nearer future** instead of the ones for 10 years after the disaster."

All residents of Okuma were forced to evacuate after the Great East Japan Earthquake and tsunami caused the triple meltdown at the plant in March 2011.

The Cabinet Office's team took into account the results of the Environment Ministry's model decontamination program in the zones last fiscal year. It also factored in natural decontamination effects based on the half-lives of radioactive substances and the impact of rain, wind and other natural elements.

The estimates are also based on the premise that personal exposure to radiation remains around 70 percent of the air dose rates.

The central government currently plans to allow evacuees to return to their homes when annual radiation doses in each region decline to 20 millisieverts or less.

According to the team's estimate for areas where 100 millisieverts per year were detected in November, adults who live in wooden houses and stay outside for 6.5 hours a day will be exposed to 6 to 12 millisieverts in 2021 if decontamination work is conducted.

Even without cleanup work, the radiation dose readings for those people are estimated to drop to 24 millisieverts by 2021.

The team has not estimated the radioactive doses for children.

However, it is unclear if the decontamination efforts will continue producing the significant results that they are currently achieving, and geographic features could also negatively affect the results of the cleanup programs

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(This article was written by Senior Staff Writer Noriyoshi Otsuki and Yuri Oiwa.)

Estimates of 2021 radiation doses predict drop-off in Fukushima

http://www.japantimes.co.jp/news/2014/06/24/national/estimates-of-2021-radiation-doses-predict-drop-off-in-fukushima/#.U6ke3bHi91s

JIJI

FUKUSHIMA – Radiation doses in parts of Fukushima Prefecture now deemed uninhabitable because of contamination will fall by over half by 2021, government estimates released Monday show.

Annual doses per person would fall below 20 millisieverts if decontamination work is done, according to the estimates by the Cabinet Office.

It is the first time that radiation exposure estimates have been compiled for the areas where annual doses stand above 50 millisieverts. An annual reading of 20 millisieverts or less is one of the conditions for the evacuation advisory to be lifted.

The estimates were presented at a meeting Monday in the city of Fukushima of a private panel that advises Kazuyoshi Akaba, the minister of economy, trade and industry, on measures to help reconstruct municipalities around Tokyo Electric Power Co.'s Fukushima No. 1 nuclear plant.

According to the Cabinet Office, atmospheric radiation levels in the most contaminated areas are expected to decrease by half or more within 10 years of the accident, due to the natural decay of the radioactive substances as well as rain and wind sweeping some of the substances away. With decontamination work, the levels would drop further, it said. As of last November, atmospheric radiation levels in the areas stood at 3.8-19 microsieverts per hour.

Annual radiation doses for residents who spend eight hours outdoors a day would reach up to 37 millisieverts if cleanup measures are not taken. Decontamination efforts would see the annual exposure level fall to 3-19 millisieverts, the Cabinet Office said.

Decontamination work was done in parts of the highly polluted areas on a trial basis between last October and January. But no full-fledged decontamination program has been drawn up for the areas.

Radiation near nuke plant could be reduced below 20 millisieverts in 2021: gov't
http://mainichi.jp/english/english/newsselect/news/20140624p2a00m0na005000c.html

The government has estimated that decontamination work could cut the annual radiation dose in specified areas near the crippled Fukushima No. 1 Nuclear Power Plant from around 100 millisieverts to less than 20 millisieverts in 2021.

The Cabinet Office announced the estimated yearly radiation exposure in designated evacuation zones, or areas where the yearly radiation dose totals more than 50 millisieverts, on June 23. It based the estimates on Environment Ministry data, including the outcome of model decontamination projects.

Based on calculations from November last year, an adult male who spent eight hours outside and 16 hours inside each day near the plant would be exposed to 100 millisieverts of radiation per year. By March 2021, 10 years after the nuclear disaster, however, the Cabinet Office calculated that that figure would drop to 37 millisieverts -- even if no decontamination work was carried out.

If decontamination work were successfully completed in March 2015, the figure would drop to 9-10 millisieverts in 2021, and if the effects of decontamination were low, it would still fall to 17-19 millisieverts, the Cabinet Office calculated.

A yearly radiation dose of 20 millisieverts is a yardstick for lifting evacuation orders.

Meanwhile, in areas where the yearly radiation dosage totaled 50 millisieverts, the figure would drop to 19 millisieverts in March 2021 without decontamination work. If the cleansing work was carried out with success, the dosage would drop to 6-7 millisieverts, and it would drop to 10-11 millisieverts if the work was not as effective as hoped.

"The figures are estimates, based on various hypotheses, and we need to interpret them while allowing for a margin of error," a Cabinet Office official commented. "We will offer the information to local residents in plain language and use the data for disaster recovery."

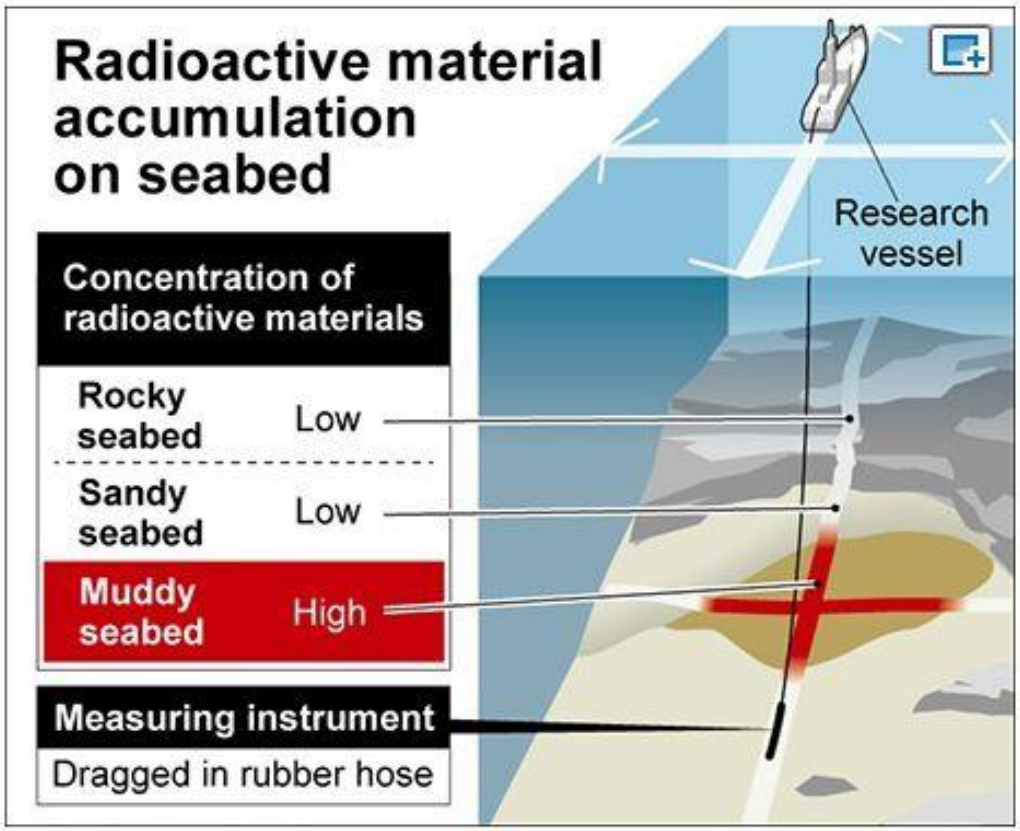
Some Fukushima evacuees and municipal governments, however, are requesting that the national government work on reducing the yearly permissible exposure dose to one millisievert.

July 3, 2014

Some spots more radioactive than others

Study shows muddy seabed off Fukushima coast has higher levels of contamination

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201407030069



THE ASAHI SHIMBUN

By CHIKAKO KAWAHARA/ Staff Writer

Concentrations of radioactive cesium on the seafloor after the 2011 Fukushima nuclear disaster were discovered to be higher in muddy depressions than on the rocky seabed, maritime researchers said.

"We are learning that the nuclear accident didn't contaminate the entire ocean, but created spots that tend to have higher radioactive levels than others," said Blair Thornton, a researcher from the University of Tokyo's Institute of Industrial Science. "We want to continue investigating."

At the request of the Nuclear Regulation Authority, a team of researchers from the University of Tokyo, the National Maritime Research Institute and Kanazawa University charted a distance of more than 1,000 kilometers. Sites measured ran 50 km north to south and 25 km west to east off the coast of Fukushima Prefecture, where the stricken Fukushima No. 1 nuclear power plant is located.

They used a ship equipped with an instrument specially developed to measure seafloor gamma ray levels while simultaneously surveying the underwater landscape using sonar.

Per every kilogram of seabed soil, the average concentration of cesium-137 was 90 becquerels. But of the locations charted 4 km offshore, 20 sites measured higher than 1,000 becquerels and some locations 6 km offshore registered levels as high as 2,000 becquerels.

According Thornton, the locations with higher concentration of radioactive materials were found in depressions where more mud tends to accumulate than in rocky seabeds. The cesium atoms likely bond with small particles in the mud and create highly concentrated residues of radioactive materials.
The survey also found that the seabed south of the crippled Fukushima plant had high readings, most likely due to the current of the ocean at the time of the March 11, 2011, accident.

Some locations 1.6 km and 2.5 km off the mouth of the Abukumagawa river in Miyagi Prefecture also had high readings, 1,300 becquerels and 2,700 becquerels per kilogram, respectively. These high levels of radioactivity presumably come from the radioactive cesium carried by the river within the soil, flowing northward through Fukushima Prefecture.

Little change was observed in the seabed soil even after the typhoon season, suggesting that fine mud on the ocean floor is rarely dispersed once it settles.

The team also conducted experiments to see how much cesium in the seabed soil is dissolving into the water and found levels of between 1 and 2 percent. This is significantly less than the 10 percent recorded immediately after the accident, and suggests contamination of seawater from the ocean floor is diminishing.

July 9, 2014

Nuclear Watch: Radioactive Waste Disposal

Nuclear Watch: Radioactive Waste Disposal

http://www3.nhk.or.jp/nhkworld/newsline/201407091317.html

Report on the Horonobe research center where the Japan Atomic Agency is studying the possibilities of final disposal of radioactive waste.

Reprocessing leaves behind highly toxic wastewater which is then mixed with heated glass and put into steel containers 1,3 metres high that weigh 500 kg each. These unit still emit radiation at an extremely high level (enough to kill a person in 20 seconds)

The disposal facility must be safe for a very long time (ca 100.000 years) and buried deep into the ground. At the moment the research facility is 250 m deep and 120 tons of water must be pumped out daily. It would have a capacity of 40.000 units and a total length of tunnels of 270 km. Tremors are also monitored constantly.

However the Science Council of Japan are voicing their concerns about this disposal option.

Where and how to safely store radioactive waste definitively? The question is not yet answered.

It has to be noted also that Horonobe so far has been dealing with research without real material.

July 14, 2014

Debris cleanup at plant likely to have contaminated rice paddies

TEPCO's rubble removal at Fukushima plant likely spread cesium to rice paddies
http://ajw.asahi.com/article/0311disaster/fukushima/AJ201407140051

Radioactive substances were released during debris clearance work at the No. 3 reactor of the Fukushima No. 1 nuclear plant in August 2013. (Asahi Shimbun file photo)

By MIKI AOKI/ Staff Writer

Tokyo Electric Power Co. plans to clear debris from the Fukushima No. 1 nuclear plant despite strong indications that earlier removal work contaminated rice paddies far from the stricken facility, The Asahi Shimbun has learned.

The agriculture ministry pointed out the possibility that the removal of rubble from the plant site in August last year spread radioactive substances to 14 rice paddies in Minami-Soma outside the evacuation zone and more than 20 kilometers from the plant.

Cesium levels in the rice crops harvested last autumn exceeded the safety standard of 100 becquerels per kilogram, according to ministry officials.

Radioactivity readings above the standard were also detected from rice grown at five locations inside the evacuation zone.

The ministry called on TEPCO to take preventive measures in its debris-removal work.

Although the utility has since suspended its clearing operations at the plant, the company plans to soon dismantle a cover installed on the No. 1 reactor building, where highly contaminated debris remains to be removed.

TEPCO has not told the public about the ministry's findings.

"(If TEPCO hopes to resume rubble-clearing operations), providing information on the possibility of the spread of (contaminated substances) is a major premise," said Takehiko Murayama, a risk management professor at the Tokyo Institute of Technology.

An agriculture ministry survey found that some parts of rice crops that emerged in mid-August were contaminated. If the crops had drawn up radioactive substances released into the soil immediately after the Fukushima nuclear plant was hit by the Great East Japan Earthquake and tsunami in March 2011, those substances would be detected uniformly throughout the plants.

Since they weren't, the ministry concluded that the radioactive substances had been newly released at least by the end of September 2013, the harvest period for the rice crops.

The ministry is pointing to Aug. 19, when TEPCO removed a large piece of wreckage from the plant's No. 3 reactor building. Radioactive dust under the debris blew away in the process and exposed two workers away from the reactor to radiation.

A maximum reading of 13 becquerels per square centimeter was detected from the heads of the two workers. Air dose rates increased at five measuring points 2.8 to 8.3 km north-northwest on the leeward side of the nuclear plant.

The Fukushima prefectural government attributed the increase in air dose rates to radioactive substances released during the Aug. 19 removal operation.

"We cannot think of any other factors," said a prefectural official. "It is almost certain that the rise in readings was caused by the clearance work."

The farm ministry also said Minami-Soma lies downwind of the five measuring spots, and that the System for Prediction of Environmental Emergency Dose Information (SPEEDI) estimated that the released particles would reach the city within three hours.

It also says Minami-Soma is the only city with more than one site contaminated with cesium levels exceeding the safety standard, and that the high readings were not detected from rice crops in the area the previous fiscal year.

Ministry officials said they planned to disclose the findings after confirming the cause of the rice crop contamination.

TEPCO said it will resume debris-clearing efforts at the nuclear plant while taking preventive measures based on the ministry's instructions that came in March this year.

However, the utility said it has yet to learn how far the released particles spread.

The company said its plans to dismantle the cover on the No. 1 reactor building will be the fastest way to remove wreckage from the site. TEPCO will also spray more anti-scattering agents than usual during the operation.

But the company acknowledged that the procedure will still lead to the release of a large amount of radioactive substances, and the spread of the substances will depend on the weather and the wind direction.

Debris cleanup at Fukushima reactor may have contaminated rice crops

http://www.japantimes.co.jp/news/2014/07/14/national/debris-cleanup-fukushima-reactor-may-contaminated-rice-crops/#.U8QdJ7Hi91s

Kyodo

Debris cleanup work by Tokyo Electric Power Co. at the Fukushima No. 1 nuclear plant may have led to the contamination of rice crops in nearby areas, agriculture ministry officials said Monday.

Radioactive cesium exceeding the government limit of 100 becquerels per kilogram was detected in rice crops from Minamisoma, Fukushima Prefecture, last year, including areas located more than 20 km from the crippled nuclear plant.

Farm ministry officials said they could not deny the possibility that radioactive dust was stirred up when Tepco cleaned up debris at the No. 3 reactor last August and that the dust could have made its way north to Minamisoma.

The ministry told Tepco in March to take measures to prevent dust dispersal, according to the officials.

A Tepco spokesman said the company does not deny the possibility that its cleanup work is to blame but added it isn't clear whether that was the direct cause of the contamination.

The tainted rice was tested by the Fukushima Prefectural Government and never made it to market.

Debris removal may have caused rice contamination

http://www3.nhk.or.jp/nhkworld/english/news/20140714_17.html

Rice paddies located about 20 kilometers from the Fukushima Daiichi plant were found contaminated with radioactive cesium blown by the wind.

The agriculture ministry called for plant operator TEPCO to take measures.

The Fukushima Prefectural government revealed that last year's harvested rice from 14 locations in the city of Minami Soma contained more than 100 becquerels of cesium per kilogram. This is beyond the government's safety limit. The contaminated rice has been removed.

The ministry says cesium was detected on the outside of the husk. Debris removal work conducted last August at the Number 3 reactor may be one of the reasons for the contamination.

TEPCO reportedly told the ministry it will use chemicals to stop dust from spreading during debris removal work. The utility said it will increase monitoring of the spreading dust.

Neither the ministry nor the utility told Minami Soma City officials the work at the plant may have contaminated the crop.

City officials say they were greatly startled. They said the ministry should have explained the matter to local authorities much earlier.

The ministry says it was going to report the finding after it determined the cause.

TEPCO is scheduled to conduct a large-scale debris removal work at Number One reactor. For this, it plans to disassemble covers which had been put to prevent the radioactive materials from spreading.

July 15, 2014

More about the Horonobe disposal project

Underground lab tackles trouble-plagued nuclear waste issue

http://www.japantimes.co.jp/news/2014/07/15/national/underground-lab-tackles-trouble-plagued-nuclear-waste-issue/#.U8UXYrHi91s

by Mari Yamaguchi

AP

HORONOBE, HOKKAIDO – Reindeer farms and grazing Holstein cows dot a vast stretch of rolling green pasture here on Japan's northern tip. Underground it's a different story.

rs and scientists have carved a sprawling laboratory deep below this sleep dairy town in Hokkaido that, despite government reassurances, some of Horonobe's 2,500 residents fear could turn their neighborhood into a nuclear waste storage site.

"I'm worried," said 54-year-old reindeer handler Atsushi Arase. "If the government already has its eye on us as a potential site, it may eventually come here even if we refuse."

The country's utilities have more than 17,000 tons of spent fuel rods that have finished their useful life but will remain dangerously radioactive for thousands of years. What to do with them is a vexing problem that nuclear-powered nations around the world face, and that has come to the fore as Japan debates whether to keep using nuclear energy after the 2011 disaster at Tokyo Electric Power Co.'s Fukushima No. 1 atomic plant.

The answer to that problem may lie in the Horonobe Underground Research Center, which has been collecting geological data to determine if and how radioactive waste can be stored safely for as long as 100,000 years in a country that is susceptible to volcanic activity, earthquakes and shifting underground water flows.

Several journalists donned hard hats recently and crammed in small groups into a cagelike mesh elevator for a 350-meter descent to reach the laboratory.

They emerged in a 760-meter-long tunnel cut in the shape of a figure 8, its bare wall showing 3 million-year-old sedimentary layers. Dripping water formed puddles on the ground. Dozens of cables and gauges connected to biscuit-size holes in the wall were analyzing the composition and movement of groundwater and other data around the clock.

In return for hosting the research, which under an agreement with the Japan Atomic Energy Agency doesn't involve any radioactivity, Horonobe has received about ¥1 billion in government subsidies and tunnel-related public works projects since 2000, according to town statistics.

But as with America's doomed Yucca Mountain project, finding a community willing to host a radioactive dump site is proving difficult, even with a raft of financial enticements. One mayor expressed interest in 2007, and was booted from office in the next election.

Kazuhiko Shimizu, the underground lab's director-general, noted that Horonobe is distant from potential risks, and data samples have so far indicated it might work as a storage site. Exploring an alternative location would take another 20 years, he added.

"It's a project that takes a lot of time and effort just to get started," he said. "It's not easy."

That kind of thinking makes locals fear they have made a deal with the devil.

"There is no guarantee this test site won't turn into a final repository," said 60-year-old dairy farmer Satoshi Sumi. A move by France to convert its test site into a final depository makes him nervous. "I've been skeptical about the agreement and I still am."

The issue is political, not scientific, said Osamu Tochiyama, director of the government-funded Radioactive Waste Disposal Safety Research Center in Tokyo.

Under the current plan, Japan would reprocess the spent fuel so most of it could be reused. The remaining waste would be fused with melted glass into cylinders, and placed in 19-cm thick stainless steel canisters designed to last for 1,000 years — the time it takes for most of the radioactivity to largely decline.

The canisters would be put in cold storage at the Rokkasho reprocessing plant for up to 50 years. Then they would be transported and entombed in a 70-cm thick shield made of bentonite clay before being lowered into deep underground storage in stable bedrock.

The government envisions building a sprawling underground repository about twice the area of Tokyo's Disneyland at a cost of ¥3.5 trillion and filling it with waste by 2100.

"Nobody wants to have waste in the neighborhood. But we should all face the reality and think what to do with the waste that already exists, whether you support nuclear energy or not," Tochiyama said. "It's wrong to keep putting off a decision and imposing it on the younger generations."

But more than a decade after Japan founded the Nuclear Waste Management Organization (NUMO) in 2000 to find a site, it is still looking.

The government plans to compile a list of potential sites over the next several months and start negotiations with communities. Officials are tight-lipped about where, because of the strong opposition anticipated.

Globally, only Finland and Sweden have finalized sites for underground waste storage. They are scheduled to open around 2020 and 2029, respectively. France is seeking approval to turn its current test site in the town of Bure into a full-fledged repository that would open in 2025.

In the U.S., after abandoning the proposed site at Nevada's Yucca Mountain, the government is looking at extending the use of interim "dry cask" storage to buy time until a final repository can be found.

The government of Prime Minister Shinzo Abe is pushing to restart some of Japan's 50 nuclear reactors, which are offline following meltdowns at the tsunami-swamped Fukushima plant in 2011, and would start producing more waste if switched back on.

Popular former Prime Minister Junichiro Koizumi, previously a supporter of nuclear power, drew attention to the issue last year after visiting Finland's Onkalo site and coming out against restarts because of Japan's inability to find a site.

In a report released in May, a panel of experts appointed by the Ministry of Economy, Trade and Industry called the NUMO operation an "aimless journey" and warned of "an imminent, realistic crisis."

NUMO replaced eight of its 10 board members on July 1. New president Shunsuke Kondo, former head of policymaking at the Japan Atomic Energy Commission, vowed to step up cooperation with the government to move forward with the waste disposal program.

The anticipated removal of highly toxic debris in the coming years from the Fukushima reactors is adding to the sense of urgency. Experts have mixed views about whether their damaged fuel rods and melted debris can be stored in the same way as normal spent fuel.

Japan also may end up with much more waste than anticipated because its reprocessing trials have been trouble-plagued, and the country is under pressure to abandon the effort altogether, not only because it is expensive but also because it extracts plutonium, which could be used in a nuclear weapon.

"Therefore when you separate the plutonium from spent fuel you are creating an international security danger," says Frank von Hippel, a Princeton University nuclear physicist and waste disposal expert.

In April, the government started a feasibility study of disposing of spent fuel rods directly without reprocessing, as Finland, Sweden and the U.S. plan to do. France, a global leader in reprocessing, is pursuing the latter route.

Burying the 4-meter-long fuel rods would require a bigger site, and additional safety measures to prevent the nuclear chain reaction from starting again.

Mayor Akira Miyamoto says Horonobe has contributed to the nation's energy policy and will continue to do so. He welcomes the government's plan to dig an even deeper tunnel 500 meters underground for further experiments.
But he stressed that radioactive materials are unwelcome.

"I understand there will be a final disposal site somewhere in Japan, but not here," Miyamoto said. "We're happy to help the government research, as long as it helps to revitalize our town."

July 16, 2014

Cesium from the plant probably spread 50 km

Study: Cesium from Fukushima debris removal likely spread 50 km

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201407160064

By MIKI AOKI/ Staff Writer

Radioactive substances released during rubble-removal work at the Fukushima No. 1 nuclear plant last yearlikely spread to areas nearly 50 kilometers away, according to a research team at Kyoto University.

The agriculture ministry earlier raised the likelihood that debris-removal operations on Aug. 19, 2013, led to cesium levels exceeding the safety standard detected in rice harvested more than 20 km from the plant.

Akio Koizumi, a health and environment science professor at Kyoto University's Graduate School of Medicine, and four other scientists discovered that the wind likely carried the cesium more than twice that distance.

The researchers set up air sampling instruments at three points in residential areas of Fukushima Prefecture and have measured radioactive cesium concentrations every week since September 2012 to estimate residents' exposure to radiation.

From samples collected between Aug. 15 and 22 last year, they found a reading of 1.28 millibecquerels per cubic meter at a location in Soma, 48 km northwest of the plant. That radioactivity level was more than six times higher than usual.

Radioactivity levels were 20 to 30 times higher than normal in Minami-Soma, 27 km north-northwest of the Fukushima plant. And there were almost no changes in cesium concentrations in Kawauchi, 22 km west-southwest of the plant, the researchers said.

Based on the wind's speed and direction at the time, as well as size of the collected particles, Koizumi and his colleagues concluded that the radioactive cesium came from the Fukushima No. 1 plant as the result of the Aug. 19, 2013, clearance work at the No. 3 reactor.

The team also found that cesium levels at the measuring point in Minami-Soma surged in both May and June 2013. They attributed the increase to debris-clearing operations at the facility.

The research results indicate that future rubble removal at the nuclear plant could disperse radioactive materials over much broader areas surrounding the facility.

In March this year, the scientists presented their findings to the Environment Ministry. It has also been reported that the agriculture ministry instructed Tokyo Electric Power Co., operator of the nuclear plant, to take measures to prevent the release of radioactive substances in the debris-removal work at the site.

TEPCO currently plans to resume debris-removal efforts by the end of July, starting with the dismantling of a cover installed on the No. 1 reactor building, where highly contaminated rubble remains to be removed.

The utility acknowledged that the Aug. 19 operations released a maximum 4 trillion becquerels--**more than 10,000 times the usual levels at the site--over four hours**, and apologized to residents for "causing trouble."

However, TEPCO argued that it is unclear whether the increase in cesium readings was related to debris-clearing work.

July 23, 2014

Debris removal at No.3 released over 1 trillion becquerels

One trillion Bq released by nuclear debris removal

http://www3.nhk.or.jp/nhkworld/english/news/20140723_37.html

The operator of the damaged Fukushima Daiichi nuclear plant says more than one trillion becquerels of radioactive substances were released as a result of debris removal work at one of the plant's reactors.

Radioactive cesium was detected at levels exceeding the government limit in rice harvested last year in Minami Soma, some 20 kilometers from Fukushima Daiichi.

There are fears that some rice paddies in the city have been tainted by airborne radioactive material released when debris was removed from the plant's No.3 reactor in August last year.

On Wednesday, Tokyo Electric Power Company presented the Nuclear Regulation Authority with an estimate that the removal work discharged 280 billion becquerels per hour of radioactive substances, or **a total of 1.1 trillion becquerels.**

The plant is believed to be still releasing an average of 10 million becquerels per hour of radioactive material.

Municipalities around the plant are seeking solid measures to prevent the spread of radioactive substances, as workers prepare to dismantle the covering of the No.1 reactor building to remove debris there.

July 24, 2014

1.1 trillion becquerels of cesium into the air last summer

Radioactive substances were released during debris clearance work at the No. 3 reactor of the Fukushima No. 1 nuclear plant in August 2013. (Asahi Shimbun file photo)

1.1 trillion becquerels of radioactivity leak during Fukushima cleanup

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201407240050

More than 1 trillion becquerels of radioactive substances were released into the environment during debris-clearing work at the Fukushima No. 1 nuclear power plant last year, according to estimates by Tokyo Electric Power Co.

Although TEPCO's stricken facility is estimated to currently emit about 10 million becquerels per hour, the utility said that cleanup efforts at the plant's No. 3 reactor on Aug. 19, 2013, resulted in the release of a maximum 1.1 trillion becquerels of radioactive materials over a period of four hours.

The figure was presented at a meeting of the Nuclear Regulation Authority on July 23.

"More careful countermeasures should have been taken," said Toyoshi Fuketa, an NRA commissioner.

The estimates were made by monitoring results in downwind areas and also took into account that alarms for highly contaminated dust concentrations sounded for four hours.

The precise amount of radioactive substances that leaked out of the plant site remains unclear, TEPCO officials said.

The utility said the concentration levels were the highest during a 20-minute period, and it applied that figure for all of the four-hour cleanup effort. Therefore, TEPCO officials believe their final figure is probably an overestimate.

Since Aug. 19 last year, TEPCO has taken steps to prevent a recurrence, such as spraying anti-scattering agents not only before debris removal, but also after the operations. Dust concentration alarms have not sounded since the new precautions took effect, according to the company.

Cleanup sent 1 trillion becquerels of cesium into atmosphere last summer: Tepco

JIJI

Up to 1.12 trillion becquerels of cesium was dispersed last summer as debris was removed from the battered building of reactor 3 at the Fukushima No. 1 nuclear plant, with tainted rice later being found in Miniamisoma, Fukushima Prefecture, according to Tokyo Electric.

Last Aug. 19, radiation-tainted dirt and dust was stirred up while the debris was removed from the unit, which was gutted by an explosion during the March 2011 meltdown crisis, Tokyo Electric Power Co. said Wednesday at a review meeting of the Nuclear Regulation Authority.

By Tepco's estimate, up to 280 billion becquerels per hour of radiation were released into the environment over four hours. That's 2,800 times the 10 billion becquerels per hour usually discharged from buildings at the crippled plant.
The work set off an warning alarm for airborne radiation at the plant and the cesium-tainted rice was found in paddies about 20 km north of the plant.

A southeast wind was blowing at the time of the removal work.

Tepco claims it was still not known whether the rice contamination had a causal connection with the work.

July 25, 2014

Reprocessing or disposal?

Spent nuclear fuel: Reprocess or dispose?

http://www3.nhk.or.jp/nhkworld/english/news/20140725_32.html

The Japanese government's basic stance is to reprocess all spent nuclear fuel to extract plutonium and reuse it as fuel at nuclear power plants.

A basic energy plan adopted in April upholds the nuclear fuel recycling policy. But, for the first time, the plan also called for studies on ways to directly dispose of spent fuel without reprocessing it.

Behind this move lies a series of challenges the government faces in recycling nuclear fuel. A reprocessing plant in Rokkasho Village in the northern prefecture of Aomori has suffered numerous troubles, and has been unable to start full operation more than 20 years since construction began.

The fast-breeder reactor Monju in Fukui Prefecture in central Japan is designed to use recycled plutonium.
But the facility too has been plagued by troubles, including a fire and failed inspections, and its future is uncertain.

The Japan Atomic Energy Agency plans to continue geological and geographical analyses for the direct disposal of spent fuel. It's due to finalize a report in 2018.

However, this option also has its own challenges. Spent nuclear fuel is highly radioactive, and compared to reprocessing, direct disposal would mean more than a 4-fold increase in nuclear waste volume.
Above all, the government lacks any prospect of finding a place that would accept a nuclear dumpsite.

Agency: nuclear waste can be directly disposed of

http://www3.nhk.or.jp/nhkworld/english/news/20140725_34.html

The Japan Atomic Energy Agency is reported to be looking at the direct disposal of spent nuclear fuel instead of reprocessing it.

NHK has obtained a draft report compiled by the agency which analyzed the environmental impact of disposing of spent nuclear fuel.

The conclusion of the analysis is expected to touch off controversy, because the government has long maintained the policy of reprocessing all spent nuclear fuel. It has conducted few studies about disposing of it as waste.

Spent nuclear fuel is known to have higher radiation levels than high-level radioactive waste.

But the agency's draft report says it is technically possible to directly dispose of spent nuclear fuel at a low radiation level.

If spent nuclear fuel is buried 1,000 meters underground for 1 million years, the radiation level at the earth's surface will peak in 3,000 years, at 0.3 microsieverts per year.

Even though reprocessing remains official government policy, the Rokkasho reprocessing plant is nowhere near full operating capacity.

Japan's nuclear power plants have accumulated 17,000 tons of spent nuclear fuel.

The agency's analysis is expected to lead to greater attention on future discussions on dealing with the stockpile of spent nuclear fuel.

Professor Tatsujiro Suzuki at Nagasaki University says the conclusion that direct disposal is possible is a very important step forward. Suzuki is a former member of the government's Atomic Energy Commission.

July 28, 2014

Radiactive waste site won't be nationalised

Govt. won't nationalize radioactive storage site

http://www3.nhk.or.jp/nhkworld/english/news/20140728_30.html

The government says it will allow landowners to keep their property rights for the land where it will build temporary storage facilities for radioactive debris in Fukushima Prefecture. It had originally planned to buy the land for the facilities.

Environment Minister Nobuteru Ishihara and Reconstruction Minister Takumi Nemoto met Fukushima Prefecture Governor Yuhei Sato and the mayors of Futaba and Okuma in Tokyo on Monday. The two towns host the crippled nuclear power plant.

The government had planned to buy land from landowners in the towns to build the intermediate storage facilities for radioactive soil and waste from the nuclear power plant. But some landowners had refused to sell.

The ministers said the central government will offer those landowners the right to retain their land. The government says it will obtain the right to use the land for up to 30 years.

They also said the government will provide rough compensation figures for the land after local governments and residents accept the construction plans.

Ishihara said the government has offered as much as it can at this point. He said he hopes the local governments will accept the construction of the facilities as they are vital for decontamination and recovery work.

Governor Sato said the central government has accepted the landowners' opinions. But he said it still has not come up with concrete measures to revive communities and rebuild residents' lives.

July 30, 2014

Shioya Town chosen by Gov't for final disposal

Town chosen as nuclear waste disposal site

http://www3.nhk.or.jp/nhkworld/english/news/20140730_21.html

Japan's Environment Ministry has chosen a town in Tochigi Prefecture, north of Tokyo, as a possible final disposal site for radioactive waste from the Fukushima Daiichi nuclear accident in 2011.

The ministry needs to create the disposal facilities because storage is reaching capacity in 5 prefectures. The facilities are for sewage sludge, incinerated ash, and other waste contaminated with more than 8,000 becquerels per kilogram of radioactive materials.

On Wednesday, Senior Vice Environment Minister Shinji Inoue visited Shioya Town and told Mayor Kazuhisa Mikata and Tochigi Governor Tomikazu Fukuda of the decision. He said state-owned property in the town was chosen after considering safety.

Inoue asked for the town's cooperation in field surveys, adding that the central government will execute

the plan while addressing local concerns.

Town Mayor Mikata expressed regret over the decision. He said he told the government that he strongly opposes the plan and wants to protect the local environment.

About 50 local residents gathered in front of the town office in protest.

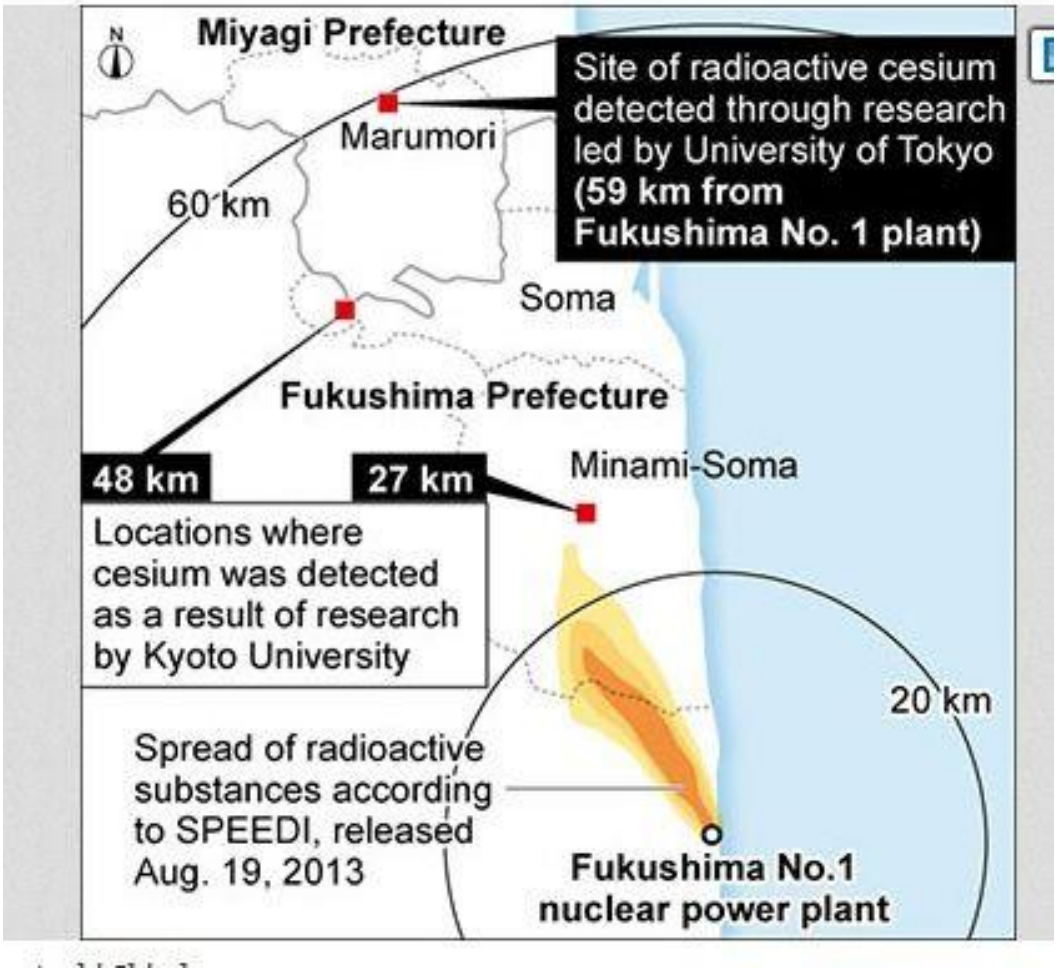
In September 2012, the ministry chose a state-held forest in Yaita City as the prefecture's candidate site. But the plan faced criticism and the ministry was forced to back down and start the selection process over.

July 31, 2014

Radioactive dust from debris clearing spread all the way to Miyagi

Radioactive dust released during Fukushima cleanup reaches as far as Miyagi Prefecture

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201407310044



By MIKI AOKI/ Staff Writer

Airborne radioactive materials released during debris-clearing work at the Fukushima No. 1 nuclear power plant were found in a town 60 kilometers away on seven occasions since December 2011.

Led by Teruyuki Nakajima, a professor of atmospheric physics at the University of Tokyo's Atmosphere and Ocean Research Institute, the team noted a surge in concentration of airborne radioactive cesium during clean-up activities that reached the town of Marumori in neighboring Miyagi Prefecture.

The researchers said the findings show that radioactive materials were repeatedly released into the environment and reached extensive areas during debris-clearing operations.

They called on Tokyo Electric Power Co., the operator of the Fukushima plant, to take more care to prevent the spread of radioactive materials during debris-clearing operations, even if it requires implementing more costly methods.

In conducting its research, the team placed a device to collect airborne dust at the town office of Marumori, 59 kilometers north-northwest of the stricken Fukushima plant. The device collected the samples at four- or five-day intervals between December 2011 and December 2013.

The team determined that there were eight cases in which the amount of radioactive cesium in the samples were at least 10 times higher than normal levels and the material likely originated from the Fukushima plant because of wind direction and speed.

The highest level of contamination was recorded in a sample collected between Aug. 16-20, 2013, reaching 50 to 100 times higher than normal levels.

TEPCO conducted large-scale debris-clearing work at the plant on Aug. 19, 2013. Previous research by the farm ministry and Kyoto University also showed that radioactive dust released during the work reached locations 27 km and 48 km from the plant.

In seven other cases, the amount of radioactive materials in the samples was about 10 times higher than normal. The research team reported the results of its findings to the farm ministry in May.

According to TEPCO, seven of the eight cases were recorded during the same period when the utility was doing debris-clearing work at the No. 3 reactor building.

The remaining case involved samples collected between Nov. 16-20, 2012, coinciding with an accidental water leak from a vent pipe of a cesium-absorption device at the plant.

A TEPCO official said it was unlikely that the accident caused a major release of radioactive materials like the August 2013 incident.

The utility had planned to dismantle a shroud over the No. 1 reactor building this month to start full-scale debris-clearing work around the reactor, but postponed the plan in order to strengthen measures to prevent the spread of radioactive materials during clean-up activities.

A worker at the Fukushima plant said that TEPCO has not discussed any drastic measures, such as covering the reactor with a container.

"It will likely resume debris cleanup when criticism calms down," the worker said.

August 2, 2014

Higher radiation limits?

Environment Ministry to focus decontamination work on individual exposure amounts

http://mainichi.jp/english/english/newsselect/news/20140802p2a00m0na010000c.html

The Ministry of the Environment said that its efforts to remove radioactive contamination from the Fukushima No. 1 Nuclear Power Plant disaster will shift focus to case-by-case exposure amounts rather than a universal goal, according to a midterm report it released on Aug. 1.

The change was prompted by data showing that despite many local municipalities aiming to lower air radiation levels to within 0.23 microsieverts per hour, there have been numerous cases where even with air radiation levels at between 0.3 and 0.6 microsieverts per hour, people's yearly exposure to radiation caused by the disaster has stayed below a limit of 1 millisievert of extra radiation exposure per year.

The data, introduced in the report, came from a survey on around 70,000 people by the cities of Date and Soma in Fukushima Prefecture, where people living in areas with 0.3 to 0.6 microsieverts of radiation per hour were still under 1 millisievert of extra radiation exposure per year. The ministry suggested to local municipalities that they supply personal dosimeters and base decontamination off of gathered readings, and that they announce information on areas with high radiation levels.

Regarding the 0.23 microsieverts-per-hour standard, the report said, "It is not the goal for decontamination work, it is an estimate based on one lifestyle pattern and its meaning was not accurately expressed." The report said that radiation exposure varies greatly depending on lifestyle, and it would be difficult for the national government to set a single, unified goal for decontamination efforts. It is calling a focus on individual radiation exposure amounts and better communication of risk information the pillars of decontamination efforts.

Senior Vice Minister of the Environment Shinji Inoue said, "We want to speed up decontamination work and disaster recovery, using the report as a basis."

While allowing higher radiation levels could speed up decontamination efforts, local municipalities are divided in their response to the idea, and confusion is expected.

August 5, 2014

Miyagi Gov't agrees

Miyagi Pref. agrees to gov't survey on disposal site for Fukushima radioactive waste

http://mainichi.jp/english/english/newsselect/news/20140805p2a00m0na007000c.html

SENDAI -- The Miyagi Prefectural Government is set to allow the national government to conduct a survey on three candidate sites in the prefecture for a final disposal facility for waste contaminated with radioactive substances emanating from the crippled Fukushima No. 1 nuclear power plant.

Miyagi Gov. Yoshihiro Murai will notify Environment Minister Nobuteru Ishihara of the decision possibly within this week.

The move represents a step forward toward conducting a survey as part of the Environment Ministry's efforts to select a site.

However, efforts to select a site are expected to pose a challenge to the central government as three municipalities hosting the candidate sites -- Kurihara, Taiwa and Kami -- have voiced opposition to building such a final disposal facility in their areas. Kami Mayor Hirofumi Inomata has refused to cooperate with the ministry survey, and even suggested that his town government will file a lawsuit demanding a ban on the national government from going ahead with the survey.

In a meeting on July 25, Ishihara asked Gov. Murai and the mayors of 35 cities, towns and villages in the prefecture to cooperate with the ministry in a survey to select a site for a final disposal facility for so-called "specially designated" waste. The environment minister designates waste containing certain levels of radioactive substances from the nuclear plant as such.

However, the mayors failed to reach a consensus during the meeting, and a final decision was left up to Gov. Murai.

In another meeting with the mayors on Aug. 4, Murai underscored the need to accept the Environment Ministry survey.

"A massive amount of specially designated waste is stored at various areas of the prefecture, and needs to be disposed of at an early date," Murai told the meeting. "To dispel the three municipalities' concerns, it's inevitable for us to accept a detailed survey." The governor then asked the mayors for their opinions on the issue.

In response, Kurihara Mayor Isamu Sato and Taiwa Mayor Hajimu Asano agreed to accept the survey with some conditions attached.

On the other hand, Kami Mayor Inomata noted that the candidate site in his town does not meet the standards for a site for a final disposal facility, such as the size of the land lot. He then called for a review of the national government's policy of disposing of waste contaminated with radioactive substances from the Fukushima No. 1 nuclear plant within the prefecture where the waste has been generated.

Some mayors expressed support for Inomata's view, but a majority of the attendees insisted that local communities should accept the conducting of a survey while continuing discussions on the selection of a site.

Gov. Murai then declared that the prefectural government will give the green light to the national government survey.

After the conference, Mayor Inomata warned that local residents may resort to force to block any attempt by the central government to go ahead with the survey. "A survey shouldn't be conducted without local residents' understanding. If the national government is to forcibly start its survey, it would cause confusion," he told reporters.

In the survey, the Environment Ministry will drill the ground at the candidate sites to check the solidity of the strata and levels of groundwater infiltration. The ministry will hold a meeting of an experts' panel to examine the survey results and evaluate their safety before narrowing down the three sites to one.

August 7, 2014

Miyagi Gov't agrees (2)

Miyagi to accept nuclear waste site survey

http://www3.nhk.or.jp/nhkworld/english/news/20140807_37.html

The governor of Miyagi Prefecture has officially agreed to accept governmental surveys to select a candidate site for final disposal of radioactive waste from the Fukushima nuclear accident in 2011.

Governor Yoshihiro Murai met Environment Minister Nobuteru Ishihara on Thursday.

The Environment Ministry plans to conduct field surveys to choose one from among 3 candidate locations in Miyagi Prefecture. On Monday, the governor met the heads of municipalities in the prefecture and decided to accept such surveys.

The governor told Ishihara that he wants the ministry to conduct surveys by considering requests from candidate municipalities and taking measures to prevent harm from rumors over radioactivity.
Ishihara said he will soon visit the municipalities of candidate sites to explain detailed plans before conducting surveys.

The government is planning to build nuclear waste sites in 5 prefectures. Miyagi, north of Fukushima, is the first to accept field surveys.

But it remains uncertain whether the government will be able to gain local approval for a final disposal site because the 3 candidate municipalities in Miyagi are all opposed to the building of such facilities.

Governor Murai said it took a year for his prefecture to agree to the surveys. He added that he hopes the government will do the work in a responsible manner.

August 18, 2014

Town rejects plans to build radioactive waste site

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

The mayor of Shioya, in Tochigi Prefecture north of Tokyo, has demanded that the government retract its plan to build a permanent radioactive waste storage site in his town.

The Environment Ministry is seeking to construct facilities in 5 prefectures within the Tokyo metropolitan area and northern Japan. The facilities will permanently hold sewage sludge, incinerated ash, and other debris contaminated with more than 8,000 becquerels per kilogram of radioactive materials. The highly radioactive waste was incurred by the nuclear accident in Fukushima in March 2011.

Last month, the ministry decided to use state-owned land in Shioya to build one of the facilities. The ministry wants the town's cooperation in field surveys in the area. But the town is opposed to the construction.
Town Mayor Kazuhisa Mikata and the speaker of the local assembly visited the ministry on Monday.

They submitted in writing concerns over the storage facility, saying it will have a negative effect on the town's natural water resources and agricultural products. They said local produce will be hit hard by rumors concerning food safety.

Senior Vice Environment Minister Shinji Inoue said the facilities are desperately needed. He said the ministry is ready to explain the plan to the town.

Mayor Mikata later told reporters the government must provide explanations why the Shioya site was chosen before detailed inspections were made.

An expert panel set up by Tochigi Prefecture will meet on Wednesday to examine the process used by the government to select the location.

August 22, 2014

Fukushima to accept construction of interim soil storage facility

JIJI

FUKUSHIMA – The Fukushima Prefectural Government will accept a central government plan as early as next week to construct an interim facility for storing soil tainted with radioactive fallout from Tokyo Electric Power Co.'s Fukushima No. 1 nuclear power plant, informed sources said Friday.
On Tuesday the central and prefectural governments plan to explain to the towns of Okuma and Futaba measures aimed at reviving their economies and ways to acquire land for the storage building. The two towns are candidates to host the facility.
After winning support for the plan from representatives of the two municipalities and residents, the Fukushima government will officially announce its decision to accept the storage construction, the sources said.

The prefecture wants to push forward talks on the matter among parties concerned before Prime Minister Shinzo Abe's planned Cabinet reshuffle on Sept. 3, in which Environment Minister Nobuteru Ishihara, who is in charge of the soil storage issue, is expected to be replaced, they added.
In January the government hopes to start storing soil collected during work to decontaminate areas affected by the nuclear accident at the power plant triggered by the March 2011 earthquake and tsunami. But the possibility cannot be ruled out that the start of the storage operation will be delayed because negotiations on land acquisition prices with owners will not be easy, the sources pointed out.
The central government plans to provide a total of ¥301 billion in subsidies to the prefectural and host municipal governments.

Issue of temporary storage entering final stage

http://www3.nhk.or.jp/nhkworld/english/news/20140822_23.html

The assemblies of 2 towns in Fukushima Prefecture have decided to hear from the central government about recreating living conditions using a proposed subsidy. The funds are linked to the construction of temporary storage facilities for radioactive waste in those towns.

The government plans to build facilities in Futaba and Okuma towns for storing radioactive waste generated by the decontamination effort at the Fukushima Daiichi nuclear plant. The 2 towns host the nuclear plant, which was damaged by the earthquake and tsunami in March 2011.

On August 8, the government told Fukushima Prefecture and its municipalities that it would pay them a total of 301 billion yen, or about 3 billion dollars, if they consent to the construction of temporary storage facilities.

The central government has already explained about the plan to the prefectural assembly.

The sources say the Futaba and Okuma assemblies decided to hold conferences next Tuesday to hear the government explain about the subsidy.

And next Wednesday the government is to provide explanations for representatives of the towns' residents at 2 locations in Fukushima Prefecture.

Senior officials of the Environment Ministry are to attend these sessions to explain how the subsidy would be used to help recreate living conditions, including child care and support for people looking for work, and to maintain residents' ties with their hometowns.

Fukushima Prefecture and the two towns are expected to make the final decision based on reactions from their assemblies and residents.

The decision is likely to come by the time Prime Minister Shinzo Abe conducts his planned cabinet reshuffle on September 3.

August 23, 2014

Will Fukushima Pref. accept temporary storage?

Fukushima Prefecture to accept intermediate storage facility for radioactive waste

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201408230037

Fukushima Prefecture is set to accept the construction of an interim facility to store radioactive waste from cleanup work due to the nuclear disaster, advancing the stalled process of decontaminating the affected areas.

The prefectural government has decided to shoulder the difference between the appraised value of land in Okuma and Futaba, where the structure will be built, and the price it would have fetched before the 2011 accident at the Fukushima No. 1 nuclear power plant.

The decision came after landowners insisted that the land should be bought at a fair market value because the current appraisals are much lower than pre-disaster estimates.

Consent from local governments is expected to move forward the central government's plan to start transporting radioactive soil and other contaminated waste to the storage site in January.

Okuma and Futaba host the crippled Fukushima No. 1 nuclear power plant. The residents of the two towns are still living as evacuees due to high levels of radiation in their hometowns.

Talks between local officials and the central government over the planned facility reached an impasse after Environment Minister Nobuteru Ishihara enraged landowners with a comment in June.

"In the end, it will come down to money," Ishihara said, referring to efforts to gain local approval for the storage facilities. Residents were angry because of the implication they could be easily bought.

The stalemate threatened to jeopardize the entire decontamination operation in the prefecture since the storage site is indispensable to advance the work to clean up and rebuild the affected communities.

In an effort to break the stalemate, the central government on Aug. 8 offered to double the funds to be provided to the local governments to 301 billion yen ($2.9 billion).

The remaining hurdle was how to shoulder the difference between the appraisal prices before and after the nuclear disaster to meet the landowners' request.

Central and local government officials wanted the matter settled by Sept. 3, when Prime Minister Shinzo Abe is expected to announce a new Cabinet lineup.

There is a growing speculation that Ishihara will be replaced in the reshuffle, due in part to his controversial remarks.

A senior Environment Ministry official apparently thought that Ishihara's departure would mean a delay of at least a month in negotiations. A new central government team needs to be briefed on the background and current status of the project before picking up where Ishihara left off.

The prefectural government decided to settle the talks ahead of the Cabinet reshuffle by picking up the tab for the difference in land appraisal rather than pushing for an additional offer from the central government.

"It will be difficult for us to get further concessions from the central government," a prefectural official said. "Starting the talks all over again is also totally unacceptable."

Officials of Okuma and Futaba welcomed the prefectural government's decision to pay the difference from its own coffers.
Fukushima Governor Yuhei Sato is expected to meet the mayors on Aug. 25 to formally convey the decision.
The prefectural government is likely to officially announce its acceptance of the construction of the interim storage facility by Sept. 2.
The central government is set to enter negotiations with landowners as early as next month over the purchase.

Fukushima Prefecture aims for agreement from local towns on nuclear waste storage

http://mainichi.jp/english/english/newsselect/news/20140823p2a00m0na005000c.html

The Fukushima Prefectural Government is set to allow interim storage facilities for radioactive waste from the Fukushima No. 1 Nuclear Power Plant disaster to be built in two towns in the prefecture, as long as it can reach a payment deal with them.
Contaminated soil has been sitting at temporary storage sites, getting in the way of decontamination work and recovery efforts. To alleviate this problem, the national government is aiming to have interim storage facilities built and operating from January next year.
The central government has earmarked the Fukushima Prefecture towns of Futaba and Okuma as candidate sites for midterm storage facilities, but the municipalities have been at odds with the national government over the price of land.
The national government has indicated that it will base its payment for land on post-nuclear disaster prices. The Futaba and Okuma municipal governments, however, want the prices to be based on pre-disaster levels.
Since the national government has already made concessions for land owners who don't want to give up their land, saying it will allow them to rent out the land, the prefectural government has judged that it cannot expect any further concessions from the national government on the land payment issue. The prefectural government therefore hopes to reach an agreement with the municipalities by covering the extra amount they are seeking.
On Aug. 25, the prefectural government intends to talk to the municipal governments about its plan to cover the difference between what they are demanding and what the central government is willing to pay. Meanwhile, meetings at the municipal assemblies of both towns have been slated for Aug. 26, with Minister of the Environment Nobuteru Ishihara due to attend. Officials are expected to outline an offer of 301 billion yen in aid from the national government, and discuss the prefectural government's plan to cover the extra amount the towns are requesting.
If the prefectural government secures agreements from the two municipal governments, it will give the national government the OK to move forward on constructing the facilities. Fukushima Gov. Yuhei Sato is aiming to seal an agreement before the next Cabinet reshuffle, scheduled for Sept. 3.

August 26, 2014

820 million dollars

Fukushima gov't offers 15 billion yen to 2 municipalities for radioactive soil storage

http://mainichi.jp/english/english/newsselect/news/20140826p2a00m0na021000c.html

FUKUSHIMA -- Fukushima Gov. Yuhei Sato unveiled a plan on Aug. 25 to offer some 15 billion yen to help rebuild and promote two municipalities in the prefecture in exchange for temporary storage of contaminated soil emanating from the Fukushima No. 1 Nuclear Power Plant disaster.

Gov. Sato unveiled the plan when he held talks with Okuma Mayor Toshitsuna Watanabe and Futaba Mayor Shiro Izawa. Okuma and Futaba are the coastal towns tapped as candidate storage sites as they host the crippled Fukushima No. 1 nuclear power station. The funds the Fukushima Prefectural Government offered to provide are aimed at helping landowners of the candidate sites put their lives back in order as well as helping promote the two municipalities. The two mayors said they would positively evaluate the proposal, setting the stage for them to allow the central government to negotiate with landowners to purchase the land required for building the storage facilities.

Gov. Sato briefed the two mayors on the plan, saying, "They are very troublesome facilities, the likes of which we've never had to deal with. The prefectural government will do whatever it can to deal with problems faced by the towns." The central government plans to compute purchase prices of the land based on market value that dropped in the wake of the outbreak of the nuclear disaster. But local residents are demanding "pre-disaster prices," creating gaps with the central government's purchase prices. Therefore, the Fukushima Prefectural Government is considering implementing measures to help the landowners restore their livelihoods, among other steps, as part of efforts to fill in the price gaps.

On the prefectural government's plan, Okuma Mayor Watanabe said, "We are now standing at the starting line." He sounded positive about allowing for negotiations between the central government and the landowners, saying, "Securing the understanding of the landowners is of the highest priority." Futaba Mayor Izawa said, "We can appreciate the prefectural government's handling of the issue." But on whether to accept the central government's proposal to build storage facilities in their municipalities, the two mayors said they were unable to provide an answer.

The Okuma and Futaba town assemblies held general meetings on Aug. 26. Environment Minister Nobuteru Ishihara attended the meetings to try to secure their understanding concerning 301 billion yen in subsidies and other measures the central government offered on Aug. 8. Of the 15-billion-yen subsidies related to the temporary storage facilities, a total of 85 billion yen would be extended directly to the two municipalities, Ishihara said.

The Fukushima Prefectural Government explained the 1.5-billion-yen financial assistance plan at the assembly meetings. Similar explanations are also expected to be given at the meetings of administrative district chiefs in the two municipalities on Aug. 27. Gov. Sato is expected to announce his endorsement of the central government's plans to build the temporary storage facilities in the two towns as early as Aug. 29.

Govt. to grant Fukushima towns $820 mil. for waste

http://www3.nhk.or.jp/nhkworld/english/news/20140826_25.html

Japan's government has offered a direct grant of 820-million dollars to 2 towns in Fukushima prefecture where it hopes to build intermediate nuclear waste storage facilities.

The government plans to build the facilities in the towns of Futaba and Okuma. They will house radioactive waste generated by the process of cleaning up the nuclear accident at the Fukushima Daiichi power plant.

It hopes to purchase land at candidate sites for the facilities or acquire the rights to use property.

Environment Minister Nobuteru Ishihara visited the Futaba town assembly with prefectural officials to seek understanding for the plan on Tuesday.

He explained the government hopes as much as possible to present measures that are in line with the residents' wishes.

Ishihara said the intermediate storage facilities are necessary to the decontamination and reconstruction process in the areas.

He said the grants to the 2 towns would be part of 3 billion dollars that will be given in subsidies to the prefecture and municipalities to help rebuild communities and peoples' lives.

Ishihara said a leaflet detailing the measure was distributed to all the residents of the 2 towns. A hotline will be set up for inquiries.

The environment minister plans to attend the Okuma town assembly later in the day to seek understanding there as well.

August 27, 2014

Fukushima to host nuclear waste storages

http://www3.nhk.or.jp/nhkworld/english/news/20140827_36.html

The Fukushima Prefectural government says it has decided to accept a central government proposal to build intermediate radioactive waste storage facilities in the prefecture.

The central government plans to build the facilities on 16-square-kilometer lots it will prepare in the towns of Futaba and Okuma near the crippled Fukushima Daiichi plant.

The facilities will house contaminated soil and other radioactive waste generated by the process of decontaminating communities in the prefecture.

The central government has already shown its readiness to provide direct grants worth about 2.9 billion dollars to the towns and the prefecture.

The prefectural government says it made the decision on Wednesday after discussing the matter with both municipalities.

It says they value to a certain extent the financial incentives prepared by the central government.

It adds it believes it obtained a broad public consensus as there were no major objections in the prefectural assembly or at meetings with community leaders.

Fukushima Governor Yuhei Sato is expected to formally announce the decision on Friday. The central government is then expected to begin negotiations with the landlords of the lots.

In August 2011 then-prime minister Naoto Kan proposed a similar plan to the prefecture after the accident at the plant in March of that year.

The current government of Prime Minister Shinzo Abe formally made the request last December.

At a series of negotiations, the central and prefectural governments agreed that new legislation should be enacted to stipulate the stored waste will be transferred from the prefecture within 30 years.

The two governments also agreed that landlords will have the option of selling their lots to the central government or keeping their ownership of the properties.

Fukushima towns OK plan to construct storage facilities for nuke waste

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201408270040

By YOSHITAKA ITO/ Staff Writer

Two Fukushima Prefecture municipalities have decided to accept the central government's rich package of subsidies to allow the construction of intermediate facilities to store radioactive debris from the Fukushima No. 1 nuclear power plant disaster.

“We succeeded in greatly deepening (local officials’) understanding (of our storage facility plan),” Nobuteru Ishihara, environment minister, told reporters on Aug. 26 after meeting with members of the town assemblies of Futaba and Okuma.

Ishihara said the central government will pay subsidies totaling 301 billion yen ($2.89 billion) to support local residents’ lives and revitalize local communities. Of that, 85 billion yen will go directly to the town governments of Futaba and Okuma, which host the stricken Fukushima plant. The remaining 216 billion yen in subsidies will be distributed through other programs.

The central government plans to distribute documents to all residents of the two towns to explain the assistance measures, and set up a dedicated telephone line to answer inquiries from local residents and others.
As for the purchase prices of the construction sites for the storage facilities, which had been a stumbling block between the central government and local officials, the Fukushima prefectural government had proposed earlier in August to cover the difference between land prices before the nuclear disaster and the current land values.
Because the town assemblies were satisfied with the suggested assistance measures, the governments of both Futaba and Okuma agreed to allow the central government to hold explanatory sessions for the landowners.
With the town governments giving their approval, it is now up to the landowners to give final approval for the central government to proceed with construction of the intermediate storage facilities.
The central government is expected to start negotiations with landowners by the end of September, after the Fukushima prefectural government officially announces its acceptance of the construction plan.

Town assemblies effectively accept interim storage facilities for radioactive soil

http://mainichi.jp/english/english/newsselect/news/20140827p2a00m0na015000c.html

FUKUSHIMA -- The town assemblies of Okuma and Futaba have effectively agreed to the planned construction of interim storage facilities for radioactive soil emanating from the Fukushima No. 1 nuclear power plant disaster at their candidate sites, it has been learned.
No objections were lodged during the plenary sessions in either town assemblies on Aug. 26 following explanations by Environment Minister Nobuteru Ishihara that 85 billion yen would be extended directly to the two municipalities as part of the 301 billion yen in subsidies offered by the central government. The planned facilities are designed to store radioactive soil and other waste generated in Fukushima Prefecture.
The plenary sessions of the Futaba and Okuma town assemblies were held in the Fukushima Prefecture city of Iwaki and the prefectural city of Aizuwakamatsu, respectively. Ishihara explained during the meetings that the subsidies will add up to a total of 100 billion yen -- with 85 billion yen in direct subsidies to the two towns and 15 billion yen in financial assistance for livelihood reconstruction combined. Ishihara also said his ministry will send out information materials to all residents and landowners in the two towns and install dedicated phone lines to respond to their inquiries.
After the plenary sessions, Seiichi Sasaki, speaker of the Futaba Municipal Assembly, told reporters, "I would like the central government to give in-depth explanations."
Yukio Chiba, speaker of the Okuma Municipal Assembly, said, "This (today's meeting) is not a place to decide whether we accept (the temporary storage facilities) or not. There are still matters that need to be discussed."
Environment Minister Ishihara, meanwhile, said, "We have gained better understanding (over financial assistance and other measures)."
Similar explanations are expected to be given to administrative district chiefs in the two municipalities on Aug. 27. Fukushima Gov. Yuhei Sato is then expected to announce his endorsement of the central government's plans to build the temporary storage facilities in the two towns as early as Aug. 29.

Contaminated soil has been sitting at temporary storage sites, getting in the way of decontamination work and recovery efforts. To alleviate this problem, the national government is aiming to have interim storage facilities built and operating from January next year.

August 29, 2014

Fukushima to accept waste storage plan

http://www3.nhk.or.jp/nhkworld/english/news/20140829_45.html

Japan's Fukushima Prefecture has decided to accept a central government proposal to build intermediate radioactive waste facilities in 2 of its towns.

The government plans to build the facilities on 16-square-kilometer lots in the towns of Futaba and Okuma, near the crippled Fukushima Daiichi plant.

The facilities would house contaminated soil and other radioactive waste generated by the process of decontaminating communities in Fukushima.

The government has already shown readiness to provide direct grants worth about 2.9 billion dollars to the towns and the prefecture.

Fukushima Governor Yuhei Sato and senior prefectural officials held a closed-door meeting on Friday. They reportedly agreed to accept the proposal on condition that the central government enacts new legislation stipulating that the stored waste will be transferred from the prefecture within 30 years.

Fukushima also plans to ask the government to negotiate carefully with the owners of the sites while sufficiently considering individual situations.

Friday's meeting came after the government briefed a local assembly and community leaders about its proposal. There were no major objections.

Sato told reporters on Friday that the prefecture scrutinized government plans to enact new legislation for waste storage and measures to help restore living conditions for local residents.

He said it's important to listen to local opinion, and that he will make a final decision after conveying the results of Friday's meeting to the 2 towns and other communities. Sato plans to meet local leaders on Saturday.

The governor is then expected to meet Prime Minister Shinzo Abe on Monday to formally convey the decision.

August 30, 2014

Fukushima Pref. plans to accept radioactive waste storage

http://mainichi.jp/english/english/newsselect/news/20140830p2g00m0dm011000c.html

FUKUSHIMA (Kyodo) -- The Fukushima prefectural government on Friday decided to accept a central government plan to store radioactive waste from the decontamination operations since the March 2011 nuclear disaster within the prefecture for three decades.
After a meeting of senior prefectural officials on the matter, Gov. Yuhei Sato told reporters, "We've screened and confirmed safety and regional promotion measures as offered by the state."
Sato is expected to convey the acceptance to Environment Minister Nobuteru Ishihara and Reconstruction Minister Takumi Nemoto possibly Monday. Arrangements are under way for him to also meet with Prime Minister Shinzo Abe in Tokyo.
In a bid to start stockpiling the waste in January at facilities near the stricken Fukushima Daiichi nuclear power plant, the central government will negotiate for the use of land with roughly 2,000 landowners of about 16 square kilometers around the plant.
The central and prefectural governments have negotiated terms and conditions since the environment minister last December requested the prefecture approve storage for up to 30 years.
During the negotiations, the central government abandoned a plan to buy all the necessary land in the face of opposition from landowners worried the storage could continue beyond 30 years.
Instead, the government has agreed to also lease land and to provide 301 billion yen in subsidies to the prefecture over the period.
It has also vowed to secure a site outside the prefecture for final disposal of the radioactive waste after the 30-year period, although the site has not been decided.

See also in the Japan Times:

Fukushima governor all but accepts radioactive storage plan

Kyodo
http://www.japantimes.co.jp/news/2014/08/30/national/fukushima-governor-all-but-accepts-radioactive-storage-plan/#.VAHJM2Onq1s

FUKUSHIMA – Fukushima's governor on Saturday officially agreed to let the central government store radioactive debris collected from decontamination operations for three decades in return for ¥301 billion in subsidies.
"It's a difficult decision, but I want to accept the construction plan," Gov. Yuhei Sato told reporters.
Sato made the comments after meeting with Toshitsuna Watanabe and Shiro Izawa, the mayors of the towns of Okuma and Futaba, which host the damaged Fukushima No. 1 power plant, and representatives from neighboring localities.
At the meeting, the two mayors expressed plans to take the governor's decision "gravely" and said that the construction plans for the storage facilities had been formalized, according to sources.
Sato said he accepted the plan because he sees it as "necessary to advance decontamination and realize recovery of the environment."

He is to formally convey his acceptance to Environment Minister Nobuteru Ishihara and Reconstruction Minister Takumi Nemoto as early as Monday. Arrangements are also underway for him to meet with Prime Minister Shinzo Abe in Tokyo.
The Abe government wants to store the tainted waste near the stricken power plant. To do so, it will have to conduct negotiations with roughly 2,000 landowners to acquire the approximately 16 sq. km of land around the plant needed to host the storage facilities. But critics say doing so will allow the government to keep the waste their even longer.
The central and prefectural governments have been negotiating the terms and conditions for the deal ever since the environment minister asked Fukushima last December to store the waste for up to 30 years.

August 31, 2014

Storage site in Fukushima

The candidate site for an intermediate storage facility for radioactive soil and debris spans the towns of Okuma, foreground, and Futaba, background, in Fukushima Prefecture. Seen in the central background is the Fukushima No. 1 nuclear power plant. (Takeshi Tokitsu)

Fukushima governor gives go-ahead for intermediate storage facility for radioactive debris

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201408310016

FUKUSHIMA--Fukushima Governor Yuhei Sato said on Aug. 30 that his prefecture will accept the central government's plan to construct an intermediate storage facility in Okuma and Futaba for radioactive debris from cleanup work due to the nuclear disaster.

He made the announcement after meeting here with mayors of the two towns that are jointly hosting the crippled Fukushima No. 1 nuclear power plant.

"I made a painful decision. I decided to accept the construction," Sato told reporters after the meeting.

Okuma Mayor Toshitsuna Watanabe and Futaba Mayor Shiro Izawa also said that they will accept the prefectural government's decision, saying that they took Sato's acceptance seriously.

The Fukushima governor plans to convey his approval to Environment Minister Nobuteru Ishihara and Reconstruction Minister Takumi Nemoto on Sept. 1.

The decision is expected to advance the construction plan for the storage facility, which was first advocated by the central government several months after the nuclear plant suffered a major accident following the March 11, 2011, Great East Japan Earthquake and tsunami.

The central government will hold explanatory meetings with landowners of the planned construction site as early as in September. Then, it will start negotiations to acquire their land so that it can transport radioactive soil and debris to the storage facility from January.

When the facility is completed, radioactive soil and debris, which have been temporarily placed in various parts of the prefecture at present, will be transported there. This will allow the decontamination efforts to be accelerated, since local opposition to temporary storage sites has impeded the buildup of the contaminated materials.

However, of the more than 2,000 landowners who will be contacted in regards to the storage facility, some are reluctant to sell or lease their land. Therefore, the focus from now is whether they will accept the government's offers.

(This article was written by Takuro Negishi and Yoshitaka Ito.)

Fukushima okays storage of radioactive soil

Fukushima declares acceptance of storage for contaminated soil

http://mainichi.jp/english/english/newsselect/news/20140831p2g00m0dm005000c.html

FUKUSHIMA (Kyodo) -- The Fukushima government declared Saturday its acceptance of a central government plan to build storage facilities in the prefecture for contaminated soil from decontamination operations following the March 2011 nuclear disaster.

"It's a tough decision but I will accept the construction," Gov. Yuhei Sato told reporters.

Toshitsuna Watanabe and Shiro Izawa, the mayors of Okuma and Futaba, the two Fukushima towns tapped for the storage facilities as the hosts of the crippled Fukushima Daiichi power plant, suggested after meeting with Sato in the city of Fukushima that they take the governor's decision seriously.
Sato said the proposed facilities are necessary to "advance decontamination and environmental recovery. But he kept the latest decision separate from actually allowing contaminated soil to be hauled into the envisioned facilities.
The governor said he will renew his calls for legislation to make it certain that the stored soil will be permanently disposed of outside of the prefecture within 30 years from the start of storage, as well as for an allocation of subsidies to be provided to the local governments in return.
The mayors said they call on the central government to make a detailed explanation to landowners to be affected by the storage construction project.
Sato is scheduled to convey his acceptance to Environment Minister Nobuteru Ishihara and Reconstruction Minister Takumi Nemoto on Monday. Arrangements are under way for him to also meet with Prime Minister Shinzo Abe at the prime minister's office.
The government plans to start hauling contaminated soil into the facilities by next January, and to do so, enter into negotiations with around 2,000 landowners.

September 1, 2014

Storing radioactive waste in Fukushima

3 cities in Chiba to store radioactive waste

http://www3.nhk.or.jp/nhkworld/english/news/20140901_10.html

Three cities in Chiba Prefecture, near Tokyo, plan to store more than 500 tons of radioactive waste in their areas collected after the 2011 Fukushima nuclear plant disaster.

The waste collected from Kashiwa, Matsudo and Nagareyama has been temporarily stored at facilities belonging to the prefecture.

But the prefecture has been calling on the cities to retrieve the waste and store it in their own areas if the central government fails to build permanent storage facilities by the end of March in 2015.

Kashiwa City plans to submit to the local assembly an extra budget plan for about 4-million dollars. The money will go toward installing a storage warehouse where the waste can be moved.

The 3 cities say they will decide when to retrieve the waste based on discussions with prefectural officials.

The central government is obliged to find disposal sites for the sludge and ash with cesium levels of more

than 8,000 becquerels per kilogram in the 5 prefectures near the plant.

But strong opposition from local residents has delayed the process.

Fukushima accepts storage facilities

http://www3.nhk.or.jp/nhkworld/english/news/20140901_18.html

The governor of Fukushima Prefecture has informed the central government of his approval of the plan to build intermediate storage facilities for highly radioactive waste in 2 towns within the prefecture.

Yuhei Sato informed Environment Minister Nobuteru Ishihara and Reconstruction Minister Takumi Nemoto about the decision at a meeting on Monday.

The meeting was also attended by the mayors of the 2 towns -- Futaba and Okuma -- near the Fukushima Daiichi nuclear power plant.

Sato said the construction of the facilities will be a heavy burden on local communities, but he wants to restore the environment as soon as possible.

The governor urged the central government to quickly enact legislation to stipulate that the stored waste will be moved out of Fukushima Prefecture within 30 years.

The mayors of Futaba and Okuma towns said they take Sato's decision seriously. They called on the central government to thoroughly explain its plan to landowners to win their support.

Environment Minister Ishihara said the government will do all it can to build the facilities and decontaminate and rebuild Fukushima.

Fukushima gov. tells ministers of acceptance of radioactive waste

http://mainichi.jp/english/english/newsselect/news/20140901p2g00m0dm057000c.html

FUKUSHIMA, Japan (Kyodo) -- The Fukushima governor on Monday told two Cabinet ministers he will accept a central government plan to store radioactive waste from decontamination following the March 2011 nuclear disaster for up to 30 years in the prefecture.
"Storage facilities may force great burdens on local communities, but we made a difficult decision to restore the environment in the prefecture," Yuhei Sato told Environment Minister Nobuteru Ishihara and Reconstruction Minister Takumi Nemoto.
"We respect this important decision," Ishihara said. "The state will continue full efforts toward reconstruction."

Present at their meeting in Fukushima city were the mayors of Okuma and Futaba towns, planned sites of the storage facilities near the Fukushima Daiichi nuclear power plant where the devastating earthquake and tsunami triggered the nuclear disaster.
Sato asked the ministers to enact a law for final disposal of the waste outside the prefecture within 30 years, earmark budget subsidies for the prefecture and ensure the safety of radioactive waste transportation.
The central government will soon start negotiations with some 2,000 landowners in the two towns on storage facility construction in a bid to begin waste transportation to these towns by January.

September 2, 2014

Not just Fukushima's problem

EDITORIAL: Storing radioactive debris should not be regarded as Fukushima's problem

http://ajw.asahi.com/article/views/editorial/AJ201409020016

Fukushima Prefecture and two towns, Okuma and Futaba, have accepted the central government's plan to construct an intermediate storage facility for radioactive soil and other polluted material generated by the March 2011 accident at the Fukushima No. 1 nuclear plant.
The central government will soon start negotiations with landowners in the two towns, which jointly host the crippled nuclear plant, to buy the necessary land for the facility.

Temporary storage sites for radioactive debris in the prefecture will soon be filled to the brim. This is causing delays in decontamination work.
An intermediate storage facility is vital infrastructure for cleaning up the mess left by the nuclear disaster. Concerns have arisen that efforts to rebuild the shattered livelihoods and communities in Fukushima could be seriously hampered if no community would accept the facility.
We welcome the decision by the three local governments as a first step toward building the facility.
The process leading to this point, however, raises concerns about the future.
The way the whole burden has been imposed on specific local communities makes us wonder if the implications of cleanup work and of continuing nuclear power generation can be shared by the entire nation.
Three years have passed since the central government called for the acceptance of the storage facility. In the end, the government offered more than 300 billion yen (about $2.9 billion) of grants to help local residents rebuild their lives and support the prefecture's reconstruction efforts.
The prices at which the government buys land to build the facility will be based on current market prices, apart from compensation from Tokyo Electric Power Co, the nuclear plant's operator. The prefectural government will subsidize the differences between the purchase prices and the pre-accident prices.
Given the heavy burden of hosting the storage facility, generous financial support to the landowners and the local governments is inevitable.
But money divides people. When a certain area receives money in exchange for accepting a burden, people outside the area tend to pay little attention to the burden, saying, "They got the money."
Compensation for damage caused by the Fukushima disaster has created rifts based on complicated emotions between disaster-affected areas and other areas, between the evacuation zones and the rest of Fukushima Prefecture, and even between residents of the same communities because of differences in the amounts of money they have received.
Such rifts emerged both when the nuclear power plant was built and after the accident when TEPCO decided on compensation to victims.
Money is not a silver bullet to solve these kinds of problems.
In addition, half a year after it asked for the acceptance of the storage facility, the government started negotiations focused on the two towns.
Most parts of the two towns have high levels of radiation, making it effectively impossible for their residents to return home in the foreseeable future.
Storing radioactive debris in areas with high radiation levels may be reasonable from the viewpoint of preventing the spread of polluted material. Even so, the government's approach may have narrowed the scope of the problem to talks with specific areas.
Essentially, the potential risks inherent in nuclear power generation and the burdens of dealing with its legacies are issues that should be considered by the whole nation.
During meetings to explain the intermediate storage facility to local residents, some participants expressed their wishes to see it located in Tokyo. Others argued that the burden should be shared with areas that consume electricity generated by nuclear power.
These comments are natural responses to the proposal if the decision is based on the principle that the burden should be shared fairly by the beneficiaries.
We will face the same problem when we try to determine who should shoulder the burden from the disposal of aged nuclear reactors and spent nuclear fuel.
It is crucial to seek a solution that won't divide the people.
Even if the proposed intermediate storage facility is built, many other challenges must be tackled.

Five conditions, says Sato

Radioactive waste from decontamination work is temporarily stored in a residential area in Koori, Fukushima Prefecture. (Asahi Shimbun file photo)

Fukushima governor sets 5 conditions for storing radioactive waste

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201409020061

The Fukushima governor issued five conditions for accepting radioactive debris at a planned interim storage facility, including a law stipulating that the waste will be moved outside the prefecture within 30 years.

Governor Yuhei Sato's demand for the legislation came at a meeting with Prime Minister Shinzo Abe in Tokyo on Sept. 1. During the talks, Sato conveyed the decision of the prefecture and the towns of Okuma and Futaba, which co-host the crippled Fukushima No. 1 nuclear power plant, to accept construction of the storage facility.

"(Giving consent to the construction) will force the localities to bear an enormous burden, but we had to make a heart-wrenching decision to accept it in order to expedite rebuilding and the recovery of the environment," Sato said.

Abe responded: "I am fully aware that it was a tough decision. We will work together and do our best to rebuild Fukushima Prefecture."

With temporary storage areas already near capacity, decontamination operations and rebuilding efforts around the nuclear plant have stalled. Currently, radioactive debris is being stored at about 54,000 locations in the prefecture, including the backyards of homes, parking lots and parks.
But local residents are concerned that the new storage facility in Okuma and Futaba will end up being the final disposal site for the estimated 20 million cubic meters of debris, enough to fill 13 to 18 Tokyo Domes, generated from the cleanup process.
Earlier on Sept. 1, Sato informed Environment Minister Nobuteru Ishihara and reconstruction minister Takumi Nemoto about the decision to accept construction of the storage facility during a meeting in the prefectural capital of Fukushima.
However, Sato stressed that building the storage facility and accepting the radioactive soil and other debris from decontamination operations are "separate" issues.
The central government plans to start the shipments in January.
The governor said a law must state that final disposal of the waste outside the prefecture will occur within 30 years after the start of shipments to the interim storage site.
The four other conditions for accepting shipments of the waste were: compiling a budget to provide 301 billion yen ($2.89 billion) in grants to the local governments; presenting detailed measures to maintain and manage the transportation routes and secure the safety of local communities along those routes; securing the safety of the interim storage facility and transportation of the waste; and reaching a safety agreement between the central government and the governments of Fukushima Prefecture, Okuma and Futaba over the storage.
Ishihara said the central government will take such requests seriously.

September 3, 2014

Storing Radioactive waste

Storing Tepco's radioactive waste

http://www.japantimes.co.jp/opinion/2014/09/03/editorials/storing-tepcos-radioactive-waste/#.VAb-yGOnq1s

The plan to build facilities around the crippled Fukushima No.1 Nuclear Power Plant of Tokyo Electric Power Co. to store radioactive waste collected through decontamination of the areas hit by the March 2011 meltdowns at the plant will finally move forward with the go-ahead given by Fukushima Gov. Yuhei Sato. Although the facilities are expected to remove one of the obstacles to Fukushima's reconstruction from the worst nuclear disaster since Chernobyl, the government still needs to realize that for people who were forced out of their hometowns by the 2011 crisis, giving up their property for construction of the facilities will be a hard decision because it means parting with their land.
The government still needs to negotiate with about 2,000 residents who own the candidate sites for the facilities to acquire roughly 16 sq. km of land. It will accept rental contracts with some residents to

address their concern that despite the government's plan to keep the waste there for just 30 years, the facilities could end up becoming permanent storage sites.

Currently large bags of radiation-tainted soil and other waste gathered in the decontamination operation are stored in more than 50,000 locations around Fukushima Prefecture — mostly in the yards of private homes and on business premises, but also on school grounds and in public parks, with the contents spilling out from tears in some of the bags. The total amount of such waste has reached 15 million tons in the prefecture alone and is forecast to eventually hit 30 million tons.

The widespread presence of this waste is a hindrance to the rebuilding of many people's lives in Fukushima, so the sooner the storage facilities are built, the better. Talks with the prefecture and the towns of Okuma and Futaba, which host the Tepco plant, moved forward after the government promised a total of ¥301 billion in grants over 30 years after use of the facilities begins. The grants are about three times larger than the amount initially proposed by the government. However, the government should not think that it was ultimately money that mattered in the negotiations, as Environment Minister Nobuteru Ishihara suggested in controversial remarks he made earlier.

The protracted negotiations over construction of the storage facilities were threatening to divide municipalities in the prefecture. While the towns of Okuma and Futaba — whose residents were forced to leave due to the radiation fallout from the 2011 disaster — agonized over whether to accept the facilities, other municipalities in the more populous parts of Fukushima called for the prompt construction of the storage facilities. The latter hope that transfer of the waste to the storage facilities would facilitate the return of their own residents. Meanwhile, much of the land comprising the towns of Okuma and Futaba remains off-limits to residents due to the high levels of lingering radiation, and the situation is not expected to change for a long time.

The government needs to understand and address the complex sentiments of local landowners as it proceeds with negotiations for land acquisitions. Concern lingers on whether the government will honor its words that the waste will remain there for only 30 years and then be moved for final disposal at a site outside of Fukushima. The government must keep in mind that the storage facilities will not be completed without the trust of local parties, including the landowners.

September 5, 2014

Second wave of radiooactive emission a week after /11

Radioactive plumes spread cesium a week after Fukushima disaster

http://mainichi.jp/english/english/newsselect/news/20140905p2a00m0na012000c.html

A second wave of radioactive material from the Fukushima No. 1 Nuclear Power Plant disaster spread over the Tohoku and Kanto regions around one week after the outbreak of the disaster, analysis of radiation readings has found.

It was already known that clouds of radioactive material, known as "radioactive plumes," had spread on March 15 and 16, 2011, but new analysis by the secretariat of the Nuclear Regulation Authority and the Ministry of the Environment shows similar radiation readings for March 20 and 21 as well.

Until now, radiation levels after the disaster have been estimated by comparing observed readings, such as those from aircraft, with computer simulations obtained from the System for Prediction of Environmental Emergency Dose Information (SPEEDI). For the most recent analysis, the Ministry of the Environment used data from constant monitoring devices used to measure vehicle exhaust fumes and other such air pollution. The ministry sought help from institutions including Tokyo Metropolitan University and the Atmosphere and Ocean Research Institute at the University of Tokyo. It collected filter paper that catches airborne particles from around 90 monitoring stations in nine prefectures. Researchers analyzed radiation levels from March 12 to March 23, 2011.

The analysis showed that at one monitoring station in the city of Fukushima on the night of March 15, the combined activity of cesium-137 and cesium-134 went as high as 45.5 becquerels per cubic meter of air. Radioactive plumes are believed to have continuously spewed from the plant between March 16 and March 19 as well, but the analysis suggests that due to eastern-blowing winds, they spread out over the Pacific Ocean and did not elevate atmospheric radiation levels over Japan. However, the wind direction later changed, and at 3 p.m. on March 20, the Fukushima city monitoring station registered a reading of 104.1 becquerels per cubic meter of air. Readings around this level continued until the next morning.

It is widely known that a radioactive plume spread around March 15, causing a sharp climb in radiation levels to around 20 microsieverts per hour after rain caused radioactive material to fall on homes and on the ground. Rain did not fall on March 20 and 21, so the already-high radiation levels near homes and on the ground did not climb noticeably. This is thought to be the reason why the second radioactive plume was not noticed until now.

In the Kanto region, two belts of high-concentration radiation were registered -- one on March 15 and one on March 21. In particular, on the morning of March 21 there was a spike in radioactive cesium concentrations in southern Ibaraki Prefecture and northeastern Chiba Prefecture. Afterwards, the plumes appear to have moved southwest to the northeastern coast of Tokyo Bay. Rain is thought to have brought the radioactive material down to the area and created radioactive "hot spots" that were recorded in various areas.

Yuichi Moriguchi, an environmental systems professor at the University of Tokyo who is knowledgeable about environmental pollution from the Fukushima disaster, commented, "This is important data that shows when and where high concentrations of cesium in the atmosphere spread. This information will help in accurately determining residents' radiation exposure at the early stages of the nuclear crisis."

September 05, 2014(Mainichi Japan)

September 7, 2014

Radioactive contamination of Fukushima Bay even more serious than expected

Two trillion becquerels of radioactive material may have escaped No. 1

http://www.japantimes.co.jp/news/2014/09/07/national/two-trillion-becquerels-radioactive-material-may-escaped-1/#.VAysHmOnq1s

JIJI

Some 2 trillion becquerels of strontium-90 and cesium-137 may have flowed into the bay of Tokyo Electric Power Co.'s crippled Fukushima No. 1 plant during the 10 months to May this year, it was learned Sunday.

The amount exceeds by 10 times the limit of radioactive material releases Tepco set before the March 2011 meltdown accident at the power plant in Fukushima Prefecture.

At the plant, tainted groundwater may be flowing into the bay, and highly radioactive water may be leaking into the bay from reactor buildings through trenches.

According to Tepco documents, some 4.8 billion becquerels of strontium-90 and 2 billion becquerels of cesium-137 are estimated to have flowed into the plant's bay per day, based on their average concentrations near a water intake for the Nos. 1-Nos. 4 reactors between August last year and May this year.

The total during the 10 months is thus estimated at 1.46 trillion becquerels for strontium-90 and 610 billion becquerels for cesium-137.

The combined total for the two radioactive substances tops 2 trillion becquerels. **Since tainted water in the plant has other substances, the radioactive contamination of water in the plant's bay is believed to be more serious.**

In August last year, Tepco estimated that 10 trillion becquerels of strontium-90 and 20 trillion becquerels of cesium-137 had flowed into the bay since May 2011.

The estimated amounts in the following 10 months were smaller because average concentrations of radioactive substances were lower, Tepco officials explained.

However, radioactive materials in the plant's bay spread out into the open sea as the tide ebbs and flows. Also, it is noted that part of contaminated groundwater may be flowing directly into the open sea.

September 18, 2014

Transporting radioactive soil

Govt. releases transport plan for tainted soil

http://www3.nhk.or.jp/nhkworld/english/news/20140918_26.html

Japan's Environment Ministry has come up with a plan to reduce the possible impact from trucks removing radioactive-contaminated soil produced by the Fukushima Daiichi nuclear power plant accident.

Ministry officials on Thursday showed an experts' panel its basic plan for transporting contaminated soil and other waste to intermediate storage facilities.

Two such facilities will be built in the towns of Futaba and Okuma, near Fukushima Daiichi. Soil and other waste from decontamination efforts in Fukushima Prefecture are to be stored there for up to 30 years before being removed to final disposal sites.

Under the plan, the Environment Ministry will ask local governments to use small- or mid-sized trucks when carrying such waste to designated loading depots.

Then, workers from the central government will reload the waste onto large trucks that will carry it to the intermediate storage facilities.

Ministry officials say this method of switching the size of trucks for transportation will help curb the impact on the environment along the transportation routes because fewer vehicles will be used. They add that the measure will also help reduce the risks of traffic congestion and accidents.

They will discuss the matter with officials of Fukushima Prefecture and related municipalities to decide on a concrete plan.

September 19, 2014

Kami and Shioya towns vote against radioactive storage

Towns vote to block radioactive waste dumps

http://www3.nhk.or.jp/nhkworld/english/news/20140919_37.html

The assemblies of 2 towns north of Tokyo have voted unanimously to block or limit the construction of final disposal sites for radioactive waste in their towns.

Kami Town in Miyagi Prefecture and Shioya Town in Tochigi Prefecture have both been named by the central government as candidate sites for the facilities.

Sludge, ash, and other waste containing more than 8,000 becquerels of radioactive materials per kilogram are to be permanently stored at the sites.

The government plans to build such facilities in 5 prefectures near Fukushima, where the 2011 nuclear accident occurred.

On Friday, the assemblies of the 2 towns approved separate ordinances that would effectively hamper the central government's plan.

The ordinance in Kami Town says local authorities are responsible for protecting and preserving the rich natural environment.

The ordinance in Shioya designates a natural spring near the candidate site as an important industrial asset. It requires the mayor's approval for commercial or government-led waste disposal activities in the

area.

Officials at the Environment Ministry say they will continue to carefully tell the municipalities that the facilities are necessary, and that they will be safe.

September 20, 2014

Tochigi finds a way to block storage of nuke waste

Tochigi town passes water-protection ordinance to block nuclear waste plans

http://ajw.asahi.com/article/behind_news/social_affairs/AJ201409200104

A town in Tochigi Prefecture has found a novel way to block the construction of a final disposal site for radioactive waste from the 2011 Fukushima nuclear crisis by **passing an ordinance that will protect its natural resources.**

The ordinance, passed unanimously by the Shioya town assembly on Sept. 19, will protect an area that includes local springs, as well as mountain forest that was designated by the Environment Ministry as a candidate for the final disposal facility.

The ministry plans to use the site to store designated waste which contains more than 8,000 becquerels of radioactivity per kilogram.

Under the ordinance, the town government aims to protect the quality and quantity of water in springs, including the Shojinzawa Yusui, recognized by the ministry as one of the best 100 natural waters in Japan. The protected zone covers about 5,000 hectares of land, including the mountain forest. The official designation will be made after deliberations at an advisory council.

All projects to be undertaken in the area, including those by the central government, will require approval by the town government. Violators will be asked or ordered by the town government to suspend the projects.

After the ordinance was passed, Shioya Mayor Kazuhisa Mikata said: “Shioya is a water resource town. The disposal site problem is not a challenge for Shioya alone. We have to eliminate potential sources of water contamination.”

A group opposed to the construction of the disposal site had gathered more than 60,000 signatures inside and outside the prefecture as of Sept. 19, more than five times the town's population.

Vice Environment Minister Masaki Suzuki said: “The residents' concerns must not be taken lightly. We must consider how to assuage their anxieties."

Hirobumi Inomata, mayor of Kami in Miyagi Prefecture, said on Sept. 19 that his town will also enact an ordinance for water-quality protection to block construction of a final disposal site being considered there.

The town government aims to submit a proposal for the ordinance to the assembly in December.

(This article was compiled from reports by Hajime Hattori and Hiroshi Shimada.)

September 22, 2014

Decontamination "painfully slow"

Opposition to waste storage complicates project

Fukushima cleanup going painfully slow

http://www.japantimes.co.jp/news/2014/09/22/reference/fukushima-cleanup-going-painfully-slow/#.VCGkfhanp1s

Staff Writer

Three and a half years after Tokyo Electric Power Co.'s crippled Fukushima No. 1 nuclear power station spewed massive amounts of radioactive materials into the air and water, decontamination work in Fukushima Prefecture has yet to draw to an end.
The government initially hoped to complete the decontamination by the end of last March, but the process continues to lag far behind, prompting the government to push back the goal by three years to 2017.
Due to the slow progress, huge bags filled with contaminated soil can still be seen piled up at hundreds of temporary storage sites across the prefecture, and many residents are in limbo, unable to make up their minds about whether to return home in the near future or to relocate for good.
How are toxic houses and land decontaminated?
The work mainly consists of scraping off the top layer of soil, removing grass and fallen leaves, and washing roofs and walls with water or wiping them off with cloth.
As of March, the removed soil and grass was being stored at more than 660 temporary storage sites set up by municipal governments in Fukushima and at 53,000 decontaminated spots such as school grounds and people's front yards, according to the Fukushima Minpo newspaper.

Through the decontamination work, officials aim to reduce areas where the annual radiation exposure amount exceeds 20 millisieverts. As a long-term goal, they hope to reduce the annual dosage to less than 1 millisievert.
The International Commission on Radiological Protection has a radiation exposure limit of 1 millisievert per year under normal situations and says that cumulative exposure of 100 millisieverts increases the chance of death from cancer by 0.5 percent.

Who is in charge of the decontamination?

The central government is responsible for decontaminating heavily contaminated evacuation zones in 11 municipalities where annual radiation levels exceed 20 millisieverts.
As for less contaminated areas in 40 municipalities, where radiation dosages range between 1 and 20 millisieverts a year, the municipalities are taking the lead..

How much work has been completed?

As of July, decontamination was completed in about 70 percent of schools, public facilities and farmland in the areas where municipal governments have responsibility.
But about half of the planned decontamination for residential houses, and about 70 percent for roads and forests had yet to be finished, according to Environment Ministry data.
As for the state-run decontamination in the 11 municipalities, work hasn't started in the area where annual radiation readings exceed 50 millisieverts.

Why is it taking so long?

The major reason is the lack of temporary storage sites that would be used until the government builds more permanent facilities.
Some residents are opposing the temporary storage of contaminated waste out of fear of radiation and uncertainty over how long the bags of tainted soil will be stored there.
But the central government hopes to speed up the whole process after reaching agreement with Fukushima Gov. Yuhei Sato on Sept. 1 to build temporary storage facilities in Okuma and Futaba in return for ¥301 billion in subsidies.
The government plans to start moving waste to the facilities in January and complete the transportation in three years.
The government is currently mulling the best way to move the contaminated waste. Last Thursday, the Environment Ministry proposed a transportation plan to a panel of experts, including using 10-ton dump trucks on expressways to deliver the soil quickly — and hopefully safely — to sites where it will likely sit for decades awaiting permanent disposal.

Will the government's plan work?

That remains to be seen. The government still needs to negotiate with more than 2,000 landowners to acquire 16 sq. km of land in Okuma and Futaba to build the storage facilities.
At the temporary storage facilities, soil will be stored in accordance with the amount of contamination, and burnable waste such as leaves and wood will be incinerated to reduce the overall amount of waste.
The total is estimated to reach 22 million cu. meters, equal to filling the Tokyo Dome 18 times.
Within three decades, the waste is supposed to moved to the final disposal sites the government plans to create outside Fukushima. However, the locations of these final sites have yet to be found.
The neighboring prefectures are having their own problems with radiation-tainted waste, as their residents are strongly opposed to storage nearby.
In July, the Environment Ministry designated a plot of state-owned land in Shioya, in Tochigi Prefecture, but the mayor and residents are opposed to the plan, saying it will damage the environment in which they live.

How effective is the cleanup process in highly contaminated areas?
According to experiments conducted by the Environment Ministry between last October and January in the area where annual radiation readings exceed 50 millisieverts, atmospheric radiation levels in houses and farmland declined by 50 to 80 percent after the top layers of soil and grass was removed, and walls and roofs were washed.
But the study also showed the limits of decontamination technology, as it stated that even after a thorough cleaning had been carried out, atmospheric radiation levels in many areas remained above 20 millisieverts per year — the threshold for lifting the government's evacuation order.
How much will it cost in total and who picks up the bill?
By law, Tepco is responsible for covering the cost of decontamination work.
As of March, the government had asked the company to pay about ¥66 billion for the cleanup work, but until then it had paid only ¥36 billion, according to the Environment Ministry. Tepco reportedly refused to pay much of the remaining bill, citing its deteriorating finances.
The government decided last December to finance the cost of the decontamination by selling Tepco shares held by a state-backed fund. But if the government fails to gain the necessary funds through selling the shares, taxpayers' money might have to be used to pay for the decontamination work, experts say.
The government estimates that the decontamination will cost about ¥2.5 trillion in total. But according to a calculation by the National Institute of Advanced Industrial Science and Technology, it could be twice as much, reaching a staggering ¥5 trillion.

September 26, 2014

Build storage facilities before restarting reactors

Scientists stress need for nuclear waste storage

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

An organization of Japan's leading scientists says power companies should be required to build temporary storage facilities for nuclear waste before resuming operation at nuclear plants.

The Science Council of Japan has released its latest report on ways to store highly radioactive nuclear waste.

In September of 2012, the council said the government's plan to permanently bury nuclear waste deep underground has met a dead end, and needs to be evaluated from scratch.

The council then proposed storing nuclear waste in a retrievable way for up to several centuries, in order to allow time for the development of new technologies for its permanent disposal and to form a consensus among the public.

The council's latest report says **it would be irresponsible for power companies to resume operations**

without securing temporary storage facilities for nuclear waste.

The council plans to hold a news conference on Monday to explain the report. It also plans to release new recommendations on nuclear waste disposal by the end of the year.

Japan's nuclear plants must meet new regulations introduced after the 2011 Fukushima accident, but the rules do not require power companies to secure temporary storage facilities for nuclear waste.

The council is authorized to issue recommendations to the government as an organization under the jurisdiction of the Cabinet Office. **The recommendations are not legally binding.**

Defining Govt' s role in dealing with radioactive waste

Bill to define government's role in radioactive waste disposal

http://mainichi.jp/english/english/newsselect/news/20140926p2a00m0na009000c.html

Details of a bill that would define the national government's role in disposing of radioactive waste from the Fukushima No. 1 Nuclear Power Plant disaster emerged on Sept. 25.
The bill, to be presented at an extraordinary session of the Diet, which will be convened on Sept. 29, would revise the Act on Japan Environmental Safety Corporation. It is aimed at alleviating Fukushima Prefecture residents' fears that midterm storage facilities will end up turning into final disposal sites.
The proposed revision emphasizes that "maintenance and management of midterm storage facilities essential to the decontamination and recovery of Fukushima will be handled responsibly by the national government." The bill would also change the name of the Japan Environmental Safety Corporation (JESCO), which is to operate the midterm storage facilities, to incorporate "midterm storage" in addition to "environmental safety."
Under the revisions, **the national government would be required to maintain and secure the safety of midterm storage facilities, take necessary measures to obtain the understanding and cooperation of nearby residents and others associated with the facilities, and take necessary measures to ensure that waste is moved to final disposal sites outside of the prefecture within 30 years of storing it at midterm facilities.**
The revised law would also require the government to hold all of JESCO's issued shares, instead of over 50 percent as stipulated now. The government already holds all of the shares, but by requiring this by law, the government aims to show itself as standing at the forefront of waste disposal efforts. The proposed revisions also include regulations about additional investment in JESCO by the national government.
JESCO is set to handle work relating to the midterm storage facilities based on requests from entities including the national, prefectural and municipal governments. It will also continue its current work detoxifying polychlorinated biphenyl waste.

Gov't bill on Fukushima waste

Govt. drafts bill on Fukushima radioactive waste

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

The Japanese government has drawn up a bill that will ensure radioactive waste stored in Fukushima Prefecture is removed within 30 years.

The move follows a demand from local communities, which have agreed that contaminated soil and other waste will be stored at interim facilities near the Fukushima Daiichi nuclear plant.

The bill obliges the central government to ensure the waste is safely stored, and that it is moved to a final disposal site outside the prefecture within 30 years.

It calls on the government to consider new technologies that might lower the concentration of radioactive substances in soil and reuse waste before final disposal.

The bill revises a law over a state company that deals in the disposal of a toxic substance called polychlorinated biphenyl, or PCB. The revision would allow the firm to engage in businesses related to the storage facilities.

The government plans to have the bill approved by the Cabinet and submit it to an extraordinary Diet session that convenes on Monday.

September 29, 2014

Radioactive pollution from 3/11 lingers in lakes

Hiroshi Iijima, head of the NPO Asaza Fund, seen here in Ushiku, Ibaraki Prefecture, worries about radioactive contamination of river water flowing into Lake Kasumigaura. (Mainichi)

Radioactive contamination lingering in lakes, marshes

http://mainichi.jp/english/english/newsselect/news/20140929p2a00m0na012000c.html

Radioactive contamination from the Fukushima nuclear disaster continues to linger at high levels in some lakes and marshes, with **one expert suggesting that there is no option but to wait for nature to take its course.**

Lake Kasumigaura in Ibaraki Prefecture boasts the second largest surface area in the country. After the nuclear disaster, 20 municipalities in the prefecture, including ones around the lake, have been closely monitored for radiation levels. While cleanup work has finished for homes and public facilities, the soil at the bottom of the lake remains contaminated.

Fifty-six rivers pour into the lake and have brought radioactive material with them, plus airborne material has fallen on the lake. Since August 2011, the Environment Ministry has been sampling water and basin soil at eight points in the lake and 24 points along incoming rivers four times a year, while since May 2012 the Ibaraki Prefectural Government has been sampling at 32 river points not covered by the ministry.

The average radioactive cesium concentration of basin soil across all 56 river points in May this year was 293 becquerels per kilogram, around half of what it was two years ago. However, the average radiation levels for basin soil in the lake have shown no improvement, staying at a steady 200-300 becquerels per kilogram.

"In a closed off body of water (like Lake Kasumigaura), **the mud and sand at the bottom shifts back and forth, but this removes little of the radioactive contaminants,**" says Atsushi Tanaka, senior researcher at the National Institute for Environmental Studies.

While the radiation levels for eel, channel catfish and Japanese silver crucian carp caught in the lake are below the safety limit of 100 becquerels per kilogram, but not by much. **A national government order issued in spring 2012 not to ship these fish to market remains in effect**. Japanese white crucian carp from the lake are also being kept from market under a prefectural government order.

"All we can do is continue monitoring and wait for the radiation levels to drop," says Kenya Mizuguchi, professor emeritus of resource management at Tokyo University of Marine Science and Technology.

Lake Kasumigaura's water is used for drinking and irrigation by local municipalities, but since radioactive cesium levels in the water are beneath detectable levels, the Environment Ministry has said that no special measures are necessary.

"I'm worried that there could be effects on the water in the future. They should take samples at more sites," says 58-year-old Hiroshi Iijima, head of the nonprofit organization Asaza Fund, which deals with environmental issues in Lake Kasumigaura.

The Kasumigaura Kitaura marine products cooperative, meanwhile, is forcing all of its 56 member businesses to check their products for radiation to allay consumer fears.

Overall, contamination of freshwater fish in closed-off bodies of water like lakes and marshes tends to linger. In August 2011, radioactive cesium of 640 becquerels per kilogram was detected in wakasagi fish caught in a crater lake on Mount Akagi in the Gunma Prefecture city of Maebashi. While the levels have been falling, when the fish were measured on Sept. 15 this year, they still registered 98 becquerels per kilogram, barely below the safety limit, and local fisheries continue to keep them from the market.

"It's a big blow to the local economy," says one tourism industry source.

According to Gunma University professor of analytical chemistry Kinichi Tsunoda, it takes around 1.6 years for half the water in the lake on Mount Akagi to be replaced, and currently around 1/4 of the water present at the time of the nuclear disaster remains. Plankton eat cesium in the water, and wakasagi then eat this plankton, building up cesium in their bodies. He says that comparisons with other lakes and marshes have shown that water in this lake remains for a relatively long time, and cesium concentrations are slow to drop.

Restrictions on shipping fish to market continue for other bodies of water as well, such as Lake Chuzenji in Nikko, Tochigi Prefecture, known for its trout, and Tega Marsh in northern Chiba Prefecture. University of Tokyo professor of environmental systems Yuichi Moriguchi says, "The national government should put more effort into decontamination of inland bodies of water like lakes and marshes."

September 30, 2014

Upcoming briefings may be "rough"

Landowners briefed on Fukushima waste storage plan

http://www3.nhk.or.jp/nhkworld/english/news/20140930_10.html

Landowners near the Fukushima Daiichi nuclear plant have voiced frustration at the government's plan to buy up their properties to build intermediate storage facilities for radioactive soil and other waste.

About 150 people took part in an Environment Ministry briefing on Monday. It was the first in a series of sessions aimed at outlining compensation plans for landowners in Futaba and Okuma towns.

The move comes as the Fukushima prefectural government earlier accepted construction of storage facilities in the 2 towns.

Ministry officials said they plan to purchase land at around half of its value before the nuclear accident. The officials said compensation for housing would depend on the age of buildings. They said landowners who decline to sell but allow usage of their plots would be paid 70 percent of the purchase price.

They said the prefecture would effectively cover the difference between the properties' pre-disaster value and the amount of compensation.

Many landowners expressed their reservations.

A man from Futaba Town said the offered price fell short of what he expected, and that the officials spoke about the possibility of forcibly buying up land. He predicted that upcoming briefings would be rough.

A woman from Okuma Town said government officials seemed to care little about the feelings of people who will be deprived of their land.

The government wants to win landowners' understanding, and start shipping contaminated waste to the storage facilities **in January.**

October 3, 201

Cabinet approves bill on nuke storage

Cabinet approves bill on Fukushima waste disposal

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

The Abe Cabinet approved a bill on Friday that will ensure that radioactive soil and other waste stored in Fukushima Prefecture is removed within 30 years.

The move follows a demand from local communities near the Fukushima Daiichi nuclear plant that have agreed to temporarily store contaminated soil and other waste. The facilities are to be built in Futaba and Okuma towns.

The bill obliges the central government to ensure that the waste is safely stored, and that it is moved to a final disposal site outside the prefecture within 30 years.

It calls on the government to consider new technologies that might lower the concentration of radioactive substances in the soil and to reuse the waste before final disposal.

The bill revises a law related to a state company that deals in the disposal of a toxic substance called polychlorinated biphenyl, or PCB. The revision would allow the firm to engage in businesses related to the storage facilities.

The government will seek Diet approval of the bill during the current extraordinary session.

Environment Minister Yoshio Mochiduki told reporters that there is still a long road ahead. He said he hopes to gain the trust of the local people.

October 8, 2014

Miyagi people not even notified about survey

Govt. surveys Miyagi for radioactive waste site

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Japan's Environment Ministry has begun field surveys of potential sites for a radioactive waste disposal facility in Miyagi Prefecture.

Sludge, ash and other contaminated waste with radioactivity exceeding 8,000 becquerels per kilogram will be stored **permanently** at the site.

The ministry plans to build permanent storage facilities in five prefectures. **All of them are near Fukushima**, where the 2011 nuclear accident occurred. The ministry is surveying 3 state-owned land sites in Miyagi and will choose one of them.

Officials and private-sector consultants surveyed one of the sites in the town of Kami on Wednesday.

The townspeople are against hosting the facility. A resident in his 70s said it is frustrating that the town was not notified about the survey.

Ministry officials say they will be drilling to check the quality and stability of the ground. They say underground checks and analysis of nearby traffic volumes will be done by the end of November.

October 13, 2014

Extend the leasing contracts?

Contracts for interim radioactive waste storage sites in Fukushima due to expire

http://mainichi.jp/english/english/newsselect/news/20141013p2a00m0na005000c.html

FUKUSHIMA -- Property leases for many interim radioactive waste storage facilities in Fukushima Prefecture are set to expire staring this month, a Mainichi Shimbun survey of local municipalities has found.

A total of 46 out of 47 municipalities in the prefecture subject to Fukushima nuclear disaster decontamination work responded to the Mainichi survey request, sent out in August this year. According to the results, as of the end of July, there were 859 temporary storage sites in 40 of the municipalities, holding some 3,194,688 cubic meters of radioactive soil and other contaminated waste from the disaster cleanup.

A government plan drawn up in October 2011 stated these sites would be closed in roughly three years. Accordingly, the central and local governments leased properties for many of the facilities for a three-year term. The leases for lands hosting 105 facilities storing 178,192 cubic meters of waste will reach their third year by the end of January 2015 -- shrinking storage capacity even as the volume of waste increases as decontamination work continues.

While the Fukushima governor in September agreed that the towns of Okuma and Futaba would host mid-term contaminated waste disposal sites, a timetable for moving the waste from the current temporary facilities to mid-term storage sites has not been set. **The Environment Ministry has begun requesting land owners of 64 temporary facilities that are being managed directly by the national government to extend their contracts.**

The town of Kawamata, whose nine interim storage sites will reach the three-year mark by January 2015, is set to demand that the national government remove the waste within the agreed time period.

Meanwhile, the Kawauchi municipal government has asked the central government to take responsibility for any storage site lease extensions and explain the situation to residents.

October 14, 2014

End of briefings on waste storage

Briefing on Fukushima waste storage plan completed

http://www3.nhk.or.jp/nhkworld/english/news/20141014_14.html

The Japanese government has completed a series of briefings on its plan to build intermediate storage facilities in Fukushima Prefecture.

The government plans to buy up land in Futaba and Okuma Towns that host the destroyed Fukushima

Daiichi nuclear plant to house facilities to store radioactive soil and other waste.

The series of 12 sessions for landowners in the 2 towns began in September after the Fukushima prefectural government accepted the construction of the storage facilities.

About 240 people took part in the final session held behind closed doors in Iwaki City on Sunday.

Participants said Environment Ministry officials gave them an outline of compensation plans for their land.

Some of them complained about the offered price, saying it's not enough to rebuild their lives elsewhere. But the officials said it's hard to revise the planned purchase prices.

Some participants said the officials seemed to care little about the feelings of those who will lose their land.

The government wants to win the understanding of the landowners, and start shipping contaminated waste to the storage facilities in January.

October 15, 2014

Missing landowners (Okuma and Futaba)

Government having trouble locating landowners of planned radioactive waste site

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201410150056

The Environment Ministry has completed briefings for landowners of a site to store radioactive waste from the Fukushima nuclear disaster, but attendance at the meetings was less than half the landholders.
A total of 901 property owners of the construction site, located in the towns of Okuma and Futaba near the crippled Fukushima No. 1 nuclear power plant, attended the 12 meetings hosted by the ministry.
Those that participated are believed to account for less than half of the total number who hold land titles to the site.
Ministry officials said many of the landowners evacuated as the March 2011 nuclear disaster unfurled and have yet to be found or contacted, which is just one of the obstacles the government's purchasing plan has to overcome.
The site also includes land whose ownership remains unclear due to the death of the previous owners.
Dozens of workers at the ministry's Fukushima Office for Environmental Restoration have tried to locate all current landholders. The office has managed to only send briefing-session invitations to 1,269 people among owners of 2,365 land plots.

While ministry officials said they will continue trying to locate all of the current property owners, they also said they will consider seeking to have family courts appoint interim administrators for the properties.
Many of those who did attend the briefing sessions also reportedly voiced their dissatisfaction with the government's plan to buy up the land. A woman in her 60s from Okuma, who took part in a meeting in Aizu-Wakamatsu, Fukushima Prefecture, said she felt the amount of compensation offered by the government was "too little," given the fact that many people from the two towns have been forced to live as refugees.
During a news conference on Oct. 14, Environment Minister Yoshio Mochizuki said the ministry will create a system to dispatch officials when land owners come forward with questions.

October 16, 2014

Decontamination - New tools

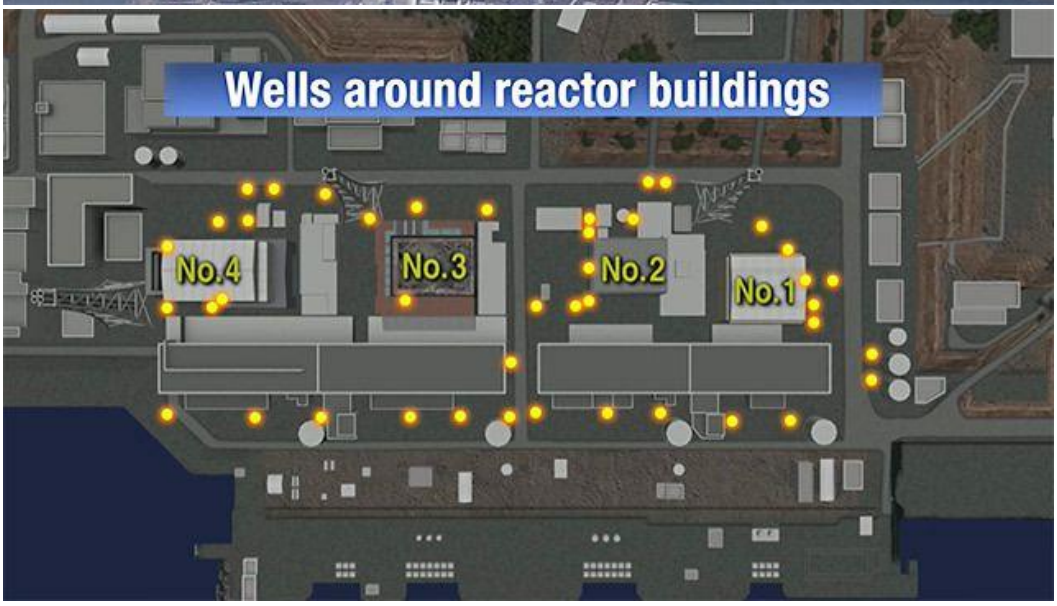
NUCLEAR WATCH

http://www3.nhk.or.jp/nhkworld/english/news/nuclearwatch/20141016.html

Workers at Japan's crippled nuclear plant have been showing off new tools to tackle a growing problem. They added equipment to decontaminate more of the water that's accumulating on the Fukushima Daiichi site. And they let the media see how they'll use it.
NHK WORLD's Mitsuko Nishikawa has the details.

This is a new unit of ALPS, the Advanced Liquid Processing System.
It's designed to remove most radioactive substances. Officials with Tokyo Electric Power Company say it can treat 750 tons of water every day.
Workers switched on their first ALPS unit in March last year. They've had to deal with a string of breakdowns. They showed the media their second unit.
They're also building a third with higher performance.

The extra units are essential. Three hundred tons of groundwater flows into the reactor buildings every day and gets contaminated. Workers store that water in tanks. They need to process about 360,000 tons.
"We're using a variety of equipment to try to decontaminate the water quickly."
Akira Ono / Chief, Fukushima Daiichi Nuclear Plant
Workers also showed off another new tool. It decontaminates groundwater pumped up from wells around the reactor buildings and discharges it into the ocean.
Over 40 wells surround the four reactor buildings. Workers stopped pumping up groundwater after the nuclear accident in 2011 because they found it contained radioactive substances.



They started testing the decontamination system this August. They say it cuts most radioactive substances to a level too low to detect.
Company representatives explained the system's capabilities to local fishermen, but couldn't ease all their concerns
"For all of us in the fishing community, it's very important that the decommissioning of the reactors proceed smoothly. TEPCO officials must let us know more about the situation."
Tetsu Nozaki / Chairman, Fukushima fisheries federation

Experts say decommissioning the plant will take 40 years. And the radioactive water is one of the biggest hurdles. Company executives say they'll keep making that water as clean as they can with help from the government.

October 24, 2014

Local opposition causes delay

Residents delay search for radioactive waste site

http://www3.nhk.or.jp/nhkworld/english/news/20141024_27.html

Japan's Environment Ministry has suspended inspections of 3 sites under consideration for a radioactive waste disposal facility due to local opposition at 1 of the locations.

The ministry planned to start field surveys on Friday at 3 state-owned sites in Miyagi Prefecture to find a place for a permanent storage facility for contaminated waste stemming from the Fukushima Daiichi nuclear accident.

But about 40 opponents of the survey in the town of Kami, including Mayor Hirobumi Inomata, were waiting for ministry officials at the site.

Inomata asked them to stop the survey, saying that State Minister Yasuhiro Ozato had earlier said he took the request seriously.

The officials called off the survey for the day.

Officials at the 2 other sites under consideration also called off planned surveys Friday morning. Those other sites are in the city of Kurihara and town of Taiwa.

A senior official at the ministry's Tohoku regional office said current circumstances make it difficult to go ahead with the surveys. He added he will consult with the ministry about what to do.

October 25, 2014

460,000 Bq of cesium per liter of groundwater

High levels of radiation found at Fukushima plant

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

The operator of the crippled Fukushima Daiichi nuclear plant says it has found high levels of radioactive cesium in groundwater in the compound.

Officials of Tokyo Electric Power Company say water taken on Wednesday from a monitoring well contained **460,000 becquerels of cesium per liter.** Water from another well contained 424,000 becquerels.

The wells are several meters west of the No. 2 reactor building. There are about 40 around the reactor buildings.

Officials say the levels are 800 to 900 times the previous peak level of 500 becquerels per liter.

TEPCO officials say they don't know what caused the rise. They speculate a recent typhoon may be to blame.

They have stopped pumping water from the 2 wells to conduct an investigation.

TEPCO began pumping up groundwater from the wells on a trial basis in August. They started full-scale operations last week.

The utility plans to treat the tainted groundwater and discharge it into the ocean to deal with the buildup of contaminated water.

But local people strongly oppose the plan. TEPCO has yet to discharge water into the ocean.

October 28, 2014

Fluctuating cesium: problem can't be solved, says TEPCO

Fukushima cesium levels fluctuating

http://www3.nhk.or.jp/nhkworld/english/news/20141028_13.html

Tokyo Electric Power Company, or TEPCO, says the levels of radioactive cesium in the compound's groundwater at the damaged Fukushima Daiichi nuclear plant fluctuated greatly last week.

TEPCO detected the highest concentration of cesium in samples of water taken from 2 monitoring wells near a reactor building on Wednesday.

One well had 428,000 becquerels of cesium per liter of water, while the other contained 458,000 becquerels.

But only 2 days later, the reading in the first well had dropped to 5,200 becquerels, or one-eightieth of the level detected on Wednesday. The concentration in the other well stood at 470 becquerels, or about one-one-thousandth of the previous quantity.

TEPCO says these wells are connected underground with other wells that are highly contaminated. So the operator believes cesium poured into them with this month's heavy rains and then flowed out with the underground water.

The utility says this problem cannot be fundamentally solved because the area around the wells thought to be the source of the contamination has extremely high radiation levels and cannot be decontaminated.

The 2 wells are among those from which tainted groundwater is pumped and discharged into the sea after being decontaminated.

But TEPCO has suspended the operation and is considering whether to resume the work.

October 29, 2014

Radioactive soil stored at schools not covered by law

Radioactive soil stored at Fukushima schools not covered by recent disposal law, has nowhere to go

JIJI

FUKUSHIMA – Radioactive soil currently stored at schools in Fukushima Prefecture is not supposed to be transferred to radioactive waste storage facilities planned to be built near the crippled Fukushima No. 1 nuclear power plant, Jiji Press learned Tuesday.

because decontamination at schools was carried out before a special law on radioactive contamination took effect in January 2012 and thus the Environment Ministry deems tainted soil collected during the work not covered by the law. The central government undertakes or funds decontamination work.

The Fukushima Prefectural Government is arguing that such discrimination is pointless and has repeatedly called on the ministry to create a system that will allow soil contaminated with fallout from the March 2011 nuclear calamity at the power plant to be shipped from schools to the planned interim storage facilities.

"We want the state government to prepare an environment where children can study safely," a senior Fukushima municipal official said.

But the ministry has not given a clear response. This reluctance may be partly due to concerns over the cost of shipping soil to the facilities to store tainted soil before being finally disposed of at other locations. The cost is to be borne eventually by the plant's operator, Tokyo Electric Power Co.

A senior ministry official said it may be unfair to discriminate between radioactive soil collected before and after the law's effectuation.

In August, the Fukushima Prefectural Government decided to accept the construction of the temporary storage facilities around the nuclear plant.

Hoping to begin radioactive waste shipments to the facilities in January, the central government is working to win the consent of landowners on the construction.

Permanent waste storage: Not in Shioya, please!

Town submits petition opposing waste facility

http://www3.nhk.or.jp/nhkworld/english/news/20141029_33.html

Residents of Shioya Town, Tochigi Prefecture, have petitioned the Environment Ministry to drop a site in their town from consideration to host a facility for storing radioactive waste.

The site in Shioya, north of Tokyo, is one of five the government wants to build permanent storage facilities on for designated waste. The waste is material from the Fukushima Daiichi nuclear accident that has radiation levels exceeding 8,000 becquerels per kilogram.

The mayor of Shioya and the leader of a group of residents handed their petition to State Minister of the Environment Yasuhiro Ozato at the ministry in Tokyo on Wednesday.

Shioya has a population of about 12,000. But the petition was signed by about 173,000 people from across Japan.

Residents and their supporters claim a permanent storage facility would threaten the town's water supply and accelerate population decline.

State Minister Ozato said he takes the residents' and signatories' concerns seriously. He stressed the importance of smooth communication and exchange of views over those concerns.

The representative of the residents' group said that he expects the State Minister to understand that the signatures show how strongly people feel about the government's plan.

The Environment Ministry plans to hold a meeting of the prefecture's mayors on November 9th to win support for the permanent storage facility.

Shioya is expected to reiterate their opposition to the plan.

October 31, 2014

IAEA experts to report on analysis of seawater

IAEA to send experts to analyze seawater

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

The International Atomic Energy Agency will send two marine experts to Japan to report their analysis of the sea water off the coast of the defunct Fukushima Daiichi nuclear plant.

Experts from the IAEA affiliated Environment Laboratories in Monaco collected the samples in September to examine the effects of radioactive materials on the ocean's ecosystem.

The laboratory's director David Osborn and another expert will visit Japan from November 4th to the 7th.

The IAEA has been advising Japan to disclose comparative analysis of the results of more than one institution to enhance transparency and ease concerns of neighboring countries.

The two experts also plan to compare water analysis results from Japanese and IAEA laboratories to assess the accuracy of Japanese data.

The IAEA will take new samples off the coast near the Fukushima plant on November 5th.

NRA: Fukushima debris didn't taint rice paddies

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

A member of Japan's Nuclear Regulation Authority says it's highly unlikely that radioactive particles from the Fukushima Daiichi nuclear power plant contaminated rice fields some 20 kilometers away.

Commissioner Toyoshi Fuketa spoke at the authority's meeting on Friday. Radioactive substances were found in the paddies after workers removed debris from the plant's Number 3 reactor building in August last year.

The authority said the removal work released dust particles with 110 billion becquerels of radiation.

The plant's operator, Tokyo Electric Power Company, said the particles had relatively large diameters of several micrometers.

Fuketa indicated that given the level of radiation, the particles had an environmental impact only in the plant compound. He suggested that the contamination may have come from river and ground water.

The authority is considering whether to make projections on how far radioactive particles will spread during debris removal and how they will affect rice fields.

November 1, 2014

It wasn't us

NRA rebuts claim that Fukushima cleanup affected faraway rice paddies

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201411010037

Japan's nuclear watchdog disputed the farm ministry's assertion that radioactive substances churned up by debris removal work at the Fukushima No. 1 nuclear power plant contaminated distant rice paddies last year.
The Nuclear Regulation Authority announced at a commissioners' meeting Oct. 31 its estimate that 110 billion becquerels of radioactive materials spread as a result of cleanup at the No. 3 reactor building on Aug. 19, 2013.
This figure is lower than the 130 billion to 260 billion becquerels estimated by the plant's operator, Tokyo Electric Power Co., in August.
Radiation readings rose significantly during debris removal that day, with radioactive substances found to have contaminated plant workers about 500 meters from the reactor building.
However, NRA Commissioner Toyoshi Fuketa emphasized, "The affected area of the fallout was within the nuclear plant compound."

"While it is difficult to simulate the spread of radioactive substances (outside the plant), it is unlikely that the debris cleanup caused the contamination (of the rice paddies)," Fuketa said.
The nuclear facility was ravaged by the March 2011 Great East Japan Earthquake and ensuing tsunami, triggering a triple meltdown.
The NRA arrived at the figure of 110 billion becquerels by analyzing radiation levels recorded at monitoring posts north-northwest of the plant on the day in question.
Radioactive fallout on this scale constitutes a Level 0 incident on the International Atomic Energy Agency's International Nuclear and Radiological Event Scale.
Earlier, the farm ministry pointed to the possibility that radiation from the plant had spread to rice paddies in Minami-Soma more than 20 kilometers away, and called on TEPCO to take preventive measures in its debris removal work.
During the NRA meeting, some experts noted that despite the NRA's estimate, it is unlikely that factors other than debris cleanup at the plant could have caused such high levels of radioactive fallout at the rice farms.
“From a broader perspective, the Fukushima No. 1 plant is responsible for the contamination," one participant said.

November 4, 2014

Over 33,000 m3 of radioactive suits stored at the plant

Discarded protective suits piling up at Fukushima nuclear plant

http://mainichi.jp/english/english/newsselect/news/20141104p2a00m0na008000c.html

Mountains of discarded suits designed to protect workers from radiation at the Fukushima No. 1 Nuclear Power Plant are piling up as low-level radioactive waste.
As of the end of September, **33,300 cubic meters of discarded suits were stored on the plant's premises -- enough to fill about 70 25-meter swimming pools.**
Plant operator Tokyo Electric Power Co. (TEPCO) plans to start burning the discarded suits at an incineration facility next autumn, about half a year later than originally planned, but it's possible the facility won't be able to keep up with the amount being discarded. In the meantime, it seems the company has no immediate solution to the problem of waste being produced as an offshoot of work to deal with mounting volumes of radioactive water.
As of August, roughly 5,800 workers on average were engaged in construction work and the handling of debris at the disaster-hit nuclear power plant each day. All such workers wear suits to protect them from radiation. Masks and protective footwear can be washed and used again, but the workers' Tyvek coveralls, triple-layered gloves, double-layered socks and other such items are discarded. Sometimes the items are tainted with contaminated water or soil, so they are treated as radioactive waste.
Protective clothing is stuffed into containers in eight locations on the plant, and over the past six months it has been piled up at the rate of roughly 1,000 cubic meters per month. In December 2012, TEPCO applied to the government to build a new incineration facility on the north side of the plant's No. 6 reactor,

enabling it to reduce the amount of waste several dozen-fold Initially the company planned to have the facility running at the end of this fiscal year, but it postponed the plans in July this year, deciding to give priority to the handling of contaminated water. Operation of the new facility was subsequently delayed until October 2015.
Still, it remains unclear whether the incineration facility could handle the amount of discarded items being generated each day. Under calculations that TEPCO presented to the Nuclear Regulation Authority, the incineration facility could process about 960 cubic meters a month, roughly the same as the amount being produced during that period. **It is expected that the number of workers at the plant will continue to increase, and as the situation stands, waste will only continue to build up at the plant.**
November 04, 2014(Mainichi Japan)

16 sq km of storage site between Okuma and Futaba

Lower House approves Fukushima waste bill

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

The Lower House of Japan's Diet passed a bill on Tuesday governing the storage of radioactive waste in Fukushima. It promises that the waste will be moved out of the prefecture within 30 years.

The government plans to build intermediate storage facilities in the towns of Futaba and Okuma, near the Fukushima Daiichi nuclear plant. The people in those towns have been demanding that the waste be disposed of outside the prefecture.

The bill obliges the government to ensure the waste is safely stored in the prefecture, and moved out within 30 years to a final disposal site. The bill provides for a state company handling disposal of PCBs to engage in the business of storing nuclear waste.

It also urges that the government study ways to reduce the concentration of radioactive substances in the soil, and develop recycling technologies before final disposal.

It now goes to the Upper House for final approval.

Storage site for radioactive debris near Fukushima No. 1 is one step closer

http://www.japantimes.co.jp/news/2014/11/04/national/kagoshima-governor-positive-meti-briefing-reactor-restart/#.VFjAvMl5B1s

JIJI

KAGOSHIMA – The Lower House on Tuesday approved a bill for the construction of temporary storage facilities for radioactive waste on land near the crippled Fukushima No. 1 nuclear plant.

Thebill is expected to be enacted during the current extraordinary session of the Diet following debate in the Upper House.
The bill calls on the government to ensure the safety of the facilities and complete within 30 years the final disposal of radioactive waste, including contaminated soil, after moving it outside Fukushima Prefecture.
The government hopes to begin the transport of radioactive soil to the facilities in January.
The Lower House Environment Committee adopted a supplementary resolution calling on the government to select candidate sites and create a road map for final disposal.
The temporary storage facility is planned to be built on a site measuring **16 sq. km** straddling the Fukushima towns of Okuma and Futaba. The government has been in talks with more than 2,000 landowners to acquire the necessary land.

November 5, 2014

Checking waste materials from Japan

Taiwan to check waste shipments from Japan for radiation

http://www.japantimes.co.jp/news/2014/11/05/national/taiwan-to-check-waste-shipments-from-japan-for-radiation/#.VFoTF8l5B1v

Kyodo
TAIPEI – Taiwan will conduct radiation checks on some types of container cargo arriving from Japan, the island's legislature said on Wednesday.

The body's Finance Committee ruled that **waste materials such as plastic, scrap metal and paper must be checked with radiation meters upon arrival at the island's four seaports: Keelung, Taipei, Taichung and Kaohsiung.**
Jao Ping, director general of the Customs Administration agency, told reporters the measure will go into effect as early as this week.
On Monday, the committee passed a more onerous resolution requiring all container cargo from the ports of Tokyo and Yokohama to undergo radiation testing at the Port of Kaohsiung starting Nov. 17. It then backtracked on the decision.
The resolution was sponsored by Legislator Lu Shiow-yen of the ruling Nationalist Party, who argued that all cargo containers coming from or routed through Japan should be required to pass through Kaohsiung for radiation checks.
Kaohsiung Customs is the only division equipped with radiation detection monitors.
Lu's proposal drew strong opposition from the Ministry of Finance and Customs Administration.
An official told reporters on Monday that the measure was unfeasible because it would lead to extra transportation expenses and cause major problems for exporters and importers.
The official also revealed that authorities would propose a revision to the resolution when the committee met again on Wednesday.
Lu's office said she filed the motion because she saw a report in the Liberty Times newspaper in August saying that since the Fukushima nuclear crisis in 2011, Kaohsiung Customs had detected 226 cargo containers originating from or routed through Japan with radiation levels exceeding the legal limit.
After the 2011 Fukushima nuclear disaster, Taiwan banned food imports from five of Japan's 47 prefectures — Fukushima, Ibaraki, Gunma, Tochigi and Chiba — and has been conducting random radiation checks on 11 categories of imported foods.
Taiwan's Food and Drug Administration announced late last month that it is planning to introduce regulations requiring foods imported from Japan to carry prefecture-specific labels of origin, with some items needing to undergo radiation checks by Japanese authorities.
Those regulations are expected to take effect as early as next year if no objections are filed within a 60-day window starting Oct. 29.

Rice farmers claim not covered by settlement

Fukushima rice farmers seeking restoration of land suffer setback

http://mainichi.jp/english/english/features/news/20141105p2a00m0na017000c.html

Three farmers from Fukushima Prefecture, who are demanding that their farmland be restored to the same conditions existing prior to the Fukushima No. 1 Nuclear Power Plant disaster, were told by the nuclear damage claim dispute resolution center that their claim was not covered by the existing settlement agreement, it has been learned.
Center representatives apparently told the farmers during the out-of-court settlement hearing, which was conducted via the alternative dispute resolution (ADR) process, "We do not accept claims with which the Tokyo Electric Power Co. (TEPCO) will not agree."
The Dispute Reconciliation Committee for Nuclear Damage Compensation, which supervises the center, has presented a "guideline" for items to be subject to compensation. A manual published by the center for

survivors of the March 2011 disaster, however, states that "individual circumstances (above and beyond the guidelines) will also be taken into account."

The three farmers are Hiroyuki Suzuki, 64, from the village of Otama, Eiji Watanabe, 65, from the city of Nihonmatsu, and Toshikazu Takeda, 64, from the town of Inawashiro. All are fulltime farmers, and grow rice and other crops on plots of land that are between 9 and 40 hectares in size. They all also utilize special cultivation procedures calling for strict limits on the amount of pesticides and chemical fertilizers to be used, and ship their rice to customers all over the country with whom they have signed direct contracts.

"We have been trying to produce the best rice in all of Japan," Suzuki commented.

Suzuki's farm is about 60 kilometers from the nuclear power plant, and measurements conducted on Dec. 1, 2011 revealed that there were 16,200 becquerels of radioactive cesium for every kilogram of soil on his land.

Watanabe's farm, meanwhile, which is similarly located some 60 kilometers away from the nuclear power plant, was shown to have 6,090 becquerels per kilogram of soil on Aug. 2, 2011, while Takeda's field, located some 80 kilometers from the plant, had 1,450 becquerels per kilogram on Jan. 26, 2012.

While all of the rice grown on the three farms contained cesium below the government-set maximum level of 100 becquerels per kilogram, Takeda reports that "Many of my 300 customers started canceling their contracts, and at one point, I had only about 100."

The three farmers submitted their ADR claim to the nuclear damage claim dispute resolution center in April 2012. They sought financial compensation for shrinking revenues due to harmful rumors, as well as additional funds in the amount of roughly 3 billion yen to restore their respective farmlands to their original condition.

While the process of reversal tillage (whereby topsoil is replaced by soil lying further underground) results in air radiation dosages being lowered, it does not remove radioactive substances from the farmland. And because the removal of the top layer of soil would not be accompanied by an addition of new soil, the farmers requested that the soil be replaced.

The farmers based their claims upon the cost of replacing the soil on farmland downstream on the Jinzu River in Toyama Prefecture, at around 46.7 million yen per hectare of land, after contamination resulted in the "itai itai" ("it hurts, it hurts") disease.

TEPCO denied the Fukushima farmers' claim via a written response in May 2012. At the first oral hearing held in October of the same year, a lawyer serving as a mediator for the nuclear damage claim dispute resolution center made the comment that the case was not covered by the settlement agreement since the center did not handle cases to which TEPCO would not agree.

The settlement agreement that was presented in May 2013, however, only included the amount of money for reduced revenues. While the three farmers accepted it, they also decided to file a suit demanding that their farmlands be restored to their former condition.

Five additional farmers joined the initial three, for a total of eight plaintiffs, who brought the case on Oct. 14 of this year to the Koriyama branch of the Fukushima District Court. The farmers indicated that they were unable to arrive at a total compensation figure, but demanded that the levels of radioactive cesium be brought down to 50 becquerels or less per kilogram.

"**The claim for reduced revenues was an attempt to seek compensation for past damages, but if the land is not restored to its prior condition, we will have to ask for more damages every year, which means that we have no future outlook,**" Suzuki said critically. "The center has no understanding at all about how agriculture works."

Meanwhile, a center spokesperson commented, "We cannot comment on individual cases."

November 6, 2014

Store it all in one place, at the plant

Town offers counterproposal on radioactive waste

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

The mayor of a Japanese town named as one of the candidate sites for the final disposal of radioactive waste says that kind of material should be stored in Fukushima Prefecture.

The central government plans to construct final disposal facilities in 5 prefectures in eastern and northeastern Japan. They will store radioactive waste generated from the nuclear accident at the Fukushima Daiichi plant.
The waste contains more than 8,000 becquerels of radioactive substances per kilogram.

The central government chose Shioya Town in Tochigi Prefecture, neighboring Fukushima, as one of the sites.

The government plan is prompting local opposition. Residents claim a water source near the planned construction site will be contaminated.

Mayor Kazuhisa Mikata finished delivering his town's counterproposal to all the municipalities in Tochigi Prefecture on Wednesday.

The proposal calls for all radioactive waste to be stored at an intermediate facility in a no-entry evacuation zone near the Daiichi plant. It adds the waste should be disposed of on the plant compound.

The mayor told NHK that he will seek understanding for his town's proposal, not just oppose the state's plan. He urged the Environment Ministry to review its basic policy, saying the state should pay sufficient compensation to Fukushima and dispose of radioactive waste in one place.

The central government plans to hold a meeting in Tochigi on Sunday to explain standards used to select candidate sites.

November 7, 2014

Reply from the Environment Minister

Mochiduki comments on nuclear waste disposal

http://www3.nhk.or.jp/nhkworld/english/news/20141107_21.html

Japanese Environment Minister Yoshio Mochiduki has stressed that **the government will maintain its plan of permanently disposing of radioactive waste in the prefectures where the waste was generated after the 2011 Fukushima Daiichi nuclear plant accident**.

The government plans to build final disposal facilities in 5 prefectures in eastern and northeastern Japan because accumulated waste in the prefectures is exceeding the amount that can be kept temporally. The waste contains more than 8,000 becquerels of radioactive substances per kilogram.

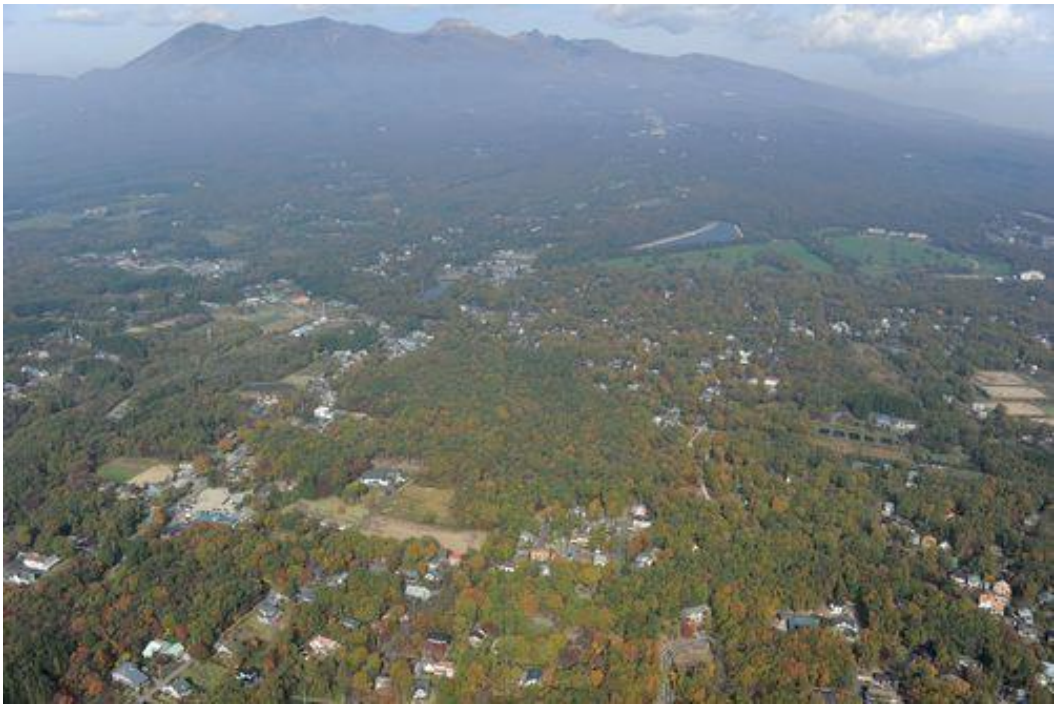
Mochiduki, speaking on Friday, was referring to a proposal from the mayor of one of the candidate sites for the facilities.

The mayor of Shioya Town in Tochigi Prefecture said all radioactive material should be disposed of at the compound of the crippled plant in Fukushima Prefecture.

Mochiduki said Fukushima Prefecture suffered serious damage due to the nuclear accident. He added that **he does not believe that imposing a further burden on the prefecture can win its understanding**.

He will attend a meeting of municipal chiefs in Tochigi Prefecture on Sunday in an effort to obtain their understanding of the government's final disposal plan.

Decontamination almost impossible on hill with vacation homes



Vacation houses hamper decontamination work in famous Tochigi Pref. town

This is an aerial view of vacation houses in Nasu Highland in Nasu, Tochigi Prefecture, on Oct. 31, 2014.
http://mainichi.jp/english/english/newsselect/news/20141107p2a00m0na020000c.html

NASU, Tochigi -- Decontamination work at Nasu Highland, one of Japan's most famous cottage areas, is making little headway because many owners of vacation houses have been unreachable in the aftermath of the disaster at the Fukushima No.1 Nuclear Power Plant.

As of Nov. 4, only 3,361 houses or less than 20 percent of about 20,000 houses under the decontamination program in the town of Nasu have been cleared of radioactive soil and other contaminated waste. **The disaster cleanup has not progressed as scheduled because town authorities have been unable to contact many vacation homeowners from Hokkaido in the north to Okinawa Prefecture in the south to win their consent.**

Rainwater runs down from contaminated hilly terrain dotted with vacation houses, prompting local residents to ask the town government to do something about it.

More than half of the houses in Nasu along the Tochigi-Fukushima border are vacation homes and the town has been designated as a contamination research area. But consent from each homeowner is a prerequisite for carrying out decontamination work. And the town has sent out research and decontamination consent forms to absentee homeowners since January last year.

While about 11,000 homeowners have given consent to decontamination work, some homeowners have refused to comply, saying they rarely use their vacation houses. About 3,600 homeowners have not responded to the consent forms. Most reminder notices that the town government sent to vacation home owners have been unanswered.

In many cases, consent forms have been sent back to the town because homeowners have relocated from their registered address, according to town officials. Furthermore, there are a significant number of cases

in which relatives who have inherited the ownership of vacation houses have given up on managing the homes, leaving them in a dilapidated condition.
As a result, **decontamination work in all of an area has been next to impossible and done sporadically.** A town official in charge says vacation homeowners probably lack interest in radiation doses and decontamination work, as compared to permanent residents.
Under a special law on decontaminating radioactive substances, authorities concerned can proceed with decontamination work by posting a notice in a newspaper and taking other procedures even if a homeowner is unreachable. But contaminated soil from the cleanup work has been temporarily stored covered with water-shielding sheets on the premises of respective homes. ''We can't do anything without consent from homeowners,'' the town official said.
The town extended the targeted completion of the decontamination program mapped out in April 2012 from the originally scheduled March 2014 to March 2017.
Local resident Noriko Mikusu, 69, says vacation homes on a slope adjacent to her home belong to people from Okinawa and other prefectures. But these homes have been abandoned probably because of their declining values and their homeowners have been unreachable, she says, adding decontamination work on her premises is meaningless because of the rainwater coming down from the vacation home compounds. Worse still, she says her grandchildren have stopped coming to her house.

November 10, 2014

Shioya mayor on Govt's plan for final storage

Tochigi town mayor rejects disposal site plan for Fukushima radioactive waste

http://mainichi.jp/english/english/newsselect/news/20141110p2a00m0na005000c.html

UTSUNOMIYA -- The mayor of the Tochigi Prefecture town of Shioya rejected the central government's plan to build a final disposal facility for waste contaminated with radioactive substances from the crippled Fukushima nuclear plant, saying such a facility "would threaten the town's survival."
Mayor Kazuhisa Mikata made the remark in a meeting between the Environment Ministry and the mayors of Tochigi Prefecture municipalities held in Utsunomiya on Nov. 9.
In the meeting, Environment Minister Yoshio Mochizuki explained the national government's selection of Shioya as a site for a final disposal facility for waste contaminated with radioactive substances emanating from the disaster-hit Fukushima No. 1 Nuclear Power Plant, and sought the mayors' understanding.
In response, Shioya Mayor Mikata demanded that the selection be retracted and that such a facility be built within Fukushima Prefecture. "The disposal facility could threaten the town's survival. ... Such waste should be treated intensively in the most contaminated areas," Mikata told the meeting.
However, Mochizuki dismissed the mayor's demand. "Our idea that such waste should be disposed of in various prefectures remains unchanged. We can't place any more burden on Fukushima Prefecture," he said. The environment minister and the mayor remained at odds over the matter.

Tochigi Gov. Tomikazu Fukuda suggested that waste with high levels of radiation eventually be extracted and disposed of after overall radiation levels in such waste decline after a certain period of time, and that the disposal facility accordingly not be billed as "final."
The environment minister promised to consider the governor's proposal.
After the meeting, Mochizuki said he believes that the national government's proposal is gradually gaining understanding from local municipalities despite his differences with the Shioya mayor.
Noting that waste contaminated with high levels of radioactive substances is temporarily stored at 170 locations in the prefecture, Mochizuki said, "I feel that the process of selecting the site for the disposal facility and our concerns about the current situation are gaining understanding to a certain extent."
However, Mikata said he remained strongly opposed to building a final disposal facility in Shioya.

November 11, 2014

Fukushima cesium contained in black mica

Fukushima cesium contained in common mineral

http://www3.nhk.or.jp/nhkworld/english/news/20141111_09.html

Scientists have found most of the radioactive cesium that leaked from the Fukushima nuclear plant settled in a common mineral that comes from granite.

University of Tokyo Associate Professor Toshihiro Kogure and his team studied soil samples from Iitate Village, Fukushima Prefecture, after the accident at the plant.

They used an electron microscope to look for radioactive particles, and discovered most of t**he cesium was contained in the mineral, called black mica.**

Granite stones in eastern Fukushima Prefecture produce the flat crystal substance as they weather.

The scientists predict most of the radioactive cesium in the soil of Fukushima is likely to be found in black mica.

Kogure said it is important to identify how the element exists in the soil. He said he expects **the finding will encourage others to develop ways to remove it from land in the prefecture.**

Scientists still don't know how the radioactive cesium chemically combined with minerals in soil around the plant.

November 12, 2014

Beginning of transfer of contaminated bags to Kawauchi site

First bags of contaminated debris prepared for transfer to Fukushima interim facility

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201411120042

KAWAUCHI, Fukushima Prefecture--Preparation work has started for the transfer of radiation-contaminated debris from a temporary storage site here to a planned interim facility that has been opposed by landowners and may not open as scheduled.

The temporary storage site holds 4,377 bags each containing a cubic meter of soil and debris contaminated by radioactive substances released in the Fukushima No. 1 nuclear power plant crisis that started in March 2011.

The Environment Ministry on Nov. 11 allowed reporters to see the preparation process, which involved the bags being uncovered and placed into new bags for transport.

Decontamination work around the crippled Fukushima nuclear plant has created tons of radioactive debris stuck in temporary storage while the government tries to find more permanent storage sites.

In late August, former Fukushima Governor Yuhei Sato accepted the central government's repeated requests to build an interim facility to store contaminated soil on a long-term basis in Okuma and Futaba in Fukushima Prefecture.

But government officials are having a tough time persuading landowners to sell their property at the proposed site. Wataru Takeshita, state minister in charge of reconstruction, indicated on Nov. 7 that it will be difficult to open the interim storage facility by the deadline of January next year.

The temporary site in Kawauchi opened in late 2011 and was one of the first places to store contaminated debris. The ministry decided to start preparations here for the transfer because the bags have been sitting idle for nearly three years and may be showing signs of deterioration.

"We have not found tears in any of the bags so far," an Environment Ministry official said. "There are some odors, but we have not detected any toxic gas inside the bags that would hamper the operation."

The process is scheduled to be completed by mid-December before snow starts accumulating.

A bag filled with contaminated debris is placed inside a new bag at a temporary storage site in Kawauchi, Fukushima Prefecture, on Nov. 11. (Yosuke Fukudome)

November 13, 2014

Water "an enormously distracting problem"

Nuclear cleanup at Fukushima plant stymied by water woes

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201411130092

THE ASSOCIATED PRESS

OKUMA, Fukushima Prefecture--More than three years into the massive cleanup of Japan's tsunami-damaged nuclear power plant, only a tiny fraction of the workers are focused on key tasks such as preparing for the dismantling of the broken reactors and removing radioactive fuel rods.

Instead, nearly all the workers at the Fukushima No. 1 nuclear power plant are devoted to an enormously distracting problem: a still-growing amount of contaminated water used to keep the damaged reactors from overheating. The amount has been swelled further by groundwater entering the reactor buildings.

Hundreds of huge blue and gray tanks to store the radioactive water, and buildings holding water treatment equipment are rapidly taking over the plant, where the cores of three reactors melted following

a 2011 earthquake and tsunami. Workers were building more tanks during a visit to the complex on Nov. 12 by foreign media, including The Associated Press.
"The contaminated water is a most pressing issue that we must tackle. There is no doubt about that," said Akira Ono, head of the plant. "Our effort to mitigate the problem is at its peak now. Though I cannot say exactly when, I hope things start getting better when the measures start taking effect."
The numbers tell the story.

6,000 WORKERS
Every day, about 6,000 workers pass through the guarded gate of the Fukushima No. 1 plant on the Pacific coast--two to three times more than when it was actually producing electricity.
On a recent work day, about 100 workers were dismantling a makeshift roof over one of the reactor buildings, and about a dozen others were removing fuel rods from a cooling pool. Most of the rest were dealing with the contaminated water, said Tatsuhiro Yamagishi, a spokesman for Tokyo Electric Power Co., the utility that owns the plant.
The work threatens to exhaust the supply of workers for other tasks, since employees must stop working when they reach annual radiation exposure limits. Experts say it is crucial to reduce the amount and radioactivity of the contaminated water to decrease the risk of exposure to workers and the environmental impact before the decommissioning work gets closer to the highly contaminated core areas.

40 YEARS
The plant has six reactors, three of which were offline when disaster struck on March 11, 2011. A magnitude-9.0 earthquake triggered a huge tsunami which swept into the plant and knocked out its backup power and cooling systems, leading to meltdowns at the three active reactors.
Decommissioning and dismantling all six reactors is a delicate, time-consuming process that includes removing the melted fuel from a highly radioactive environment, as well as all the extra fuel rods, which sit in cooling pools at the top of the reactor buildings. Workers must determine the exact condition of the melted fuel debris and develop remote-controlled and radiation-resistant robotics to deal with it.
Troubles and delays in preparatory stages, including the water problem and additional measures needed to address environmental and health concerns in removing highly radioactive debris from atop reactor buildings that exploded during meltdowns, have pushed back schedules on the decommissioning roadmap. Recently, officials said the government and TEPCO plan to delay the planned start of fuel removal from Units 1 and 2 by about 5 years.
The process of decommissioning the four reactors is expected to take at least 40 years.

500,000 TONS
The flow of underground water is doubling the amount of contaminated water and spreading it to vast areas of the compound.
Exposure to the radioactive fuel contaminates the water used to cool the melted fuel from inside, and much of it leaks and pours into the basements of the reactors and turbines, and into maintenance trenches that extend to the Pacific Ocean. Plans to freeze some of the most toxic water inside the trench near the reactors have been delayed for at least 8 months due to technical challenges.
The plant reuses some of the contaminated water for cooling after partially treating it, but the additional groundwater creates a huge excess that must be pumped out.

Currently, more than 500,000 tons of radioactive water is being stored in nearly 1,000 large tanks which now cover large areas of the sprawling plant. After a series of leaks last year, the tanks are being replaced with costlier welded ones.
That amount dwarfs the 9,000 tons of contaminated water produced during the 1979 partial meltdown of the Three Mile Island nuclear plant in the United States. At Three Mile Island, it took 14 years for the water to evaporate, said Lake Barrett, a retired U.S. nuclear regulatory official who was part of the early mitigation team there and has visited the Fukushima plant.
"This is a much more complex, much more difficult water management problem," Barrett said.

10 TRILLION YEN

An estimated 2 trillion yen ($18 billion) will be needed just for decontamination and other mitigation of the water problem. Altogether, the entire decommissioning process, including compensation for area residents, reportedly will cost about 10 trillion yen, or about $90 billion.
All this for a plant that will never produce a kilowatt of energy again.
About 500 workers are digging deep holes in preparation for a taxpayer-funded 32 billion yen ($290 million) underground "frozen wall" around four reactors and their turbine buildings to try to keep the contaminated water from seeping out.
TEPCO is developing systems to try to remove most radioactive elements from the water. One, known as ALPS, has been trouble-plagued, but utility officials hope to achieve its daily capacity of 2,000 tons when they enter full operation next month following a final inspection by regulators.
Officials hope to treat all contaminated water by the end of March, but that is far from certain.

Tanks storing contaminated water are seen at the Fukushima No. 1 nuclear power plant in Fukushima Prefecture on Nov. 12. (AP Photo/ Pool)

November 14, 2014

Opposition of residents delays storage surveys

Radioactive waste site surveys to go beyond Nov.

http://www3.nhk.or.jp/nhkworld/english/news/20141114_42.html

Japan's Environment Ministry said on Friday that it won't be able to complete its inspections of 3 candidate sites for a radioactive waste disposal facility in November due to the opposition of local residents.

The ministry plans to conduct field surveys at the 3 state-owned sites in Miyagi Prefecture, northeastern Japan, to find a place for a permanent storage facility for contaminated waste stemming from the Fukushima nuclear disaster.

Ministry officials wanted to complete the surveys by the end of November before snow piles up on the ground. But they could not start the inspections due to opposition of local residents. Snow has also started to fall in the prefecture.

The officials now hope the surveys taking about one month will end in May or later after snow melts.

The officials said they are sorry for the delay. But they added they will explain the surveys in detail to gain local understanding.

November 17, 2014

Listen to locals, says Governor

Fukushima chief urges govt. to respect local voice

http://www3.nhk.or.jp/nhkworld/english/news/20141117_26.html

The Fukushima governor has asked the government to give a thorough explanation before bringing in radioactive soil and other waste to storage facilities within the prefecture.

Governor Masao Uchibori met Environmental Minister Yoshio Mochiduki on Monday for the first time since he assumed the prefecture's top post last month.

They discussed the government plan to bring contaminated fallout from the 2011 Fukushima Daiichi disaster to sites in the prefecture starting in January.

Okuma and Futaba towns near the crippled plant are to host the intermediate storage facilities.

Environmental minister Mochiduki called for understanding from locals over the operation of the facilities, saying there would be many difficult issues.

Governor Uchibori stressed the need for close communications between the government, the prefecture, municipalities and landowners of the sites where the facilities will be located.

The government hopes to draw up a transportation plan by year-end and start bringing in the radioactive waste to the facilities as scheduled.

But it remains unclear whether the government can stick with the schedule. Negotiations with landowners are making slow progress.

November 19, 2014

Law approved on transferring waste in 30 years

Diet approves Fukushima waste disposal bill

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Japan's Diet has enacted a law on transferring radioactive soil and other stored waste out of Fukushima Prefecture for final disposal within 30 years.

The government plans to have the waste from decontamination work stored at intermediate facilities to be built in Futaba and Okuma towns, near the disabled Fukushima Daiichi nuclear plant.

An Upper House plenary session on Wednesday approved by a majority a revision to an existing law. The revision allows a state-owned company that deals with disposal of a toxic substance called polychlorinated biphenyl, or PCB, to engage in business related to the storage facilities.

The revised law obliges the government to ensure that the waste is safely stored and moved to a final

disposal site outside the prefecture within 30 years. The revision came in response to a demand from the communities that are to host the temporary facilities.

It also calls on the government to develop final disposal methods by studying new technologies that might lower the concentration of radioactive substances in soil and **allow reuse of the waste.**

Environment Minister Yoshio Mochiduki welcomed the move, saying it will help speed up reconstruction in Fukushima.

The government hopes to begin transporting the waste to the facilities in January. But it's not clear whether the plan can be put into action, as negotiations with landowners over acquiring their property to build the facilities is progressing slowly.

November 20, 2014

Legislation on waste passed

Diet passes legislation to remove nuclear waste from Fukushima in 30 years

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201411200041

The Diet passed a bill Nov. 19 mandating that radioactive soil and debris from the Fukushima decontamination work be moved outside the prefecture within 30 years, a step toward building interim storage facilities for the waste.

The law amendment was one of the five conditions set in September when the Fukushima prefectural government agreed to accept interim facilities to store contaminated waste collected during cleanup efforts around the crippled Fukushima No. 1 nuclear power plant.

Environment Minister Yoshio Mochizuki praised the legislation as a “major step forward.” However, hurdles remain high for the interim facilities--planned in Okuma and Futaba near the nuclear plant--to start accepting the waste in January as scheduled.

The bill amends a law regulating operations of the government-affiliated Japan Environmental Safety Corp. (JESCO), which is commissioned to dispose of used polychlorinated biphenyl (PCB).

The revised law stipulates the government will take necessary measures to remove waste from the prefecture for final disposal within 30 years after the interim facilities start operations. It also holds the government responsible for running the interim waste storage facilities and commissions JESCO to operate them.

Among the other conditions set by Fukushima Prefecture, the central government has agreed to earmark construction-related subsidies in its budget and take charge of the operation and maintenance of traffic routes for carrying in the waste.

One big problem for the government, however, is purchasing land for the facilities.

The planned construction zone stretches 16 square kilometers, comprising 2,365 land plots belonging to individual owners.

As of the end of September, the government has located the whereabouts of only 1,269 landowners, partly because they live outside their properties as evacuees.
The government first plans to create temporary storage sites on individual land plots it purchases to start accepting radioactive waste there as early as possible. But it has not reached a purchase or lease agreement with a single landowner.
Taking into account this stumbling block, reconstruction minister Wataru Takeshita said Nov. 7 that the government's plan to open the interim storage facilities in January will likely be pushed back.
(This article was written by Teru Okumura and Takuro Negishi.)

November 26, 2014

Kawauchi will have radioactive waste incinerator

Radioactive waste incinerator built in Fukushima

http://www3.nhk.or.jp/nhkworld/english/news/20141126_27.html

A facility to incinerate radioactive debris and other waste is ready to open in a village near the crippled Fukushima Daiichi nuclear power plant.

The Environment Ministry had been building the temporary incineration facility in the village of Kawauchi since May.

Officials and village delegates marked the completion of the work in a ceremony on Wednesday.

The facility is designed to burn 7 tons of waste per day while removing radioactive cesium.

Ministry officials plan to put the facility into full operation in early January following test runs.

The government lifted an evacuation order for part of Kawauchi last month. But about 1,700 tons of debris and other waste stored in the village remain to be disposed of.

Village Mayor Yuko Endo said some residents are worried about radiation and an unsafe living environment. He said he hopes the incineration facility will help ease their concern.

The Environment Ministry says Kawauchi is the first municipality in Futaba County to have an incineration facility. It says it plans to build similar facilities in other municipalities in the county where Fukushima Daiichi is located.

Contamination of rice not caused by Fukushima Daiichi

Experts: Debris removal not cause of tainted rice

http://www3.nhk.or.jp/nhkworld/english/news/20141126_31.html

Japan's nuclear regulators say rice fields some 20 kilometers from Fukushima Daiichi were not contaminated with radiation due to work to remove debris at the damaged plant.

Some paddies in the city of Minami Soma yielded contaminated rice last year.

Experts speculated that the rice paddies may have been tainted by airborne radioactive material released when debris was removed from the plant's No. 3 reactor in August.

To test the theory, experts at the Nuclear Regulation Authority simulated the spread of radioactive cesium caused by debris removal. They announced their findings on Wednesday.
The experts estimated that 30 becquerels of radioactive cesium per square meter would have fallen on one location where the contaminated rice was harvested, and 12 becquerels on another.

Regulatory authorities say those levels are far below the allowable limit, making it almost certain the removal work did not cause the contamination.

They warn that other tainted crops could turn up. Soil and trees are still contaminated with radioactive material that leaked from the plant at the time of the nuclear accident in 2011.

Officials at the agriculture ministry say they will continue testing soil and water in the city to find out what caused the rice contamination.

December 5, 2014

Bidding starts for storage facilitity construction

Govt. to invite bids for Fukushima waste storage

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Japan's Environment Ministry will open bidding for the construction of storage facilities in Fukushima Prefecture for waste produced from decontamination work. However, land for the project has not yet been secured.

The ministry plans to construct intermediate storage facilities in Futaba and Okuma Towns. The damaged Fukushima Daiichi nuclear power plant operated by TEPCO is located nearby.

The ministry hopes to start transporting contaminated soil and other waste in January of next year. But negotiations with landowners over acquiring their property have made little progress.

Ministry officials say they will select companies to build temporary storage sites, where workers can place waste before moving it to intermediate facilities for up to 30 years.

The exact location and start date of construction has not been finalized.

Officials will continue negotiating with landowners in the hope that construction can begin soon.

The government will also draw up a transportation plan for decontamination waste by year-end.

However, it remains unclear whether the waste can begin moving to new storage sites next month as planned.

December 12, 2014

Okuma says yes

Okuma Town accepts interim storage facilities

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

A town in Fukushima Prefecture has decided to accept a plan to build intermediate storage facilities for radioactive waste stemming from the nuclear accident in 2011.

The Okuma Town assembly made the decision on Friday after Mayor Toshitsuna Watanabe expressed his intention to accept the plan.

Assembly members agreed that the government's proposed compensation for people who will give up their land or property is insufficient, but it has provided a sufficient explanation of the plan.

The members also concluded that they have no way but to accept the plan to speed up post-disaster reconstruction.

Town authorities want to hold a meeting for residents to explain the decision in January.

Okuma is one of the 2 municipalities chosen by the government as candidate sites for the facilities. The other town, Futaba, has not made its position clear.

The damaged Fukushima Daiichi nuclear plant is located in the towns of Okuma and Futaba.

The government wants to build the facilities on a 16-square-kilometer site in the 2 towns. Waste transportation is due to start in January.

Mayor Watanabe said it is time to make a decision. But he said the town only accepts construction of the facilities and it will ask the central government to sign a safety agreement before bringing in waste. He said the state should also provide support for landowners and other residents.
Assembly chairperson Yukio Chiba said the members approved the plan because the mayor told them that he wants to take a step forward. He urged the government to support residents and town authorities.

Reveal the names

Court orders ministry to identify municipalities in survey on storing 3/11 debris

http://ajw.asahi.com/article/behind_news/social_affairs/AJ201412120062

By SHUNSUKE ABE/ Staff Writer
OSAKA--T**he Osaka District Court ordered the Environment Ministry to reveal the names of local governments that agreed to accept or considered accepting debris from the 2011 Great East Japan Earthquake.**
The court on Dec. 11 struck down the government's decision to keep the names of the municipalities under wraps out of concern that disclosure could hamper waste transfer projects.
Presiding Judge Kenji Tanaka said **citizens have the right to know if debris from the triple disaster of the earthquake, tsunami and Fukushima nuclear accident would be stored in their communities.**
"Local residents were concerned that disaster waste could be contaminated with radioactive materials," Tanaka said.
According to the ruling, the ministry surveyed municipalities in 43 of Japan's 47 prefectures in October 2011 on their willingness to accept the waste. The three disaster-hit prefectures of Iwate, Miyagi and Fukushima, plus Okinawa Prefecture, were excluded from the survey.
Although the ministry released the answers from 54 local governments that responded to the survey, it did not provide their names.
A citizens group in Moriguchi, Osaka Prefecture, filed a lawsuit demanding the ministry disclose the names. The ministry argued that it did not release the names "for fear of eroding neutrality in decision-making (on whether to accept the waste)."
Judge Tanaka said the potential disadvantages caused by the nondisclosure would have been enormous.
"We corrected the government's stance on information disclosure," Sugiko Hashimoto, head of the Moriguchi citizens group, told reporters in Osaka after the court's ruling.
The Environment Ministry said in a statement, "We will consider a response to the matter after inspecting the content of the ruling."

December 17, 2014

Debris collecting starts in Futaba

Debris removal begins along coast of Futaba town

http://www3.nhk.or.jp/nhkworld/english/news/20141217_28.html

Work to remove debris from the March 2011 tsunami has begun along the coast of Futaba Town in Japan's Fukushima Prefecture. An evacuation order is still in place for the town since the accident there at the damaged Fukushima Daiichi nuclear plant.

Japan's government is responsible for removing the debris.

On Wednesday morning, government-appointed workers began clearing the roughly 200-hectare area. They loaded driftwood and housing material onto trucks using construction machinery, and took it to a provisional storage site.

The Environment Ministry estimates the amount of debris in the area at 5,500 tons. The area is designated for preparation for the lifting of the evacuation order, where radiation levels there are relatively low.

Removal of the debris would enable decontamination work and hopefully speed up the area's reconstruction.

Debris clearing starts in Futaba, more than 3½ years after tsunami

http://www.japantimes.co.jp/news/2014/12/17/national/debris-clearing-starts-futaba-3%C2%BD-years-tsunami/#.VJGf-P-cJA

Kyodo
FUKUSHIMA – Workers started clearing debris on Wednesday in some parts of Futaba near the Fukushima No. 1 power plant, nearly four years after the March 2011 earthquake and tsunami triggered the nuclear crisis.
Fukushima Prefecture town is in the evacuation zone around the crippled nuclear plant.
The Environment Ministry plans to remove 13,000 tons of debris by March 2016 in areas designated to prepare for the lifting of the evacuation order. No such plan is in place for other areas of the town due to higher radiation levels.
After a silent tribute to victims of the disaster, ministry officials and other people launched the operation using heavy machinery in the Morotake area.
“At last, Futaba town’s reconstruction begins,” said Rokuro Saito, 77, a community leader in Morotake. Saito has been living in Iwaki, Fukushima Prefecture, in the wake of the disaster.

December 21, 2014

Last of hotspot advisories to be lifted

Govt. to lift last 'hot spot' evacuation advisory

http://www3.nhk.or.jp/nhkworld/english/news/20141221_11.html

The Japanese government is set to lift the last of its evacuation advisories in Fukushima Prefecture for so-called "hot spots" with high radiation levels.

Officials are expected to convey the decision to the residents of Minamisoma City on Sunday.

The decision would affect 152 households in the city, located about 20 kilometers from the disabled Fukushima Daiichi nuclear plant.

Authorities issued the hot-spot advisories 3 years ago for individual houses. They are separate from evacuation zones, which remain in force.

The government earlier planned to lift the hot spot designation in Minamisoma by the end of October, saying radiation levels have gone below its standards.

But the plan met opposition from residents who complained the area was not yet safe for living in.

Government officials say they have since gained the understanding of local governments. They say they have decided to lift the advisories on December 28th.

Some residents are still concerned about radiation levels. Officials say if requested they will continue the decontamination work that is currently underway.

They also say residents will continue to receive monthly compensation of about 835 dollars from Tokyo Electric Power Company until March next year for their stress and suffering.

75%of radioactivity released after first 4 days

More radioactive materials released after crisis

http://www3.nhk.or.jp/nhkworld/english/news/20141221_16.html

The Japan Atomic Energy Agency says 75 percent of the radioactive substances released from the Fukushima Daiichi Nuclear Power Plant came more than 4 days after the accident.

The government's investigation has not released what happened during this period. Experts say the reason needs to be determined as to why massive amounts of radioactive materials continued to be released for a prolonged period.

The nuclear accident in Fukushima has been evaluated as the worst, at level 7, on a par with the Chernobyl accident in 1986, due to the large amount of radioactive substances that were released. But the details on how the substances were released remain unknown.

A research group at the Japan Atomic Energy Agency collected new data on radiation detected near the plant over time to analyze how radioactive materials were released into the air.

The research has found that an estimated 470,000 terabecquerels of radioactive substances had been released by the end of March 2011, when the discharge is believed to have mostly subsided.

The research group says 25 percent of the radioactive materials were released during the first 4 days of the accident, as the meltdown and hydrogen explosions were happening, while 75 percent were released over the 2-week period that followed.

The group also analyzed how the radioactive materials spread, using the climate data at the time. They found that contamination in places where former residents are still not allowed to return became serious on March 15th -- 4 days after the accident.

They also say **radioactive substances released between March 20th and 21st spread to a wider area, including the Kanto region, and are believed to have contaminated drinking water supplies.**

The outcome of the analyses indicates that radioactive materials continued to be released after the first 4 days, which is believed to be the critical time during which the situation was deteriorating out of control.

The government's investigation has focused on the first 4 days, and has not determined the cause of the massive release of radioactive substances following that period.

Masamichi Chino of the research group says the cause needs to be determined to prevent future accidents and to bring the situation under control quickly if another accident happens.

More than 120,000 people are still forced to live in temporary shelters.

Six municipalities remain off limits due to high levels of contamination.

Gov't gives up plan to transport radioactive soil

Plan to truck Fukushima radioactive soil, waste is put on hold

http://www.japantimes.co.jp/news/2014/12/21/national/plan-truck-fukushima-radioactive-soil-waste-put-hold/#.VJb4Rv-cJA

Kyodo
The government has given up on an earlier plan, slated to start in January, to transport radioactive soil and other waste from decontamination work following the 2011 Fukushima nuclear disaster to nearby towns, sources close to the matter said Sunday.
The move comes as the decontamination work has been slow and negotiations with landowners in Futaba and Okuma towns in Fukushima Prefecture on the construction of interim waste storage facilities have been protracted, the sources said.
Under the government plan, contaminated waste to be kept in the interim facilities will be permanently disposed of outside the prefecture within 30 years, as requested by the prefectural government in accepting the storage.
The site for final disposal of the radioactive waste has yet to be decided.

December 22, 2014

All radiation hotpots "safe"?

Small radiation hot spots in Fukushima to be declared safe

http://www.japantimes.co.jp/news/2014/12/22/national/small-radiation-hot-spots-in-fukushima-to-be-declared-safe/#.VJhcl_-cJA

JIJI
Sunday, officials will lift an evacuation advisory for 142 locations in the city of Minamisoma, which will affect 152 households, Yosuke Takagi, state minister of economy, trade and industry, said this weekend during a briefing to residents.

Amid complaints from residents, Takagi said the decision was based on rules that allow hot spot designations to be lifted once radiation levels fall following decontamination work.
In June 2011, three months after the triple reactor meltdown at Tokyo Electric Power Co.'s Fukushima No. 1 nuclear plant, the government designated 260 places in the cities of Minamisoma and Date and the village of Kawauchi as hot spots where annual radiation doses for residents could exceed 20 millisieverts. Evacuations were advised.
Date and Kawauchi were declared free of hot spots in December 2012.
In October this year, the government indicated it would add Minamisoma to the list within the month. But it postponed doing so amid concerns among residents that radiation levels remained high.

Is Governor Fukuda's proposal an option?

Panel mulls restitution of final disposal sites

http://www3.nhk.or.jp/nhkworld/english/news/20141222_26.html

A government panel is discussing the pending issue of how to set up permanent disposal sites for contaminated waste from the Fukushima Daiichi nuclear disaster.

The outlook for creating such facilities is still uncertain due to local objections more than 3 and half years after the accident.

The environment ministry panel is mulling what to do about radioactive soil, ash, sewage sludge and other waste from decontamination work in 5 prefectures near Fukushima after the disaster.

The waste is being temporarily stored at various locations in the prefectures, but the government plans to build permanent disposal facilities.

On Monday, the panel experts considered a proposal made by Tochigi Governor Tomikazu Fukuda. **Fukuda is calling for soil and other waste at the permanent disposal sites to be reused after radiation levels fall low enough. The aim is to recycle the waste and eventually restore the disposal sites to their former conditions.**

A panel member said there would be various technical issues involved with removing the waste from the facilities.

Another said that if contaminated waste is to be recycled, the treatment should be aligned with the standards for reusing waste from dismantled nuclear plants.

Panel chair Masaru Tanaka said he wants to consider Fukuda's proposal as one option, and study what issues need to be addressed.

December 24, 2014

New guidelines for waste disposal (NRA)

NRA to study nuclear waste disposal requirements

http://www3.nhk.or.jp/nhkworld/english/news/20141224_24.html

Japan's Nuclear Regulation Authority says it will begin drafting guidelines for the disposal of nuclear waste with relatively high-levels of radioactivity.

The NRA has already set regulations for burying low-level nuclear waste from decommissioned reactors.

But it delayed coming up with regulations for the disposal of higher level waste, such as parts from inside the reactor. Officials said they needed more time to carefully consider what's required.

Now the authority has decided to set up a team to draft those guidelines. They plan to begin work next month and complete a proposal within the year.

Relatively high-level nuclear waste will be buried at least 50 meters underground. The authority plans to set standards for quake resistance and anti-leakage measures.

But waste such as control rods, which remain highly radioactive over a long time, may require further processing. Regulations for that waste will be excluded from next year's draft.

Energy companies are expected to announce plans to decommission their older reactors, which will produce more radioactive waste.

January 13, 2015

Futaba says OK

Futaba town accepts interim storage facilities

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

The Japanese government's plan to build intermediate storage facilities for radioactive waste from the 2011 nuclear accident is set to move ahead, now that the candidate sites have accepted the plan.

The government wants to build facilities for storing contaminated soil and debris on a 16-square-kilometer site straddling the towns of Futaba and Okuma in Fukushima Prefecture. The 2 towns host the damaged Fukushima Daiichi nuclear plant.

Okuma accepted the plan last month. The mayor of Futaba made the same decision on Tuesday in Iwaki city, where most of the town's residents have evacuated.

Those in favor of accepting the intermediate storage facilities say they will help speed up decontamination efforts in the region.

But others cite the risk of the intermediate facilities becoming permanent unless the government fulfills its promise to dispose of nuclear waste outside the prefecture.

The government plans to continue purchase negotiations with the site's landowners. It is also working out safety arrangements with the prefecture and the 2 towns for the transportation of radioactive waste to the facilities.

Futaba Mayor Shiro Izawa said acceptance of the government's plan is an unavoidable part of accelerating post-disaster rebuilding.

January 14, 2015

Futaba says OK (2)

Futaba to accept radioactive soil storage facilities

http://www.japantimes.co.jp/news/2015/01/14/national/futaba-accept-radioactive-soil-storage-facilities/#.VLYhlHt1Cos

JIJI
IWAKI, FUKUSHIMA PREF. – The Fukushima Prefecture town of Futaba will accept planned interim facilities to store radioactive soil left over from decontamination work stemming from the meltdowns at Tokyo Electric Power Co.'s Fukushima No. 1 nuclear plant, Mayor Shiro Izawa said Tuesday.
Izawa signaled the approval in talks with reporters at the town's temporary office in the city of Iwaki, Fukushima Prefecture.
The central government plans to establish the storage facilities on a site straddling Futaba and the neighboring Fukushima town of Okuma. The Tepco plant was damaged heavily in the March 2011 earthquake and tsunami.

Last August, Yuhei Sato, then governor of Fukushima, approved the construction of the facilities, but the Futaba authorities did not clarify the town's stance at the time. Okuma voiced its readiness to accept the plan in December.
At a meeting of Futaba assembly members on Tuesday, Izawa explained his intention to accept the storage facilities.
Later he told reporters, "We cannot move forward toward reconstruction unless we make a tough decision."
But he said it is absolutely necessary that the central government will fully explain the plan to the owners of the land for the planned storage facilities.

Town near crippled nuclear facility OKs plan to build storage facility for waste

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201501140031

A town that co-hosts the stricken Fukushima No. 1 nuclear power plant has agreed to the construction of an intermediate storage facility for radioactive debris generated by the 2011 earthquake and tsunami.
"I decided we have no choice but to agree to hosting the facility. It was a difficult decision that was made purely for the sake of rebuilding and revitalizing Fukushima," Futaba Mayor Shiro Izawa said Jan. 13 after a town assembly meeting.
The assembly members endorsed the mayor's decision, which essentially was a formality as the town had earlier approved the central government subsidy plan related to the site.
The town of Okuma, also a candidate site for a waste facility, as well as the Fukushima prefectural government, have already given approval to the plan.

January 15, 2015

Transportation of radioactive waste will have to wait

Transportation of radioactive waste to be delayed

http://www3.nhk.or.jp/nhkworld/english/news/20150115_31.html

Japan's Environment Ministry has decided to delay transportation of radioactive waste to a projected intermediate storage area in Fukushima Prefecture due to a delay in construction.

The government chose a 16-square-kilometer area straddling the towns of Futaba and Okuma as a candidate site for the intermediate storage facilities. The facilities will store radioactive waste stemming from the 2011 nuclear accident at the Fukushima Daiichi plant.

The Fukushima prefectural government accepted the plan last year.

The Environment Ministry has been preparing to start transportation by the end of January.
But construction of a temporary storage site, where workers will place radioactive waste before moving it to the intermediate facilities, has been delayed.

Soil and other waste accumulated from decontamination operations are now stored at around 1,000 initial storage sites and more than 75,000 private properties across the prefecture.

Local governments are calling for transportation of the contaminated waste to the intermediate storage facilities to start soon.

January 16, 2015

Transportation of radioactive waste will have to wait (2)

Govt. delays transportation of radioactive waste

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Japan's government has decided to delay the start of moving radioactive waste created by the Fukushima nuclear accident to intermediate storage facilities.

Environment Minister Yoshio Mochiduki said on Friday that the ministry had given up its initial plan to begin the work by the end of January.

Mochiduki expressed hope to start the work by March 11th, the 4th anniversary of the earthquake and tsunami that led to the nuclear accident.

He said the government has to ask local authorities and residents to keep waste at temporary storage sites for several more years because it's impossible to transport the large amount of waste all at once.

The government has chosen a 16-square-kilometer area straddling Futaba and Okuma towns in Fukushima Prefecture for the facilities. But the project has made little progress.

Radioactive soil and other waste stemming from decontamination work have been kept at **1,037 sites in 53 out of 59 municipalities in the prefecture.**

75,000 other locations, including private property and parking lots, are also used as temporary storage sites.

Fukushima Governor Masao Uchibori said the intermediate facilities are a huge nuisance for local communities, but essential for the reconstruction of his prefecture.

He urged the central government to answer the prefecture's request to ensure safety during transportation of contaminated waste.

The governor added that he will deal with the matter by taking into account the public's wish to get rid of the waste and the troubles the intermediate storage facilities bring to the host municipalities.

Gov't to postpone moving radioactive waste to interim storage sites

http://mainichi.jp/english/english/newsselect/news/20150116p2g00m0dm075000c.html

TOKYO (Kyodo) -- Environment Minister Yoshio Mochizuki said Friday the government has given up its plan to begin this month transporting radioactively contaminated soil and other waste, collected during decontamination work following the 2011 Fukushima nuclear crisis, to interim storage sites at nearby towns.
The government now aims to begin such transportation by March 11 this year on the fourth anniversary of the disaster at the Fukushima Daiichi nuclear power station, Environment Ministry officials said.
The delay was due to difficulties obtaining agreement from residents near the interim storage sites and local municipalities, the officials said.
Under the government plan, the radioactively contaminated waste will be kept in the interim facilities in the towns of Futaba and Okuma in Fukushima Prefecture and will be permanently disposed of outside the prefecture within 30 years, as requested by the Fukushima prefectural government in accepting the storage.
The site for final disposal of the radioactive waste has yet to be decided.
Meanwhile, Reconstruction Minister Wataru Takeshita offered an apology over the delay.
In October 2011, the government led by then Prime Minister Yoshihiko Noda released the target to begin the delivery of contaminated waste to interim storage sites in January 2015.

January 18, 2015

Potassium chloride indispensable

All 2014 Fukushima rice cleared radiation tests, thanks to fertilizer

http://www.japantimes.co.jp/news/2015/01/18/national/all-2014-fukushima-rice-cleared-radiation-tests-thanks-to-fertilizer/#.VLt1uy51Cos

Fukushima Minpo
For the first time since the triple meltdown at the Fukushima No. 1 plant throttled the agriculture-reliant prefecture, all rice produced there last year cleared the required radiation tests.
Fukushima Prefectural Government last year checked every bag of rice produced in the prefecture — some 10.75 million bags — based on the Food Sanitation Law, which bans the sale of rice radiating more than 100 becquerels of cesium per kilogram.

The tests found that all bags checked from January 2014 through December 2014 exhibited lower than standard radiation levels, in contrast with the bags produced in 2012 and 2013, which contained a small percentage of tainted rice unfit for shipment, the prefectural government said.
Officials said they hope the results will help raise consumer confidence in Fukushima rice, which was devastated by the nuclear disaster. **Experts attribute the achievement to efforts to prevent cesium from making its way into rice fields during cultivation, and to the use of fertilizers based on potassium chloride, which prevents the grain from absorbing the radioactive isotope.**
The tests, introduced in 2012, screen bags of rice as they move on a conveyer belt. Bags sniffed out by the initial screening are tested further with precision instruments. Bags over the 100-becquerel cesium limit are discarded.
In 2012, a total of 10.35 million bags were tested and 71, or 0.0007 percent, failed to pass the testing criteria.
In 2013, the failure rate was reduced to just 28 bags, or 0.0003 percent of the 11 million bags tested.
In 2014, 29 bags were flagged as suspicious by initial screening but later found to be below the cesium threshold.
Given that 867 bags were weeded out by initial scans in 2012, the 2014 results represent a major advance, they said.
To date, the rice farmers, prefectural government and local JA cooperatives have made joint efforts to promote fertilizers based on potassium chloride, which prevents rice from absorbing cesium.
The prefecture is shouldering all costs for the fertilizers. In 2014, it distributed ¥1.61 billion in subsidies to farmers to buy enough potassium chloride-based fertilizer to treat 68,000 hectares of paddies.
Research has shown that putting potassium in soil prevents rice from taking in cesium. But it is important to keep the potassium levels high while rice is young. Thus, the prefecture and JA cooperatives have advised rice farmers to keep adding the chemical.
Keisuke Nemoto, a professor at the University of Tokyo's Laboratory of Crop Ecology and Morphology who is studying how radioactive cesium makes its way into rice, said the 2014 test results represent the fruit of the joint effort.
But Nemoto said his experiments showed that rice grown in paddies last year without potassium-based fertilizers still breaks the 100-becquerel cesium limit.
"Unless farmers keep adding potassium to soil every year, the chemical's density in soil will decline and rice could start absorbing cesium again," he warned.
This section, appearing every third Monday, focuses on topics and issues covered by the Fukushima Minpo, the largest newspaper in Fukushima Prefecture. The original article was published January 9.

January 20, 2015

Storage "indispensable" for Fukushima's recovery

Editorial: Speed up talks on securing land for storing Fukushima radioactive soil

http://mainichi.jp/english/english/perspectives/news/20150120p2a00m0na007000c.html

The Environment Ministry has postponed bringing soil contaminated with radioactive substances leaking from the tsunami-ravaged Fukushima No. 1 Nuclear Power Plant to a temporary storage facility beyond this month as was originally scheduled. The ministry says it will begin to bring contaminated soil to the facility by March 11, which marks the fifth anniversary of the Great East Japan Earthquake, which triggered a massive tsunami and the nuclear crisis. The delay is attributable to the ministry's deadlocked negotiations with the Fukushima Prefectural Government and the owners of the land where the facility is to be built.

The facility is indispensable for Fukushima's disaster recovery. The more the construction of the facility is delayed, the more serious impact it will have on local residents' efforts to restore their livelihoods.

The temporary storage facility, with a capacity of some 25.5 million cubic meters of soil, is to be built on a 16-square-kilometer area that straddles between the Fukushima Prefecture towns of Futaba and Okuma near the crippled atomic power station. In August last year, then Fukushima Gov. Yuhei Sato agreed to accept the construction of the facility with five conditions attached.

Two of the conditions -- the enactment of legislation on the final disposal of tainted soil outside the prefecture and the creation of grants to help revitalize the Fukushima economy -- have been met. However, the three others, including a safety agreement between the national government and local municipalities hosting the facility, remain unaddressed.

Current Gov. Masao Uchibori says the prefectural government will carefully proceed with consultations. Needless to say, ensuring safety of the facility is absolutely necessary, but the prefectural government should put more efforts into its negotiations with the national government and local municipalities.

The ministry's negotiations with over 2,000 landowners have been stalled. Ministry officials said they have been unable to contact nearly half of the landowners because the ministry cannot confirm where they are taking shelter. The ministry has not yet reached an agreement with a single landowner over the use of their land for the facility.

The ministry intends to use some 30,000 square meters of the land free of charge for now to store radioactively contaminated soil, but it is nothing but a stopgap measure. A group of some landowners are demanding that the national government buy their land at higher prices in the future as it has offered.

Despite such circumstances, the Futaba and Okuma municipal governments decided between late last year and earlier this month to accept the site in hope that the construction of the facility will speed up their disaster recovery. The Environment Ministry has recruited about 140 people who have experience in land acquisition and other expertise as temporary workers and is set to assign them to Fukushima beginning in April. These workers should respect the town governments' decisions and speed up negotiations on land acquisition with landowners.

Radioactively contaminated soil is currently stored at more than 1,000 locations in Fukushima Prefecture. The ministry intends to bring the soil to the temporary storage facility on an experimental basis for the first year. That tainted soil from 43 municipalities in the prefecture accounts for less than 1 percent of all contaminated soil.

Environment Minister Yoshio Mochizuki says, "We have no choice but to ask the local communities to accept soil at the temporary storage facility for several years." Local residents have expressed concern over and displeasure at the prospects that the temporary storage of radioactive soil at the facility will be prolonged. The central government should release a road map toward the construction of facilities to dispose of such contaminated soil, including the timing of the completion of the temporary storage facility.

The national government has included 250 billion yen as grants to the prefectural government in return for hosting the temporary storage facility from the fiscal 2014 supplementary budget draft. Both the

central and prefectural governments should secure transparency on how the grants will be spent to make sure that the money will be used for Fukushima's disaster recovery and deepen the public's understanding of the need for the temporary storage facility.

January 21, 2015

Paving the Way Home (Nuclear Watch)

http://www3.nhk.or.jp/nhkworld/english/news/nuclearwatch/20150121.html

Cleanup crew have been working to decontaminate the Fukushima Daiichi nuclear plant for nearly 4 years. Thanks to their efforts, some evacuees have been able to return to their hometowns nearby. But it's not easy for former residents to pick up and start over. For one, job opportunities remain limited. NHK WORLD's Yuki Hidaka visited one returning resident who is trying to solve this problem.

Tomoyuki Wada was born and raised in Odaka, Fukushima Prefecture, less than 20 kilometers from the site of the nuclear accident.

The area is now open to residents only during the daytime. Government officials aim to make it safe to live there again by April of next year.

Wada says it's necessary to create jobs before then, so that people can restart their lives there as soon as they return. He travels to Odaka during the daytime to revive local businesses.

"People will return if they know there are shops and jobs available in the area," he says. "By gradually creating an inflow of residents, the town will regain its energy and that will positively impact people's daily lives."

Wada has revived the local silk farming and textile industries. Investments have been kept to a minimum by using existing resources. Four locals now work at the facility. All of the products are hand-made. "Time flies when I'm working at my job. I think this kind of work suits me" says employee Shizuka Kume.

The company is planning to increase the number of silkworms by tenfold over the next few months. Even though silk farming and textile production are small industries, they are essential for the community to thrive," Wada says.

Wada also opened a restaurant last month. He used a vacant facility owned by one of his friends.

Dozens of people showed up on opening day. Wada hopes the eatery will play a role in rebuilding ties within the community that have come close to being severed. One customer remarked that the restaurant gives the community what it really needs a place to gather.

Wada employs 4 Odaka residents at the restaurant, which is open for lunch 4 days a week.

"I hope that the silk farming and textile production businesses, as well as the restaurant, become profitable as soon as possible," Wada says. He aims to expand them after the government lifts the restrictions in Odaka. He hopes to help turn his hometown into a place where people are happy to live once more.

January 27, 2015

Dry storage for Hamaoka

Chubu Electric applies with NRA to build dry storage facility at Hamaoka nuclear plant

http://mainichi.jp/english/english/newsselect/news/20150127p2a00m0na014000c.html

Chubu Electric Power Co. applied with the Nuclear Regulation Authority (NRA) on Jan. 26 for permission to build a dry storage facility for spent nuclear fuel from the No. 4 reactor at its Hamaoka nuclear power plant in Shizuoka Prefecture.

The power company wants to build a dry storage facility on the premises of the Hamaoka Nuclear Power Plant so that it won't have to store spent nuclear fuel in a fuel pool. If completed, it will be the third such facility at nuclear plants in Japan. Following the outbreak of the crisis at the Fukushima No. 1 Nuclear Power Plant, NRA Chairman Shunichi Tanaka said that dry storage facilities, which were said to be safer than spent nuclear fuel pools, were "desirable." While spent fuel pools in Japan are nearly completely full, there has been little press in the shift toward the dry storage method.

Under the dry storage method, spent nuclear fuel is stored in a steel container called "cask" after being cooled in a spent fuel pool for at least several years. Such facilities are believed to be less vulnerable to earthquakes and tsunami as they do not need electric power and spent nuclear fuel can be cooled naturally by air. Chubu Electric released the dry storage facility scheme in 2008 when it decided to decommission the No. 1 and No. 2 reactors at the Hamaoka plant. The utility plans to start operating the dry storage facility in fiscal 2018 and store 400 metric tons of spent nuclear fuel there for up to 50 years.

There are similar facilities at the Fukushima No. 1 Nuclear Power Plant and Atomic Power Co.'s Tokai No. 2 nuclear power plant in Ibaraki Prefecture with a storage capacity of about 500 tons and 250 tons, respectively. As for such facilities outside nuclear power stations, Tokyo Electric Power Co. and Atomic Power Co. are jointly building a dry storage facility with a capacity of 5,000 tons in the Aomori Prefecture city of Mutsu.

At the Fukushima nuclear power plant's No. 4 reactor where hydrogen explosions occurred in its reactor building, all of the nuclear fuel, including spent fuel, was stored in a fuel pool. The fuel could not be cooled because the facility lost power, and there was a danger of nuclear fuel melting as it was laid bare in the fuel pool that dried up temporarily. The nuclear fuel stored in a dry facility at the same nuclear plant remained intact.

Nevertheless, no new dry storage facility plan has been released so far since the Fukushima disaster. That's because local residents have deep concerns that if utilities were to build such facilities, spent nuclear fuel could be disposed of in their areas permanently. There appears to be even stiffer opposition from local residents to any plan to build such facilities outside the premises of nuclear power stations.

January 29, 2015

Fukushima nuclear waste

Construction of radioactive waste storage to start

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Japan's environment ministry plans to soon start building initial facilities for storing radioactive waste stemming from decontamination work in Fukushima Prefecture, northern Japan.

They are part of the intermediate storage complex to be built in a 16-square-kilometer area straddling the towns of Futaba and Okuma.

The government earlier planned to start moving the waste to the site by the end of this month. But it canceled the plan due to delays in purchasing land and building facilities.

The government now plans to start the transport by March 11th, the 4th anniversary of the earthquake and tsunami that led to the nuclear accident in 2011.
The ministry says **construction of 2 initial storage facilities, each 10,000 square kilometers, will start next Tuesday at industrial parks in the intermediate site.**

The waste is to be kept there until intermediate storage facilities are completed. It remains unclear when their construction will begin, due to lack of progress in purchasing land.

Huge amounts of radioactive soil and other waste stemming from decontamination work have been kept in each municipality of the prefecture.

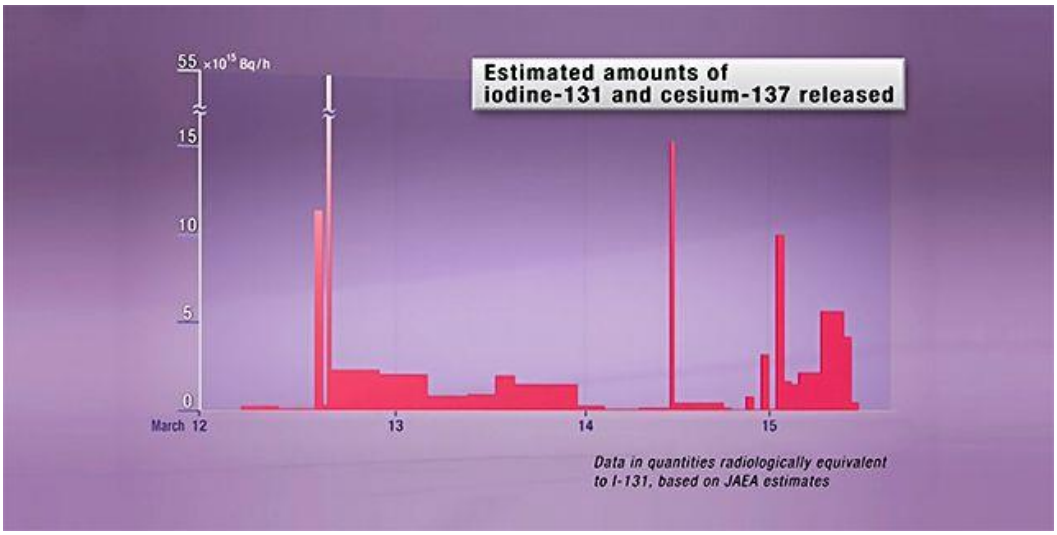
Municipalities are asking the government to provide a concrete schedule for transporting the waste.

January 30, 2015

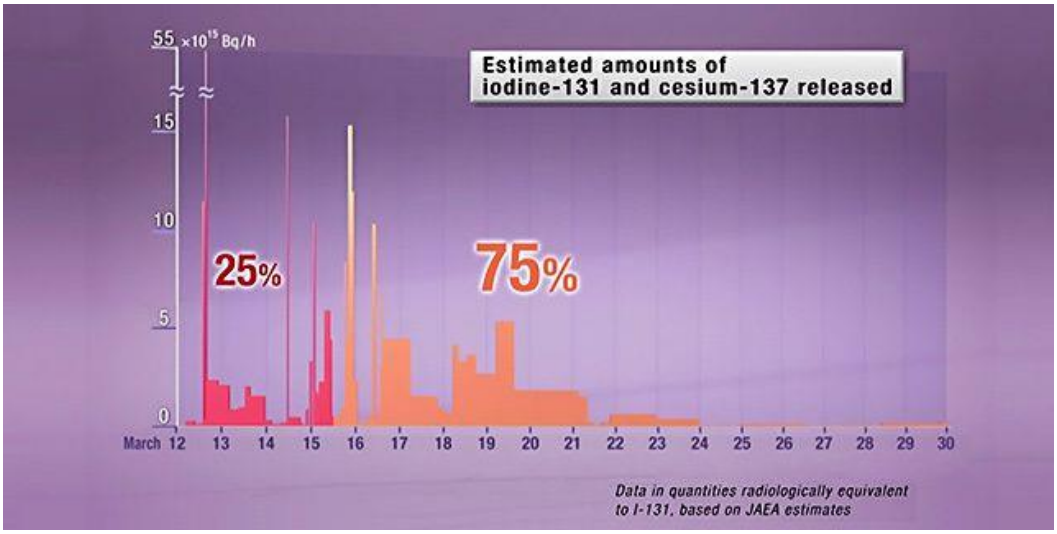
Nuclear Watch: New Findings on Fallout

http://www3.nhk.or.jp/nhkworld/english/news/nuclearwatch/20150130.html

Nearly 4 years have passed since the nuclear accident at Japan's Fukushima Daiichi plant. But even as work proceeds on decommissioning the reactors, experts are still trying to grasp all the details of the disaster. They have made new discoveries about the radioactive substances released from the reactors. In this installment of Nuclear Watch, we tell you what they've found.
On March 13th, 2011, a US aircraft carrier deployed off northeastern Japan detected an increase in the level of radiation in the atmosphere. The crew kept a running record of the data.
NHK created this chart with help from a researcher who's been analyzing the information.
Up until now, people looking into the accident had focused on the 4 days immediately after the disaster. That's because they thought the bulk of radioactive substances was released from the plant during that period.



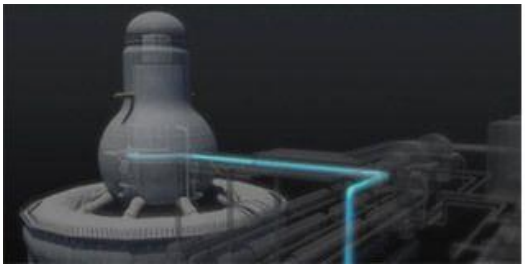
However, the data analyzed by the researchers suggest something different. Only a quarter of the radioactive substances drifted away from the plant during the first 4 days. The remaining 75 percent spread over the next 2 weeks.

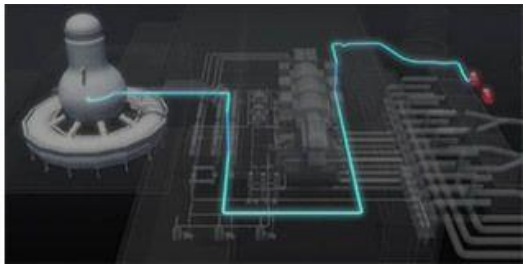


An analysis reveals why this happened. When the disaster hit, the nuclear plant lost its external power. That made electric pumps that inject water into the reactors useless.

So workers used fire engines to spray water into the reactors in an effort to keep them from melting down.

The fire engines pumped out 30,000 liters of water every hour. But an in-house investigation by the plant's operator shows only about 1,000 liters per hour reached the targets.





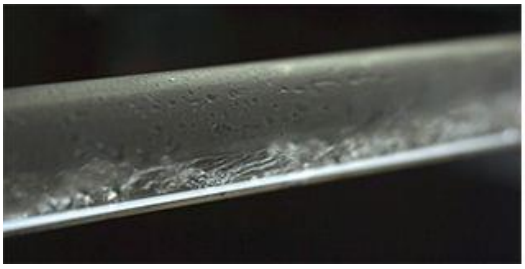
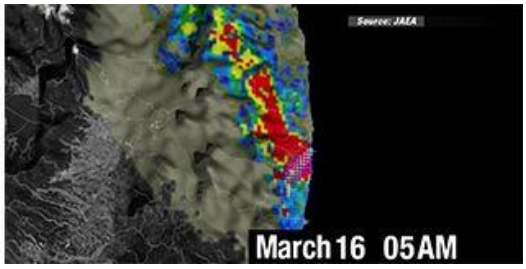
We conducted an experiment to see if this may have contributed to the massive release of radioactive fallout


Nuclear fuel is covered with a metal called zirconium. We heated the metal to a temperature of 1,200 degrees Celsius, the estimated temperature inside the reactors when the accident happened. We then poured traces of vapor onto the metal to simulate water from the fire engines.
Instead of dropping, the temperature of the metal quickly began to climb. In 2 minutes, it surged by 78 degrees. Experts suspect this is why large amounts of radioactive substances escaped over an extended time.

NHK asked experts to gather for analysis.

"Fuel keeps melting slowly, as zirconium generates a relatively large amount of heat," explains Masanori Naitoh, Director of the Institute of Applied Energy. "The metal remained hot for some time. This means radioactive materials will be released for a longer time."

The experiment showed that water that was meant to prevent the meltdowns may have actually sustained them. Naitoh says the result shows that radioactive substances kept leaking out and spreading into the atmosphere.

NHK WORLD's Kenichiro Okamoto has been following the story, and tells us what he's learned.

Why wasn't the fallout discovered until now?

Several independent panels investigated the accident. Some were appointed by the government... others by the Diet, or private groups.
The members tried to figure out why no one was able to control the situation. They focused on the 4 to 5 days after the disaster, when TEPCO failed to prevent the reactors from melting down.

Are the investigations ongoing?

Radiation levels around the Fukushima Daiichi reactors remain extremely high.
And no one has been able to get close enough to determine what's happening inside. And it's possible there may still be more data to analyze about radioactive substances released from the plant.

This explains why experts believe it will take several decades to get a complete picture of what happened.
In the meantime, everyone needs to keep in mind that no nuclear plant is perfectly safe.
And members of the media need to keep watching the situation, and report on future developments as they happen.

January 31, 2015

Disposing of nuclear waste

News Navigator: How is nuclear waste of decommissioned reactors disposed of?

http://mainichi.jp/english/english/perspectives/news/20150131p2a00m0na015000c.html

As old nuclear reactors in the country are considered for decommission, the Mainichi Shimbun answers some common questions readers may have about how such decommissioning and the disposal of nuclear waste take place.
Question: What is the background behind the current talk of decommissioning reactors?
Answer: Under current law, nuclear reactors are generally limited to 40 years of operation -- and power utilities are considering decommissioning as an option for nuclear reactors that are approaching this limit. Standard decommissioning involves extracting spent nuclear fuel from the reactor, decontaminating the inside of the reactor building, and then proceeding with the reactor's dismantling. The whole process takes from 20 to 30 years.
Q: Won't high levels of radioactively contaminated waste emerge during a reactor's dismantling?
A: According to power utilities and other sources, most of the waste that comes out during the dismantling process includes items such as concrete structures that do not need to be treated as radioactive waste. Only around 3 percent of total waste products comprise objects that require handling as radioactive waste -- mainly things including structures inside the reactor such as the pressure vessel that housed its nuclear fuel, and the equipment used for the spent nuclear fuel pool.
As an example, around 8,740 metric tons of radioactive waste is estimated to come out from the No. 2 reactor at Chubu Electric Power Co.'s Hamaoka Nuclear Power Plant in Shizuoka Prefecture -- where decommissioning work began in 2009 -- as opposed to 262,800 tons of nonradioactive waste.
Q: How is radioactive waste processed?
A: Except for spent nuclear fuel, the radioactive waste that comes out during decommissioning work has a low level of radiation. Particularly low-level radioactive waste such as filters or workers' clothing is stuffed into barrels, embedded in cement and other materials, and buried less than 20 meters under ground.
This would be the same processing as is already being done at a Japan Nuclear Fuel Ltd. facility in Aomori Prefecture for low-level nuclear waste created by nuclear reactor operations.
On the other hand, objects inside a nuclear reactor -- such as the control rods used to adjust nuclear fission -- are 10 to 100 times more radioactive than low-level waste, and are buried from 50 to 100 meters under ground. Nuclear waste is buried under ground because the bedrock and the soil block radiation.
Q: How will the processed radioactive waste be managed?

A: Shallowly-buried waste will be kept in artificial structures under ground until radiation levels naturally fall -- anywhere from 50 to 300 years. For deeply-buried waste, neither burial locations nor an organization that will retain management responsibility have yet been decided upon. But now that power utilities have started considering reactor decommissions, the Nuclear Regulation Authority began discussions this month geared toward establishing standards for facilities and management of deeply-buried waste. (Answers by Shimpei Torii, Science & Environment News Department)

February 3, 2015

Work begins on interim radioactive soil dump

Construction of radioactive waste facility begins

http://www3.nhk.or.jp/nhkworld/english/news/20150203_20.html

Japan's government has begun building part of an intermediate storage facility for radioactive soil and other waste from decontamination in Fukushima Prefecture, where a nuclear disaster hit 4 years ago.

The government wants to build the facility in a 16-square-kilometer area straddling the towns of Futaba and Okuma, but has been facing difficulties in acquiring the land.

Workers on Tuesday began construction of 2 temporary stockyards with a total area of 20,000 square meters. They are to be used to temporarily store 20,000 cubic meters of soil and other waste before it goes to a main facility.

The yard sites are about 200 meters and one kilometer from the crippled Fukushima Daiichi plant.

The government aims to begin transporting waste to them before March 11th, the 4th anniversary of the earthquake and tsunami that led to the nuclear accident in 2011. The waste is currently stored at initial storage sites and individuals' yards across the prefecture.

But it remains unknown when the transport from these locations will be completed, as land negotiations with owners are still underway.

The intermediate storage facility is to be used to store 2.2 million cubic meters of radioactive waste for 30 years. The government plans to start building other parts of the facility in areas where agreements with owners have been obtained.

Environment Minister Yoshio Mochiduki said the government will have no choice but to ask Fukushima people to allow continued use of initial storage sites for the next several years.

Work begins on interim soil dump near Fukushima No. 1

http://www.japantimes.co.jp/news/2015/02/03/national/work-begins-interim-soil-dump-near-fukushima-1/#.VNEF6y51Cos

Workers discuss planned interim facilities for contaminated soil in Futaba, Fukushima Prefecture, on Tuesday. | KYODO

Kyodo

Workers on Tuesday began building interim facilities near the crippled Fukushima No. 1 nuclear plant to store contaminated soil and other waste gathered during cleanup work across Fukushima Prefecture.

The dump will cover around 16 sq. km and is located in the seaside towns of Okuma and Futaba. The complex will be able to hold around 30 million tons of soil and other waste such as radioactive ash. It will not receive waste generated from the plant itself.

Construction has been delayed due to the difficulty of obtaining agreement from municipalities and local residents. The central government had hoped to begin moving radioactive waste to the interim sites in January, but it now plans to begin doing so by March 11, which will be the fourth anniversary of the 2011 quake and tsunami.

The project will cost ¥1.1 trillion, which the central government will provide.

On Tuesday morning, work began on creating storage yards across about 2 hectares of land. But it remains unclear when the government will be able to start setting up other key storage buildings, an Environment Ministry official said.

The waste is to be permanently disposed of outside the prefecture within 30 years, which the prefectural government demanded as a condition of accepting the temporary facilities. Where it will be stored in the long term remains undecided.

Meanwhile, Tokyo Electric Power Co. on Tuesday resumed decommissioning work at the Fukushima No. 1 complex after a two-week hiatus in the wake of two separate fatal accidents last month.

Work begins to build interim nuclear soil storage in Fukushima

http://mainichi.jp/english/english/newsselect/news/20150203p2g00m0dm030000c.html

FUKUSHIMA, Japan (Kyodo) -- Workers on Tuesday launched the construction of interim facilities near the crippled Fukushima Daiichi nuclear plant to store contaminated soil and other waste collected during radiation cleanup activities within Fukushima Prefecture.

The storage facilities on around 16 square kilometers of land in the seaside towns of Okuma and Futaba are expected to be capable of storing 30 million tons of soil and other radioactive waste, such as burned ash. They are not for storing tainted waste generated within the crippled plant.

Construction work has been delayed due to difficulties in obtaining agreement from the local municipalities and residents. The government, which had hoped to begin moving radioactive waste to the interim storage sites in January, now plans to begin doing so by March 11, the fourth anniversary of the 2011 earthquake-tsunami disaster that triggered the nuclear crisis.

The government plans to spend 1.1 trillion yen on the project.

On Tuesday morning, work began to prepare outside storage yards on some 2 hectares of land. But it remains unclear when the government will be able to start setting up other key storage buildings, an environment ministry official said.

The waste to be temporarily kept at the sites will be permanently disposed of outside the prefecture within 30 years, as requested by the prefectural government in accepting the facilities. But the issue of finding permanent disposal sites remains unresolved.

Meanwhile, Tokyo Electric Power Co. on Tuesday resumed part of the decommissioning work at its Fukushima Daiichi complex after a two-week hiatus in the wake of two separate fatal accidents last month.

The company had suspended all of work at the site Jan. 21 to conduct safety checks following the deaths of two workers at the Daiichi and nearby Daini site.

February 4, 2015

Securing land in Fukushima

Land secured in Fukushima opens door for 1st shipment of radioactive waste

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201502040078

Preparatory work to build an interim storage site for radioactive waste is under way at the Okuma east industrial park (front) in Okuma, Fukushima Prefecture, on Feb. 3. The crippled Fukushima No. 1 nuclear power plant stands in the background. (Tatsuya Shimada)

The government has begun prep work on a parcel of land near the crippled Fukushima No. 1 nuclear power plant to receive its first delivery of radioactive debris from decontamination work in the area.
The Environment Ministry began the work for the interim storage site on Feb. 3, following its announcement last month that it had secured 60,000 square meters of land in industrial parks in the towns of Okuma and Futaba as a first step.
The move comes as companies owning large lots of land in the industrial parks are ready to sell their plots for the storage project.
While the plots owned by the companies account for just 2 percent of the total land needed to build storage site in Okuma and Futaba, which co-host the plant, the move will allow the government to begin shipping tainted debris by its target of March 11, the fourth anniversary of the nuclear disaster triggered by the Great East Japan Earthquake and tsunami.
The ministry plans to transfer 43,000 cubic meters of radioactive soil and other debris stored at 43 localities in the prefecture over a year on a trial basis.
The secured plots take up about 70 percent of the Futaba industrial park and Okuma east industrial park's combined 440,000 square meters of land.
The Asahi Shimbun found that eight of the 13 companies that own property in the parks are willing to sell their land to the government and have already notified the appropriate officials of their decision.
Most of the companies are in the pharmaceutical and machinery industries and based in Tokyo.

"We doubt products we make here will sell anyway, even if we can someday resume operations," said an official with a company that owns a factory in the Okuma park, referring to its decision to sell off the land. "We are afraid that (radiation-related) fears about products and produce from this area will linger."
An official with a company in the Futaba park that also agreed to sell its land said: "We set up the factory about 20 years ago and hired many residents. We are more than happy to offer our land to help rebuild the local area."
Residents of the two towns, where radiation levels remain high, continue to live outside the area after it was evacuated following the outbreak nuclear crisis.
Plots in the industrial parks were among the ministry's first targets for the interim storage site. It is expected to be easier to start building the site on these plots because they house fewer buildings compared with other land.
Still, the ministry expects a prolonged battle to secure the 16 square kilometers needed for the storage site. “It will take a very long time,” said a senior ministry official.
The storage facility to be built in the towns will be designed to hold radioactive waste for up to 30 years.

February 8, 2015

Environment minister meets Fukushima Governor

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Japan's Environment Minister Yoshio Mochiduki has asked the governor of Fukushima Prefecture for permission to begin transporting radioactive waste to a projected intermediate storage site by March 11th.

On Tuesday, the government started building facilities in Futaba and Okuma towns to store the radioactive waste stemming from the nuclear accident in 2011.

The prefecture and the 2 towns have set 5 conditions for allowing the waste to be transported. These include creating a law that stipulates the waste will be finally disposed of outside the prefecture. They also want new financial support to help revive the local economy.

Mochiduki and Reconstruction Minister Wataru Takeshita met Fukushima Governor Masao Uchibori at the prefectural government office on Sunday.

Mochiduki explained that **the government wants to settle the only pending condition, which involves the signing of a safety pact with the prefecture and the 2 towns.**

Uchibori said the prefecture will respond after closely examining the proposal and contacting local residents.

Mochiduki also indicated that the government intends to transfer contaminated soil from schools and irrigation ponds to the intermediate storage facilities.

He told reporters that transporting radioactive waste to the facilities will be an important first step for the reconstruction of Fukushima, and he wants the prefecture to make a decision as soon as possible.

February 9, 2015

Mochizuki meets Fukushima Governor on storage

Gov't offers Fukushima Pref. authority to check safety of radioactive waste storage facilities

http://mainichi.jp/english/english/newsselect/news/20150209p2a00m0na010000c.html

The environment minister proposed to give Fukushima Prefecture and two prefectural towns the authority to check the safety of planned interim storage facilities for radioactive waste as part of a safety agreement proposal.
Environment Minister Yoshio Mochizuki met with Fukushima Gov. Masao Uchibori at the prefectural government office on Feb. 8 to present the safety agreement proposal over interim storage plans for contaminated soil and other radioactive waste generated by the Fukushima nuclear crisis. The government plans to build interim storage facilities in the Fukushima towns of Okuma and Futaba.
The ministry offered the prefectural and municipal governments the authority to carry out on-site inspections, and when the safety of the facilities cannot be confirmed, the local governments will be able to demand a halt to construction of the storehouses and to accepting the contaminated waste.
As the construction plans for interim storage facilities have not been finalized as the government is facing difficulty in reaching agreement with local landowners, the Environment Ministry started construction work for different temporary storage sites on Feb. 3 to keep the radioactive soil and other waste for the time being. The ministry is looking to transfer the contaminated waste to the temporary storage sites by March 11, the fourth anniversary of the Great East Japan Earthquake.
Environment Minister Mochizuki asked the Fukushima governor to sign the safety agreement as soon as possible. Gov. Uchibori told the minister that he'll respond to the government after examining the proposal and listening to the opinions of local residents.
The prefectural government has demanded the central government ensure the safety of the storage facilities, as well as the safety of radioactive waste transportation, and establish agreement with the local governments as conditions for accepting the contaminated waste, among other requirements.

February 12, 2015

Over 1000 decontaminated home to be demolished

1,000 homes being torn down after decontamination

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

NHK has learned that at least 1,000 homes in Fukushima Prefecture will be demolished -- even after they have been cleaned of radioactive fallout from the 2011 Fukushima Daiichi accident.

Local officials say that's a waste of time and money. They call on the government to run the decontamination work more efficiently.

NHK polled officials from 9 Fukushima municipalities where demolition is under way. Each municipality remains partly or completely evacuated.

Officials from 3 towns said about 1,080 houses are to be torn down despite being decontaminated as requested by residents. Naraha Town reports the largest number, around 870.

Officials say leaking rain and animal intrusions are damaging the homes while residents remain evacuated. They also say many evacuees have given up on returning and found new homes instead.

The government pays for both decontamination and demolition programs in evacuation areas. The Environment Ministry says decontamination takes about 2 weeks and costs about 8,300 dollars on average.

An official says the ministry tried to speed up decontamination work at local governments' requests. He says the ministry will now pursue efficiency as well.

February 17, 2015

Revised policy on final disposal of nuclear waste

Basic policy on nuclear waste disposal approved

http://www3.nhk.or.jp/nhkworld/english/news/20150217_25.html

Experts with the industry ministry have approved a draft revision of Japan's basic policy on disposal of highly radioactive nuclear power plant waste.

The government plans to bury high-level radioactive waste from nuclear plants 300 meters or deeper underground in final disposal facilities. But officials have been unable to secure sites for the facilities from candidate municipalities, even though they have been trying for the past 13 years.

The ministry's panel of experts broadly approved the draft revision at a meeting on Tuesday.

It says **the government will stick to its underground disposal program, but can halt the process and recover the waste in case of a technical problem or a change in plans.**

It also says the government will choose potential host sites for disposal facilities, and negotiate with local residents to win their consent.

Spent nuclear fuel is currently reprocessed and fused with glass before disposal. But this takes too much time, so the government is considering expanding the number of storage sites and studying ways to manage the used fuel without reprocessing.

The government plans to have the Cabinet endorse the draft basic policy at the end of March, after receiving public comments.

But it will then have to draw up a more concrete policy and override public skepticism about the safety of the disposal methods.

Final nuclear waste dump may be reversible

http://www.japantimes.co.jp/news/2015/02/17/national/science-health/final-nuclear-waste-dump-may-be-reversible/#.VOMEai51Cos

Kyodo
The government said Tuesday it will consider designing a final storage site for nuclear waste that can be opened in the event that policies change or better techniques become available to deal with it.
Officials aim to include the plan in a revised basic policy on the final disposal of highly radioactive waste.
The government is currently considering the vexed question of what to do with waste in the long-term, as some of it may need management for tens of thousands of years.
Prime Minister Shinzo Abe's administration wants to fire up nuclear reactors again following the hiatus caused by the 2011 Fukushima meltdowns, but public opinion remains opposed.
Critics accuse the government of pushing a return to nuclear without answering the question of where the waste will go.
"In principle, we grant reversibility regarding policies on final disposal . . . so future generations can choose the best way" given the likely emergence of new technology in times ahead, according to a draft document proposed by the Ministry of Economy, Trade and Industry (METI).
Finland is currently constructing the world's first disposal facility for high-level radioactive waste. It decided in 2000 that the repository, in Olkiluoto, should be designed in a way that grants future generations access, while ensuring long-term safety.
As for how Japan would store its waste, a policy adopted in 2008 envisions reprocessing the waste, then vitrifying it and placing it deep underground.
But the revised policy is expected to leave open the possibility of other methods, too, including the direct disposal that has been opted for by Finland, Sweden and the United States.
This implies a possible review of Japan's long-standing but stalled policy of a nuclear fuel cycle that aims to reprocess all spent fuel and reuse the extracted plutonium and uranium as reactor fuel.
The revised policy will also declare that the "current generation" is not only responsible for generating the waste it will also take action on the storage question. However, it falls short of mentioning a time frame for deciding on the final storage.
It would take a long time to build such a facility. Therefore the government is also seeking to expand storage capacity by **constructing new interim facilities as a temporary fix.**
The revised policy will be adopted by the Cabinet by the end of March.
METI has proposed introducing a system in which the Japan Atomic Energy Commission, a promoter of nuclear power, acts as a third party in the choice of a final disposal site. But some experts who attended the ministry's panel meeting Tuesday questioned that organization's independence.
The process of finding local governments willing to host a final repository started in 2002, but there was overwhelming opposition and little progress was made.
The government now plans to choose candidate sites based on their scientific value, rather than waiting for municipalities to step forward.

Japan eyes allowing retrieval of radioactive waste after disposal

http://mainichi.jp/english/english/newsselect/news/20150217p2g00m0dm047000c.html

TOKYO (Kyodo) -- The Japanese government said Tuesday it will consider allowing future generations to retrieve high-level radioactive waste from a final disposal facility should there be possible nuclear policy changes or development of new technologies.

The government aims to include the plan in its revised basic policy on the final disposal of highly radioactive waste, as it is currently reviewing the nation's stalled process to find a final site for fuel waste -- which will require management for tens of thousands of years.
Prime Minister Shinzo Abe's administration is seeking to revive the country's idled nuclear plants following the 2011 Fukushima meltdowns although the majority of the public remains opposed to the use of atomic power. The government has been under criticism over its stance to promote nuclear power without resolving the issue of the final disposal of nuclear waste, especially after the 2011 Fukushima nuclear crisis.
"In principle, we grant reversibility regarding policies on final disposal...so future generations can choose the best way to dispose (of nuclear waste)" by taking in new technologies, a draft document proposed by the industry ministry said.
Finland, which is now constructing the world's first disposal facility of high-level radioactive waste in Olkiluoto, decided in 2000 that the repository should be designed to enable retrieval for future generations, while ensuring long-term safety of the facility.
Regarding a method of permanent nuclear waste disposal, the current policy adopted in 2008 says Japan envisions placing high-level radioactive waste deep underground in a vitrified form after reprocessing it. But the revised policy is expected to leave open the possibility of alternative ways, including direct disposal that has been opted for by Finland, Sweden and the United States -- implying a possible review of Japan's long-standing, stalled policy of nuclear fuel cycle that aims to reprocess all spent fuel and reuse the extracted plutonium and uranium as reactor fuel.
The government also plans to stipulate in the revised policy that the "current generation," which is responsible for generating fuel waste from nuclear plants, will address the issue and will not put the problem off, but fell short of mentioning a specific time frame for deciding on the final storage.
As it is expected to take a prolonged time to start building a final disposal facility, the government is also seeking to expand storage capacity of spent fuel by constructing new interim facilities as a fix for the time being.
The revised policy will be adopted by the Cabinet by the end of March.
The industry ministry also proposed introducing a system in which the Japan Atomic Energy Commission, which has promoted nuclear power, evaluates the process of choosing a final disposal site as a third party. But some experts who attended the ministry's panel meeting Tuesday questioned the independence of the organization.
A process to find local governments willing to host a final repository site started in 2002, but little progress was made due mainly to opposition from local people.
The government now plans to choose candidate sites that are suitable for building such a facility based on scientific grounds, rather than waiting for municipalities to offer to host it.

Useful ocean

IAEA: Consider releasing treated water into ocean

http://www3.nhk.or.jp/nhkworld/english/news/20150217_36.html

The International Atomic Energy Agency has advised Japan's government and the operator of the crippled Fukushima Daiichi nuclear plant to work out plans to treat radioactive wastewater from a long-term view.

The UN agency suggested the plans would include discharging treated wastewater into the sea.

An IAEA team of experts has ended 9 days of checking Japan's efforts to decommission the crippled plant. The team visited the site and interviewed officials of the government and the operator, TEPCO.

At a news conference on Tuesday, team leader Juan Carlos Lentijo cited as future challenges accumulating wastewater at the plant and radioactive waste to be generated during the decommissioning process.

Lentijo said the water contains radioactive tritium, which cannot be removed by filtering devices. He said more tanks will be needed to store such water but that there will be a shortage of space for them.

He noted that the government and the operator should have a long-term view to carry out decommissioning work safely and without delay. He advised them to consider options including discharging filtered water into the sea.

He also urged the Japanese side to come up with a plan to control a large amount of radioactive waste to be generated in the decommissioning process.

The IAEA team is to publish its final report by the end of March. The government plans to reflect the report in future decommissioning and revising of a timetable for the work.

February 18, 2015

Taiwan running out of storage space...

Taiwan wants to send nuclear waste overseas for reprocessing

http://www.japantimes.co.jp/news/2015/02/18/asia-pacific/taiwan-wants-to-send-nuclear-waste-overseas-for-reprocessing/#.VORKJS51Cos

AFP-JIJI
TAIPEI – Taiwan has unveiled a plan to process nuclear waste overseas for the first time as it runs out of storage space at its power plants, sparking criticism from environmental groups.
The state-run Taiwan Power Co. on Tuesday began soliciting bids from overseas reprocessing companies for 1,200 used fuel rods from the island's first and second nuclear plants.
The two plants, which currently store the spent fuel rods, were launched in 1978 and 1981 and will each be decommissioned once they have been operational for 40 years.
But Taipower has said it may be forced to shut down or decommission the plants earlier than scheduled, as they are reaching storage capacity for spent nuclear fuel.
Some environmental groups accused Taipower of seeking ways to keep the two plants in operation even though they are set to be decommissioned.
"We strongly protest the plan. It's absurd to send the fuel rods abroad to be reprocessed since Taiwan is no longer building nuclear power plants," said the National Nuclear Abolition Action Platform.
"It's clear that Taipower is in a rush to ship the nuclear waste abroad because the first nuclear power plant will be shut down if it fails to do so, which will mean that its plan to push for extended operation of the plant will fall through."
The government is under growing public pressure over its unpopular nuclear facilities as safety concerns have mounted since the Fukushima No. 1 nuclear disaster in 2011.
Like Japan, Taiwan regularly suffers earthquakes. In September 1999 a magnitude-7.6 quake killed around 2,400 people in the island's deadliest natural disaster in recent history.
Last year the authorities were forced to seal off a new power plant due to open in 2015, pending a referendum on its future.
But the government says Taiwan will run out of energy if it ditches nuclear power — the three plants currently operated by Taipower supply about 20 percent of the island's electricity.
Taipower has said the technology to reprocess spent fuel is mature and that countries including Germany, Japan and Italy have shipped their nuclear waste overseas for reprocessing.
"We need to handle used nuclear fuel whether or not we are going to have nuclear power or extend nuclear plant's operation. . . . We will be irresponsible if we don't deal with it. It is absurd to oppose overseas reprocessing," it said in a statement.
Companies from England, France and Russia have expressed interest in bidding for the work, which is expected to cost $11.25 billion New Taiwan dollars ($356 million), local media reported.

February 19, 2015

Where is the "clear vision" for waste disposal?

Editorial: Clear vision needed in choosing final disposal sites for radioactive waste

http://mainichi.jp/english/english/perspectives/news/20150219p2a00m0na005000c.html

Approximately 17,000 metric tons of spent nuclear fuel has been stockpiled in Japan. If any of the nation's idled nuclear reactors were restarted, the amount of radioactive waste would further increase. All nuclear waste must be safety disposed of.

The government's nuclear policy, however, has not gone far enough in considering the final disposal of spent nuclear fuel.

A working group within the Economy, Trade and Industry Ministry has essentially approved revisions to a basic policy on the final disposal of radioactive nuclear plant waste under the Designated Radioactive Waste Final Disposal Act. The move follows intensified debate following the outbreak of the Fukushima nuclear crisis. Under the proposed revisions, the government would change several points in the procedure for selecting candidate sites for final repositories while retaining the method of sealing radioactive waste tightly in special containers and burying the containers deep underground.

To settle on a final repository, the government has switched from an open application system to one under which the national government selects candidate sites it deems scientifically suitable. The open application system could cause friction within local communities even before the national government examines whether the areas are suited to host a final repository for high-level radioactive waste. The change is significant in that **the central government will list up candidate sites based on scientific evidence, separate from local interests and local residents' opinions.**

Still, a final repository cannot be selected easily simply by changing the way candidate sites are chosen. The most important task is establish a process for consensus acceptable to all those concerned, including local residents.

The proposed revisions call for establishment of a venue for dialogue in which local residents participate at an early stage and share information with the government in a bid to form a consensus. Needless to say, such a venue is important, but questions remain as to how to manage the venue.

There are numerous examples worldwide that show how difficult it is to form a consensus. Of all countries that possess atomic power stations, Finland and Sweden are the only countries that have selected sites for their final repositories for spent nuclear fuel. The German government had once selected the location of final disposal site but later retracted the decision the year before last because questions were raised over the selection process. In the United States, the government canceled its plan to build a final repository because of stiff opposition from local residents, while residents of a candidate site in France are arguing over the pros and cons of hosting such a facility.

Japan needs to pursue suitable selection methods while keeping other examples from across the world in mind. In such efforts, it is important to ensure transparency of relevant information and nurture the public's confidence in the government and scientists. The proposed revisions mention the possibility of recovering spent nuclear fuel after such waste is brought into the final disposal site. There is a possibility that new disposal technology will be developed, but it is highly unlikely that

expectations for such technology will facilitate the consensus-forming process. **Offering incentives to local bodies willing to host such a facility is not enough to convince local residents**.
Priority should be placed on restraining further increases in the volume of radioactive waste across the country. The government will likely be able to help build a consensus among residents of candidate sites by drawing a road map to phase out nuclear power, thereby clarifying its stance to prevent the amount of radioactive waste from growing. The Science Council of Japan has proposed that electric power companies set up temporary storage facilities for spent nuclear fuel in their respective service areas. **The proposal is useful in encouraging members of the general public to consider the issue of radioactive waste as something that affects each and every one of them as individuals.**
February 19, 2015(Mainichi Japan)

February 21, 2015

Dry cask storage

News Navigator: How is spent nuclear fuel cooled without water?

http://mainichi.jp/english/english/perspectives/news/20150221p2a00m0na007000c.html

With air-cooled dry casks recently receiving attention as a means of storing spent nuclear fuel, the Mainichi answers common questions readers may have about this and other ways in which nuclear waste is stored.
Question: How is spent nuclear fuel from nuclear power plants stored?
Answer: Spent nuclear fuel continuously emits heat, so it has to be cooled. At many nuclear plants, it is kept in pools of water.
With dry storage, however, the fuel is stored in a cask made of a material like metal or concrete. Pools for spent fuel require electricity so a pump can circulate the water, but with dry storage, the natural flow of air is used to cool the containers, and no electricity is needed.
Before dry casks can be used, however, the fuel has to be cooled in pools of water for seven to 10 years. In Japan, resin that blocks radiation is applied to the inside of metal casks, and they are filled with helium gas to prevent fires and corrosion. The surface of the cask holding the fuel will range from 30 to 60 degrees Celsius, depending on the surrounding air temperature. The fuel inside does not melt, and the surface radiation is only 5 to 12 microsieverts per hour -- low enough for the containers to be held with bare hands without problem.
Q: Why is dry cask storage receiving attention now?
A: Originally it was seen as a way to free up space in the cooling pools because, as nuclear plants were operated, spent fuel accumulated and the pools were coming close to filling up. Now, it is receiving attention because of the Fukushima No. 1 Nuclear Power Plant disaster triggered by the March 2011 Great East Japan Earthquake and tsunami. At the No. 4 reactor building, all nuclear fuel was in the cooling pool. When the building exploded, that pool was left exposed to the open air. For a time, cooling of the fuel ceased, and if the water had vaporized, the fuel could have melted. On the other hand, an air-cooled cask at the plant was fine despite the tsunami.

Q: How widespread is the use of dry cask storage for spent fuel?
A: In other countries dry storage is the norm, implemented at over 70 locations in the United States. Germany has two large-scale storage facilities using this method. In Japan, last month Chubu Electric Power Co. applied for permission for a plan to construct a dry storage facility at the Hamaoka Nuclear Power Plant in Shizuoka Prefecture, which would make it the third nuclear plant in the nation with such a facility. Meanwhile, Tokyo Electric Power Co. and one other electric power company are constructing large-scale facilities in Mutsu, Aomori Prefecture.
However, while some 17,000 tons of spent nuclear fuel exists in Japan, the capacity of all these dry cask storage facilities is just over 6,000 tons. One reason that dry cask storage has not found wider use in Japan is that nuclear waste can be stored for up to 50 years using that technique and residents living near potential storage sites are strongly concerned that the waste will be left there for a long time. The agreement of local residents is essential to furthering the use of dry storage, and the national government and power companies must provide them with proper explanations. (Answers by Yui Shuzo, Science & Environment News Department)

Fukushima & radioactive waste

Fukushima may accept delivery of radioactive waste

http://www.japantimes.co.jp/news/2015/02/21/national/fukushima-may-accept-delivery-of-radioactive-waste/#.VOhDpC51Cos

Workers wearing protective gear put compressed radioactive waste into a protective storage bag in March 2013 at a temporary storage site in Naraha, Fukushima Prefecture, inside the restricted zone near the Fukushima No. 1 nuclear power plant. | AP

Kyodo

FUKUSHIMA – The Fukushima prefectural government may in the coming week approve the delivery of radioactive soil and other waste at interim storage facilities that are under construction, sources said Saturday.
Government Minister Yoshio Mochizuki, who plans to visit the prefecture around Wednesday, according to the sources.
The prefectural government has begun discussing the timing with Futaba and one of the towns hosting the facilities, Okuma, they said.
Work to build the facilities began earlier in February after the prefectural government agreed to the construction last August. But the prefectural government has yet to approve the delivery of waste collected during decontamination work following the 2011 nuclear crisis, saying it is a separate decision.
The central government aims to begin such transportation by March 11, the fourth anniversary of the disaster at Tokyo Electric Power Co.'s Fukushima No. 1 nuclear power station.
Under the government's plan, the radioactive waste will be kept in the interim facilities in the Fukushima towns of Futaba and Okuma and will be permanently disposed of outside the prefecture within 30 years, as requested by the prefectural government.
The prefectural government has called on the state for legislation ensuring that the waste will get final disposal outside Fukushima Prefecture within 30 years.
The site for final disposal of the waste has yet to be decided.

Fukushima Pref. to accept delivery of radioactively contaminated waste

http://mainichi.jp/english/english/newsselect/news/20150221p2g00m0dm043000c.html

FUKUSHIMA, Japan (Kyodo) -- The Fukushima prefectural government may approve next week the delivery of radioactively contaminated soil and other waste, collected during decontamination work following the 2011 nuclear crisis, to interim storage facilities under construction in the prefecture, sources familiar with the matter said Saturday.
Fukushima Gov. Masao Uchibori may declare the acceptance during a meeting with Environment Minister Yoshio Mochizuki, who plans to visit the prefecture around next Wednesday, according to the sources.
The prefectural government has begun discussing the timing with Futaba and Okuma, the town hosting the sites, they said.
Work to build the facilities began earlier in February after the prefectural government agreed with the construction in August last year.
But the prefectural government has yet to approve the delivery, saying decisions on the two issues are separate.
The central government aims to begin such transportation by March 11 this year on the fourth anniversary of the disaster at the Fukushima Daiichi nuclear power station of Tokyo Electric Power Co.
Under the government plan, the radioactively contaminated waste will be kept in the interim facilities in the towns of Futaba and Okuma in Fukushima Prefecture and will be permanently disposed of outside the prefecture within 30 years, as requested by the Fukushima prefectural government in accepting the storage.

The prefectural government has called on the state for legislation assuring the waste will be put to final disposal outside Fukushima Prefecture within 30 years.
The site for final disposal of the radioactive waste has yet to be decided.

February 22, 2015

Waste disposal: Unilateral approach no answer

Nuclear waste disposal problem

https://www.japantimes.co.jp/opinion/2015/02/22/editorials/nuclear-waste-disposal-problem/
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The trade and industry ministry has drafted a new policy on the waste scheme that paves the way for changing the disposal method in the future when policies change or new technologies become available, but it is far from clear if the move will facilitate the long-stalled process of finding a site for radioactive waste disposal.
Due to the lack of an established scheme for final disposal of the waste that would be generated after spent fuel is reprocessed, Japan's nuclear power generation has long been likened to a condominium without a toilet. The absence of a solution was highlighted two years ago when former Prime Minister Junichiro Koizumi vocally expressed opposition to restarting nuclear power reactors that had been idled in the wake of the 2011 meltdowns at Tokyo Electric Power Co.'s Fukushima No. 1 nuclear power plant.
The goverment in 2000 adopted a policy of disposing of highly radioactive waste by burying it deep underground. A power industry organization has solicited municipalities across the country that would be ready to host the final disposal site. A financially strapped town in Kochi Prefecture came forward in 2007 to apply for a documentary review in the selection process. But the bid was eventually withdrawn when its mayor faced strong opposition from local residents. He was forced out of office in a subsequent election. No progress has since been made on the issue.
Meanwhile, doubts have been raised about the safety and technical viability of vitrifying and burying the radioactive waste — which would need to be managed for tens of thousands of years before its radioactivity declined to levels considered safe — in a country prone to earthquakes and volcanic eruptions. The Science Council of Japan, a representative organization of various scientists under the Cabinet Office, in 2012 called for a fundamental overhaul of the deep-underground disposal scheme, citing the lack of scientific knowledge on safety of the method.
Such questions have gone unheeded as Prime Minister Shinzo Abe reversed the previous Democratic Party of Japan-led administration's policy of phasing out nuclear power and eventually ending it in the 2030s, and opted to push for restarting the idled reactors.
His administration now says the government will take the lead in selecting the candidate site for underground disposal. Instead of waiting for willing municipalities to come forward, the government says it will specify areas that are suitable for the disposal site on scientific grounds and request that multiple municipalities accept on-site research.
The draft recently compiled by the Ministry of Economy, Trade and Industry to revise the policy on nuclear waste disposal is apparently aimed at making it easier for candidate municipalities to accept the

waste storage. It says that even after the waste has been buried underground, the repository should be constructed so that it can be opened in the future and the waste removed if policies change or new technologies and methods for disposal emerge.
The draft, which the government hopes to finalize by the end of next month, also calls for research on "direct disposal" of spent fuel as waste without reprocessing it — which could lead to a possible review of the nation's long-stalled policy of reprocessing all spent fuel and reusing the extracted plutonium and uranium as reactor fuel, thereby establishing a nuclear fuel cycle. It also urges operators of nuclear power plants to increase their capacity for temporary storage of spent fuel in dry casks — given that the final disposal storage site is not expected to be ready in the near future.
The government may be trying to win public support for restarting the idled reactors by demonstrating flexibility on moving the waste-disposal issue forward. But in its policy proposal now being prepared, the Science Council of Japan criticizes the government for being "irresponsible toward future generations" by seeking to restart the reactors without a decision on the waste-disposal site.
The council says it will be difficult to decide on the waste- disposal site "given that public trust in the government, power companies and scientists has been lost" because of the 2011 Fukushima nuclear disaster. The council proposes tentatively storing spent fuel in dry casks aboveground for 50 years — during which time efforts should be made to regain the public's trust in nuclear power and build a national consensus on the waste-disposal policy.
With or without reactivating the idled reactors, the radioactive waste-disposal question must be dealt with — given the already mounting stockpiles of spent fuel from past nuclear power generation. While almost all of the nation's nuclear power reactors have been shut down since the 2011 Fukushima disaster, roughly 17,000 tons of spent fuel are stored in fuel-cooling pools at power plants across the country and in a storage facility at the reprocessing plant built in Rokkasho, Aomori Prefecture.
With the start of the reprocessing plant's operations delayed over a series of technical problems and not yet in sight, reactivating the idled reactors would one day fill the nationwide storage capacity — which is already more than 70 percent full.
The Abe administration should realize that a unilateral approach will not resolve the nuclear waste-disposal problem. It will not be resolved, as the scientists say, as long as public trust in nuclear power policy remains so low — as reflected in media opinion surveys indicating that the majority of the people polled oppose the administration's bid to restart the idled reactors. The government should pay heed to the legitimate doubts expressed over its policy concerning this sticky problem with nuclear power generation.

February 24, 2015

Fukushima governor okays nuclear waste transport

http://www3.nhk.or.jp/nhkworld/english/news/20150224_90.html

The governor of Fukushima Prefecture has given the go-ahead to transporting radioactively contaminated soil to an intermediate storage facility there.

The government began building the facility this month in an area straddling the towns of Futaba and Okuma.
Carrying in soil and debris from decontamination is set to begin by March 11th -- the fourth anniversary of the earthquake that triggered the nuclear disaster at the Fukushima Daiichi nuclear plant.

Governor Masao Uchibori met with the mayors of the towns on Tuesday after receiving the central government's response to 5 conditions they set for transporting to the facility materials contaminated due to the disaster.

The conditions include safety agreements with local municipalities and measures to ensure safety during transport.

Uchibori told the mayors that he made the difficult decision to allow the materials to be carried into the facility to speed up decontamination and recovery of the environment.

The mayors agreed that local needs have been understood. But they asked for more explanation for landowners and that the materials eventually be disposed of outside the prefecture.

Uchibori plans to convey his decision to the central government on Wednesday. A schedule for the transport has yet to be negotiated.

Okuma Mayor Toshitsuna Watanabe said that allowing the transportation of radioactive waste to an intermediate storage facility in his town was a difficult but necessary decision.

But the mayor of the other town designated to hold the waste, Futaba, gave preconditions for accepting the proposal. Mayor Shiro Izawa stated that he has requested revisions of 2 articles in the national safety measures.

Izawa said that he will likely agree to take the radioactive materials if the revisions are made, but that he cannot provide further comment at this time.

Later Futaba Mayor Izawa told reporters that he wants the central government to partially revise its draft safety agreement and allow more townspeople on a committee to monitor the facility.

February 25, 2015

Interim storage in Fukushima

Fukushima OKs delivery of radioactive soil to interim storage

http://mainichi.jp/english/english/newsselect/news/20150225p2g00m0dm039000c.html

FUKUSHIMA, Japan (Kyodo) -- The Fukushima prefectural government approved on Tuesday the delivery of radioactively contaminated soil and other waste, generated during cleanup work after the 2011 nuclear crisis, to interim storage facilities currently under construction in the prefecture.

To help accelerate the decontamination activities, the central government is seeking to begin moving radioactive waste to the interim storage sites by March 11, the fourth anniversary of the earthquake-tsunami calamity that triggered the world's worst nuclear accident since the 1986 Chernobyl disaster.

Work to build a makeshift storage yard at the facilities began earlier in February, but Fukushima Gov. Masao Uchibori had yet to approve the delivery, saying decisions on the facility construction and delivery of the radioactive waste are two separate issues.

Uchibori's announcement came after he discussed the issue with the mayors of Futaba and Okuma towns, host communities of the crippled Fukushima Daiichi complex and the planned interim storage. Uchibori said he will convey the decision to the central government on Wednesday.

In accepting the delivery, Fukushima demanded the central government legislate that the contaminated soil will be permanently disposed of outside the prefecture within 30 years and have a safety agreement, among other requests. The legislation was enacted last November.

Uchibori is set to meet with Environment Minister Yoshio Mochizuki and Reconstruction Minister Wataru Takeshita in the city of Fukushima on Wednesday and sign the safety agreement.

The central government had planned to begin moving radioactive soil in January, but the process was delayed due to difficulties in obtaining agreement from the local municipalities and residents.

The facilities are planned on around 16 square kilometers of land in Okuma and Futaba. They are expected to be capable of storing 30 million tons of soil and other radioactive waste, such as burned ash, but they are not for storing highly radioactive waste generated in the crippled plant.

Negotiations with landowners, however, have seen slow progress so far.

Fukushima governor OKs contaminated soil transfer to provisional dump

http://www.japantimes.co.jp/news/2015/02/25/national/fukushima-governor-agrees-contaminated-soil-transfer/#.VO18pi51Cos

JIJI

FUKUSHIMA – Fukushima Gov. Masao Uchibori said Tuesday he will allow the transfer of radioactive soil to a provisional site in the prefecture.

The provisional site is part of a planned interim storage facility for soil and other radioactive waste from decontamination work in the prefecture following the nuclear disaster at Tepco's Fukushima No. 1 power plant.

Uchibori told reporters he made the decision to get the ball rolling on decontamination work and disposal of the tainted soil, even though the owners of the land being used for the storage site have to bear a heavy burden.

He said he believes the central government has largely met five conditions requested by the prefecture as a prerequisite for accepting the transfer of such soil.

The prefectural government plans to ask the central government to proceed with the soil transfer in a careful manner by taking into account the sentiment of the landowners.

Uchibori conveyed his decision to the mayors of Okuma and Futaba, which will host the interim storage facility, as well as leaders of six neighboring municipalities during a meeting held in the city of Fukushima, the prefectural capital.

The prefectural government put forward the five conditions last August for allowing the transfer of soil to the site, including safety measures for the site and soil transportation and the conclusion of a safety agreement between the Environment Ministry and local governments.

Okuma and Futaba plan to accept the soil on condition that the ministry revise its draft safety agreement over a monitoring system after the construction of the facility.

Uchibori planned to explain his decision and request revisions to the draft in a meeting in his office on Wednesday with Environment Minister Yoshio Mochizuki and reconstruction minister Wataru Takeshita.

The storage facility will be built in an area covering 16 sq. km straddling Okuma and Futaba.

The Environment Ministry began work on Feb. 3 to build the storage site with the aim of beginning delivery of contaminated soil by March 11, which will mark the fourth anniversary of the earthquake and tsunami that caused the nuclear disaster.

The central government plans to complete final disposal of the contaminated soil at a site outside Fukushima Prefecture within 30 years.

Governor, mayors approve nuclear waste shipments

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

The governor of Fukushima Prefecture and the mayors of 2 towns say they will approve shipments of radioactive soil to intermediate storage facilities to be built in the prefecture.

Governor Masao Uchibori and the mayors of the towns of Futaba and Okuma met Environment Minister Yoshio Mochiduki and Reconstruction Minister Wataru Takeshita on Wednesday.

Governor Uchibori said he will allow the movement of radioactive soil and other waste to bring about the prefecture's recovery as soon as possible.

The two mayors also expressed their consent.

The central government plans to build the facilities in Futaba and Okuma to store soil and other waste from decontamination work following the 2011 nuclear accident. The towns also host the troubled Fukushima Daiichi plant.

The government plans to begin the construction this month and start shipments of the waste by March 11th -- the 4th anniversary of the massive earthquake and tsunami that triggered the accident.

The local governments have been demanding the conclusion of safety agreements and ensured security of shipments among other conditions.

February 26, 2015

Interim storage agreement

Trio of approvals in Fukushima seals deal for radioactive soil dump

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201502260037

Bags filled with contaminated soil pile up at a temporary storage site in Tomioka, Fukushima Prefecture. The bags will be transferred to the interim storage facility straddling Okuma and Futaba. (Eiji Hori)

Ending a prolonged and often contentious process, Fukushima Prefecture and two town governments agreed to host an interim storage facility for contaminated debris from the 2011 nuclear crisis.
Fukushima Governor Masao Uchibori and the mayors of Okuma and Futaba met Feb. 25 with Environment Minister Yoshio Mochizuki and Wataru Takeshita, the reconstruction minister, to sign safety agreements, an important hurdle in the process.
Under the deal, the facility will store tainted soil generated from decontamination work for a maximum of 30 years.
Despite the agreement, the mayors said the decision was not easy.
“This is an agonizing decision, but it is unavoidable,” said Okuma Mayor Toshitsuna Watanabe.
Referring to future negotiations to purchase the land in question, Futaba Mayor Shiro Izawa said, “I hope there will be no heavy-handed methods that will only lead to criticism from the local community.”
The storage facility will be built in an area covering part of the two towns and surrounding the crippled Fukushima No. 1 nuclear power plant. It will cover 16 square kilometers, roughly the size of Tokyo’s Shibuya Ward.
The central government will construct a facility to burn material brought to the site to reduce the overall volume of tainted debris.
Contaminated soil being temporarily stored in various locations throughout Fukushima Prefecture will be transported to the new site.

The idea for the interim facility was first raised in August 2011, when Prime Minister Naoto Kan of the Democratic Party of Japan held the reins of the government.
It has taken more than three years to finalize the site for the facility, partly because of concerns raised by local governments in the prefecture, as well as extended negotiations over conditions for purchasing land for the facility.
In September 2014, then Fukushima Governor Yuhei Sato indicated to the Abe administration that the prefectural government would approve the facility.
Around that time, the prefectural government stipulated five conditions that would have to be met before approval was given. One was that a law be enacted clearly designating a location outside Fukushima Prefecture as the final storage site after the 30-year period for the interim facility ends.
The final condition was the safety agreement signed Feb. 25.
Local governments signed onto the agreement after the central government agreed to their demands related to the site, including a provision that gives them the right to request a halt to the delivery of radiation-contaminated soil.
(This article was written by Yoshitaka Ito and Teru Okumura.)

Nuclear Watch on nuclear waste

Fukushima Seeks Space for Waste

http://www3.nhk.or.jp/nhkworld/english/news/features/201502261612.html

Residents of Fukushima have been struggling for nearly 4 years to deal with radioactive waste left by the nuclear accident. Now the Japanese government says it's made some progress toward securing storage for contaminated soil. But NHK WORLD's Noriko Okada finds that waste taken care of by the agreement they reached with leaders in Fukushima is just a drop in the bucket.
The governor of Fukushima Prefecture and the mayors of 2 towns met with the Japanese environment and reconstruction ministers. The Fukushima officials said they'll permit shipments of radioactive waste into the towns, and allow it to be kept in intermediate storage facilities.
"I decided to allow radioactive soil and other waste to be brought into the towns," explains Fukushima Governor Masao Uchibori. "The goal is to clean up the environment and recover from the disaster as soon as possible." Environment Minister Yoshio Mochizuki expressed his appreciation for what he calls an "extremely difficult decision" and said that "The government will do everything in its power to complete this project, and to reconstruct Fukushima."
Around Fukushima, heaps of black bags sit on the side of roads or the backyards of houses. They hold radioactive soil and other waste collected during decontamination work. The waste sits in more than 75,000 spots around the prefecture, including residential areas. The problem of what to do with the waste has slowed down the entire rebuilding effort.
Last September, leaders in Fukushima agreed to allow the central government begin building immediate storage facilities on 2 plots of land. Construction began this month and officials in Tokyo hope they will start receiving shipments of waste by the end of next month.

The government plans to build intermediate storage sites totaling over 16 square kilometers. But so far, it has received permission to use only the 2 sites. Their small size means they'll be able to hold only 0.1% of the accumulated waste.
Government officials have been negotiating to purchase more property from more than 2,300 landowners, but none of them have agreed to sell. Many of them say they don't want to give up family land.
Some landowners are unhappy that the government is going ahead with the intermediate storage facilities. "I suppose the intermediate storage facilities are necessary," says one resident. "But it's not right that this plan moved forward without reaching a conclusion in discussions with landowners."
There's another reason landowners are dissatisfied. Once the intermediate facilities are up and running, the government will have 30 years to transfer the waste out of the prefecture for final disposal.
Officials say they'll study ways to accomplish this, but so far haven't provided any specific information about where the waste might end up.

March 1, 2015

Abe visits interim storage site

Abe views Fukushima site for radioactively contaminated waste

http://mainichi.jp/english/english/newsselect/news/20150301p2g00m0dm032000c.html

FUKUSHIMA (Kyodo) -- Prime Minister Shinzo Abe on Sunday viewed a site in Fukushima Prefecture for interim storage facilities for radioactively contaminated soil and other waste generated in cleanup work following the 2011 nuclear disaster.
"I hope to speed up the decontamination work to ensure reconstruction," Abe said as he looked at the facilities under construction from the roof of the Futaba town hall under the guidance of Futaba Mayor Shiro Izawa.
The mayor asked Abe for constant support for the town's reconstruction given that the local authorities took the bitter decision to host the facilities.
The central government plans to begin delivery of the waste to the interim storage site on March 13, two days after the fourth anniversary of the Great East Japan Earthquake that triggered the nuclear crisis.
The facilities are being built on about 16 square kilometers of land in Futaba and Okuma, both in the Fukushima Prefecture.
They are expected to be capable of storing 30 million tons of soil and other radioactive waste, such as burned ash, but they will not store highly radioactive waste generated in the crippled Fukushima Daiichi nuclear power plant of Tokyo Electric Power Co.
Under the government plan, the radioactively contaminated waste will be kept at the interim facilities and be permanently disposed of outside the prefecture within 30 years, as requested by the prefectural government in accepting the storage plan.
The prefectural government has called on the state for legislation guaranteeing that the waste will be put to final disposal outside Fukushima Prefecture within 30 years.
A site for the final disposal of the radioactive waste has yet to be decided.

March 6, 2015

Farmers & toxic waste

Disposal of farming-related radioactive waste slow

http://www3.nhk.or.jp/nhkworld/english/news/20150306_41.html

An NHK survey has found that the disposal of contaminated grasses and other farming waste has been slow in most of the municipalities affected by fallout from the Fukushima Daiichi nuclear accident.

Farmers are calling for the pace to be speeded up.

In the March 2011 nuclear crisis, radioactive fallout tainted grass, compost, tree logs used for cultivation of mushrooms, and other farming and forestry material.

The law requires municipalities to dispose of the matter if the levels of their radioactive substances are below locally manageable levels of 8,000 becquerels per kilogram.

137 municipalities in five prefectures, Fukushima, Iwate, Miyagi, Tochigi and Gunma, told NHK they kept or still keep the waste.

About 30 percent, or 41 municipalities, said they are working on disposing the waste. Among them, only 8 municipalities said they have finished.

Local governments attribute the slow pace to residents' disapproval of waste incineration and disposing of the ashes in their neighborhood. They also cite a lack of facilities.

Many farmers are still forced to store the waste on their private land. Experts say incineration and other methods will become more difficult as it will rot over a long period.

March 9, 2015

Looking to Germany for help on nuke waste disposal

Japan Political Pulse: Looking to Germany for hints on nuclear waste disposal

http://mainichi.jp/english/english/perspectives/news/20150309p2a00m0na008000c.html

It's been four years since the triple-meltdown at the Fukushima No. 1 nuclear plant, and Japan's nuclear power industry is still an apartment without a toilet. An off-color image to be sure, but apt for an industry that continuously churns out waste -- spent nuclear fuel -- with no permanent place to put it.

The administration of Prime Minister Shinzo Abe will soon rejig its basic plan for deciding final disposal sites for spent fuel. The government will do away with waiting for local governments to apply to host a site in favor of releasing a list of "the most scientifically appropriate areas" for final disposal. A Cabinet decision on the list is expected in mid-April.

If only it was as easy as writing a list. Germany is phasing out nuclear power, so the authorities know the grand total of spent fuel they will have to dispose of. However, they are still having a terrible time finding a place to put even this finite amount. Japan, meanwhile, still has a nuclear power industry, and the volume of spent fuel that needs to be dealt with will continue to grow. It's high time Japan snapped out of its nuclear stupor and tacked this problem.

Last month, I went to Berlin with the European reporting group at the Japan National Press Club and spoke with Ursula Heinen-Esser, chair of the Bundestag's commission on the storage of high-level radioactive waste. She is also a former parliamentarian with the ruling Christian Democratic Union party. Germany is looking to settle on criteria for selecting final disposal sites by the middle of next year. A location is set to be picked by 2031. Deliveries of nuclear waste to the site apparently won't start for 40 to 60 years.

In Japan, meanwhile, a nuclear fuel disposal program hasn't even been decided on yet. In Germany, too, it's hard to say that everything will go as smoothly as planned, though the path to the goal looks clear and level.

Germany has a bitter experience with the nuclear waste disposal issue. In 1977, the state of Lower Saxony invited the government to build a nuclear waste repository in the town of Gorleben, which became a flashpoint for intense and sometimes violent anti-nuclear protests. Gorleben is now more or less smack dab in the middle of northern Germany, but at the time it was very close to West Germany's border with the communist East.

The Gorleben repository was never completed, and in 2013 the German federal government sent the plans back to the drawing board. The Gorleben site was not, however, removed from the list of waste repository candidates. Meanwhile, there are some worries that the presence of a mid-term storage facility nearby could mean a permanent disposal site could be forced on the area. I won't get too deeply into that issue here, however.

Should the German government give up on Gorleben? The issue is still apparently a live wire in German politics. When I asked Ms. Heinen-Esser about it, she gave me a bitter smile and said she didn't want to go into detail. She went on to say more than once that transparency and broad citizen participation in the site selection process were most important, but also the most difficult, and it was her commission's job to make it all happen.

There are 32 people on the commission. Among them are eight members representing the party factions in the Bundestag, and eight Cabinet ministers from Germany's state governments. Then there are eight scientists and eight people from a variety of backgrounds, from labor unions to religious organizations. Their main job is to judge the validity of the process of selecting a disposal site, and voting power is only granted to the 18 non-politician members. The selection of a repository site will be made by an independent federal agency tasked with nuclear safety and waste disposal.

Now let's look at Japan. The nine electrical utilities that make up the Nuclear Waste Management Organization of Japan made a public appeal for disposal sites, and in 2007 the Kochi Prefecture town of Toyo raised its hand. The decision sparked serious conflict in the town, and the proposal hasn't made any further progress. There haven't been any major moves since to find a final nuclear waste repository, and "the national government will take the lead," according to the administration's basic energy policy for 2014.

When I asked the Agency for Natural Resources and Energy about nuclear waste disposal, it stated that it was waiting for the coming Cabinet decision on a new plan, and would launch information symposiums across the country.

Did the German decision to abandon nuclear power give the move to find a final nuclear waste disposal site a good push? I asked that of Ms. Heinen-Esser, and she replied with a German "Ja." She said that it likely made it a little easier to get broad agreement on the disposal site issue.

So how should public agreement be sought? Through symposia, or a parliamentary commission? I don't know if the German method to give the people their say will be successful, but I do know that the Japanese people know nothing of their government's plans for nuclear waste disposal.

Finland and Sweden have a head start in actually building final waste repositories, but the projects are being managed by electrical utilities. Also, the nuclear industries and the populations of both nations are far smaller than Japan's. As such, it's instructive to watch the weighty discussions taking place in Germany, a major world economic power of some 80 million people. And by the way, German Chancellor Angela Merkel arrived in Japan on March 9. (By Takao Yamada, Special Senior Writer)

March 11, 2015

Transfer of radioactive soil

Transfer of tainted Fukushima soil to begin

http://www3.nhk.or.jp/nhkworld/english/news/20150311_24.html

Workers will begin transferring soil and debris collected during decontamination efforts to an intermediate storage facility in Fukushima Prefecture on Friday. The material was tainted by fallout from the Fukushima Daiichi nuclear plant and is being kept at initial storage sites in the prefecture.

The government began building the intermediate storage facility last month in an area straddling the towns of Futaba and Okuma.

Environmental and local officials say 54 of the 59 municipalities in the prefecture are storing soil and debris contaminated by nuclear fallout. 43 of those municipalities are hosting about 1,050 initial storage sites.

Soil and debris are also being stored at about 86,000 other sites, such as yards and parking lots. It was estimated at the end of January that sites in the prefecture are storing about 6.6 million cubic meters of contaminated material.

The Environment Ministry in Tokyo wants to speed up the transfer to the intermediate storage facility to remove all the material from the initial storage sites.

The government plans to move up to 22 million cubic meters of soil and debris into a 16-square-kilometer area. But the government has only been able to purchase enough land to accommodate 20,000 cubic meters due to difficult negotiations with landowners.

The ministry says some of the more than 2,300 landowners are reluctant to sell land that has been in their family for generations. It says others are unhappy with the amount of compensation offered.

Authorities don't know how long the toxic soil and debris must remain at the initial storage sites.

Despite the uncertainties, the government must dispose of the contaminated soil and debris outside Fukushima Prefecture within 30 years of initial storage.

March 12, 2015

Aerial radiation lower than standard for decontamination

FOUR YEARS AFTER: Radiation levels clear decontamination standard in 88% of areas

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201503120066

Aerial radiation levels are lower than the standard requiring decontamination work in 88 percent of about 3,600 areas monitored in Fukushima Prefecture, an Asahi Shimbun survey found.

The positive trend was evident at the 78 spots that have measured radiation levels since immediately after the accident started at the Fukushima No. 1 nuclear power plant. In March 2011, the highest monthly aerial radiation levels cleared the standard at only four of these 78 spots.

But the number increased to 62 in February this year following the natural decay of radiation and the effects of decontamination work.

The Asahi Shimbun's survey results, which showed that more residential areas are becoming safer, provided much-needed relief to residents of the prefecture.

"When I hear that radiation levels are lower than the standard in nearly 90 percent of the spots, I feel relieved because the areas where we can be at ease are expanding," said Riken Komatsu, a 35-year-old member of citizens group Umilabo (Sea laboratory), which voluntarily measures radiation levels in the seabed and fish off the coast of Fukushima Prefecture.

"But we must not forget that the serious situation is continuing in 10 percent of the spots," he added.

In Fukushima Prefecture's coastal Soso region, where the nuclear plant is located, 58 percent of the monitored spots showed radiation levels below the standard. In seven of the municipalities in the region, only 22 percent of 302 spots cleared the standard.

The municipalities include the towns of Okuma and Futaba, the two co-hosts of the nuclear plant that have remained evacuated since the disaster unfolded. The highest radiation level recorded was 18.30 microsieverts per hour in a spot in Okuma.

The central government's Nuclear Regulation Authority and the Fukushima prefectural government have set up monitoring posts in 3,661 spots in residential areas, including schools, parks and municipal government offices. The devices, which automatically measure aerial radiation levels around the clock, have also been placed at certain intervals from the nuclear plant.

Local governments view a reading of 0.23 microsievert per hour as the level that requires decontamination work in the area.

The Asahi Shimbun checked radiation levels measured at noon on March 11 and found that 88 percent of the 3,574 spots where accurate measurements were taken fell below 0.23 microsievert per hour.

In the Aizu region, which is more than 73 kilometers west of the nuclear plant, and the Minami-Aizu region, which is further distant from the plant, the radiation levels were lower than the standard in all spots monitored.

In the Iwaki region, which is more than 21 km southwest of the nuclear plant, the radiation levels cleared the standard in 99 percent of the spots.
The rates were 98 percent in the Kennan region in the southern part of the prefecture and 96 percent in the central Kenchu region, according to the survey.
In the northern Kenhoku region, including the prefectural capital of Fukushima, where many radioactive substances flew immediately after the accident, the corresponding figure was 89 percent.
Outside the prefecture, the radiation level at noon on March 11 was 0.06 microsievert per hour in Tokyo's Shinjuku Ward and 0.08 microsievert per hour in Osaka.

Transfer of tainted Fukushima soil to start

http://www3.nhk.or.jp/nhkworld/english/news/20150313_01.html

As cleanup work continues, workers in Fukushima Prefecture will start transferring contaminated materials to an intermediate storage facility.

Soil and debris tainted by nuclear fallout from the 2011 accident have been piling up across the prefecture.

Construction of a storage facility began only last month due to difficulties in finding a suitable site. It is located in an area between 2 towns near the stricken nuclear plant. The transfer will start on Friday, without waiting for completion of the facility.

The Environment Ministry is aiming to transport 1,000 cubic meters of contaminated materials each from 43 municipalities in the prefecture, during the first year.

So far the government has only secured enough land to accommodate 20,000 cubic meters, roughly 0.1 percent of the planned size.

The completed 16-square-kilometers intermediate storage facility will hold up to 22 million cubic meters of contaminated soil and debris.

It is unclear when construction of the facility will be completed due to difficult negotiations with landowners.

At the same time the government must start looking for a final disposal site for the contaminated materials. Officials promised the citizens of Fukushima that if they host the intermediate facility for 30 years, the final storage site would be outside their prefecture.

People from Okuma, one of the 2 towns hosting the intermediate facility, have expressed mixed feelings.

A man in his 30s who used to live within the planned site said he has given up returning to the town. He believes the intermediate facility will end up becoming the final one, as other prefectures will not want to

accept the contaminated debris.

A woman whose home stands near the planned site said she will not be able to return to her hometown when the facility is completed.

March 13, 2015

Transfer of radioactive soil starts

Delivery of radioactive soil to interim storage begins in Fukushima

http://www.japantimes.co.jp/news/2015/03/13/national/delivery-of-radioactive-soil-to-interim-storage-begins-in-fukushima/#.VQMyfOF1Cos

Kyodo

FUKUSHIMA – Workers on Friday began delivering soil and other radiation-tainted waste generated by the decontamination work following the 2011 Fukushima nuclear crisis to a makeshift storage yard at a storage facility in the prefecture.

The government plans to build depositories on around 16 sq. km of land in the towns of Okuma and Futaba, which host the crippled Fukushima No. 1 power plant, to eventually store massive amounts of

radioactive waste. But the plan remains highly uncertain amid slow progress in negotiations with landowners.
Contaminated waste was delivered Friday to a section of the site in Okuma, but shipments to the Futaba section were delayed until March 25 at the request of local authorities.
The Environment Ministry decided to move the waste — still being stored near residents' homes and other places across the prefecture four years after the crisis began — to the temporary storage yard.
"The start of delivery marks a major step forward for the rebirth and reconstruction of Fukushima. I'd like to thank local communities for accepting it," Environment Minister Yoshio Mochizuki told a news conference Friday.
Over the next year, around 43,000 cu. meters of waste — equivalent to less than 1 percent of the estimated total of 22 million cu. meters created by the Fukushima No. 1 reactor meltdowns — will be delivered, the ministry said.
The government is negotiating with about 2,400 landowners to secure the land needed for the facilities, but many people have voiced strong concern that the storage could end up being permanent if the land is acquired by the state. Others are refusing to sell because the land was owned by their families for generations.

Soil transport starts four years later

FOUR YEARS AFTER: Fukushima cleanup takes step forward on 4th anniversary of first explosion

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201503130038

Workers continue their decommissioning efforts at the Fukushima No. 1 nuclear power plant on the night of March 12. The luminous line in front is the Joban Expressway, which fully opened on March 1. (Wataru Sekita)

March 12 marked the fourth anniversary of the first hydrogen explosion at the Fukushima No. 1 nuclear plant, a terrifying moment in Japan's worst nuclear disaster.

Four years later, work started to transport soil and other debris contaminated by the radioactive substances to intermediate storage facilities near the stricken nuclear plant.

"It is a major step forward for Fukushima's recovery, and we will make a renewed commitment to proceeding with the construction of the storage facilities while fulfilling our responsibility to fully explain the situation to local authorities," Environment Minister Yoshio Mochizuki said March 13.

A day after the Great East Japan Earthquake and tsunami knocked out power at the plant, the explosion rocked the No. 1 reactor building, followed by two other explosions at the No. 3 and No. 4 reactor buildings. Meltdowns occurred at the No. 1, 2 and 3 reactors, causing the plant to spew radioactive substances over the surrounding areas.

The damaged reactor buildings, a large number of tanks storing contaminated water and other structures at the plant were brightly lit up on the night of March 12 as Tokyo Electric Power Co., the plant's operator, continued its decommissioning work.

A luminous line of the Joban Expressway was also visible from a hill in the town of Tomioka near the plant. The final stretch of the expressway, which runs past the nuclear plant, was completed on March 1.

The Environment Ministry has kicked off an experimental project to study the safety of transporting a large amount of contaminated materials. It plans to bring radioactive debris from 43 municipalities across Fukushima Prefecture to the intermediate storage sites over a year.

The total amount of contaminated soil and materials will be 22 million cubic meters, and they will be stored at the intermediate facilities for a maximum 30 years, ministry officials said.

March 14, 2015

Mixed feelings about interim storage

Fukushima residents find it hard to come to terms with interim storage for tainted soil

http://mainichi.jp/english/english/newsselect/news/20150314p2a00m0na010000c.html

OKUMA, Fukushima -- Soil tainted with radioactive substances from the crippled nuclear power station was delivered for the first time on March 13 to a site where the government plans to build a temporary storage facility.
Only 12 cubic meters of tainted soil in so-called flexible containers was transferred to the site on the first day. The government has yet to show a work schedule as to when it will finish transporting tainted soil whose total volume is equal to filling Tokyo Dome 18 times. There is no guarantee that the government will abide by its promise to store tainted soil there for no more than 30 years. Therefore, the delivery of contaminated soil has left many questions unanswered for local residents.
The governments of Okuma and Futaba made a painful decision to accept the central government's storage plan, but local residents, particularly land owners and leaseholders, were watching the first delivery of tainted soil with mixed feelings.
"It is said that the negotiations between the government and landowners on land procurements have made little headway, but there has been no negotiations with us. We can't go along with the start of delivery at this stage," said a 66-year-old woman who has her house on a tract of land where the government plans to build a temporary storage facility.

Her house is located within a three-kilometer radius of the crippled Fukushima No. 1 Nuclear Power Plant. Even before the Fukushima Prefectural Government decided to accept the central government's plan to build a temporary storage facility there, the woman had shown understanding of the plan, saying, "Unless some place accepts it, there will be no reconstruction for Fukushima." But even if she sold her property to the state, it would remain unclear how the tract of land would be used and whether she would be able to go there again.
She also wonders how the government will haul "important things that are irreplaceable with money" out of her house and decontaminate them. Although there are so many things she wants to confirm, she says she has not received any clear explanations from the government. "Although landowners' questions remain unanswered, it appears to me that things are forcibly moving ahead," she said.
Noriko Onodera, a 63-year-old woman who had evacuated from Futaba to Iwaki in Fukushima Prefecture, has her house outside the planned site for the temporary storage facility. But she said, "It is distressing and sad to see contaminated soil gathering in my hometown."

The central government stipulated in a law that it will permanently dispose of the tainted soil outside Fukushima Prefecture within 30 years, but she is suspicious about whether the government will actually do so. Four years have passed since the outbreak of the nuclear crisis. "While thinking it necessary to accept changes taking place in the town as it gets damaged, I can't sort out my feelings," she added.
Meanwhile, an official of the government of Naraha in Fukushima Prefecture said, "The fact that it was delivered has significant meaning." Naraha, whose entire town has been evacuated, is about to decide to return to where it was before the March 2011 triple disasters. A total of 570,000 cubic meters of contaminated soil is piled up in a temporary storage site in the town. A total of 1,000 cubic meters of contaminated soil, or only 0.2 percent of the soil, can be transferred from the site in the initial year. But the official said, "It will give reassurances to the townspeople. We want to appreciate the Okuma and Futaba towns for deciding to accept it."
Etsuko Yoshida, 76, who has lived in a temporary housing unit in the Fukushima Prefecture city of Koriyama after evacuating from Kawauchi in the same prefecture, says there is a temporary storage site for contaminated soil in front of her house in an "emergency evacuation preparation zone." She said, "I have mixed feelings when I come to think of the people of Okuma and Futaba who are losing their hometowns. The government should safely transport all of the contaminated soil in the prefecture to a facility rather than loosely saying, 'We have just started to deliver it for now'."

March 17, 2015

Store waste but where?

Nuclear waste a challenge in decommissioning

http://www3.nhk.or.jp/nhkworld/english/news/20150317_15.html

Decommissioning nuclear reactors takes decades, and generates tons of radioactive waste. But storage sites for such waste have yet to be secured in Japan.

2 Japanese utilities announced on Tuesday that they would scrap 3 reactors in Fukui Prefecture, central Japan.

Aside from these and the reactors at the disabled Fukushima Daiichi plant, 3 other reactors in Shizuoka and Ibaraki prefectures are in the process of being decommissioned.

In Shizuoka, work started in 2009 on permanently shutting down 2 reactors that belong to Chubu Electric Power Company's Hamaoka plant. The entire process is expected to take 28 years.

Workers have already removed nuclear fuel. They are now decontaminating the facilities to minimize radiation exposure during the dismantling work.

They will begin dismantling peripheral facilities from as early as April before taking down the reactors.

The outer building will be the last to be pulled down.

The Federation of Electric Power Companies estimates that if all 57 reactors in Japan are scrapped, it would generate about 450,000 tons of low-level radioactive waste. The country has no facility to dispose of such waste.

Chubu Electric on Monday applied to the government to store waste with very low radiation levels within the Hamaoka plant for the time being. Shizuoka Prefecture officials gave their nod to the plan, but warned that they won't tolerate keeping the waste there forever.

Scrapped reactor vessels and other types of waste with relatively high radiation levels are to be stored in facilities built 50 to 100 meters underground. But again, there is no prospect of securing sites for the storage.

Japan's government has also made no progress on finding disposal sites for high-level radioactive waste that's produced during the processing of spent nuclear fuel.

Between 2 and 6 tons of contaminated waste for a (small) reactor

Miyazawa on nuclear waste disposal

http://www3.nhk.or.jp/nhkworld/english/news/20150317_21.html

Japan's minister in charge of nuclear plants says he expects utilities to play the central role in the disposal of nuclear waste generated through decommissioning of nuclear power plants.

Speaking to reporters on Tuesday, Economy, Trade and Industry Minister Yoichi Miyazawa also expressed hope that utilities will work to secure necessary disposal sites.

It is estimated that decommissioning a small-scale reactor will generate about 2,680 tons to 6,340 tons of contaminated equipment.

However, at present, there are no disposal sites that can store such waste.

March 21, 2015

Only 45 items left on food list to be checked for cesium

Food list for cesium tests to be shortened: ministry

http://www.japantimes.co.jp/news/2015/03/21/national/food-list-cesium-tests-shortened-ministry/#.VQ1qjeF1Cos

KYODO
The health ministry plans to shorten the list of food being tested for cesium fallout from the Fukushima nuclear disaster as the number of tainted items is falling.
Based on test results so far, the ministry will exclude 20 items including broccoli, plums and tea, starting in April. That will reduce the number of test items to 45, a list released Friday showed.
But **beef and milk** will continue to be tested, given that the degree of cesium contamination in those foods depends heavily on how cattle were raised and what they were fed.
The tests are conducted in 17 prefectures, mainly in the Tohoku and Kanto regions, to allay public health concerns triggered by the massive radioactive debris released into the air and sea by the March 2011 triple core meltdown at the Fukushima No. 1 power plant, which is still polluting the Pacific Ocean with radioactive water.

March 25, 2015

Transfer of radioactive soil started

Tainted soil moved to intermediate storage site

http://www3.nhk.or.jp/nhkworld/english/news/20150325_37.html

Workers have begun transferring radioactive waste to an intermediate storage facility in the town of Futaba in Fukushima Prefecture. Similar work was begun in a neighboring town earlier this month.

Workers wearing protective suits checked the tags on bags of waste at an initial storage facility in Futaba on Wednesday. The tags show the radiation levels and other information about the soil and debris tainted by nuclear fallout from the 2011 nuclear accident at the Fukushima Daiichi plant.

The workers then transported the bags by truck to an intermediate facility about 500 meters from the defunct nuclear plant.

Facility workers unloaded the bags onto a patch of ground covered with sheets. The bags hold 12 cubic meters of waste.

The government is planning to transport 22 million cubic meters of tainted material to the 16-square-kilometer intermediate facility straddling the towns of Futaba and Okuma. The work in Okuma began on March 15th.

So far the government has only secured enough land to accommodate 20,000 cubic meters of material due to difficult negotiations with landowners. It's unclear when the work of transferring the soil and debris at initial storage facilities and homes across the prefecture will be completed.

The government must dispose of the contaminated waste somewhere outside Fukushima Prefecture within 30 years of initial storage. But it has yet to find candidate sites for final disposal.

March 26, 2015

Transfer of radioactive soil

Contaminated soil begins arriving at mid-term storage site in Fukushima town

http://mainichi.jp/english/english/newsselect/news/20150326p2a00m0na012000c.html

FUTABA, Fukushima -- The transfer of radioactively contaminated soil from a temporary holding area to a mid-term storage site began here on March 25.
Similar work has been underway in neighboring Okuma since March 13, but Futaba Mayor Shiro Izawa had asked for the work in his town to be put off until after a traditional period for visiting family graves, which ended on March 24.
"Although I feel that progress has been made towards improving the prefecture's environment and recovery from the disaster, I have mixed feelings when I think about the heavy burden shouldered by the area accepting the waste," Izawa stated in a news release.
Under current waste management plans, soil contaminated by the Fukushima No. 1 nuclear plant disaster will be held at mid-term sites for up to 30 years.

On March 25, 12 of 800 bags containing a cubic meter of soil each were moved via two 10-ton trucks to a temporary holding area at the site of the planned mid-term storage facility, which has yet to be built. The site is around 3.2 kilometers from the temporary holding area.
Over the coming year, the Ministry of the Environment plans to clear 43,000 cubic meters of contaminated soil from temporary storage sites in 43 Fukushima Prefecture municipalities.

April 5, 2015

Half of the owners not even identified yet

Workers work on bags containing soil, leaves and other debris from the decontamination operation in Tomioka, Fukushima Prefecture, near Tepco's Fukushima No. 2 nuclear power plant, on Feb. 24. | REUTERS

Half of owners of Fukushima land for site to store radioactive soil are unknown

http://www.japantimes.co.jp/news/2015/04/05/national/half-of-owners-of-fukushima-land-for-site-to-store-radioactive-soil-are-unknown/#.VSDx2pPwmos

Kyodo
The central government has not been able to identify half of some 2,400 owners of land in Fukushima Prefecture where it plans to build storage facilities for contaminated soil from the nuclear crisis, sources said.
The government intends to build the complex on around 16 sq. km of land in the towns of Okuma and Futaba that is designated as uninhabitable due to radiation contamination. Facility buildings have not yet been built due to slow progress in negotiations with the landowners.

To acquire the necessary land, the government needs to negotiate with all of the landowners. With around 1,200 of them remaining unknown, construction of the complex, seen as key to the rebuilding of Fukushima, is expected to be further delayed.
According to the sources, in many cases land registrations have not been renewed since the 1860s. It is also proving difficult to contact the two towns' residents who remain in evacuee accommodations across the country.
The government has begun transferring radioactive soil and other waste collected during decommissioning work within Fukushima to part of land it has borrowed free of charge from corporate landowners. But it has been able to conclude land purchasing contracts with only a few owners so far.

April 8, 2015

Just a glitch?

Glitch suspected in abnormally high readings at Fukushima radiation monitoring posts

http://mainichi.jp/english/english/newsselect/news/20150408p2a00m0na010000c.html

Abnormalities have been detected at about 30 monitoring posts set up in Fukushima Prefecture to measure airborne radiation levels, the prefectural government announced on April 7.
Prefectural officials said about 30 of the 77 simple monitoring posts that were set up at the end of March and went into operation in April on a test basis had produced abnormal data. The monitoring posts are located in seven municipalities, including the cities of Minamisoma and Date. Two posts in Minamisoma and Katsurao gave readings that were about 1,000 times higher than normal.
No abnormal readings have been recorded at other prefectural monitoring posts nearby, and prefectural officials suspect a glitch occurred when measurement data was being transferred.
Checks were commissioned after abnormally high readings were detected in two locations in Minamisoma on April 3. A representative of the prefecture's radiation monitoring office commented, "We thought we would make a public announcement after investigating the cause (of the high readings). We should have done so at the time we were first aware of the abnormality."
Meanwhile, Tokyo Electric Power Co. on April 7 announced that a temperature gauge inside the containment vessel of the No. 2 reactor at its crippled Fukushima No. 1 Nuclear Power Plant had also returned an abnormally high reading.
At 5 a.m. on April 3 the temperature reading was 20.9 degrees, but as of 5 p.m. on April 5 it stood at 88.5 degrees. Another temperature gauge at the No. 2 reactor showed a normal reading, and a representative of the power company said that control of the reactor was not affected.

June 14, 2015

Recycle radioactive waste?

Govt. panel proposes restoring nuclear waste sites

http://www3.nhk.or.jp/nhkworld/english/news/20150414_18.html

A government panel says radioactive soil and waste from the Fukushima Daiichi nuclear power plant could eventually be recycled and permanent disposal sites restored to their original conditions.

The environment ministry is planning to build final disposal sites in 5 prefectures that have large volumes of contaminated waste from the 2011 nuclear disaster.

The ministry panel presented a draft proposal in a meeting with experts on Monday.

The draft says that after radiation falls below a certain level at the disposal sites, the waste could be recycled for public works projects or recycled at other facilities in the prefecture.

It says the option of restoring the disposal sites to their original conditions could then be considered.

The draft says another idea is to manage the disposal sites over the long-term and use them as sports fields when they are deemed safe.

Debates are expected to continue on whether there will be facilities that will accept recycled nuclear waste and what level of radiation would be considered safe.

June 17, 2015

Radioactive waste site in Chiba Pref.?

Radioactive waste in Chiba to be put in TEPCO site

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

The Japanese government is planning to store radioactive waste in Chiba Prefecture, near Tokyo, at a site owned by the operator of the damaged Fukushima Daiichi Nuclear power plant.

The government has been in the process of selecting a site to dispose of about 3,687 tons of radioactive waste. It was collected in 10 cities in the prefecture after the 2011 nuclear accident in Fukushima Prefecture, northeastern Japan.

It plans to build a storage facility on the 760,000 square-meter premises of a power station in Chiba City, which is operated by Tokyo Electric Power Company.

The site is located in an industrial area along Tokyo Bay. It is several kilometers away from residential areas.

The government plans to find sites to permanently store radioactive waste with cesium levels of more than 8,000 becquerels per kilogram.

It intends to build storage facilities in 5 prefectures near Fukushima.

April 24, 2015

Hot spot in Tokyo park

Park in Ikebukuro closed after hot spot detected in playground

Kyodo, JIJI, AFP-JIJI

An unusually high level of radiation has been detected at a park in Tokyo's Ikebukuro area, the Toshima Ward Office said Thursday, prompting speculation that hazardous material has been buried there.
The ward office has banned entry to the municipal park, which is right next to Tobu Railway Co.'s Shimoitabashi Station in the Ikebukuro-honcho district and surrounded by residences.
The name of the park is Ikebukuro Honcho Densha no Mieru Koen.
On Thursday afternoon, a radiation level of up to 480 microsieverts per hour was recorded at a spot on the ground near playground equipment, the municipality said.
That is nearly half the permitted annual dose of 1 millisievert and far in excess of the ward's decontamination standard of 0.23 microsievert.

“Because the area in which we detect radioactivity is very limited, and readings in the surrounding areas are normal, we suspect radioactive materials of some kind are buried there,” Toshima Mayor Yukio Takano said in a statement.
The ward has fenced off the playground equipment and plans to identify the buried material, remove it and decontaminate the polluted area.
A public health center in the ward was expected to offer health consultations starting Friday to those who request them.
A 62-year-old woman who lives nearby said Thursday she is very worried to learn that a hot spot has been confirmed next to her house.
“Many children play in the park daily, so the ward office should explain the situation,” she said, adding that she had heard nothing so far.
Following a report from a resident on Monday, Toshima Ward officials probed the park Wednesday and detected 2.53 microsieverts per hour radiating from an area with playground equipment.
Based on advice from the Nuclear Regulation Authority, the ward surveyed the area again on Thursday and detected 480 microsieverts.
The park, managed by the ward, opened in March 2013. Before then, the site had been used as a parking space for garbage collection vehicles from the Tokyo Metropolitan Government.
The top soil at the lot was replaced before it was turned into a park, a Toshima Ward official said.

Tokyo park closes after radiation hot spot found

http://ajw.asahi.com/article/behind_news/social_affairs/AJ201504240055

Abnormally high levels of radiation were detected near playground equipment in a park in central Tokyo, but they should not pose a health risk to visitors, a nuclear safety official said.
A radiation dose of 480 microsieverts per hour was recorded in Ikebukuro Honcho Densha no Mieru Koen park in a residential area near Tobu Railway Co.’s Shimo-Itabashi Station on April 23, according to a Toshima Ward official.
Officials suspect radioactive material was buried at the location.
At 480 microsieverts per hour, an individual would have to be exposed for about 40 hours to exceed the government’s threshold for evacuation. The threshold was set at 20 millisieverts per year after the Fukushima nuclear disaster started in 2011.
“The area with elevated levels of radiation is limited, and people do not usually stay there for an extended period of time, so the radiation dose will not have an adverse effect on the health of visitors to the park,” said a Nuclear Regulation Authority Secretariat official who joined the investigation.
The area with the highest level of radiation was detected on the ground surface near playground equipment.
A few meters away near the end of a playground slide, the radiation level declined to 0.07 microsievert per hour, the ward official said.
Toshima Ward officials have fenced off the area around the playground and have temporarily closed the park.

High radiation level detected in Tokyo park

http://www3.nhk.or.jp/nhkworld/english/news/20150424_35.html

A high level of radiation has been detected at a small park in downtown Tokyo.

Up to 480 microsieverts per hour were recorded on the ground near playground equipment at the park in Toshima Ward on Thursday afternoon.

The ward has closed the park for round-the-clock surveillance.

A mother in her 30s who often visits the park with her child said she's surprised and worried about possible health effects.

A public healthcare center in the ward has begun offering health consultations. Some people have asked for thorough information on the radiation level.

A senior official at the center said the area of high radiation is extremely limited, and that she believes playing in the park will not lead to serious health problems.

Small lump source of the radiation?

Likely radiation source found in Tokyo park

http://www3.nhk.or.jp/nhkworld/english/news/20150424_42.html

Officials from Tokyo's Toshima Ward have found the possible source of high levels of radiation at a park.

The officials investigated the park on Friday with experts from the Japan Radioisotope Association. They detected the unusually high levels of radiation on the previous day near playground equipment.

The officials say they measured up to 500 microsieverts of radiation per hour. A person would reach the annual upper limit of radiation exposure by being near the equipment for two hours.

The officials say they dug up an unidentified lump that is smaller than 10 centimeters in size. They add radiation levels dropped after they took it from the ground.

Toshima Ward plans to ask experts to analyze the substance.

Ward official Noboru Ishii says the mound was found in the soil, but that's all they know at this stage.

He notes the local government will make an announcement once experts identify the substance.

The park has been closed.

Will it be Chiba?

Radioactive waste storage site proposed

http://www3.nhk.or.jp/nhkworld/english/news/20150424_43.html

The government has presented Chiba City and Chiba Prefecture with a plan to build a facility to store radioactive waste at a Tokyo Electric Power Company site in Chiba City.

TEPCO is the operator of the damaged Fukushima Daiichi Nuclear power plant.

The government plans to build facilities to store radioactive waste in 5 prefectures. This follows the 2011 nuclear accident in Fukushima Daiichi. The waste has cesium levels of more than 8,000 becquerels per kilogram.

State Minister for the Environment Yasuhiro Ozato on Friday met Chiba Mayor Yasuhiro Kumagai and Chiba Prefectural Governor Kensaku Morita.

Ozato proposed the site in Chiba and asked for their cooperation in studying it. The environment ministry chose the location from a list of about 5,000.

The candidate site is an approximately 34 thousand-square kilometer-field within TEPCO's thermal power plant compound. It's in an industrial zone along Tokyo Bay, and is several kilometers from any residential area.

Mayor Kumagai said he cannot make a quick decision, He added he will consider the proposal carefully, based on the residents' safety and security.

He also asked the ministry to explain the plan to the residents and local assembly.

The ministry had proposed building storage sites in Miyagi and Tochigi Prefectures but met strong local opposition.

April 25, 2015

Can radioactive materials be dumped anywhere?

Radioactive soil removed from Tokyo park

http://www.japantimes.co.jp/news/2015/04/25/national/radioactive-soil-removed-from-tokyo-park/#.VTyqXpPwmos

AFP-JIJI
Workers have removed radioactive soil from a Tokyo playground where extremely high radiation levels had frightened local residents for days, official said.
Soil underneath a slide at the municipal park in the Ikebukuro district showed radiation readings of up to 480 microsieverts per hour.
Anyone directly exposed to this level would absorb in two hours the government's annual maximum radiation threshold.
Contractors dug out soil from the spot on Friday, and the radiation reading returned to normal, around 0.06 microsieverts per hour, according to local reports.
Workers suspect the contamination was from radium, which is used for medical tools and glow-in-the-dark paint for watches, reports said.
Yukio Takano, the mayor of Toshima Ward, where the park is located, said in a statement that the problem, which fanned fears for the health of area children, was likely to end soon.
"The amount of radiation has been dramatically reduced after a test excavation" of the soil, said the statement, released late Friday.
The contamination came to light after a local resident reported it on Monday, but officials say they do not think it is connected to the disaster at the Fukushima No. 1 nuclear plant.
The park, Ikebukuro Honcho Densha no Mieru Koen, was built in 2013, two years after the Fukushima reactor meltdowns, on what was previously a parking lot for Tokyo's sanitation department, a local official said.
Top soil at the lot was replaced before the land was turned into a park.
Many families in eastern Japan continue to survey the levels of radioactive contamination around their homes, distrustful of government assurances that most places were not affected by the Fukushima crisis.

Such efforts have led some people to discover radioactive materials that have been dumped in their neighborhoods. Months after the Fukushima crisis started in 2011, officials found bottles of radium discarded in Tokyo under a private house and a supermarket.

May 20, 2015

Full decontamination starts in Futaba

Decontamination begins in Fukushima's Futaba town

http://www3.nhk.or.jp/nhkworld/english/news/20150520_26.html

Full decontamination work has begun in a town near the damaged Fukushima nuclear power plant.

Futaba Town is the last of 11 local municipalities to undergo government decontamination.

The work in Futaba has been delayed due to negotiations over how to rebuild the community, while decontamination in the other 10 municipalities has ended or is underway.

About 200 hectares of land in the town along the Pacific coast is designated for decontamination. With its radioactive levels relatively low, the area is designated as ready to allow early resettlement of residents.

Contractors hired by the government cut grass and removed dirt in ditches on Wednesday.

Contamination work for residential and farming areas is scheduled to be completed by next March.

96 percent of Futaba is still designated as a no-entry zone due to high radiation levels. Town officials are requesting decontamination for that part too, but no decision has been made on the matter.

May 22, 2015

Waste disposal biggest challenge for nukes

Nuclear waste disposal problem

http://www3.nhk.or.jp/nhkworld/english/news/20150522_19.html

The biggest challenge facing nuclear power generation is said to be the disposal of nuclear waste.

When spent nuclear fuel is processed to remove plutonium, the resulting liquid substance is hardened by mixing it with glass. This is called nuclear waste.

Nuclear waste gives off strong radiation, which could kill a person in about 10 seconds. It takes tens of thousands of years for such radiation to drop to safe levels.

The government enacted a law on nuclear waste disposal in 2000, and has been asking municipalities since 2002 for candidate sites for disposal facilities.

But no municipalities have volunteered, so the government has decided to select candidate locations from a scientific perspective.

About 2,500 units of nuclear waste from power plants in Japan are now stored in a facility at Rokkasho Village in Aomori Prefecture. In addition, nuclear plants across the country are storing spent fuel equivalent to about 25,000 units of nuclear waste.

None of the 43 reactors in Japan is currently online in the wake of the 2011 Fukushima accident. Storage facilities for spent nuclear fuel at some power plants could fill up as rapidly as about 3 years if operations resume.

Municipalities that host nuclear power plants are worried that spent fuel will continue to be stored at the plants if no disposal sites are built.

Govt. approves policy on nuclear waste disposal

http://www3.nhk.or.jp/nhkworld/english/news/20150522_18.html

The Japanese government has decided on a new basic policy for the disposal of highly radioactive waste from nuclear power plants. It features a greater commitment by the government to select disposal sites.

The policy, revised for the first time in 7 years, was approved at a Cabinet meeting on Friday.

The government plans to bury high-level radioactive waste from nuclear plants at a depth of 300 meters or more in final disposal facilities. But the efforts to solicit candidate sites have made no progress in the past 13 years, due to strong safety concerns.

The new basic policy says the government will name suitable candidate sites for the final disposal facilities and will seek the cooperation of the relevant local authorities.

In an attempt to dispel public misgivings, the policy stipulates that the waste could be retrieved even after final disposal in the event of a change in government policy or other circumstances.

The relevant ministers have confirmed that the government will work to win the understanding of the

public and local governments for the policy.

They also decided to draw up an action plan to set up interim storage facilities designed to store highly radioactive waste until the final disposal is carried out.

Economy, Trade and Industry Minister Yoichi Miyazawa told reporters after the Cabinet meeting that the government will proceed steadily, starting with efforts to win the understanding of the public and local authorities for the candidate sites. He said no deadline will be set for reaching a conclusion.

The government plans to hold town meetings with residents and briefings for local authorities across the nation, but it faces the grave challenge of dispelling deep-rooted safety concerns.

Nuclear waste disposal: Gov't changes tactics

METI changes tactics after search for nuclear waste host proves futile

http://www.japantimes.co.jp/news/2015/05/22/national/meti-changes-tactics-search-nuclear-waste-host-proves-futile/#.VV83oEbwmid

Kyodo

The government will select potential areas to host nuclear dump sites instead of waiting for communities to volunteer, according to the revised policy on permanent disposal of high-level radioactive waste that was adopted by the Cabinet on Friday.
The revision, the first in seven years, was prompted after towns, villages and cities throughout Japan snubbed requests to host nuclear waste dumps. The government has been soliciting offers since 2002.
The move is seen as a sign that the government wants to address the matter as it proceeds with its pursuit of reactor restarts. All commercial units have largely sat idle since the triple meltdown at the Fukushima No. 1 plant in 2011.
It remains unclear when a final depository could be built, because the policy mentions no time frame. The government also plans to expand its storage capacity for spent fuel by building new interim facilities as a short-term fix.
"We will steadily proceed with the process as (resolving the problem is) the current generation's responsibility," minister of economy, trade and industry Yoichi Miyazawa told reporters, adding there will be "quite a few" candidate sites.
They will be chosen on scientific grounds, the policy says.
Prime Minister Shinzo Abe's administration is seeking to revive atomic power, although the majority of the public remains opposed in light of the Fukushima disaster, which left tens of thousands homeless.
Critics have attacked the government for promoting atomic power without resolving where all the waste will end up.
Permanent disposal of high-level nuclear waste requires that a depository be built more than 300 meters underground, where the materials must lie for up to 100,000 years until radiation levels fall to the point where there is no harm to humans or the environment.

About 17,000 tons of spent fuel is stored on the premises of nuclear plants and elsewhere in Japan, but some would run out of space in three years if all the reactors got back online.
Under the revision, the government said it will allow future generations to retrieve high-level waste from such facilities should policy changes or new technologies emerge.
Worldwide, only Finland and Sweden have been able to pick final depository sites. Finland is building the world's first permanent disposal site for high-level waste in Olkiluoto, aiming to put it into operation around 2020.
But many other countries with nuclear plants are struggling to find a site for such a facility. In the United States, President Barack Obama decided in 2009 to call off a plan to build a disposal site in Nevada's Yucca Mountain due to local opposition.

Gov't to choose sites for final disposal of high-level nuclear waste

http://mainichi.jp/english/english/newsselect/news/20150522p2g00m0dm029000c.html

TOKYO (Kyodo) -- The Cabinet adopted Friday a revised basic policy on the final disposal of highly radioactive nuclear waste, introducing a scheme in which the government will choose candidate sites based on scientific grounds, rather than waiting for municipalities willing to host a final depository.
Under the policy, revised for the first time in seven years, the government is to take such a step given the little progress made in the process of soliciting candidates that began in 2002 due to safety concerns.
The move indicates the government's attempt to address the unresolved issue as Japan gets closer to the restart of idled nuclear reactors after the 2011 Fukushima meltdowns.
The outlook, however, still remains highly uncertain over when such a final depository would be built, with no specific time frame mentioned in the policy. The government also plans to expand the storage capacity for spent nuclear fuel by constructing new interim facilities as a short-term fix.
"We will steadily proceed with the process as (resolving the problem is) the current generation's responsibility," industry minister Yoichi Miyazawa told reporters.
The minister added that the number of candidate sites suitable for building a final depository to be chosen by the government will be "quite a few."
Prime Minister Shinzo Abe's administration is seeking to revive the country's nuclear plants idled following the Fukushima crisis, although the majority of the public remains opposed to the use of atomic power. The government has been under criticism over its stance of promoting nuclear power without resolving the issue of the final disposal of nuclear waste, especially after the 2011 disaster.
For permanent disposal, high-level nuclear waste needs to be stored at a final depository more than 300 meters underground for up to some 100,000 years until radiation levels fall and there is no harm to humans and the environment.
Currently, around 17,000 tons of spent nuclear fuel are being kept on the premises of nuclear plants and elsewhere in Japan, but some nuclear plants would run out of space to keep nuclear waste in three years if idled reactors go back online.
In the revised policy, the government also said it will allow future generations to retrieve high-level radioactive waste from a final disposal facility should there be possible nuclear policy changes or development of new technologies.
Worldwide, only Finland and Sweden have been able to decide on the final depository site. Finland is constructing the world's first permanent disposal site of high-level radioactive waste in Olkiluoto, aiming to put it in operation around 2020.

But many other countries with nuclear plants are struggling to find a site for such a facility. In the United States, President Barack Obama decided in 2009 to call off a plan to build a disposal site in Nevada's Yucca Mountain due to local opposition.

May 23, 2015

Nuclear waste symposium in Tokyo

Nuclear waste symposium in Tokyo

http://www3.nhk.or.jp/nhkworld/english/news/20150524_01.html

People in Tokyo have discussed the government's new policy on disposal of highly radioactive nuclear waste at a symposium in the nation's capital.

About 300 people joined the event on Saturday. It comes after the adoption of a new government policy one day earlier. The symposium is the first in a series of meetings that officials will hold across Japan.

Under the new policy, government officials will select candidate sites for final disposal of high-level radioactive waste from nuclear power plants. This will be done instead of waiting for municipalities to come forward to host sites.

A panelist at the symposium, Akihiro Tada of the Agency for Natural Resources and Energy, said the selection of candidate sites by the government is not intended to forcibly impose a conclusion. He said it is meant to encourage debate among local residents.

The chair of a government panel of experts, Hiroya Masuda, said scientific judgment will be required to determine whether disposal is safe or not. But he added what's more important is to win public understanding and trust.

One symposium participant said the government needs to show how much nuclear waste will be disposed in order to gain public understanding. Another pointed out it is difficult to convince people to accept disposal sites because many do not want nuclear power.

Officials have scheduled similar symposiums at 8 other locations by the end of next month.

May 26, 2015

The spent fuel plague

Spent nuclear fuel issues plague restarts

http://www.japantimes.co.jp/news/2015/05/26/national/spent-nuclear-fuel-issues-plague-restarts/#.VWVhc0bwmos

A man and children walk past a model of a nuclear reactor at Chubu Electric Power Co.'s Hamaoka nuclear power station in Omaezaki, Shizuoka Prefecture, in August 2009. The amount of spent fuel at the Hamaoka plant could exceed the capacity of storage pools there some two years after the plant is restarted. | BLOOMBERG

JIJI

Spent fuel at the Hamaoka nuclear power station in Shizuoka Prefecture could exceed the capacity of storage pools some two years after the plant is restarted — much sooner than the previously assumed eight years, according to sources.

The faster pace is because the storage pools for reactors 1 and 2 at the Chubu Electric Power Co. plant will be removed from the complex's total storage capacity following the decommissioning of the two units. Previously, Chubu Electric planned to continue using the two reactors' storage pools. The operations of the two reactors ended in 2009.

Last month, four power suppliers, including Kansai Electric Power Co., decommissioned a combined five aging reactors, significantly reducing storage pool capacity.

As of the end of March, the Hamaoka plant's storage capacity fell by 440 tons in the past six months to 1,300 tons, reflecting the exclusion of the reactor 1 and 2 pools, according to Chubu Electric's semiannual report to the Federation of Electric Power Companies. Meanwhile, the amount of spent fuel stored at the plant stood at 1,130 tons.

If the remaining three reactors at the plant are brought back online, the amount of spent fuel would exceed the storage capacity in 2.3 years, compared with the eight years estimated before the company's decision not to use the reactor 1 and 2 pools.
Of all 15 domestic nuclear plants that operators are seeking to restart, storage space capacity appears to be lowest at the Hamaoka plant.
Only four of the plants have more than 10 years before they run short of capacity, including Hokkaido Electric Power Co.'s Tomari plant, which has the longest time, at 16.5 years. The three others are Tohoku Electric Power Co.'s Higashidori plant, with 15.1 years, Hokuriku Electric Power Co.'s Shika plant, with 14.4 years, and Kyushu Electric Power Co.'s Sendai plant, with 10.7 years.
All nuclear reactors in Japan are now offline.
Some nuclear plant operators are working to increase their spent-fuel storage capacities while pinning hopes on fuel recycling at Japan Nuclear Fuel Ltd.'s facilities in the village of Rokkasho, Aomori Prefecture.
Chubu Electric has applied to build a dry-cooling storage facility at the Hamaoka plant to boost its total capacity to store spent fuel. It hopes to put the facility into operation in fiscal 2018 if the plan is approved by the Nuclear Regulation Authority.
A Chubu Electric official said storage capacity prospects remain unclear at the plant because it is uncertain if any reactors will be allowed to restart.

June 3, 2015

Local residents oppose Gov't choices

Rough road ahead for gov't to choose nuclear waste disposal site

http://mainichi.jp/english/english/newsselect/news/20150603p2a00m0na017000c.html

SENDAI -- A road leading to a candidate site for a nuclear waste disposal facility opened in the Miyagi Prefecture town of Kami after being closed for months during winter, while locals, including the mayor, remain strictly against the plan to bring radioactive waste into the town.
Town officials removed gates and chains set up in front of a campsite, the entrance to the municipal road leading to the candidate disposal site, at around 10 a.m. on June 3, the same date the gates were opened last year.
A 75-year-old local man who came to watch said, "I would come running here if the Environment Ministry were to visit to survey the site. Depending on circumstances I would not hesitate to stage a sit-in."
The Environment Ministry picked the towns of Kami and Taiwa as well as the city of Kurihara as candidate municipalities in Miyagi Prefecture to host the disposal site for designated waste, which includes radioactive materials generated by the 2011 Fukushima nuclear disaster. The Miyagi Prefectural Government has given approval for the ministry to conduct drilling surveys and other assessments, after which the ministry plans to narrow the candidate site to one municipality.
However, local residents began voicing concerns over the effects of a disposal site on the town's farming industry. The Kami Municipal Government headed by Mayor Hirobumi Inomata then declared its

opposition to the ministry's decision, claiming that there were flaws in the disposal site selection process, including inadequate planning to secure sufficient space for the waste site.
In October last year, Kami residents blocked Environment Ministry officials, who had been dispatched to conduct a ground survey, from entering the candidate site by holding sit-ins. In the meantime, the ministry failed to start assessments in Kurihara and Taiwa -- both of which requested simultaneous assessments in all three municipalities -- before the snow season, and the municipal road in Kami closed for the winter.
The Kami Municipal Government has been working on countermeasures against the government's plan, such as establishing an ordinance in December 2014 stipulating that construction of a disposal site requires permission from the town.
While the Environment Ministry held briefing sessions targeting residents of Miyagi Prefecture twice in the prefectural capital of Sendai, some 30 kilometers away from Kami, it was unable to hold such meetings in the town.
Meanwhile, Yasuhiro Muroishi, counsellor for the environment minister's secretariat, went no further than saying that the ministry plans to conduct surveys at the candidate site as quickly as possible when conditions are met.
There is a total of 3,384 metric tons of designated radioactive waste in Miyagi Prefecture, including rice straw with concentrations of radioactive cesium over 8,000 becquerels per kilogram. While **these waste materials are currently stored in front of farmers' homes and in greenhouse-type facilities,** local residents have asked the authorities to remove them from their property.
At the same time, Miyagi Prefecture Gov. Yoshihiro Murai urged the national government to promptly decide what to do and begin its surveys.
The national government plans to build final disposal facilities for radioactive materials in Miyagi, Tochigi, Gunma, Ibaraki and Chiba prefectures. The town of Shioya in Tochigi Prefecture, one of the municipalities where a candidate site has been named, is opposing the government's plan. The Chiba Municipal Government has yet to respond to the national government on whether it will accept the selection of Tokyo Electric Power Co.'s Chiba Thermal Power Station as a candidate site. For Gunma and Ibaraki prefectures, candidate locations have not yet been named.

June 4, 2015

Two more temporary stockyards in Fukushima

2 Fukushima waste storage sites to be built

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html
Jun. 4, 2015 - Updated 09:40 UTC+2

Japan's environment ministry will soon start building two more temporary stockyards to store radioactive waste from decontamination work in Fukushima Prefecture. A nuclear accident took place there in 2011.

The stockyards are facilities to temporarily store contaminated soil and other waste before it goes to a

main storage facility that has yet to be built.

The ministry already has two such stockyards in the region of Futaba and Okuma towns. The two towns host the damaged nuclear plant. The stockyards can store 20,000 cubic meters of waste.

With the two new stockyards to be built in the same region, the ministry has now nearly secured enough land to carry out its plan to transfer **more than 40,000 cubic meters of waste** gathered from 43 municipalities in the prefecture in a year.

Work to transfer radioactive waste to the existing stockyards began in March. But the ministry has only transferred 3,000 cubic meters of waste. That's less than a tenth of the planned annual total amount.

As for the entire site of the main storage facility planned for the same area, the Environment Ministry faces the challenge of negotiating with more than 2,300 landowners. Only a few have so far agreed to sell their land.

The planned main storage facility is for intermediate storage until a site is secured for final disposal. Legislation obliges the government to ensure the waste stored in the main storage facility is moved to a final disposal site outside Fukushima Prefecture within 30 years.

June 6, 2015

Final disposal site of relatively low radioactive waste to be nationalised

Workers move large black plastic bags containing irradiated soil, leaves and debris from the ongoing decontamination operation at a temporary storage site in the town of Tomioka, Fukushima Prefecture, in February. | REUTERS

Radiated Fukushima Prefecture soil disposal facility to be nationalized

http://www.japantimes.co.jp/news/2015/06/06/national/radiated-fukushima-prefecture-soil-disposal-facility-to-be-nationalized/#.VXKT8Ubwmos

JIJI

FUKUSHIMA – Environment Minister Yoshio Mochizuki told Fukushima Prefecture leaders Friday that the central government plans to nationalize a private facility intended for the disposal of relatively low radioactive waste in the prefecture.

In a meeting with Fukushima Gov. Masao Uchibori and others, Mochizuki also said the government plans to launch a new subsidy program for revising the local economy.

The ministry was to utilize the facility, which handles industrial waste, for the final disposal of such radioactive waste under an outsourcing contract, but it accepted the local demand for the nationalization.

Uchibori said in the meeting that he welcomes the ministry's policy.

Koichi Miyamoto, mayor of the town of Tomioka where the facility is located, was understanding of the ministry's move.

The facility will be used for the **final disposal of waste** tainted with radioactive materials released from Tokyo Electric Power Co.'s Fukushima No. 1 nuclear power plant damaged in the March 2011 earthquake and tsunami.

It will accept **waste with radioactivity levels of up to 100,000 becquerels per kilogram.**

Waste and soil with higher radioactivity levels are to be kept at an interim storage facility, which will be constructed at a site straddling the towns of Okuma and Futaba.

Ministry to nationalize Fukushima site to bury radioactive waste

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201506060036

By YU KOTSUBO/ Staff Writer
FUKUSHIMA--The Environment Ministry said it will nationalize a privately owned site in Fukushima Prefecture to dispose of radioactive waste generated by the 2011 nuclear disaster there.
The decision effectively makes the government responsible for safety of the site.
Environment Minister Yoshio Mochizuki met with Fukushima Governor Masao Uchibori, Tomioka Mayor Koichi Miyamoto and Naraha Mayor Yukiei Matsumoto on June 5, and told them that the government will purchase a site in Tomioka to bury the radioactive waste. A transportation route to the site runs through Naraha.
The material to be buried includes "designated waste," whose concentration of radioactive materials exceeds 8,000 becquerels per kilogram.
"We made the decision to secure the safety of the project," Mochizuki said during the meeting held at a Fukushima prefectural government office.
Mochizuki sweetened the deal by pledging to take measures to promote the local economy, including a provision of grants that can be used freely by local governments. The nationalization and the economic promotion measures had been requested by the local governments.
In response to the ministry's decision, Uchibori called it "an important step."
Miyamoto added, "I think it was a good decision."
The site, currently owned by Fukushima Ecotech, is expected to accommodate designated waste, such as sewage sludge and rice straw, as well as rubble from evacuation zones, and residential garbage from municipalities in Futaba county in and around the crippled Fukushima No. 1 nuclear power plant that will be produced after evacuated residents are allowed to return home.
In 2013, the ministry had asked the local governments to accept a plan to bury the waste at the privately owned site. However, local authorities demanded that the government nationalize and operate it under state control to ensure safety.
This has delayed the process from its planned January 2015 initial start.
The government is also facing difficulties in determining disposal sites in other prefectures because of strong opposition from local residents.
"The decision (to nationalize the site in Fukushima Prefecture) has no direct relations with other prefectures," a ministry official said. "But it will be regarded by them as an important step forward."

June 17, 2015

Bags of radioactive soil found damaged at 78 sites

Bags of contaminated soil damaged at storage sites

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

A survey by the Environment Ministry has found that bags containing soil and debris from decontamination efforts in Fukushima Prefecture are damaged at dozens of initial storage sites.

The ministry last year examined 580 sites that hold soil, grass and other materials tainted with radioactive substances from the 2011 Fukushima Daiichi nuclear plant accident. The survey didn't cover evacuation zones.

Ministry officials say bags and water-proof sheets were found to be damaged at 78 sites. At 113 sites, part of the ground where bags had been placed had crumbled due to rain or other causes.

The officials say there were no leaks of contaminated soil to areas outside the holding sites. But the survey underlines the challenge of ensuring safety while keeping waste at such sites for extended periods.

Officials plan to transfer waste now at such initial storage sites to an intermediate storage facility currently under construction in an area straddling 2 towns within the prefecture.

But construction has made little progress because in many cases negotiations with landowners have stalled.

Ministry officials say they will regularly examine the initial storage sites and cooperate with local governments on steps to stem the leak of contaminated materials.

June 18, 2015

What about French plutonium?

Japan faces dilemma over plutonium stored in France

http://www.japantimes.co.jp/news/2015/06/18/national/japan-faces-dilemma-plutonium-stored-france/#.VYKzR0bwmot

Reuters
Still dealing with the huge clean up after the Fukushima crisis and debating the future use of nuclear energy, the government now faces another conundrum — **what to do with 16 tons of its plutonium sitting in France after being reprocessed there.**
The question will be among the issues that come under the spotlight on Thursday and Friday as nuclear proliferation experts meet with lawmakers and government officials in Tokyo.
With all reactors shut down in the wake of the nuclear meltdowns at Tepco's Fukushima No. 1 plant, Japan is currently unable to take fuel made from the plutonium and could be forced to find other countries to use it.
The matter has taken on greater urgency as Areva, the French nuclear company that owns the La Hague reprocessing facility holding the plutonium in western Normandy, faces billions of dollars of losses.
"In this whole mess (at Areva) we have a huge amount of Japanese plutonium," said Mycle Schneider, an independent energy consultant, adding that Japan must resolve the problem sooner rather than later.

An Areva spokesman said the company has long-standing contracts with Japanese utilities to take nuclear fuel made from the plutonium.
Frank von Hippel, one of the founders of the International Panel on Fissile Materials (IPFM), a group of arms control and proliferation experts, will discuss Japan's stock of plutonium in France when he meets with Diet members, according to a draft of a presentation he will give.
The group argues that the world's growing inventory of plutonium from civilian use is a "clear and present danger" as it could be used in so-called dirty bombs.
Japanese government officials did not immediately respond to requests for comment.
Schneider, who is a contributor to a soon-to-be-released IPFM report on plutonium separation in nuclear power programs, said the alternative to taking back the plutonium would be to pay other countries to use it in their reactors.
He said France would be one option, but that the cost would likely be high, especially as that country has its own stockpile to deplete. He did not give an exact cost.
"**Giving its plutonium away and paying for it would expose the Japanese to the reality of plutonium as a liability rather than an asset,"** Schneider said.
A precedent for that kind of deal could be set in Britain, where the government has offered to take ownership of 20 tons of Japanese plutonium stored at the Sellafield processing plant, according to the IPFM.
"This is a kind of win-win deal," said Tatsujiro Suzuki, a former vice chairman of the Japan Atomic Energy Commission, who will join Von Hippel in meeting with Diet members on Thursday.
"The British side would make money and the Japanese would lose less," Suzuki said.

June 20, 2015

River cesium contamination rises in spring...

Radioactive cesium levels in Fukushima river seasonal: study

http://mainichi.jp/english/english/newsselect/news/20150620p2a00m0na003000c.html

Radioactive cesium contamination levels in a river near the Fukushima No. 1 nuclear plant rise in the spring and fall in the autumn, a new study shows.
The researchers believe the rise is attributable to very large numbers of leaves containing radioactive substances falling into rivers in the spring. In one year, the radioactive cesium level in the river in springtime was up to five times that in autumn.
Hirokazu Ozaki, research team leader and assistant professor at Tokyo University of Agriculture and Technology, said, "**There is a possibility that radioactive substances are concentrated in the bodies of fish through the food chain, so it's important to grasp what's happening in the rivers**. This study is unprecedented, and we'd like to continue."

A group of Tokyo University of Agriculture and Technology researchers analyzed sediment samples taken at 35 locations along the middle reaches of the Abukuma River in Fukushima Prefecture, 40-50 kilometers from the atomic power station, in spring and autumn from 2012 to 2014.
The average density of radioactive cesium-137 per kilogram of sediment was 1,450 becquerels in spring 2012, 1,270 becquerels in autumn 2012, 2,700 becquerels in spring 2013, 451 becquerels in autumn 2013, 1,080 becquerels in spring 2014 and 600 becquerels in autumn 2014.
The highest level was 22,800 becquerels at one location in spring 2013, and there is a wide variation from location to location.
According to researchers, fallen leaves and carcasses of animals containing concentrated radioactive materials fall into the river in spring, increasing the amount of radioactive cesium in the river. Then the rainy season from June to mid-July, along with the typhoons that tend to strike during summer and early autumn, causes the amount of water in the river to surge, sweeping sediment to the river's lower reaches and decreasing cesium levels in the fall, they say.

July 2, 2015

Fukushima: No to burying of nuke waste

Fukushima rejects briefing for nuclear waste site

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Japan's industry ministry is holding briefing sessions across the country. It's struggling to secure disposal sites for high-level radioactive waste generated by nuclear plants.

But it will skip the session in Fukushima Prefecture, at least for now, due to strong opposition there.

The government plans to bury high-level radioactive waste at a depth of 300 meters or more in final disposal facilities. But the effort to solicit candidate sites has made no progress because of strong safety concerns among municipalities.

In May, the industry ministry decided to name appropriate candidate sites instead of waiting for municipalities to voluntarily apply.
Since then, it has been holding briefing sessions in 39 prefectures over how to process the highly radioactive waste and how it will select appropriate sites, to deepen understanding of the facilities.

But officials in Fukushima Prefecture rejected the ministry's request to hold such a session. They cited the burden of the on-going scrapping of the crippled Fukushima Daiichi nuclear plant.

They also referred to building of intermediate storage facilities in the prefecture for contaminated soil and other materials from cleaning-up work in Fukushima.

July 8, 2015

Nuke plants are still "Apartments without toilets"

Despite moves to restart reactors, Japan lacks nuclear waste disposal site

http://mainichi.jp/english/english/perspectives/news/20150708p2a00m0na018000c.html

Chief Cabinet Secretary Yoshihide Suga said at a news conference on July 7 that the government would restart nuclear reactors that met new safety standards established by the nation's Nuclear Regulation Authority (NRA).

The same day, Kyushu Electric Power Co. began loading fuel into a reactor at its Sendai Nuclear Power Plant in Kagoshima Prefecture. The Federation of Electric Power Companies of Japan released a statement saying, "This is one important step. Preparation for reactivation is progressing step by step." **Within the electric power industry, hopes are spreading that if one reactor is restarted, then the screening of other reactors will move ahead more smoothly.**

Later this month, the government will formally adopt a proposal stating that nuclear power account for 20-22 percent of Japan's energy mix by fiscal 2030. Based on this, Prime Minister Shinzo Abe has made an international declaration that Japan will cut its greenhouse gas emissions by 26 percent from 2013 levels.

It is evident that the long-term idling of nuclear reactors has strained electric power companies financially, and both power companies and the government are aligned in seeking to restart these reactors, but the process is not all smooth sailing.

Under the Nuclear Reactor Regulation Law, the life of nuclear reactors is set at 40 years in principle. To extend this period, reactors must pass stringent NRA guidelines before this 40-year mark is reached. In fiscal 2030, there will be just 22 reactors in Japan that have been operating less than 40 years. To have nuclear power account for 20-22 percent of the nation's energy mix, around 35 reactors would need to be in operation, according to Minister of Economy, Trade and Industry Yoichi Miyazawa. This would mean the life of a dozen or so reactors would need to be extended.

And yet the problem of nuclear waste remains. **About 17,000 tons of spent fuel sits in Japan, and the pools for spent fuel at the nation's nuclear power plants are nearly full.** In the case of the Genkai Nuclear Power Plant, which Kyushu Electric Power Co. is hoping to get back online together with the Sendai Nuclear Power Plant, the pools for spent fuel would be full after just three years of operation. **Finding a place to store this fuel is an urgent task.**

The government has positioned the "nuclear fuel cycle," under which spent nuclear fuel is reprocessed, allowing uranium and plutonium to be reused as nuclear fuel, as a central part of the nation's energy policy. However, **the Rokkasho Nuclear Fuel Reprocessing Facility in Aomori Prefecture has been plagued with problems, with the schedule for its completion being delayed 21 times. Moreover, the fast-breeder reactor Monju, which uses plutonium, has hardly operated at all over the past 20 years, effectively leaving the cycle broken.**

Furthermore, there is currently no prospect of settling on a final disposal site for the highly radioactive waste that is produced after reprocessing. In May this year, the government switched to a policy of naming scientifically "promising" disposal sites, preparing the way to reactivate nuclear reactors.
From the same month, the Ministry of Economy, Trade and Industry has held explanations for workers of local government bodies across Japan, but about 30 percent of these bodies have not attended. One in Tokushima Prefecture argued that attending would give local residents the impression that it has accepted disposal site plans.
The explanations have been held behind closed doors, sparking criticism at a ministry meeting of experts that **it appears things are being done in secret**.
While moves are being made to restart nuclear reactors in Japan, the weaknesses in nuclear power that have led to nuclear plants being likened to "**apartments without toilets,"** remain unsolved.

July 13, 2015

Full decontamination work at soccer village

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Japan's environment ministry has started comprehensive decontamination work at a soccer training center named J-Village near the crippled Fukushima Daiichi nuclear power plant. Workers started cleaning up the grounds on Monday.

The facility opened as the country's first national soccer training center in 1997. It had drawn more than one million visitors, including national team members, before the nuclear accident in March 2011.

Since the accident, the center, which is located about 20 kilometers from the damaged plant, has been used as an operation base for decommissioning nuclear reactors.

Ministry officials ordered full decontamination work at J-Village, as they plan to relocate their operation base by the end of March, 2017.

The ministry plans to continue the work until March of next year.

The Fukushima prefectural government intends to reopen the facility as a soccer training center in April 2019. It hopes to welcome athletes competing in the 2020 Tokyo Olympics and Paralympics.

July 14, 2015

Olympics training centre 20 km from the plant

Workers mow grass as part of decontamination work, with the J-Village central building in the background, in Naraha, Fukushima Prefecture, on July 13, 2015. (Mainichi)

Decontamination of 'J-Village' soccer facility begins ahead of 2020 Olympics

http://mainichi.jp/english/english/newsselect/news/20150714p2a00m0na006000c.html

FUKUSHIMA -- Decontamination of the "J-Village" soccer facility near the disaster-stricken Fukushima No. 1 Nuclear Power Plant began on July 13, with plans to accommodate players ahead of the 2020 Tokyo Olympics.

The Ministry of the Environment is handling decontamination of the facility, which was tainted with radioactive materials during the Fukushima nuclear disaster. It is slated to re-open in April 2019, providing accommodation and training facilities for Japan's men's and women's Olympic soccer teams.

J-Village, which straddles the towns of Naraha and Hirono, was built in 1997 by Tokyo Electric Power Company (TEPCO) and donated to the Fukushima Prefectural Government. It is managed by "Nihon Football Village," an organization that is funded by groups including the prefectural government and TEPCO.

In the wake of the Fukushima nuclear disaster, TEPCO leased the facility and has been using it as the headquarters for its work at the Fukushima plant and as the site of its main office for recovery operations in Fukushima Prefecture. TEPCO has indicated it intends to return the facility to the prefecture in 2018.

J-Village spans an area of about 50 hectares. A total of 6.9 hectares that hold structures including the central building are to be decontaminated by March 2016. Ten of the 12 fields are currently used for purposes including housing some 1,000 TEPCO employees. By March 2017 the facilities on the fields and the main office for recovery operations are to be moved to places including the town of Tomioka. TEPCO will then decontaminate the fields, and some of them will open for use in the summer of 2018.

July 22, 2015

Just an "open-air prison of confinement"

Fukushima scrub-down aims to make villages safe, although woods may remain no-go zones

http://www.japantimes.co.jp/news/2015/07/22/national/science-health/fukushima-scrub-aims-make-villages-safe-although-woods-may-remain-no-go-zones/#.VbCKEvnwmif

Contaminated earth is piled up in bags at a collection site in Iitate, Fukushima Prefecture, on Friday. | AFP-JIJI

by Natsuko Fukue
AFP-JIJI

IITATE, FUKUSHIMA PREF. – Sweating inside their plastic protection suits, thousands of men toil in Japan's muggy early summer in a vast effort to scrub radiation from the villages around Fukushima. The mission is to decontaminate hundreds of square kilometers that were polluted when reactors went into meltdown after huge tsunami struck the Fukushima No. 1 nuclear plant in March 2011.

No stone is left unturned: Diggers scrape away the top layer of earth in fields, school courtyards and around the buildings of villages, while houses, buildings, roads and parking lots are scrubbed clean.
At least 20,000 people are involved in the cleanup, according to the Environment Ministry. The workers wear the special gloves, masks and boots required for workers in the nuclear industry.
There are currently around 2.5 million black bags filled with contaminated soil, plants and leaves piled up at the sites or in one of the nearly 800 temporary outdoor storage facilities set up across the disaster zone.
The effort comes as the central government prepares to declare sections of the evacuation zone habitable again.
That will mean evacuees can return to the homes they abandoned more than four years ago. It will also mean, say campaigners, that some people will have no choice but to go back because it will trigger the end of some compensation payments.
Government-run decontamination efforts are underway in 11 cities where Tokyo says that at present, anyone living there would be exposed to radiation levels of more than 20 millisieverts (mSv) a year.
The globally accepted norm for radiation absorption is 1 mSv per year, although the International Atomic Energy Agency and others say anything up to 20 mSv per year poses no immediate danger to human health.
The town of Naraha, which lies just 20 km from the plant, is expected to be declared safe in September.
The government intends to lift many evacuation orders by March 2017, if decontamination progresses as it hopes.
Still, the area immediately surrounding the plant remains uninhabitable, and storage sites meant to last 30 years are being built in the villages closest to the complex.
For now, **only residential areas are being cleaned in the short-term**, and the worst-hit parts of the countryside are being omitted, as recommended by the IAEA.
But that strategy has troubled environmentalists, who fear that could lead to re-contamination as woodlands will act as radiation reservoirs, with pollutants washed out by rain.
In a report on decontamination in Iitate, a heavily forested area northwest of the plant, the environmental group Greenpeace says these selective efforts will effectively confine returnees to a relatively small area of their old hometowns.
“The Japanese government plans, if implemented, will create an open-air prison of confinement to ‘cleaned’ houses and roads … and the vast untouched radioactive forests continue to pose a significant risk of recontamination of these ‘decontaminated’ areas to even higher levels,” declares the report, published Tuesday.
Some 39 other municipalities that were not evacuated after the meltdowns, and which have radiation levels deemed safe for humans, are also being decontaminated by local authorities.

July 23, 2015

Dumping radioactive branches?

Man arrested for dumping radioactive branches

http://www3.nhk.or.jp/nhkworld/english/news/20150723_26.html

Jul. 23, 2015 - Updated 09:36 UTC+2
Police have arrested a man for illegally dumping tons of tree branches tainted with radioactive substances. They were left behind in an environment cleanup near the Fukushima Daiichi nuclear power plant.

The 65-year-old man worked as a foreman for a decontamination operation in an evacuation area in Minami Soma City north of the crippled plant in January.

Police allege that the man buried about 3.4 tons of branches and twigs in a woody area, instead of transporting them to a storage site, as required.

The dumping came to light in February after the Environment Ministry, which commissioned the work, received a call from a contractor to report the irregularity.

Police say the man has denied the charge, saying he did not bury the waste, nor instruct anybody to do so.

August 3, 2015

40 tons of new spent fuel to store

Restart of Sendai reactors will result in 40 tons of spent fuel

http://www.japantimes.co.jp/news/2015/08/03/national/restart-of-sendai-reactors-will-result-in-40-tons-of-spent-fuel/#.Vb8ia_nwmos

JIJI
If the two idle reactors at Kyushu Electric Power Co.'s Sendai nuclear power plant in Kagoshima Prefecture are reactivated as anticipated, the plant will have to store around 40 tons of new spent fuel.
gh the plant's storage capacity is unlikely to be filled in the near future, the amount will constantly increase until a final fuel disposal facility is built.
The Kagoshima Prefectural Government has nixed building the disposal facility in the prefecture.
To get back online, the two reactors need to each use 44 of their total 157 fuel assemblies, Kyushu Electric officials said.
Kyushu Electric Power hopes to restart one of the reactors, which have met the Nuclear Regulation Authority's new safety standards, by next Monday at the earliest, and the other in October.
According to the Natural Resources and Energy Agency, the plant's capacity for storing spent fuel is 1,290 tons. The restart of the reactors will push the amount in storage from 890 tons, or 69 percent of capacity, to 940 tons, or around 73 percent.

In related news Monday, Japan Nuclear Fuel Ltd. said radiation detectors have broken down at its spent fuel reprocessing plant in the village of Rokkasho, Aomori Prefecture.
According to JNFL and other sources, the two systems for detecting leaks of high-level radioactive liquid waste stopped after an alarm went off around 6:50 p.m. Sunday.
The plant, designed to extract uranium and plutonium from spent fuel, has yet to be completed. It is a key component of the national nuclear fuel cycle project.
Officials at JNFL, the operator of the plant, said they believe no leak has occurred because water levels of the liquid waste were unchanged.
The operator also found problems with pressure gauges at the plant around 8:30 p.m. Sunday.
JNFL is investigating the link between these troubles and lightning reported in nearby areas at that time.
The company aims to complete the plant next March. The facility is currently undergoing an NRA safety screening.

August 11, 2015

And still no solution in view for nuclear waste

Nuclear restart highlights government dilemma over lack of waste disposal sites

http://www.japantimes.co.jp/news/2015/08/11/national/nuclear-restart-highlights-government-dilemma-lack-waste-disposal-sites/#.Vcnshfnwmou
by Kayo Mimizuka

Kyodo

With an unpopular return to nuclear power generation, Japan can no longer ignore the elephant in the room: where is the country's highly radioactive nuclear waste going?
The reboot Tuesday of a reactor at Kyushu Electric Power Co.'s Sendai plant in Kagoshima Prefecture comes as the government struggles to find a final disposal site for high-level nuclear waste.
Currently, around 17,000 tons is sitting in temporary storage pools across the country, and the restart means the generation of even more.
Spent fuel pools at some nuclear plants will reach their capacity in as soon as three years.
A spokewoman at Kyushu Electric said the Sendai plant's storage pools "still have enough room," suggesting the utility is not planning to immediately take further measures. But they are expected to become full in roughly 11 years, according to official data.
International concerns are also growing over the increase in Japan's possession of plutonium due to its potential for falling into the wrong hands and being used to make nuclear weapons. As of the end of 2014, Japan had 47.8 tons of plutonium, up 0.7 tons from a year earlier.
Under Japan's nuclear fuel recycle policy, plutonium extracted by reprocessing conventional uranium fuel is consumed by reactors in the form of plutonium-uranium mixed oxide fuel, known as MOX. But its feasibility remains uncertain, given public concerns after the Fukushima disaster.

Currently, the government plans to store nuclear waste at a final repository more than 300 meters underground. It would sit there for up to 100,000 years until radiation levels fall low enough and there is no harm to the environment.

In 2002, the government-backed Nuclear Waste Management Organization of Japan began soliciting local governments to host a disposal site, touting economic benefits such as subsidies and jobs.

The process faced a setback in 2007, though, when the town of Toyo, Kochi Prefecture, withdrew after applying for screening as a candidate site. The mayor left office after losing the election he had called to let people judge his plan to host a disposal facility. His successor called it off.

Having waited in vain for volunteers to emerge, the government changed its basic policy. In May, the Cabinet of Prime Minister Shinzo Abe introduced a scheme allowing the government to choose candidate sites based on scientific grounds, including resistance to earthquakes.

The move also indicates the pro-nuclear government wants to show it is more actively engaged in addressing the issue, as public criticism has increased over the rush to restart reactors idled following the Fukushima disaster without a solution to the waste problem.

Industry observers say, however, the issue is unlikely to be resolved smoothly, especially amid heightened safety concerns among the public.

"In a situation where trust between the public and the nuclear industry has collapsed, it will be extremely difficult to gain support from people" for the government's plan to nominate suitable sites, the Science Council of Japan, a representative body of scientists, said in its policy proposals released in April.

Finland is constructing the world's first permanent disposal site for high-level radioactive waste in Olkiluoto with plans to operating it around 2020.

Many other countries with nuclear plants are still searching for potential locations. In the United States, a plan to build a disposal site in Nevada's Yucca Mountain was canceled in 2009 due to local opposition.

Hideyuki Ban, co-director of the Citizens' Nuclear Information Center, said finding a location to build a disposal site in Japan is even more difficult than in other countries due to the public's sensitivity to nuclear power given the Fukushima crisis.

"For now, there is no national consensus at all on what to do with nuclear power generation down the road," Ban said. "As the majority of people oppose nuclear power, surely there will be a backlash" against the government's plan.

Since May, the government has been briefing municipalities on how it selects candidate sites.

Such meetings have been held in all 47 prefectures except Fukushima, but officials from some communities refused to take part out of fear their attendance might be considered a sign of their intention to accept a disposal site.

Questions have also arisen over the transparency of the process.

The central government held all of those briefings behind closed doors — without informing local residents of when and where they were held. That prompted some towns to boycott the meetings.

The government tried to justify the move by saying it was necessary to promote honest discussions.

"We were concerned that municipalities might not attend the meetings if we made it open to everyone, fearing that they might be mistaken for being interested in (hosting a final disposal site)," said Takuya Watanabe, deputy director at the industry ministry's radioactive waste management policy division. "We will consider making them open next time."

Ban, however, said it was "an extremely lame handling" by the government, adding that "transparency and fairness are the essential conditions if the government wants to achieve some sort of consensus."

The government has said resolving the issue of where to locate a disposal facility is "the current generation's responsibility."

Nevertheless, it has so far failed to indicate any specific time frame, leaving the outlook for the project unclear.

August 18, 2015

Studying sediments off Fukushima Daiichi

A Fraction of Buried, Ocean Sediment Uncovered by Typhoons, Carried Offshore by Currents

http://www.whoi.edu/news-release/FukushimaSediment

FOR IMMEDIATE RELEASE
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An international research team reports results of a three-year study of sediment samples collected offshore from the Fukushima Daiichi Nuclear Power Plant in a new paper published August 18, 2015, in the American Chemical Society's journal, *Environmental Science and Technology.*
The research aids in understanding what happens to Fukushima contaminants after they are buried on the seafloor off coastal Japan.
Led by Ken Buesseler, a senior scientist and marine chemist at the Woods Hole Oceanographic Institution (WHOI), the team found that a small fraction of contaminated seafloor sediments off Fukushima are moved offshore by typhoons that resuspend radioactive particles in the water, which then travel laterally with southeasterly currents into the Pacific Ocean.
"Cesium is one of the dominant radionuclides that was released in unprecedented amounts with contaminated water from Japan's Fukushima Daiichi nuclear power plant following the March 11, 2011, earthquake and tsunami," says Buesseler. "A little over 99 percent of it moved with the water offshore, but a very small fraction—less than one percent—ended up on the sea floor as buried sediment."
"We've been looking at the fate of that buried sediment on the continental shelf and tracking how much of that contaminated sediment gets offshore through re-suspension from the ocean bottom," he adds.
The research team, which included colleagues from the Japan Agency for Marine-Earth Science and Technology and the Japan Atomic Energy Agency, analyzed three years' worth of data collected from time-series sediment traps.
Researchers deployed the pre-programmed, funnel-shaped instruments 115 kilometers (approximately 70 miles) southeast of the nuclear power plant at depths of 500 meters (1,640 feet) and 1,000 meters (3,280 feet). The two traps began collecting samples on July 19, 2011—130 days after the March 11th earthquake and tsunami—and were recovered and reset annually.
After analyzing the data, researchers found radiocesium from the Fukushima Daiichi Nuclear Power Plant accident in the sediment samples along with a high fraction of clay material, which is characteristic of shelf and slope sediments suggesting a near shore source.

"This was a bit of a surprise because when we think of sediment in the ocean, we think of it as sinking vertically, originating from someplace above. But what this study clearly shows is that the only place that the material in our sediment traps could have come from was the continental shelf and slope buried nearshore. We know this because the coastal sediments from the shelf have a unique Fukushima radioactive and mineral signal," says Buesseler.

The data also revealed that peak movements of the sediments with radiocesium coincided with passing typhoons which likely triggered the resuspension of coastal sediments. Radiocesium was still detected in sediment samples from July 2014.

"The total transport is small, though it is readily detectable. One percent or less of the contaminated sediment that's moving offshore every year means things aren't going to change very fast," Buesseler says. "What's buried is going to stay buried for decades to come. And that's what may be contributing to elevated levels of cesium in fish—particularly bottom-dwelling fish off Japan."

While there were hundreds of different radionuclides released from the Fukushima Daiichi Nuclear Power Plant during the disaster, after the initial decay of contaminants with half lives (the time it takes for one half of a given amount of radionuclide to decay) less than days to weeks, much of the attention has remained focused on cesium-137 and-134— two of the more abundant contaminants. Cesium-134 has a half-life of a little over two years, and so any found in the ocean could come only from the reactors at Fukushima. Cesium-137 has a half-life of roughly 30 years and is also known to have entered the Pacific as a result of aboveground nuclear weapons tests in the 1950s and '60s, providing a benchmark againstwhich to measure any additional releases from the reactors.

In October, Buesseler and the research team will return to Japan to redeploy more sediment traps. The continued study will help estimate how long it takes to decrease the level of radiocesium in seafloor sediments near the Fukushima Daiichi Nuclear Power Plant.

The research was funded initially by a Rapid Response Grant from the National Science Foundation, and continued for three years through support from the Deerbook Charitable Trust and Gordon and Betty Moore Foundation.

The Woods Hole Oceanographic Institution is a private, non-profit organization on Cape Cod, Mass., dedicated to marine research, engineering, and higher education. Established in 1930 on a recommendation from the National Academy of Sciences, its primary mission is to understand the ocean and its interaction with the Earth as a whole, and to communicate a basic understanding of the ocean's role in the changing global environment. For more information, please visit www.whoi.edu.

August 20, 2015

One in 4 ready to sell their plots for waste storage

25% of Fukushima landowners ready to sell plots for contaminated debris storage

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201508200044

By YOSHITAKA ITO/ Staff Writer

FUKUSHIMA--One in four landowners from localities around the crippled Fukushima No. 1 nuclear power plant have shown a willingness to sell their plots to allow for construction of a facility to temporarily store radioactive soil from cleanup work.
Many of them agreed to pre-sale land surveys apparently because they doubt they will ever be able to return to live in their homes due to lingering high radiation levels.
The Environment Ministry plans to build the facility on a 16-square-kilometer site straddling the towns of Okuma and Futaba in Fukushima Prefecture, which co-host the nuclear plant.
Overall, 2,365 people own plots to be purchased.
The ministry said that by the end of July 570 of 850 landowners it had contacted agreed to cooperate with land surveys to evaluate the value of their plots as an initial step toward land acquisition.
The landowners in essence accepted the ministry's guidelines for compensation with regard to the land purchase.
Ministry officials have been contacting landowners since September last year.
Surveys have been finished for plots owned by 300 individuals. But only five sales contracts have been concluded due to a shortage of ministry workers on the project.
The storage facility is expected to hold a maximum 22 million cubic meters of contaminated soil and debris up to spring 2045.
According to a senior ministry official, **it will take "more than 10 years to secure all the land needed."**
The ministry is set to begin the construction work with plots it has acquired, rather than waiting until all the necessary plots are purchased.

August 21, 2015

Decontaminating tracks

JR East begins decontaminating tracks in areas affected by nuclear crisis

http://mainichi.jp/english/english/newsselect/news/20150821p2a00m0na002000c.html

Workers remove weeds along the JR Joban Line tracks in Okuma, Fukushima Prefecture, on Aug. 20, 2015, in preparation for work to decontaminate the tracks on a trial basis. (Photo courtesy of JR East Mito branch)

East Japan Railway Co. (JR East) began on Aug. 20 to decontaminate tracks on the Joban Line, which have been affected by the Fukushima nuclear crisis, on a trial basis, company officials said.

The work, which is part of JR East's efforts to resume services between Tomioka and Namie stations, got under way in **a section between Yonomori and Futaba stations where radiation levels are particularly high.**

After analyzing data showing how radiation levels have declined following the decontamination, JR East is expected to consider when to resume services between Tomioka and Namie stations.

The company will remove rails and sleepers in a 50-meter section at six separate spots, where radiation levels are 2.8 to 28 microsieverts per hour, and remove surface soil. All these six spots are situated in a zone where it is difficult for evacuated residents to return in the foreseeable future, with annual cumulative radiation levels exceeding 50 millisieverts, in the town of Okuma. **All decommission workers are required to put on protective gear.**

On Aug. 20, workers removed weeds around the tracks and created roads through which necessary equipment will be brought into these areas.

Services on the Joban Line have been suspended in some sections in Fukushima Prefecture since the outbreak of the nuclear crisis triggered by the March 2011 Great East Japan Earthquake and ensuing tsunami.

JR East aims to resume services on the Odaka-Haranomachi section by the spring of 2016, the Namie-Odaka section by March 2017, the Tatsuta-Tomioka section by March 2018 and the Soma-Hamayoshida section by the spring of 2017.

August 31, 2015

Delay in decontamination unacceptable

Panel: Delay in decontamination work regrettable

http://www3.nhk.or.jp/nhkworld/english/news/20150901_04.html

A panel of Japan's Environment Ministry says the government should reflect on the greatly delayed decontamination work in Fukushima Prefecture.
A nuclear accident occurred there in 2011.

The panel of experts released a draft outline at a meeting in Tokyo on Monday. The panel has been looking into the disposal of contaminated waste from the Fukushima Daiichi nuclear disaster.

The draft refers to the government-run decontamination operation in evacuation zones in the prefecture. The projected end of the work was revised to the end of March, 2017 -- about 2 to 3 years later than initially planned.

The panel said the government should reflect on the delay caused by difficulties in securing initial storage sites for contaminated soil and debris.

The draft also refers to the issue of building disposal facilities for radioactive waste. The government plans to set up such facilities in 5 prefectures in eastern and northeastern Japan, but faces local objections.

The panel only said that the government should continue providing explanations to communities.

The draft approves the continuation of the government policy on decontamination and nuclear waste disposal, saying that the basic framework is working effectively.

The panel plans to compile a report at the next meeting.

September 1, 2015

Miyagi residents: "Get lost!"

Residents in the town of Kami, Miyagi Prefecture, including Mayor Hirobumi Inomata (far left), protest a visit by the Environment Ministry officials trying to survey a candidate site in the town for a nuclear waste disposal facility on Monday. | KYODO

Miyagi residents physically block officials from surveying proposed nuke waste dump sites

http://www.japantimes.co.jp/news/2015/09/01/national/residents-proposed-miyagi-nuke-waste-dump-venues-block-environment-ministry-officials-survey/#.VeaVzJfwmid

Kyodo
SENDAI – Residents of three Miyagi Prefecture towns selected as candidate sites for hosting a permanent nuclear waste disposal facility barred the entry Monday of Environment Ministry officials seeking to carry out survey work.
People in the towns of Kami, Kurihara and Taiwa stalled the officials' plan to conduct geological surveys needed to determine which of the three locations would be best to host the site, which will permanently store radioactive waste that spewed from the Fukushima No. 1 power plant following the March 11, 2011, Great East Japan Earthquake.
In the Tashirodake area of Kami on Monday morning, some 350 residents turned out in a light rain to protest the visit, holding banners and signs and yelling "Protect children's future!" and "Get lost!"
They also physically blocked the officials' access to the areas.
An Environment Ministry official meanwhile said the ministry will consider holding a town meeting in Kami in line with a request by the municipal government.
Plans to start ground surveys in the towns have been stalled since October, when the Environment Ministry began visiting them.
Miyagi Gov. Yoshihiro Murai criticized the residents' demonstrations, saying they should wage their battle against the nuclear dump site in the courts.

"They should open the land for a government survey without hesitating," Murai said. "If they disagree with the government plan, they should go to court."
Post-3/11 nuclear waste is being temporarily stored on farms around the prefecture and farmers hosting the waste are demanding the government build a proper storage site.

September 24, 2015

Waste bags recovered... but empty

Radioactive soil bags to be moved to high ground

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Environment ministry says it will better manage garbage bags holding radioactive soil and weeds in Fukushima Prefecture after hundreds of sacks stored outside were washed away by heavy rains.

Rains that hit northeastern Japan on September 11 carried away 439 plastic bags in Iitate Village. The bags contained tainted soil, grass and tree branches gathered from cleanup work after the 2011 nuclear crisis contaminated the region with radioactive fallout.

Environment ministry officials told an expert panel on Thursday that **nearly 400 have been recovered though many were empty.**

They said they will from now on register all the locations of the waste as well as the numbers at each place, despite the storage being temporary.

Officials also said they will move the waste to high ground or fix the bags them with ropes to prevent them from being washed away by heavy rain and typhoons.

Experts urged the officials to inform local residents of the levels of radioactive substances in the rivers where the bags were lost. They said the government should hurry to prepare intermediate storage facilities. Building the facilities is taking time due to negotiations with land owners and other reasons.

Ministry officials said they will check the radioactivity levels in the rivers and **inform the residents.**

October 6, 2015

Temporary waste storage: Convincing municipalities

Govt. sets plan to promote nuclear waste storage

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Japan's government plans to make it easier for municipalities to accept radioactive waste from nuclear power plants.

The government is promoting a program to reprocess spent nuclear fuel for reuse. But a reprocessing plant under construction at Rokkasho Village in northern Japan has not been able to fully accept such fuel due to a series of problems.

The uncollected fuel remains in pools at nuclear plants across the country. Some pools could fill up as more reactors are restarted.

The plan finalized on Tuesday is aimed at pushing for building intermediate storage facilities and introducing so-called dry cask storage systems.

It calls for setting up a council of officials from the central government and power company, and urging each firm to draw up a specific plan to urge local governments to accept nuclear waste.

The plan also includes **increasing grants to local governments based on how much nuclear waste they accept.**

Municipalities are wary of having to keep nuclear waste for long periods. The government and power companies face the challenge of convincing municipalities that the waste will be kept there safely and temporarily.

October 9, 2015

New Environment Minister on nuclear waste

New environment chief vows to engage communities targeted for nuclear waste facility

http://www.japantimes.co.jp/news/2015/10/09/national/politics-diplomacy/new-environment-chief-vows-to-engage-communities-targeted-for-nuclear-waste-facility/#.Vhfo2yvwmot

by Kazuaki Nagata
Staff Writer

Newly appointed Environment Minister Tamayo Marukawa said Thursday the ministry will continue to lobby Fukushima residents to back the construction of storage and disposal facilities for radioactive waste generated by the Fukushima nuclear crisis.

The government is building a temporary storage facility in the tainted towns of Okuma and Futaba, which host the heavily damaged Fukushima No. 1 power plant.

Decontamination efforts have been underway in dozens of municipalities to remove radioactive material ejected by the triple core meltdown in March 2011, which tainted the air, sea and land surrounding the plant.

Although Okuma and Futaba eventually agreed to host a facility that will store 30 million tons of radioactive waste for up to 30 years, the government is far from securing agreement from the more than 2,300 landowners whose cooperation is needed to build it.

"This process will move forward with officials visiting each landowner, explaining the details carefully and persuading them to cooperate. I'd like to make sure that we firmly take these steps," Marukawa said in an interview with reporters on Thursday.

Marukawa said the ministry needs more manpower to deal with the landowners.

"This storage facility is necessary for reconstructing Fukushima," because the rebuilding efforts will not move forward when waste is piled up all over the region, she said at her inaugural news conference Wednesday night after being appointed to Prime Minister Shinzo Abe's latest Cabinet.

But Fukushima is not the only prefecture with a radioactive waste problem. Other prefectures — chiefly Miyagi, Gunma, Ibaraki, Tochigi and Chiba — are facing exactly the same issue.

The Environment Ministry plans to build a disposal site in each prefecture, but the process has been stalled by local protests.

People in the town of Kami in Miyagi, for example, have blocked ministry officials from conducting geological surveys of the candidate site.

Marukawa said her ministry has no intention of forcing the surveys but "will continuously give careful explanations to the residents."

On other issues, Marukawa briefly touched on her experience as a woman in politics.

Marukawa, an Upper House member from the ruling Liberal Democratic Party, is one of three women in a Cabinet Abe says will promote women's empowerment.

Asked how she balances her work with motherhood, she laughed and said: "If there are such examples, I myself would like to know."

Since her husband is also an LDP lawmaker who is often away from home visiting his constituents, she said she just does her best day by day to maintain a work-life balance.

November 2, 2015

Plant makes its own rule for temporary storage of radioactive materials

Possible violation in radioactive waste storage

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Japan's Nuclear Regulation Authority secretariat has found the operator of a uranium enrichment plant in Aomori Prefecture stored radioactive waste in a location that violated safety regulations. The plant enriches uranium for nuclear power generation.

The Secretariat of the NRA is expected to ask Japan Nuclear Fuel Limited to remedy the situation.

The secretariat says the violation was discovered in August during an inspection of the plant in northeastern Japan.

It says the operator has been storing low-level radioactive waste temporarily in a room near equipment used to produce enriched uranium. The secretariat says the location is in violation of safety regulations.

The operator later moves the waste to a location that meets safety regulations.

But the secretariat says the temporary storage place is in violation of regulations. It is expected to ask the operator to correct the situation.

Officials at Japan Nuclear Fuel Limited say the plant made its own rules for temporary storage. They say there have been no leaks of radioactive substances.

The officials say they will store the waste in a proper way in the future.

November 6, 2015

Still leaking radioactive water

Photo Journal: Radioactive water still leaking from Fukushima plant

http://mainichi.jp/english/english/newsselect/news/20151106p2a00m0na003000c.html

A Fukushima prefectural council of experts and officials from municipalities surrounding the Fukushima No. 1 Nuclear Power Plant conduct an on-site inspection on Nov. 5, 2015, of work being done to replace drainage ditches after a series of incidents in which radiation-contaminated rainwater from the stricken nuclear station leaked into the Pacific Ocean. Council members inspected pumps that were installed by plant operator Tokyo Electric Power Co. (TEPCO) as an emergency measure upstream in the drainage canal. The canal leads directly to the ocean, and TEPCO is set to overhaul the system by March 2016 by replacing the canal with one that leads into the inner harbor.
On the same day as the inspection, a leak of at least 225 liters of radiation-tainted water was detected from pipes inside the turbine building of the plant's No. 2 reactor that transport highly radioactive water to Fukushima Harbor, prompting TEPCO to stop all transport of water. According to the utility, the water in this case did not leak into the outer seas. (Mainichi)

November 10, 2015

No need to worry any more...

Test fishing in Fukushima reels in a clean catch fit for a king

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201511100001

Members of a local group catch fish in waters off the Fukushima No. 1 nuclear power plant to monitor their radiation levels on Aug. 9. (Naoyuki Takahashi)

By NAOYUKI TAKAHASHI/ Staff Writer

IWAKI, Fukushima Prefecture--An aquarium's veterinarian and a team of local volunteers are monitoring radioactive contamination of fish in waters near the crippled Fukushima No. 1 nuclear power plant to see if the marine life is fit to be served for dinner.

The group, called “Iwaki Kaiyo Shirabetai-Umi Labo” (Iwaki marine unit and sea lab), organizes a monthly fishing excursion to check radioactive pollution of the sea near the plant.

Junichi Yagi, a 39-year-old company employee in Iwaki, and his peers began the project in autumn 2013 to log radiation figures that are independent of surveys conducted by the central government and Tokyo Electric Power Co., operator of the nuclear plant.

“I had been frustrated over my inability to counter an argument with data we took on our own that the sea we loved has been contaminated,” Yagi said of why the group embarked on the project.

A large amount of highly contaminated water leaked into the sea shortly after the nuclear catastrophe unfolded at the plant on March 11, 2011, which was triggered by the Great East Japan Earthquake and tsunami.

Local fishermen’s cooperatives resumed operations in June 2012 on a trial basis, but species that tend to accumulate higher levels of radiation are prohibited from being shipped to markets.

Leaks of radioactive water from the plant, however, have continued on and off although the pollution has not been as severe as that which took place in the immediate aftermath of the nuclear disaster.

During a trip in August, a boat left a fishing port in Iwaki to head to waters in the vicinity of the plant. It carried 21 people on board.

An hour later, the boat stopped 1.5 kilometers from the plant. From there, a red crane could be seen working on the decommissioning process there, and the No. 1 reactor was standing there stripped of its canopy.
Local residents are banned from catching fish in waters within 1.5 km from the plant in accordance with a 1966 pact concluded between TEPCO and local fishermen's cooperatives.
Using a special container, Seiichi Tomihara, a veterinarian at the aquarium Aquamarine Fukushima in Iwaki and a member of the group who was aboard the boat, scooped sea-bed soil samples at a depth of 15 meters.
The radiation dose in the air stood at 0.014 microsieverts per hour, a figure lower than a monitoring spot used as a comparison in Tokyo.
According to Tomihara and other radiation experts, radiation levels above the sea are relatively low despite being only 1.5 km from the plant because the water effectively serves as a lid.
Airborne radioactive substances eventually fall into the sea and drop to the seabed, so radioactivity in the air above the sea is more diminished than that on land.
The boat then traveled to a spot 2 km from the plant to fish with a rod and line.
The participants caught 20 flounder, rock trout and other species, a large enough catch to conduct a meaningful radiation check.
The fish and soil samples are taken to Aquamarine Fukushima in Iwaki, where their radioactivity is measured in front of visitors to the facility as part of the monthly event.
At a session in July, Tomihara adeptly separated bones from fish meat before parents and children who were attending the session.
"Meat is where radioactive cesium accumulates the most," he explained.
He gauged the radioactivity of a rock trout with a radiation dosimeter and then explained the results to his audience.
A rock trout is one of the species prohibited from distribution by local fishermen.
But its radiation levels were not high enough to be detected by a dosimeter used during the session.
The finding came as a surprise to some people.
"Even a fish caught in waters near the plant had such a low radiation level," said one of the participants of the session.
But a reading of white rockfish was 58.7 becquerels per kilo, below the national standards of 100 becquerels per kilo, but in excess of the limit of 50 becquerels set by the local fishermen's cooperatives for circulation.
Tomihara said fish born before the nuclear disaster tend to show higher levels of contamination, compared with ones born over the past few years.
The two-hour session proved to be an eye-opener for many.
"Fukushima's image before this session was something terrifying," said Satsuki Yanagisawa, a 38-year-old mother from Saku, Nagano Prefecture, who visited the aquarium with three other family members. "But I now know that its sea is gradually recovering. Seeing with my own eyes the contamination level of the fish checked convinced me of this."
Local fishermen operate on a trial basis in waters outside the 20-km zone from the plant, catching 64 varieties of fish.
Fish whose radioactivity is found below the fisheries cooperative standards are sold to local shops or Tokyo's Tsukiji fish market.
According to the prefectural government, none of the fish that have been caught since April for its radiation survey showed levels above the national limit.

Twenty-nine kinds of fish are currently restricted from distribution, but the ban is expected to be lifted for them step by step.
Participants in the lab session can taste dishes cooked using the fish local fishermen bring in during the trial operations, such as deep-fried Pacific cod and pasta with blue crab cream sauce.
Many families stop by and sample a free dish.
Yagi hopes the program on fish and pollution at the aquarium will help visitors gain a better understanding of the actual situation of the sea off Fukushima Prefecture.
“We don’t mean to push the view that Fukushima products are safe,” he said. “I hope that more and more people will pay attention to the condition of waters off Fukushima through conversations such as, ‘I have tried fish caught off Iwaki” and, ‘Oh, is it safe to eat?’ ”

November 19, 2015

Waste site surveys delayed

Govt. to postpone nuclear waste site survey

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Japan's Environment Ministry has informed Miyagi Prefecture that it will postpone a plan to start onsite surveys by the end of the year of 3 possible sites for a radioactive waste disposal facility.

State Minister of Environment Shinji Inoue met Miyagi Governor Yoshihiro Murai at the prefectural government office on Thursday.

Inoue said ministry officials had paid daily visits to the candidate sites since last month. He added that l**ocal opposition prevented them from starting the surveys before snow accumulates on the ground.**

He added that the ministry plans to hold a meeting of municipal mayors in the prefecture by the end of the year to continue seeking local understanding for the plan.

Murai said 2 years have passed since the government proposed building a disposal site for radioactive waste, but said it has done nothing. He said this is due to **a lack of political leadership.**

Murai said he's disappointed at the ministry's handling of the plan.

The ministry has put off the survey in Miyagi for 2 straight years.

Radioactive waste site surveys to be postponed

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Japan's Environment Ministry is likely to postpone a plan to start onsite surveys by the year-end of 3 candidate sites for a radioactive waste disposal facility in Miyagi Prefecture. The postponement was due to local opposition to the plan, among other problems.

State Minister of the Environment Shinji Inoue is expected to convey the decision to Miyagi Governor Yoshihiro Murai at the prefectural government office on Thursday.

The ministry plans to conduct field surveys at the sites, including one in the town of Kami, to dispose of contaminated waste from the accident at the Fukushima Daiichi nuclear plant in the neighboring prefecture.

Ministry officials have paid daily visits to Kami since last month to try to conduct the survey, but local opposition prevented them from starting the examination.

Ministry officials wanted to start the surveys by the year-end before snow piles up on the ground. But Kami authorities plan to block roads leading to the candidate site starting on Friday.

Municipalities of other candidate sites -- Kurihara City and Taiwa Town, have indicated that they may give up the offer to host the sites if the surveys were not conducted by the end of this year.

November 20, 2015

Deadlock over waste disposal sites?

Miyagi governor critical over lack of gov't leadership on nuke waste disposal site

http://mainichi.jp/english/english/newsselect/news/20151120p2a00m0na005000c.html

SENDAI -- Miyagi Gov. Yoshihiro Murai has criticized the central government for failing to exercise leadership in the construction of a final disposal site in the prefecture for designated waste that include waste contaminated with radioactive substances from the crippled Fukushima nuclear plant.
"Politicians have failed to display their leadership," Murai told State Minister of the Environment Shinji Inoue.
Murai made the remark in a meeting with Inoue at the prefectural government headquarters on Nov. 19, in which the senior vice minister notified the governor that the national government has abandoned conducting detailed surveys on three candidate sites in Miyagi Prefecture.
Since it has become difficult to conduct such surveys for now, the national government could be forced to review its plan to build final disposal sites in five prefectures including Miyagi.
"It'll soon start snowing at the candidate sites, so we have no choice but to abandon conducting surveys within this fiscal year," Inoue told Murai in the meeting. "**No progress can be made on the disposal of designated waste without cooperation from local communities**. I'd like you to convene a meeting of the mayors of cities, towns and villages in the prefecture to accept detailed surveys aimed at building a disposal site in the prefecture."

In response, Murai pointed out that the Environment Ministry "hasn't done anything although two years have passed" since the ministry selected three candidate sites in the prefecture for a disposal site. "Environment Minister Tamayo Marukawa visited Fukushima Prefecture, but why hasn't she come to Miyagi? It's tantamount to saying the issue of designated waste isn't a big deal," Murai angrily told Inoue. However, the governor agreed to hold a meeting of the mayors of Miyagi municipalities.
After the meeting, Inoue told a news conference that the ministry intends to ask concerned local bodies to cooperate in detailed surveys on the candidate sites.
The ministry told a meeting of mayors in January 2014 that it selected three locations in Kurihara, Kami and Taiwa as the candidates to host a disposal site in the prefecture, and has attempted since autumn last year to conduct detailed surveys on these locations. However, residents of Kami staged a protest to bloc such a survey.
Sato Isamu, mayor of Kurihara, who has conditionally agreed to accept a survey on the city's candidate site, will retract his agreement. "There is no prospect that the deadlock will be broken in the foreseeable future. At a mayors meeting, we'll retract our agreement to have the city designated as a candidate site," he said.
The town of Taiwa is also demanding that a meeting of mayors be held with an eye to retracting its agreement on designation as a candidate site.

November 21, 2015

Contaminated grass for Namie cows

Masami Yoshizawa moves contaminated grass rolls from Shiroishi, Miyagi Prefecture, at his farm in Namie, Fukushima Prefecture, on Oct. 31. (Masakazu Honda)

Municipalities lock horns over contaminated grass given to Fukushima cattle ranch

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201511210049

SHIROISHI, Miyagi Prefecture--The mayor of a town near the crippled Fukushima No. 1 nuclear power plant filed a complaint Nov. 20 against Shiroishi city for providing radiation-contaminated pasture grass to a local farmer.

Mayor Tamotsu Baba of Namie town visited the Shiroishi city office to hand a written complaint to Toru Sasaki, the deputy mayor, saying the city's action “lacked consideration” for the sentiments of Namie residents.

Sasaki defended the city’s decision, saying that it is legal to transfer feed grass that contains 8,000 becquerels or less per kilogram of radioactive fallout from the March 2011 nuclear disaster.

“It was a humanitarian act aimed at assisting farmers and stock farms,” Sasaki told Baba.

The central government is responsible for safely disposing of pasture grass that contains radiation levels exceeding 8,000 becquerels per kilogram. It has requested that local governments dispose of grass with levels at 8,000 becquerels or lower, just like other waste that is not contaminated with radiation.

After the nuclear disaster at the Fukushima No. 1 power plant, all residents of Namie, located north of the crippled facility, were evacuated. The evacuees spread out across Japan.

From late October to mid-November, the city of Shiroishi gave about 1,100 contaminated grass rolls that had accumulated at temporary storage sites around the city to a cattle farm in Namie.

The “ranch of hope” stock farm is operated by Masami Yoshizawa, who defied the government edict to kill all livestock cows exposed to radiation, and feeds 330 cows consigned by local farmers who were forced to close their ranches.
Yoshizawa accepted Shiroishi city’s request to bring in contaminated pasture grass, much of which cannot be used for feeding cows as the rolls contain more than 100 becquerels of radiation per kilogram.
Like many municipalities affected by radioactive fallout from the nuclear disaster, Shiroishi has had trouble disposing of the contaminated grass through incineration due to opposition from local residents.
The farm ministry and Miyagi prefectural government had requested Shiroishi on Nov. 18 to stop transferring contaminated pasture grass to Namie, saying such actions could spread misinformation on contamination of stock farm products and hinder the area’s recovery.

November 24, 2015

Radioactive waste piles up in Fukushima

Residents of Kami, Miyagi Prefecture, and its surrounding municipalities try to block the Environment Ministry's on-site inspection for the planned construction of a disposal facility of radioactive waste in the town on Nov. 5. (Yosuke Fukudome)

Radioactive waste mounts up as residents resist post-Fukushima disposal plans
http://ajw.asahi.com/article/0311disaster/fukushima/AJ201511240005

By YUSUKE FUKUDOME/ Staff Writer

A huge backlog of radioactive waste from the Fukushima nuclear disaster that unfolded in 2011 has piled up as the government faces public resistance to the effects of disposal regulations introduced after the meltdown.

A total of 166,000 tons of contaminated waste, including incinerated ash and rice straws, has accumulated at temporary storage sites in 12 prefectures.

While the central government has made plans to construct disposal facilities for the waste in Miyagi, Ibaraki, Tochigi, Gunma and Chiba prefectures, strong opposition from local residents has stalled progress.

In Kami, Miyagi Prefecture, where construction of one of the plants is planned, residents have forcibly blocked Environment Ministry officials' entry to the mooted construction site.

"The site is located in the middle of landslide-prone areas and it should not qualify as a location for such a facility," one local resident said. "We demand the government calls off the project."

Another said, "What is causing our anxiety is that it remains unclear who will take ultimate responsibility in solving this problem and how."

The Environment Ministry has given up conducting inspections at the construction site in a mountainous area this year after failing to gain access to it several times since last year.

Ministry officials have insisted to residents that it is essential to promptly open the facility because the current temporary storage sites around the prefecture were chosen as an emergency measure.

A typhoon, flood and other natural disasters could cause the drift and spill of contaminated waste at any time, the officials say.

After the triple meltdown at the Fukushima nuclear plant in March 2011 spewed massive radioactive fallout, the government categorized substances with radioactivity levels of more than 8,000 becquerels per kilogram as "designated waste."

The government plans in principle to eventually make each of the affected prefectures to dispose of contaminated waste locally.

At one of the temporary storage sites in Tome, Miyagi Prefecture, 194 tons of contaminated rice straws are stored in polyvinyl houses.

Shigetaro Chiba, a 73-year-old farmer who rents the storage site's land to the city office, expressed confusion over the prolonged use of his land, located next to his rice paddies, as a contaminated waste storage site.

"I was made to agree to extend the lease after the initial two-year period promised by the government expired. The new contract no longer specifies a deadline," he said.

November 29, 2015

13 prefectures against hosting nuclear waste site

Thirteen prefectures say no to hosting nuclear waste depository

http://www.japantimes.co.jp/news/2015/11/29/national/thirteen-prefectures-say-no-hosting-nuclear-waste-depository/#.VlqnLL8R-ov

Kyodo

A total of 13 out of the nation's 47 prefectures say they would refuse to host a final disposal site for highly radioactive nuclear waste, a Kyodo News survey showed Saturday.

In the survey conducted between late October and early November, 13 local governments said they would "never accept" such a facility, eight sounded negative, while 24 declined to clarify their position and two said they will "carefully consider the possibility." None showed a positive stance toward hosting the site.

In May, the government introduced a plan in which it will choose candidate sites for burying high-level radioactive waste based on scientific analysis, rather than waiting for municipalities to express a willingness to host a final depository.

The change of policy reflects the lack of progress made in the process of soliciting candidate sites that began in 2002 due to safety concerns.

For permanent disposal, high-level nuclear waste needs to be stored in a final depository more than 300 meters underground for up to 100,000 years until radiation levels fall and it no longer poses a threat to humans and the environment.

Among the 13 prefectures opposed to accommodating a disposal site, four host nuclear power plants.

Fukui Prefecture, where the largest number of nuclear plants are located, said, "We have accepted (nuclear) power generation, but do not have a duty to take nuclear waste." Ishikawa Prefecture said municipalities that consume large amounts of electricity should be given a priority as candidate sites.

Kochi Prefecture, whose municipality applied in 2007 for research to be conducted into whether it can host a final nuclear waste disposal site in exchange for government subsidies, said it "cannot afford" a depository. The Kochi town of Toyo canceled its application later that year due to protests from local residents.

One of the eight prefectures that expressed a negative stance toward hosting a disposal site, Aomori Prefecture, which currently hosts a spent nuclear fuel reprocessing plant, said the central government has promised that the facility will not be transformed into a final depository.

In a multiple-choice question on current concerns, 10 prefectures expressed worry that the state could "force municipalities into accepting" a final disposal site, while 20 were alarmed about the safety of the facility and potential reputational damage, and 17 cited the risk of earthquakes and volcanic eruptions that could affect the operation of a depository.

Earlier this month, Finland became the world's first country to give a green light to construction of a final nuclear waste disposal site, with the aim of having it begin operations in the 2020s.

13 prefectures refuse to host nuclear waste depository

http://mainichi.jp/english/english/newsselect/news/20151129p2g00m0dm002000c.html

TOKYO (Kyodo) -- A total of 13 out of Japan's 47 prefectures have refused to host a final disposal site for highly radioactive nuclear waste, a Kyodo News survey showed Saturday.[…]

December 3, 2015

Fukushima Pref. OKs disposal site

The Fukushima Ecotech Clean Center in Tomioka, Fukushima Prefecture, will be the final disposal site for the prefecture's designated waste from the 2011 nuclear accident. White sheets are used for seepage control to mitigate the effects of radioactive waste on the ground. (Asahi Shimbun file photo)

Fukushima OKs disposal site for radioactive waste within prefecture

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201512030041

Fukushima Prefecture signaled Dec. 2 it will host the final disposal site for highly radioactive waste produced by the 2011 nuclear disaster, with Governor Masao Uchibori expected to relay his decision to the Environment Ministry this week.

The central government's plan calls for the Fukushima Ecotech Clean Center, a privately run disposal facility in Tomioka near the crippled Fukushima No. 1 nuclear power plant, to be nationalized. The center will then accept about 650,000 cubic meters of garbage, including "designated waste."

Designated waste refers to contaminated refuse such as rice straw, sewage sludge and incinerated ash of household garbage that contain more than 8,000 becquerels per kilogram of radioactivity.

With 138,000 tons of such garbage, Fukushima Prefecture accounts for more than 80 percent of the estimated national total of 166,000 tons.
The Environment Ministry program requires all prefectures where radioactive fallout rained down after the triple meltdown at the Fukushima plant to dispose of designated waste within their own jurisdictions.
According to a ministry report, such waste existed in 11 other prefectures as of the end of September.
In Fukushima Prefecture, town officials in Tomioka and nearby Naraha were initially opposed to the ministry's plan on grounds that hosting the disposal site would discourage many evacuees from returning to their homes.
All residents of Tomioka, which is within a 20-kilometer radius of the Fukushima plant, are still living as evacuees because of high radiation levels in the town.
The distribution route for the planned final disposal facility runs through Naraha, most of which is also within the 20-km zone.
The two municipalities became more accepting of the project after the ministry presented safeguard measures for the disposal and the prefectural government promised the towns a combined grant of 10 billion yen ($81 million) to advance the project.
“Town officials accepted our view that the program is crucial to help recover Fukushima’s overall environment, although it poses an enormous burden on them,” Uchibori said after talks with the town officials on Dec. 2.
The Fukushima prefectural government plans to dispose of garbage measuring up to 100,000 becquerels per kilogram at the Fukushima Ecotech Clean Center.
Trash with higher radiation levels is expected to be held at a temporary storage facility under construction near the plant.
Although Fukushima is the first prefecture to accept the central government program, it remains to be seen if Miyagi, Ibaraki, Tochigi, Gunma and Chiba prefectures will follow in its footsteps in line with the ministry’s hopes.
The ministry plans to have new facilities built to dispose of designated waste in those prefectures since they have larger amounts of contaminated garbage than the other affected prefectures.
Miyagi, Tochigi and Chiba selected candidate sites after the ministry briefed municipal officials there on the method of selecting prospective venues.
However, detailed surveys toward the construction of the disposal facilities have yet to be undertaken due to fierce opposition from local citizens.
The Cabinet decided in November 2011 that prefectures with radioactive waste should dispose of the refuse within their own borders.
The contaminated waste is currently being stored on a temporary basis at sewage treatment plants or plots on farms in these prefectures.

December 4, 2015

Fukushima Pref. OKs disposal site (2)

Fukushima agrees to accept 'low-level' nuclear waste from 2011 disaster

http://www.japantimes.co.jp/news/2015/12/04/national/two-mayors-in-fukushima-ok-final-disposal-of-low-level-nuclear-waste/#.VmHYKr8R-ot

JIJI, Kyodo

FUKUSHIMA – Fukushima Gov. Masao Uchibori told Environment Minister Tamayo Marukawa Friday that his prefecture will accept relatively 'low-level' radioactive waste that resulted from the March 2011 nuclear disaster in Fukushima.

Fukushima is the first to give consent among six prefectures where final disposal of such waste is planned by the central government.

It follows a meeting that also included Koichi Miyamoto, mayor of the town of Tomioka, which hosts the existing facility where the waste will be disposed, and Yukiei Matsumoto, mayor of the town of Naraha, which accommodates a transportation route to the facility.

Marukawa said the government will make the utmost effort to deal with waste disposal while securing safety and implementing measures to rebuild the region.

On Thursday, both mayors accepted the national government's plan during talks with the governor, on condition that the government take measures to prevent the project from hindering reconstruction in the municipalities. They found it necessary to expedite disposal of so-called designated radioactive waste as the government is moving to lift evacuation orders still in place in the prefecture.

In talks with Miyamoto and Matsumoto, the governor said the prefecture made the difficult decision, believing that the facility was necessary to recover the prefecture's environment.

But the governor said the facility should only accept waste from Fukushima, and urged the government to maintain its policy of disposing of waste in the prefecture in which it originates.

Currently, the nation's designated radioactive waste totals some 166,000 tons across 12 prefectures. Although local opposition remains strong, the government hopes Fukushima's decision will encourage other prefectures to follow suit.

Subject to the final disposal at the facility will be designated waste that contains up to 100,000 becquerels of radioactive substances per kilogram, such as rice straw and debris at districts evacuated after the disaster at Tokyo Electric Power Co.'s Fukushima No. 1 nuclear power plant.

The facility is expected to handle some 650,000 cubic meters of such waste.

In December 2013, the national government presented the final disposal plan to the local governments and urged them to accept it. Taking into account requests from local communities, the government showed in November this year regional economic promotion measures, such as the creation of an industrial complex, and additional safety measures.

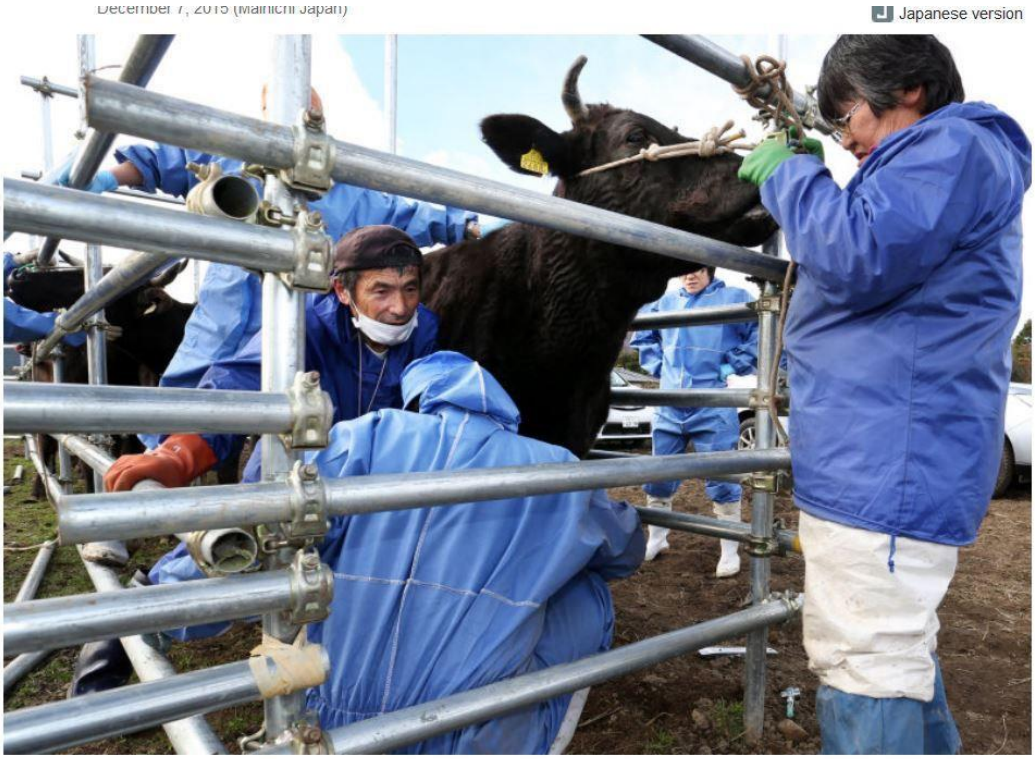
On Wednesday, the prefecture showed the two towns its plan to extend subsidies worth ¥10 billion for such measures as dealing with rumors and urged them to agree to the disposal plan.

December 7, 2015

Cows in difficult-to-return zones

Cows tested for radiation in Fukushima 'difficult-to-return' zones

http://mainichi.jp/english/articles/20151207/p2a/00m/0na/019000c



Veterinarians perform blood tests and other examinations on cows in the town of Okuma, Fukushima Prefecture, on Dec. 6, 2015, in order to determine their levels of radiation exposure. (Mainichi)

FUKUSHIMA -- In an effort to determine the radiation exposure levels of cows living in "difficult-to-return" zones along coastal areas of Fukushima Prefecture following the 2011 Fukushima No. 1 Nuclear Power Plant disaster, a local organization carried out a health survey of the animals on Dec. 6. via methods including blood sampling.

The testing was performed by the Society for Animal Refugee & Environment post-Nuclear Disaster, which is comprised of veterinary researchers from Iwate University and Kitasato University, along with local cattle farmers.

The organization has been voluntarily spearheading investigations since September 2012 into the impact of radiation exposure among cows living in evacuation zones.

At the farm of Mitsuhide Ikeda, 54, who has around 50 cows in the town of Okuma, the veterinarians soothed the cows by calling out "It's alright, it's alright," as they steadied the animals in the fenced-in enclosure. They then carried out the testing procedures, which focused primarily upon drawing the animals' blood.

After the blood samples are taken back to the universities, tests will be carried out such as measuring the concentration of radioactive cesium, as well as determining whether or not damage has occurred to the animals' DNA.

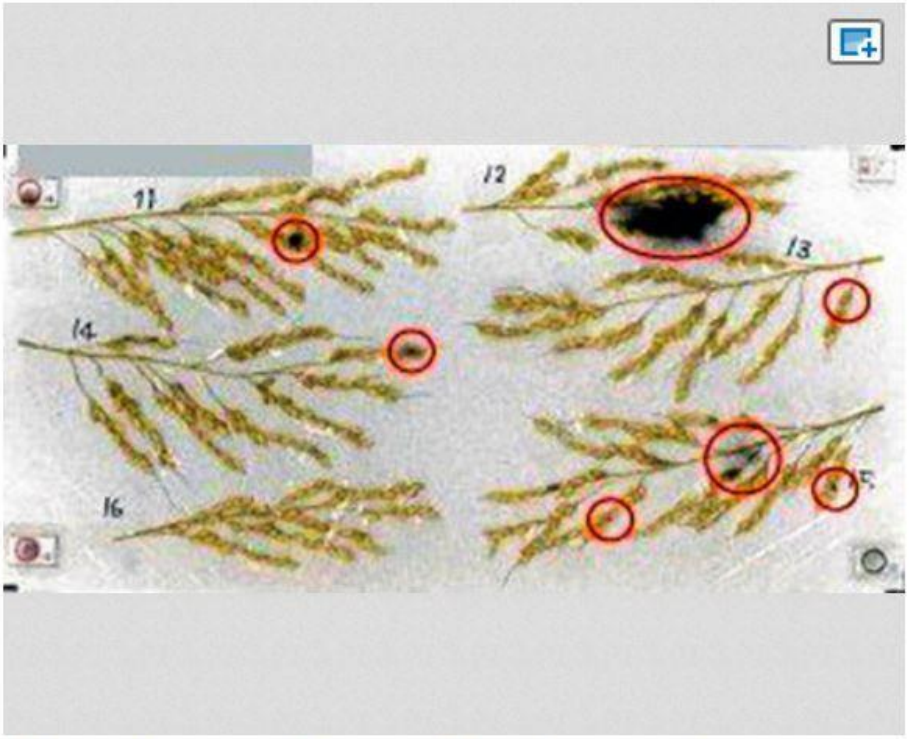
Similar testing was also carried out the previous day on Dec. 5 in the prefectural town of Namie. Over the course of the two days, a total of more than 120 cows were examined in both towns.

December 9, 2015

Radioactive rice: Cover-up suspicions?

City to investigate NRA's conclusion that radioactive rice unrelated to Fukushima plant work

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201512090084



The black marks on rice stalks harvested in Minami-Soma show radioactive substances. (Provided by the Ministry of Agriculture, Forestry and Fisheries)

By MASAKAZU HONDA/ Staff Writer

MINAMI-SOMA, Fukushima Prefecture--Addressing cover-up suspicions, the city assembly here will investigate how the Nuclear Regulation Authority concluded that work at the crippled Fukushima nuclear plant was not the cause of radioactive contamination of rice paddies.

The assembly unanimously decided to investigate during a regular session that started on Dec. 2 in response to a petition submitted by a citizens group called “Genpatsu-jiko no Kanzen-baisho o Saseru

Minami-Soma no Kai" (Minami-Soma's group that requires complete compensation for the nuclear accident).
The group doubts the NRA's assertion that the contamination of rice harvested in the city in 2013 was not related to debris-removal work at the Fukushima No. 1 nuclear plant. It has also expressed outrage that the government has stopped trying to confirm the cause.
"The government should continue a scientific investigation so that farmers can be engaged in rice farming without anxieties, and accurate information can be conveyed to citizens in evacuation," the petition said. "Suspicions remain that the NRA concealed facts with the intention of reaching that conclusion."
The agriculture ministry had raised the possibility that work to remove debris at the Fukushima plant in 2013 scattered radioactive substances that contaminated rice paddies in Minami-Soma more than 20 kilometers away.
However, the NRA reached a different conclusion, saying that while radioactive substances were stirred up by the work, they remained within the nuclear plant compound, south of Minami-Soma.
The NRA did not specify the likely source of the contamination, and the government discontinued the investigation.
The citizens group's petition, submitted to a regular assembly session in September, asked the city to scrutinize the process in which the NRA reached its conclusion and to gather views from several scholars.
The NRA's public relations office declined to comment on the issue on Dec. 8.
"As the documents of the petition were not issued to the NRA, we cannot make a comment," the office told The Asahi Shimbun.
As for the issue of determining the cause of the contamination, NRA Chairman Shunichi Tanaka has said that it is a job for the agriculture ministry.
"I absolutely cannot accept (Tanaka's remark)," Minami-Soma Mayor Katsunobu Sakurai said.
December 9, 2015
City to investigate NRA's conclusion that radioactive rice unrelated to Fukushima plant work
http://ajw.asahi.com/article/0311disaster/fukushima/AJ201512090084

December 10, 2015

Nine million bags of radioactive waste kicking around

Over 9 million bags of nuclear cleanup waste piled up across Fukushima Pref.

http://mainichi.jp/english/articles/20151210/p2a/00m/0na/020000c

Mounds of bags full of waste from the decontamination of areas around the Fukushima No. 1 nuclear plant are seen at a temporary storage site in Tomioka, Fukushima Prefecture, in this recent photo taken from a Mainichi Shimbun helicopter. (Mainichi)

The number of bags of waste from decontamination efforts around the stricken Fukushima No. 1 nuclear plant reached a little under 9.16 million as of the end of September according to Fukushima Prefecture and the Environment Ministry.

The 1-cubic-meter bags are found at some 114,700 interim storage or decontamination sites across the prefecture. In the town of Tomioka -- covered by a nuclear disaster evacuation order -- mounds of bags have grown so tall that they obscure the power shovels used to move and stack the waste, the black balls covering every sliver of landscape.

The bags of waste are typically stacked four layer high, with a fifth layer of uncontaminated soil laid on top to block radiation. Waterproof sheets are also used to stop rainwater from getting into the bags and becoming contaminated.

Negotiations with the towns of Okuma and Futaba -- both under evacuation orders -- to establish mid-term waste storage facilities there have been hard-going, and the start of construction is nowhere in sight.

Watch this one-minute video:

Bags of radiation-contaminated waste pile up in Fukushima

http://mainichi.jp/english/videos/

NRA wants waste to be buried deeper (70m at least)

NRA panel wants deeper disposal for nuclear waste

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

A team of experts at Japan's nuclear regulator has proposed that nuclear waste with relatively high levels of radiation be buried deeper underground than current law requires.

The team at the Nuclear Regulation Authority, or NRA, presented a draft of regulations for such waste on Thursday. The waste comes from the decommissioning of reactors.

The draft calls for such waste to be buried at least 70 meters underground. This is to prevent people from approaching the waste.

Current law requires that waste with low or relatively high levels of radiation be buried at least 50 meters underground.
The draft requires utilities to maintain buried waste for 300 to 400 years.

The draft also would have the central government prepare a system to prevent the buried waste from being dug up after the maintenance period ends.

The NRA team plans to gather opinions from the Federation of Electric Power Companies of Japan and compile basic ideas by the end of next March.

December 11, 2015

Experts mull 'below seabed' nuclear waste disposal

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Japan's industry ministry will ask experts to study the disposal of highly radioactive nuclear fuel waste beneath the coastal seabed.

The idea was raised on Friday at a meeting of expert panel members.

They have been discussing candidate disposal sites for high-level radioactive waste generated from the country's nuclear power plants.

The panel compiled an interim report for disposal of the waste remnant of spent fuel after uranium and plutonium are extracted for reuse.

In the report, experts excluded locations near active faults or within 15 kilometers from a volcano.

The report advises that inland areas within 20 kilometers from the coastline are more appropriate as disposal sites, as they are close to ports and safer to transport the nuclear waste.

At the meeting, they also noted that beneath the seabed along coastal regions could be an option as such sites would have fewer restrictions. However, some pointed out the risk of seawater seeping into the storage facility.

The panel decided to solicit broader opinions about the report through the Geological Society of Japan and other related academic societies.

The industry ministry will set up a research team and study the technical challenges involved with a "beneath the seabed" disposal plan through the middle of the next year.

December 12, 2015

Seabed burial?

Japan to consider ocean disposal of nuclear waste

http://ajw.asahi.com/article/behind_news/social_affairs/AJ201512120027

SHIMBUN The industry ministry will consider the feasibility of burying high-level radioactive waste from nuclear power plants under the seabed, which a working panel said Dec. 11 could be a “highly appropriate” solution.
In an interim report on disposal methods of highly contaminated materials from spent nuclear fuel, the panel said such waste could be disposed of in adjacent waters within 20 kilometers of the coastline.
It called the disposal method relatively realistic because the circulation of groundwater at sea is not as strong as on land. The panel said the site should be created in adjacent waters so that nuclear waste can easily be transported by ships.
The panel included the under-the-seabed disposal plan in nearby waters as a viable option for the final disposal site.
Based on this proposal, the ministry will set up an expert panel in January to discuss what specific technical challenges lay ahead.
The expert panel will discuss locations of active faults under the seabed and the impact of sea level changes to evaluate the feasibility of the project. It is expected to issue its recommendations by next summer.
While the government has encouraged municipalities to submit candidate sites for nuclear waste disposal, it is being forced to rethink this policy because no local government has come forward to provide a realistic disposal site.
Instead, it will hand-pick the “candidate sites from scientific perspectives” and unilaterally request local governments to comply with its research and inspection efforts.

December 13, 2015

Miyagi municipalities refuse to be candidate sites

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

The mayors of 3 municipalities in northeastern Japan have announced that they will no longer propose candidate sites for a radioactive waste disposal facility.

The announcement came after the Environment Ministry made a decision to postpone its plan to start onsite surveys of 3 proposed sites in Miyagi Prefecture by the end of the year because of local opposition.

The ministry has put off the surveys for 2 straight years.

The facility would dispose of radioactive sludge and ash from the 2011 meltdown at the Fukushima Daiichi nuclear power plant.

During Sunday's meeting, Kurihara City Mayor Isamu Sato said he has withdrawn an offer to host a candidate site. He said he will not accept any survey as there is no plausible explanation that would convince residents to go along with the proposal.

The mayors of Taiwa Town and Kami Town also said they are refusing to propose candidate sites.

State Minister of Environment Shinji Inoue also attended the meeting. As the ministry's second-highest ranking official, Inoue said he cannot accept the mayors' refusals.

He added that the ministry believes there is no choice but to build a safe facility in Miyagi to dispose of the radioactive waste.

December 14, 2015

Miyagi "chosen" candidates refuse to host radioactive waste

3 Miyagi municipalities against hosting disposal sites for contaminated waste

http://mainichi.jp/english/articles/20151214/p2a/00m/0na/007000c

SENDAI -- Three municipalities in Miyagi Prefecture that have been selected as candidates to host final disposal sites for radioactively contaminated materials told the Environment Ministry on Dec. 13 that they would relinquish their candidacies.
The Miyagi Prefecture towns of Kami and Taiwa as well as the city of Kurihara had been picked as candidate municipalities to host disposal sites for designated waste, which includes radioactively contaminated materials generated by the 2011 Fukushima nuclear disaster.
Kurihara Mayor Isamu Sato and Taiwa Mayor Hajimu Asano told a meeting of Miyagi Prefecture mayors in Sendai that they were unwilling to remain candidates with no prospect for construction in sight. Kami Mayor Hirobumi Inomata demanded that disposal sites be built in Fukushima Prefecture instead, saying, "All the three candidate sites are inappropriate."
The Environment Ministry, however, is reluctant to accept the municipalities' stance.
"We selected the three municipalities after a series of mayoral meetings to decide how to pick candidate sites. Given the process we have taken, the ministry cannot accept the municipalities' decision," a ministry official commented. The ministry is seeking renewed permission from the municipalities to survey the candidate sites in detail.
The Dec. 13 mayoral meeting was held at the request of the Environment Ministry. In the fall of last year, the ministry tried to conduct land surveys at the three candidate sites, but residents of Kami staged a protest against the plan.
Kurihara and Taiwa had responded positively to the plan, on the condition that assessments be conducted simultaneously in all three municipalities.
As the snowfall season has arrived in the candidate municipalities, however, for the second straight year, the Environment Ministry will be unable to carry out land surveys.

December 18, 2015

Too much salt for water to be decontaminated

Steel barrier creating more contaminated water

http://www3.nhk.or.jp/nhkworld/english/news/20151218_27.html

The operator of the Fukushima Daiichi nuclear plant says a steel barrier that it built along the plant's embankment is causing an unexpected problem.

Tokyo Electric Power Company, or TEPCO, **installed the steel piling wall in October to prevent contaminated groundwater from flowing into the sea.**

The utility had planned to pump up the blocked water, remove radioactive materials from most of it, and release it into the sea.

But on Friday, TEPCO officials told nuclear regulators that **the water has too high a salt content to be**

processed by decontamination equipment.

They also said **the amount of pumped-up water was larger than expected.**
The officials say workers are therefore releasing the water not into the sea, but into reactor buildings. They say the amount is about 400 tons per day.

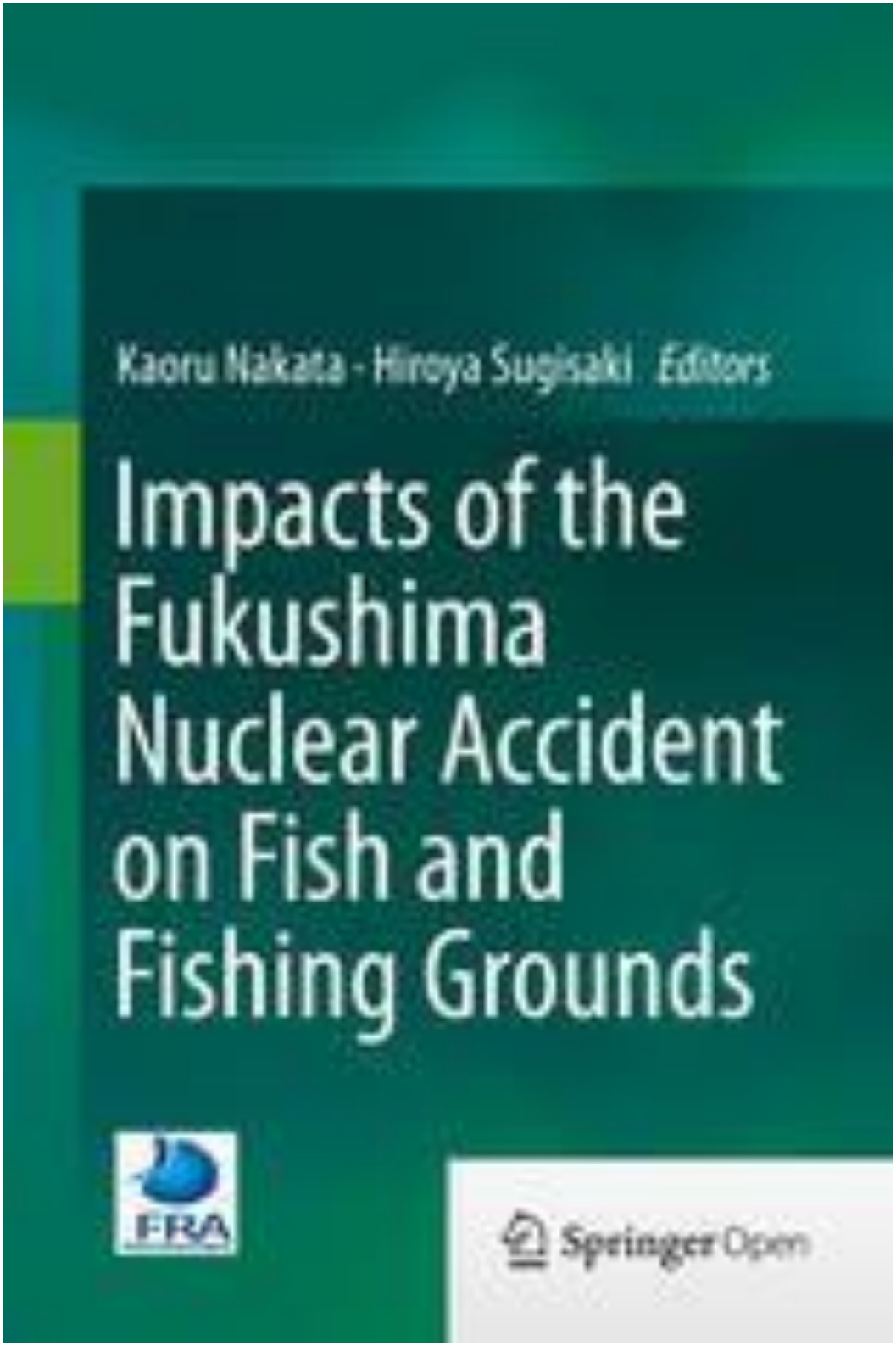
The utility had previously been reducing the flow of water into the plant's buildings.

Workers have been pumping up groundwater from wells inside the compound, and had managed to reduce its inflow into buildings from 400 tons to 200 tons per day.

TEPCO says it plans to pump up more groundwater upstream so that less reaches the embankment.

It says it will also try to process the salty water by monitoring changes in its quality.

Book on impacts of 3/11 on fish



http://link.springer.com/book/10.1007/978-4-431-55537-7

Impacts of the Fukushima Nuclear Accident on Fish and Fishing Grounds

Editors:

- Kaoru Nakata,
- Hiroya Sugisaki

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Abstract:

As a result of the Fukushima Dai-Ichi Nuclear Power Plant accident in March 2011, a large volume of radionuclides was released into the environment, thus contaminating marine and freshwater systems. The Fisheries Research Agency has conducted research beginning soon after the accident. Our research addressed the contamination processes of radionuclides (mainly radiocesium) through water, sediments, and food chains, in both marine and freshwater systems, based on a large volume of original in situ data. Our research has also provided important information on when and how marine fish have been contaminated. This chapter gives an overview of our research.

December 21, 2015

Forests won't be decontaminated

Forests will not be decontaminated

http://www3.nhk.or.jp/nhkworld/english/news/20151221_09.html

NHK has learned the government may not conduct radioactive decontamination of forested land in Fukushima and other prefectures that is far from residential areas. Many forests in the region were polluted after the accident at the Fukushima Daiichi nuclear plant in March 2011.

Sources close to the government say it may adopt a new policy because **removing fallen leaves as part of the cleanup may have other negative effects, such as loss of top soil.**

The government's decontamination work is now basically limited to forest areas within 20 meters of communities. It had not made it clear what would be done with forests in wider regions.

A government panel has been studying how to decontaminate the forested land.

The sources say the panel's study of Fukushima Prefecture shows no radioactive materials that could

adversely affect inhabited areas are dispersing from forests.

They say **the government is afraid that removing radiated fallen leaves in large areas will expose contaminated soil that can be washed away.**

Instead of decontamination work, the sources say, the government plans to **set up wooden fencing on steep hills to stop soil erosion and to make the forests healthier by thinning.**

The government will seek approval of such measures from experts on Monday.

Decontaminated soil to be turned into building material??

Model biz that reuses Fukushima soil planned

http://www3.nhk.or.jp/nhkworld/english/news/20151221_23.html

The Japanese government is planning to launch a business plan to re-use decontaminated soil from Fukushima Prefecture as construction material.

The Environment Ministry disclosed the draft plan on Monday.

The 2011 nuclear accident at Fukushima Daiichi power plant tainted soil in the region with radioactive substances.

Decontaminated soil will be kept in intermediate storage facilities within Fukushima Prefecture. It will be transferred outside the prefecture within 30 years for final disposal. The government needs to secure enough space to accommodate **22 million cubic meters of the decontaminated soil.**

An Environmental Ministry panel of experts has been discussing ways to reduce the amount of decontaminated soil.

The panel is proposing that a project be set up to test existing technology that removes radioactive substances in soil. **The soil in turn will be used as construction material for building roads and sea walls.**

Some members of the panel said it may not be easy to find construction firms that will buy materials made from decontaminated soil. They said gaining support from residents over the use of such material could also be difficult.

The re-use project is planned to start in the next fiscal year starting in April. The Environment Ministry will come up with a final plan by next March.

State Minister of Environment Shinji Inoue says the key to the project is how to reduce the vast amount of decontaminated soil.

He said it is the government's duty to quickly proceed with the construction of intermediate-storage facilities.

December 22, 2015

Decontaminated soil to be turned into building material (2)

Government estimate: Almost 100 percent of contaminated soil can be recycled

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201512220042

Bags of radioactive soil that were generated from cleanup operations are seen at a temporary storage site in March 2014. (Asahi Shimbun file photo)

Up to 99.8 percent of more than 20 million cubic meters of contaminated soil generated from cleanup operations in Fukushima Prefecture can be recycled, according to an Environment Ministry estimate.
The figure was presented at a ministry committee meeting discussing the use of contaminated soil on Dec. 21.

The ministry plans to use the radioactive soil generated through decontamination work following the 2011 accident at the Fukushima No. 1 nuclear power plant as construction materials for public works projects.
From the next fiscal year, which starts in April 2016, the ministry will start the development of the technology and model projects for a recycling plan of the contaminated soil.

Forests won't be decontaminated (2)

Gov't plans not to decontaminate Fukushima forests away from residential areas

http://mainichi.jp/english/articles/20151222/p2a/00m/0na/012000c

The Ministry of the Environment on Dec. 21 showed a panel of experts a policy of not decontaminating most of the forests in Fukushima Prefecture that are far from residential areas and where people do not usually enter.
The ministry came up with the policy because an increase in airborne radiation levels in residential areas brought on by the spread of radioactive materials has not been confirmed and because removing fallen leaves could have adverse effects such as the outflow of top soil. None of the panel members had objections over the policy, and the environment ministry is to revise its decontamination guidelines accordingly.
Forests account for 70 percent of Fukushima Prefecture's total area. The government was meant to remove fallen leaves and the like from forests within 20 meters from living areas as well as from areas where people routinely enter for activities such as mushroom cultivation and camping. But no decision had been made on what to do for other areas.
According to the ministry, in the areas where it plans not to decontaminate, about 80 percent of radioactive materials that adhered to leaves and branches at the time of the 2011 nuclear meltdowns have remained in surface soil and the spread of radioactive materials affecting airborne radiation levels in living areas has not been confirmed. Furthermore, the ministry said that any outflow of radioactive materials triggered by rainfall and other factors has not been confirmed.
Meanwhile, if accumulated fallen leaves and the like were to be removed from a wide area, it is feared to have adverse effects such as the outflow of top soil. Because of this, the ministry deemed it appropriate to prevent fallen leaves and top soil containing radioactive materials from flowing out by installing fences and sandbags rather than decontaminating forests. At the same time, the ministry will set out to revive forests. An environment ministry official in charge said, "It is difficult to decontaminate all of the forests and there could be adverse effects from such work. We have selected the best method for local people."
The environment ministry's plan has sparked criticism and anxiety among some local residents in Fukushima Prefecture, including those in forestry cooperatives and those who are trying to return to their hometowns.
The forestry cooperative in the Fukushima Prefecture village of Iitate, whose entire population has been evacuated, has demanded the government decontaminate the forests so that it could resume its business operations after the evacuation order is lifted. Forests account for 80 percent of the total area of the village. Forestry cooperative chief Chohei Sato, 64, said, "There are places where workers cannot enter

because radiation levels are high. Unless they are decontaminated, we won't be able to engage in forestry like the way we did before the nuclear accident."
Under the government policy, on the other hand, the government is to call on foresters and other relevant people to maintain forests by doing such things as thinning in areas where airborne radiation levels are 2.5 microsieverts per hour or lower -- levels that do not require controlling of radiation exposure doses. That's because if weeds and the like grow in forests, they are expected to be effective in preventing radioactive soil from flowing out to living areas.
Kimio Akimoto, 68-year-old chief of the Futaba regional forestry cooperative, said, "Workers might not come here due to anxiety over radiation. If something happens to their health, it will be the cooperative that should take responsibility for that. We do not want the government to leave it solely in the hands of people on the spot."
The Fukushima Prefecture village of Katsurao located in a mountainous area in the Abukuma Highland is seeking to have the evacuation order lifted in the spring of 2016. A 77-year-old woman, who is thinking of cultivating vegetables in the village after the evacuation order is lifted, said, "I really want the government to decontaminate so that we can live without fear. But (forgoing decontamination) cannot be helped if time and money are needed. If that is the case, I want them instead to properly improve our living strongholds."
The government says it will install prevention fences and the like if the outflow of radioactive soil is feared to affect living areas. Hidenori Endo, 73, who serves as administrative head of the Shimokatsurao district in the Katsurao village, said, "I wonder if we can completely prevent the outflow of soil. There are limitations as mountains are extensive."

January 4, 2016

Forest decontamination not sufficient

Fukushima asks govt. for forest decontamination

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Officials from Japan's Fukushima Prefecture and its municipalities have called on the central government to extend decontamination work deeper into forests.

They made the request to Environment Minister Tamayo Marukawa in Tokyo on Monday.

The government has placed an in-principle limit on the clean-up of radioactive substances from the 2011 nuclear accident to areas up to 20 meters of communities. It says it doesn't plan to go beyond that as it has no confirmation that hazardous radioactive matter has scattered further.

Toshiyuki Hata, deputy governor of Fukushima Prefecture, called on the government to review its plan and look at ways to clean up entire forests. He cited the concerns of residents who are eager to return

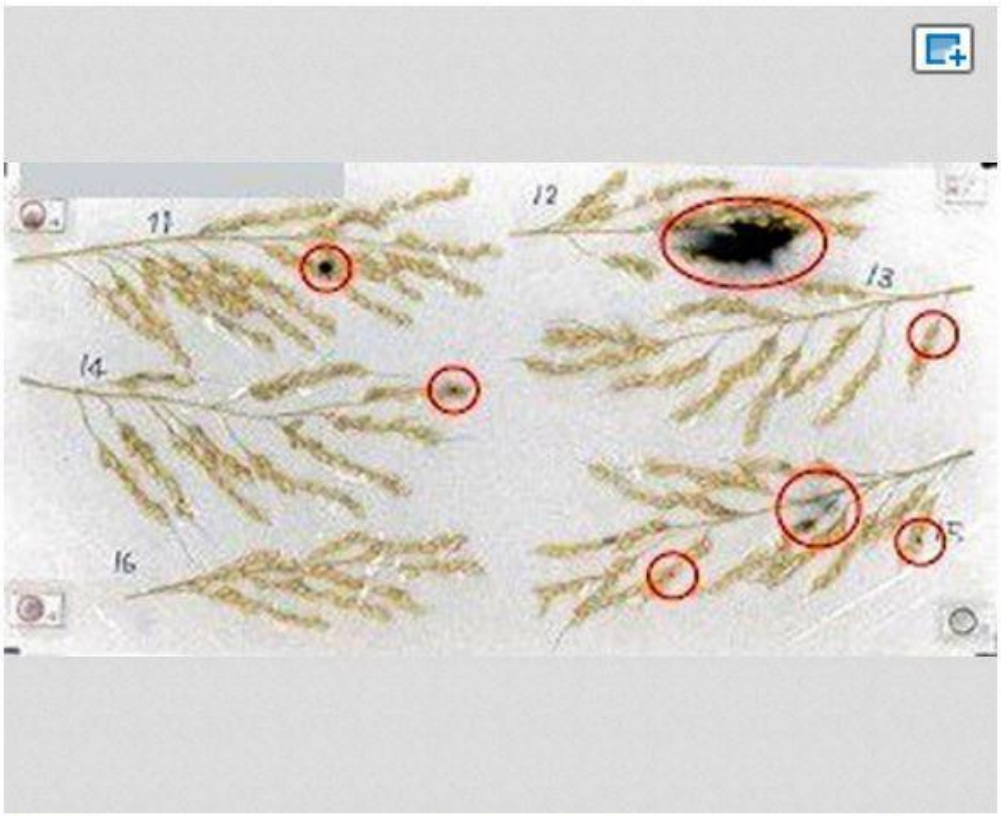
home, and workers in the forestry industry.

Minister Marukawa said only that the government will continue to hear the opinions of local communities.

The deputy governor said after the meeting that many people are worried about the situation as their homes are surrounded by forests.

January 18, 2016

Rice contamination: Fukushima No.1 was the culprit



The black spots show radioactive particles found on the ears of rice harvested in autumn 2013 in Minami-Soma, Fukushima Prefecture. (Provided by Ministry of Agriculture and Fisheries)

Researchers: No doubt cleanup at Fukushima nuclear plant contaminated rice crops in 2013

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201601180052

MINAMI-SOMA, Fukushima Prefecture--Radioactive substances that contaminated rice paddies here in 2013 came from the crippled Fukushima No. 1 nuclear plant, an international group of researchers said, rejecting a denial issued by Japan's nuclear safety authority.

The researchers, led by Akio Koizumi, a professor at Kyoto University's Graduate School of Medicine, reached the conclusion after analyzing radioactive substances and taking spot readings of radioactivity levels around Minami-Soma.

Koizumi presented the final report of the group, consisting of 11 researchers from Japan, Europe and the United States, to local farmers and other parties at a community center in Minami-Soma on Jan. 17.

"The cause of further contamination was the radioactive particles dispersed from contaminated rubble during the cleanup effort at the Fukushima No. 1 nuclear plant," Koizumi concluded in the report.

Earlier, the agriculture ministry and the Nuclear Regulatory Authority (NRA) gave different views on the source of the contaminated rice.

In 2013, rice crops from areas of Minami-Soma were found with unexpectedly high radioactivity levels more than two years after the triple meltdown at the nuclear plant located 20 kilometers south of the city.

One theory was that highly radioactive substances were dispersed when workers were lifting and removing contaminated rubble at the Fukushima plant on Aug. 19 that year. Two workers at the plant were exposed to high doses of radiation during the cleanup process.

The Ministry of Agriculture, Forestry and Fisheries said the cause of the contaminated rice was "unknown" although it acknowledged "the possibility of the dispersal of contaminated dust." The farm ministry discontinued its investigation without specifying the source of the contamination.

The NRA, however, said the contaminated rice was not related to the cleanup work at the nuclear plant.

The Minami-Soma city assembly expressed outrage over the NRA's stance. Some in the city suspected the NRA of a cover-up.

Koizumi and the other researchers digitally recreated an accidental dispersal of contaminated dust from the plant in August 2013.

They used a new analysis system to estimate the amount of radioactive cesium that spread toward Minami-Soma based on radioactivity readings around the city and other factors.

The group's cesium estimate was more than 3.6 times the amount initially estimated by the NRA.

The research group in September 2014 also collected soil samples from 10 locations around the contaminated rice paddies to determine the amount of strontium 90 in the area.

They confirmed that the ratio of strontium 90 to radioactive cesium in the soil samples was similar to the ratio that would be found near the Fukushima nuclear plant.

Beta-ray emitting strontium 90 is less airborne and tends to remain within close proximity of nuclear weapon testing sites or nuclear accidents. Radioactive cesium is more volatile and can easily adhere to fine dust spread by the wind.

In general, the amount of strontium 90 decreases the farther it gets from a nuclear plant, compared with radioactive cesium. In fact, hardly any strontium 90 has been detected far away from the Fukushima plant.

Based on the amounts of radioactive particles recorded around Minami-Soma, the researchers concluded that a highly irregular plume of radioactive cesium reached Minami-Soma on the third week of August 2013.

"Every single piece of data in the paper supports the fact that contamination by radioactive dust came from the debris at the nuclear plant," Koizumi said.

Asked about the NRA's conclusion, Koizumi said: "It seems they were blinded by their estimated amount of dispersed particles, and their choice for the analysis system was misguided. This kind of attitude would only increase the anxiety of residents in the affected areas."
The group's findings were published in the international academic journal Environmental Science & Technology last month after a peer review.
(This article was written by Masakazu Honda and Miki Aoki.)

Significant secondary releases of radionuclides are possible

Post-Accident Sporadic Releases of Airborne Radionuclides from the Fukushima Daiichi Nuclear Power Plant Site

http://pubs.acs.org/doi/full/10.1021/acs.est.5b03155

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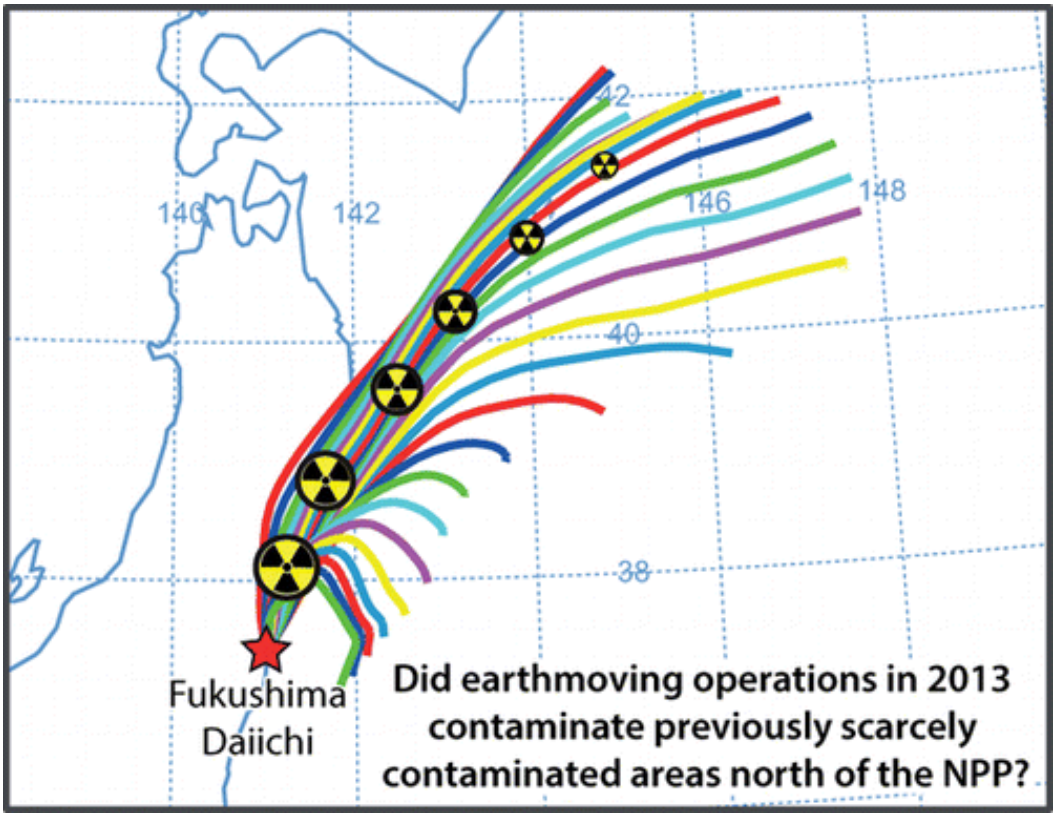


Abstract

The Fukushima nuclear accident (March 11, 2011) caused the widespread contamination of Japan by direct deposition of airborne radionuclides. Analysis of weekly air filters has revealed sporadic releases of radionuclides long after the Fukushima Daiichi reactors were stabilized. One major discharge was observed in August 2013 in monitoring stations north of the Fukushima Daiichi nuclear power plant (FDNPP). During this event, an air monitoring station in this previously scarcely contaminated area suddenly reported ^{137}Cs activity levels that were 30-fold above the background. Together with atmospheric dispersion and deposition simulation, radionuclide analysis in soil indicated that debris removal operations conducted on the FDNPP site on August 19, 2013 are likely to be responsible for this late release of radionuclides. One soil sample in the center of the simulated plume exhibited a high ^{90}Sr contamination (78 ± 8 Bq kg^{-1}) as well as a high ^{90}Sr/^{137}Cs ratio (0.04); both phenomena have usually been observed only in very close vicinity around the FDNPP. We estimate that through the resuspension of highly contaminated particles in the course of these earthmoving operations, gross ^{137}Cs activity of ca. 2.8 × 10^{11} Bq has been released.

[...] In summary, **this study reveals significant intermittent releases of airborne radionuclides in August 2013, long after the initial releases caused by the Fukushima nuclear accident in spring 2011.** Increased activities were observed at the air filter station in Haramachi/Minamisoma in the week of August 15 to 22, 2013. Although the resuspension of deposited radionuclides has been identified as a potent source for transport of radioactive contaminants,(24, 25) we could show herein that in fact **the site of FDNPP is likely to be the source of one of the most pronounced sporadic releases since the accident**. Modeling confirms that debris removal actions taking place in this week are likely to have contaminated the area of Minamisoma that has had very low contamination levels previously. Total ^{137}Cs and plutonium deposition as well as ^{134}Cs/^{137}Cs activity ratios and ^{240}Pu/^{239}Pu isotopic ratios observed in

soil remain inconclusive to support the hypothesis. However, one extraordinary high contamination of soil with ^{90}Sr in the center of the simulated plume indicates the contamination of the location with dust particle stemming from the FDNPP site. The high non-uniformity of the contamination levels and $^{134}Cs/^{137}Cs$ signatures is most probably due to non-uniform deposition of radioactive particulate matter, causing high local fluctuations in the soil samples taken in the course of this study. **Our results indicate that a total of 2.8×10^{11} Bq ^{137}Cs has been released from the FDNPP site by resuspension in the course of the debris removal operations on August 19, 2013.** This release corresponds to approximately 1/50 000 of Fukushima's total atmospheric releases of ^{137}Cs (14.5 PBq).(33) **Finally, this study evidences that significant secondary releases of radionuclides by resuspension processes and eolian transport of contaminated particles are conceivable scenarios in the future. Most importantly, the ongoing decommissioning and dismantling activities of the crippled Fukushima reactors, thereby, pose an imminent health threat for future decades.** A resuspension of highly contaminated particles from the FDNPP site not only involves the risk of a massive radiocesium dispersion; these particles are likely to carry an even more hazardous load such as less volatile, bone-seeking ^{90}Sr or actinides (including plutonium).

February 3, 2016

Radioactive glass particles attached to leaves

Radioactive glass particles found in Fukushima

http://www3.nhk.or.jp/nhkworld/english/news/20160203_33.html

A group of researchers says glass particles containing radioactive material may have scattered around the Fukushima Daiichi plant at the time of the 2011 nuclear accident.

The group is led by Noriko Yamaguchi, a senior researcher at the National Institute for Agro-Environmental Sciences, and University of Tokyo Graduate School Associate Professor Toshihiro Kogure.

It collected and analyzed minute radioactive particles attached to leaves in the mountain forests of Kawauchi Village near the plant. The tiny particles had a diameter of several micrometers.

The analysis shows the main component of the particles is glass. The particles also contain zinc, iron and radioactive cesium, which is not found in nature.

The researchers say the glass was originally contained in concrete located around the reactors, and it may have melted in the intense heat generated from the accident and taken in the cesium.

Past studies have found that radioactive particles were scattered at the time of the accident along with cesium in the form of gas. But details were not known about what such materials were and where they

came from.

Researcher Yamaguchi says her team wants to examine the amount and area of the scattered particles to clarify the mechanism of radioactive contamination and find an effective way for decontamination.

Forest too need decontaminating

Municipalities ask for forest decontamination

http://www3.nhk.or.jp/nhkworld/english/news/20160203_30.html

Representatives of municipalities surrounding the crippled Fukushima Daiichi nuclear power plant have asked the central government to clean even remote forest areas of radioactive fallout.

Officials from 8 municipalities made the request to Shinji Inoue, State Minister of Environment, in Tokyo on Wednesday.

The central government has limited radiation clean-up work to areas up to 20 meters outside each community. Campsites and other areas that people often visit are included, but the work does not cover other areas including most forests.

At the meeting, Seiichi Sasaki, chairperson of the assembly of Futaba Town, said the ministry's current plan discourages evacuees from his town from returning home. He asked the state minister to decontaminate even remote forest areas.

Inoue replied that his ministry is ready to expand the clean-up work to forests that are close to living areas. He recommended the municipalities discuss specific plans with the ministry officials.

He also indicated that the Environment Ministry will soon launch a joint taskforce with other government offices to consider plans to regenerate forests in remote areas.

February 10, 2016

NRA calls for more monitoring of radiation...

More radiation monitoring in evacuation areas

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Japan's Nuclear Regulation Authority is planning to step up radiation monitoring in evacuation zones caused by the Fukushima Daiichi accident. This is part of efforts to help residents return to the areas after

radiation levels drop.

In the wake of the 2011 accident the NRA now has about 3,000 radiation monitoring posts across Fukushima Prefecture.

The new policy was disclosed at its meeting on Wednesday.

It calls for setting up more monitoring posts in zones where evacuation orders have already been lifted or will be lifted in future.

The regulator says more information on radiation would promote the residents returning to the areas or be helpful for those who are considering returning.

The NRA plans to reduce the number of monitoring posts in other areas.

As for areas which received the highest doses of radioactive fallout from the crisis, it plans to introduce mobile monitoring facilities.

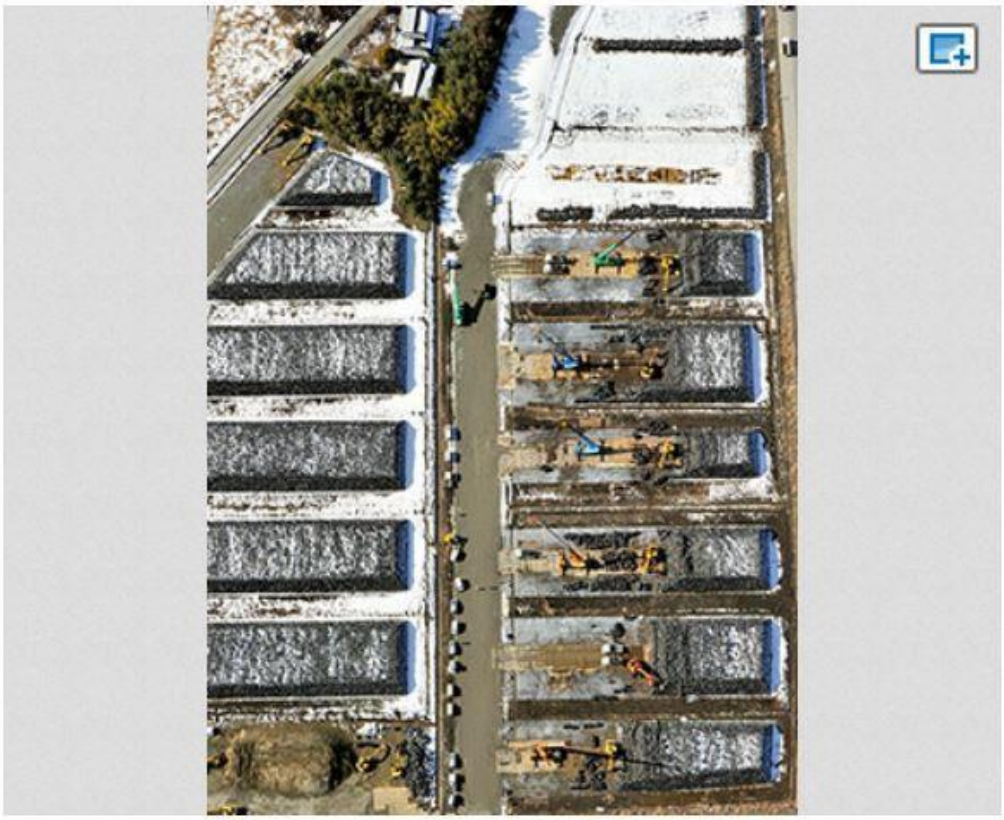
The regulator says it will finalize detailed plans after hearing from local governments and related central-government's ministries.

Chairman Shunichi Tanaka said there has been some lack of monitoring in some high-radiation zones. He notes he wants to focus on such areas because decontamination work may be changing the radiation levels in these places.

He also said he believes the state is responsible for creating an environment where people can return.

February 14, 2016

Very little progress made on interim storage



Thousands of bags containing soil contaminated with radioactive materials lie out in the open in Tomioka, Fukushima Prefecture. (Satoru Semba)

Little progress made in securing land for interim storage facilities for radioactive soil

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201602140022

With thousands of bags of radioactive soil piling up, less than 1 percent of the land needed for interim storage facilities in Fukushima Prefecture has been acquired even a year after the project started.
The mountain of paperwork in finalizing the real estate transactions and insufficient manpower are the main factors behind the slow progress.
That, in turn, could affect plans to have Fukushima residents return to their homes after evacuation orders are lifted.
Because the interim storage facilities have not yet been completed, thousands of bags of contaminated soil are stacked up in the open in parts of Fukushima. Until those bags are moved to the interim storage facilities, local residents may not be willing to return because of the high radiation levels being emitted from the contaminated soil.
The Environment Ministry and local governments in Fukushima Prefecture are continuing with work to remove soil contaminated with radioactive materials. As of the end of September 2015, a total of about 9 million cubic meters of such contaminated waste were being temporarily stored in about 115,000 locations around Fukushima. Government officials estimate that a total of 22 million cubic meters of contaminated soil will eventually be collected.

That soil will all be moved to the interim storage facilities to be constructed in the Fukushima towns of Okuma and Futaba where the Fukushima No. 1 nuclear power plant is located. Total land of about 16 square kilometers will be acquired for the interim storage facilities.
Plans call for leaving the contaminated soil at the interim facilities for a maximum of 30 years before processing it somewhere outside of Fukushima Prefecture.
Land registration records contain the names of 2,365 individuals as owners of the land and buildings where the interim storage facilities will be constructed. However, as of the end of January, Environment Ministry officials have signed contracts with 44 landowners, or just 2 percent of the total. In terms of land, those contracts only covered about 0.15 square kilometer, which does not even total 1 percent of the total land that needs to be acquired.
Environment Ministry officials are trying to push ahead with appraising the land, but they face a mountain of problems as well as other issues unique to the Fukushima situation. In terms of land, about 10 percent is owned by individuals whom ministry officials have been unable to contact.
But in terms of the names on the land records, ministry officials have been unable to contact about 990 individuals, or about 40 percent of the total. Some of the people on the land records may be deceased, meaning that those with inheritance claims could run into the thousands.
Moreover, the lack of land appraisers with background about the Fukushima situation has meant that negotiations often have taken longer than expected. Some landowners also are hesitant about selling off land that has been in the family for generations, even if there are no prospects of returning to the family plot anytime soon because of the high radiation levels in the community.
In March 2015, the Environment Ministry began a trial project by leasing some of the projected land for the interim storage facilities and transporting in contaminated soil. Over 11 months, about 36,000 cubic meters of soil were hauled there, but that only represents about 0.2 percent of the expected total.
Environment Ministry officials are unable to put together a specific plan for full-scale transporting of the contaminated soil to the interim storage facilities because in fiscal 2016 only about 1 percent of the total land needed for the interim storage facilities will likely be acquired.
(This article was written by Yu Kotsubo and Yoshitaka Ito.)

February 17, 2016

Radioactivity in Miyagi has decreased

Levels of radioactive materials in Miyagi Pref. waste down to 1/3 of previous figures

http://mainichi.jp/english/articles/20160217/p2a/00m/0na/021000c

Follow-up readings of designated waste in Miyagi Prefecture, which includes radioactive materials from the Fukushima No. 1 Nuclear Power Plant disaster, showed that the amount of waste that exceeded existing standards for the concentration of radioactive materials had decreased to about one-third of the previous figure, the Ministry of the Environment said on Feb. 17.

Shinji Inoue, state minister of the environment, relayed the news to Miyagi Gov. Yoshihiro Murai at the Miyagi Prefectural Government office. It is expected that there will be a resulting impact upon the plan for disposal sites for the waste within the prefecture, which is an issue that has run into difficulties.
State Minister Inoue commented, "It will be ideal if we can concentrate (the waste) at one single location within the prefecture." He indicated that three municipalities within the prefecture are being considered as possible candidate sites for construction (of the waste facility).
Designated waste is waste whose radiation levels exceed 8,000 becquerels per kilogram, and includes tainted rice straw. Some 3,404 metric tons of such waste is presently being temporarily stored within the prefecture on farmers' properties and other locations.
The follow-up measurements, which were conducted between August of last year and January of this year, revealed that the total amount of the waste whose radiation levels exceeded the existing standards had fallen to a total of 1,090 tons.
It is thought that the reduction is due to factors including the natural attenuation that has occurred along with the passage of time since the nuclear disaster.
The environment ministry announced this month that in cases where the concentration of radioactive substances within waste materials has decreased to a level below that of existing standards, such waste would be removed from the category of designated waste.
While the national government is responsible for the disposal of designated waste materials, it is possible for municipalities to dispose of the materials as regular waste once this designation has been lifted.

Amount of radioactive waste decreasing

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Experts say the concentration of radioactivity in waste from the 2011 Fukushima Daiichi accident will continue to drop significantly in Miyagi Prefecture, northeastern Japan.

State Minister of Environment Shinji Inoue conveyed the estimate to Miyagi Governor Yoshihiro Murai on Wednesday.

Inoue said the latest measurement shows that temporary storage sites in the prefecture hold 1,090 tons of waste contaminated with radioactive materials exceeding 8,000 becquerels per kilogram. The waste includes soil and rice straw.

The amount has decreased over time. It is about one-third of the initial amount of 3,404 tons.

An expert estimate sponsored by the Environment Ministry says the amount will drop to 252 tons in 2 years and to 38 tons in 20 years, about 1 percent of the initial figure.

The ministry says waste below the 8,000-becquerel-per-kilogram level can be treated as ordinary waste.

The estimate may affect the central government's plan to build a disposal site for contaminated waste in the prefecture.

The prefectural government plans to discuss the matter with municipalities by the end of March.

February 20, 2016

Abandon the idea of removing all fuel debris from reactors?

NRA commissioner suggests plan to remove all fuel debris at Fukushima plant may not be best option

http://www.japantimes.co.jp/news/2016/02/20/national/nra-commissioner-suggests-plan-remove-fuel-debris-fukushima-plant-may-not-best-option/#.VsgqxOaDmot

Kyodo
FUKUSHIMA – A Nuclear Regulation Authority commissioner has suggested that **removing all fuel debris from reactors at the meltdown-hit Fukushima No. 1 nuclear power plant may not be the best option.**
"I wonder if the situation would be desired that work is still underway to extract fuel debris 70 or 80 years after" the nuclear disaster, NRA Commissioner Toyoshi Fuketa told reporters Friday.
"There are a variety of options, including **removing as much fuel debris as possible and solidifying the rest**," he added.
Fuketa and another NRA commissioner, Satoru Tanaka, visited the complex Friday, the last of the commissioners to do so ahead of the fifth anniversary of the March 11, 2011, earthquake and tsunami that triggered to the triple meltdowns at the atomic plant.
His remarks could affect the decommissioning plan drafted by the government and the plant's operator, Tokyo Electric Power Co. Under that scenario, fuel debris is to be disposed of over the course of 30 to 40 years.
Fuketa said that unlike the disaster at the Chernobyl nuclear power plant, it is "not realistic" to construct concrete buildings to cover reactors at the Fukushima No. 1 plant because the situation is different.
The commissioner also questioned whether construction of an underground ice wall around the reactor buildings to prevent radioactive water buildup will prove effective.

February 26, 2016

Radiation contamination of marine life off Fukushima

Five years on, Greenpeace assessing marine contamination off Fukushima

http://www.japantimes.co.jp/news/2016/02/26/national/five-years-greenpeace-assessing-marine-contamination-off-fukushima/#.VtBNW-aDmov

Greenpeace researchers gather samples Monday on a chartered fishing boat some 20 km south of the Fukushima No. 1 nuclear power plant. | AFP-JIJI

by Harumi Ozawa and Quentin Tyberghien

AFP-JIJI

ONAHAMA, FUKUSHIMA PREF. – Fish market vendor Satoshi Nakano thinks he knows which fish caught in the radiation-tainted sea off the Fukushima coast should be kept away from dinner tables.

Yet five years after the worst nuclear accident since Chernobyl there is still no consensus on the true extent of the damage — exacerbating consumer fears about what is safe to eat.

Environmentalists are at odds with authorities, warning that the huge amounts of radiation that seeped into coastal waters after the disaster in 2011 could cause problems for decades.

The government is confident it has stemmed the flow of radioactive water, but campaigners insist contaminated ground water has continued to seep into the Pacific Ocean, and the situation needs further investigation.

"It was the single largest release of radioactivity to the marine environment in history," Greenpeace nuclear expert Shaun Burnie said, speaking aboard the campaign group's Rainbow Warrior ship, which has sailed in to support a three-week marine survey of the area the environmental watchdog is conducting.

Fukushima is facing an "enormous nuclear water crisis," Burnie said.

"The whole idea that this accident happened five years ago and that Fukushima and Japan have moved on is completely wrong."

Fishermen are banned from operating only within 20 kilometers of the plant.
Although there are no figures for attitudes on seafood alone, the latest official survey by the government's Consumer Affairs Agency showed in September that more than 17 percent of Japanese are reluctant to eat food from Fukushima.
Nakano knows it is best for business to consider carefully the type of seafood he sells, in the hope it will quell consumer fears.
"High levels of radioactivity are usually detected in fish that move little and stick to the seabed. I am not an expert, but I think those kinds of fish suck up the dirt of the ocean floor," he said in his coastal hometown of Onahama.
Greenpeace is surveying waters near the Fukushima plant, dredging up sediment from the ocean floor to check both for radiation hot spots as well as places that are not contaminated.
On Monday, the Rainbow Warrior sailed within 1.6 kilometers of the Fukushima coast as part of the project — the third such test it has conducted, but the closest to the plant since the nuclear accident.
Researchers Tuesday sent down a remote-controlled vehicle attached with a camera and scoop in order to take samples from the seabed, which will then be analyzed in independent laboratories in Japan and France.
"It's very important (to see) where is more contaminated and where is less or even almost not contaminated," Greenpeace's Jan Vande Putte said, stressing the importance of such findings for the fishing industry.
Local fishermen have put coastal catches on the market after thorough testing, which includes placing certain specimens seen as high risk through radiation screening — a program Greenpeace lauds as one of the most advanced in the world.
The tests make sure no fish containing more than half of the government safety standard for radiation goes onto the market.
The 2011 disaster was caused by a magnitude-9.0 earthquake off Japan's northeastern coast, which sparked a massive tsunami that swamped cooling systems and triggered reactor meltdowns at the Fukushima No. 1 plant, run by operator Tokyo Electric Power Co.
Today, about 1,000 huge tanks for storing contaminated water occupy large parts of the site, but as 400 tons of groundwater a day flows into the damaged reactor buildings, many more will be needed.
Tepco's measures to reduce the water influx include building an underground wall, freezing the land itself and siphoning underground water.
The government, too, insists the situation is under control.
"The impact of the contaminated water is completely contained inside the port of the Fukushima plant," Tsuyoshi Takagi, the Cabinet minister in charge of disaster reconstruction, told reporters on Tuesday.
But Greenpeace's Burnie says stopping the groundwater flow is crucial to protecting the region.
"What impact is this having on the local ecology and the marine life, which is going on over years, decades?" Burnie asked.
"We can come back in 50 years and still be talking about radiological problems" at the nuclear plant as well as along the coast, he said.

AFP-JIJI
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"We can come back in 50 years and still be talking about radiological problems" at the nuclear plant as well as along the coast, he said.

March 5, 2016

Environment minister visits Miyagi Pref.

Marukawa visits radioactive waste storage site

http://www3.nhk.or.jp/nhkworld/en/news/20160305_23/

Environment Minister Tamayo Marukawa has pledged to speed up the process of disposing of radioactive waste from the 2011 Fukushima nuclear accident.

Marukawa visited a water purification plant in Iwanuma City in Miyagi Prefecture, northeastern Japan, on Saturday ahead of the 5th anniversary of the nuclear accident. The plant is now being used as a temporary storage site for waste contaminated with radioactive materials. More than 450 tons of sludge is being stored in greenhouses.

Miyagi Governor Yoshihiro Murai told Marukawa that the prolonged storage of radioactive waste has left local residents concerned. He also said it is necessary to address the deterioration of some of the greenhouses.
The governor asked the Environment Minister to exercise strong political leadership in dealing with the waste disposal issue despite objections.

Marukawa said the government will fulfill its responsibility.

After the inspection, she told reporters that she had seen radioactive waste stored near residences and that she felt the need to dispose of the waste as soon as possible.

The government plans to build new radioactive waste disposal facilities in the prefectures of Miyagi, Tochigi, Chiba and Gunma. But it faces strong local opposition.

Only the government of Ibaraki Prefecture has agreed to store the waste at existing facilities.

March 6, 2016

Decontamination far from over

Decontamination to take another year

http://www3.nhk.or.jp/nhkworld/en/news/20160306_19/

see short video on decontamination efforts

The task of cleaning up radioactive substances from the 2011 Fukushima nuclear accident is still continuing in more than one-third of the affected municipalities.

In Fukushima Prefecture, the work has only been completed in 14 out of the 43 communities.

Of the 58 municipalities in 7 other prefectures, decontamination has been completed or almost finished in 50.

The clean-up is not expected to be fully completed until March next year at the earliest.

The Environment Ministry says the work has been delayed by the time needed to secure temporary storage space, but it is trying to speed up the process by hiring more workers.

Decontamination work continuing in 4 prefectures
http://www3.nhk.or.jp/nhkworld/en/news/20160306_15/

Decontamination work outside the Fukushima Daiichi plant in the aftermath of the 2011 disaster is continuing in 37 municipalities in 4 prefectures.

In Fukushima Prefecture, the task has been completed in 6 of the 11 municipalities in the evacuation zone, and in 11 of the 36 outside the evacuation zone.

It is expected that the decontamination work in all Fukushima municipalities will be completed by next March at the earliest.

Of the 58 municipalities in 7 other prefectures where decontamination has been carried out, the work has been completed or almost finished in 50.

It is hoped that the decontamination work in the remaining 8 municipalities can be completed by next March.

The Environment Ministry says the decontamination has been delayed by the time needed to secure temporary storage space, but it is trying to accelerate the process by hiring more workers.

March 13, 2016

Over 3 000 tons "undesignated" radioactive waste

Survey: 3,000 tons of radioactive waste unreported

http://www3.nhk.or.jp/nhkworld/en/news/20160313_14/

An NHK survey has found that at least 3,000 tons of undesignated radioactive waste from the 2011 Fukushima nuclear accident is being kept in 30 municipalities in 7 prefectures.

Local governments and farmers have not reported that they are storing the waste, as they are **worried about false rumors.**

The government designates, stores and disposes of rice straw and soil that are contaminated with more than 8,000 becquerels of radioactive materials per kilogram.

However, it is up to municipalities and farmers whether to apply for the designation.

NHK surveyed more than 500 municipalities in eastern Japan and found that **3,114 tons of this type of waste is being kept in 30 municipalities in 7 prefectures, including Fukushima and Tokyo, without being designated.**

Some local governments said they did not report that they were storing the waste because they are worried about false rumors.

Others said they would still have to keep the waste if it is designated, as the construction of disposal facilities is facing difficulties.

The government plans to investigate the actual situation of undesignated waste, and consider methods of disposal.

March 21, 2016

TEPCO starts burning contaminated waste

Incineration of radioactive waste begins at Fukushima nuclear plant

http://mainichi.jp/english/articles/20160321/p2a/00m/0na/004000c

Tokyo Electric Power Co. (TEPCO) has begun incinerating radioactively contaminated clothing and other waste on the grounds of the disaster-hit Fukushima No. 1 Nuclear Power Plant in an effort to reduce the volume of waste.

A three-story incineration facility has been built on the north side of the plant grounds. Every day around 7,000 people work at the Fukushima plant, creating a massive amount of waste in the form of used radiation suits, gloves and boots. Pre-disaster incineration equipment was destroyed by the March 2011 Great East Japan Earthquake and tsunami, which led to the construction of the new facility.

As of the end of last year some 70,000 metric tons of this kind of waste was being held in storage containers. TEPCO estimates that by the year 2028, 358,000 tons of such waste will have been produced, but claims it can reduce the volume of the waste to as little as about one-fiftieth of its original size by incinerating it.

Radioactive materials contained in the smoke from the incinerator will be removed by filters on the exhaust pipes. The resulting ash will be sealed in specialized barrels, and TEPCO says there will be little danger from radioactive exposure.

However, in addition to the aforementioned waste there were, as of July last year, around 83,000 tons of lumber from trees cut down to make way for tanks storing contaminated water and 155,000 tons of other waste such as power plant debris from the hydrogen explosions that occurred there. These additional kinds of waste are expected to grow to 695,000 tons by 2028, and will not be processed at the incineration facility.

While TEPCO plans to construct facilities to burn this lumber and to break down debris in the future, these are not expected to all be operational until around fiscal 2020.

March 22, 2016

New incinerator at Fukushima Daiichi

Fukushima Daiichi waste incinerator starts up

http://www.world-nuclear-news.org/WR-Fukushima-Daiichi-waste-incinerator-starts-up-2203164.html

A facility for incinerating miscellaneous solid low-level waste has begun operating at the damaged Fukushima Daiichi nuclear power plant in Japan. The incinerator will be used for disposing of items such as used protective clothing and construction waste.

The miscellaneous solid waste incineration facility houses two incineration lines, each comprising a rotary kiln incineration system and a series of exhaust filters. The two lines share a common exhaust stack. Ash generated in the incinerators is stored in sealed drums for final disposal. Each incineration line has the capacity to process 300 kilograms of waste per hour. The facility can operate around the clock.
Construction of the facility began in May 2013 and was completed last November. It was built by Kobelco, part of Kobe Steel Group, under contract from Tokyo Electric Power Company (Tepco). Cold testing of the facility - in which non-contaminated waste was burned - was carried out between 25 November and the end of December. This was followed last month by hot testing - in which actual contaminated waste was incinerated.
Tepco announced today that the facility had now started full operation.
It is designed to burn solid wastes such as used personal protective equipment (including gloves and overalls), construction materials (rags, wood, packing materials, paper, etc), as well as waste oil and spent resins.
Tepco said, "The waste materials can't be taken off the site, so incinerating it and then storing the ash in sealed containers has been found to be the safest and most efficient way to reduce its volume." It noted that the facility was fitted with filters to prevent the dispersal of radioactivity in the air. "The amount of radioactive materials in the exhaust gas will be measured on a regular basis to prevent any impact on the surrounding environment," the company said.
The facility is intended to reduce the volume of the radioactive waste "to one several tenth or less", Tepco said.
Three existing low-level waste incinerators on the Fukushima Daiichi site - with a combined capacity of handling over eight tonnes of waste per day - are not in operation as they are now being used to store and process radioactive water instead.
Researched and written
by World Nuclear News

March 25, 2016

Nuclear waste: Seeing locals' understanding

NRA chief seeks Fukushima waste understanding

http://www3.nhk.or.jp/nhkworld/en/news/20160325_14/

The head of Japan's nuclear watchdog has stressed the need to gain the understanding of local residents about the nuclear waste created by the 2011 accident at the Fukushima Daiichi plant long before it is decided where it will be stored. He says the waste may end up remaining at the plant's compound for a long time.

Nuclear Regulation Authority Chairman Shunichi Tanaka spoke to NHK this month, 5 years after the

nuclear disaster.

The Japanese government and Tokyo Electric Power Company say they will start removing the melted fuel from the plant's 3 reactors in 2021. But its future storage sites and final destinations have yet to be decided.

Tanaka said it is easy to demand that the melted fuel and other nuclear waste be transferred to other places, but this is not realistic. He said he thinks the only possible way is to store the waste at the plant in a stable manner until it is decided where it is to end up.

Tanaka referred to the need to gain the understanding of local people about the reactors' decommissioning and to deal with them sincerely.

TEPCO officials have said that locations and methods to store the melted fuel will be decided after it is removed from the reactors, and that they want to consult with the central government on the matter.

They said the utility wants to proceed with the decommissioning while providing the local people with detailed explanations to win their understanding.

March 28, 2016

Govt's plan for storing contaminated waste

Interim storage of contaminated nuclear materials

http://www3.nhk.or.jp/nhkworld/en/news/20160328_16/

The environment minister has revealed the ministry's outlook for finding a place to store contaminated soil and other materials from the 2011 Fukushima Daiichi nuclear accident.

Tamayo Marukawa attended at a meeting on Sunday to discuss plans for rebuilding Fukushima.

The government plans to build intermediate storage facilities on a 16-square-kilometer area straddling the towns of Futaba and Okuma and will transfer up to 22 million cubic meters of tainted materials there.

Marukawa said she expects that over the next 5 years, the government will be able to secure up to 11.5 square kilometers of land for the storage facilities in Fukushima Prefecture.

She also said that up to 1.25 million cubic meters of contaminated materials, or 20 to 60 percent of the total in the prefecture, can be transferred to the facilities for the 5-year period.

Marukawa said that if this is realized, most of the contaminated materials currently piled up in residential areas, including private yards and schools, would be removed.

So far, only 82 out of about 2,300 landowners have signed contracts with the government, and only about 1 percent of the land has been secured.

Marukawa later told reporters that the government will soon calculate the amount of compensation for the landowners, and that it will make efforts to gain the understanding of local residents.

Environment Ministry presents contaminated waste disposal plan for Fukushima

http://mainichi.jp/english/articles/20160328/p2a/00m/0na/011000c

FUKUSHIMA -- The Ministry of the Environment announced on March 27 that the government expects to acquire up to 70 percent of land for interim storage facilities for waste contaminated with radioactive materials emanating from the Fukushima nuclear crisis and bring up to 40 percent of contaminated soil into such facilities by the end of fiscal 2020.

The ministry has a rough road ahead, however, since **as of March 25 it had only acquired about 1.3 percent of the land needed to build storage facilities straddling the Fukushima Prefecture towns of Okuma and Futaba,** and it also faces serious challenges in negotiations with landowners.
On a total of 1,600 hectares of land, the interim storage facilities will be equipped with disposal sites for contaminated soil and other materials, as well as incinerators to reduce the volume of contaminated waste derived from decontamination work around the Fukushima No. 1 Nuclear Power Plant. Delivering of the waste began in March 2015 as a pilot project and it will be stored at the site up to 30 years.
The Environment Ministry presented the projection at a meeting held in the city of Fukushima on March 27. It announced the plan to secure 640-1,150 hectares, or 40-70 percent of the areas for the interim storage sites, by the end of fiscal 2020. A ministry official explained how it calculated the figures, saying that the ministry has already contacted 1,240 landowners by visiting their homes and "there is a feeling" that they will cooperate with the ministry's plan.
Up to 28 million cubic meters of waste contaminated with radiation that is currently stored across Fukushima Prefecture is planned to be brought to the storage sites, and the ministry expects to deliver 5 million to 12.5 million cubic meters of that to the facilities by the end of fiscal 2020. Environment Minister Tamayo Marukawa told a March 27 news conference in the city of Fukushima that the ministry plans to remove contaminated soil stored at schools and residential areas first, adding, "We've allowed a wide range in the projected figures (as negotiations with landowners are underway)."
Meanwhile, Toshitsuna Watanabe, mayor of the town of Okuma where an interim storage facility is planned to be built, expressed appreciation for the figures presented by the ministry to some extent, saying, "Though it appears to be a rough projection, I recognize that they at least presented the target figures." He added, "With no goals presented before this, local residents were beginning to suspect the central government's willingness (to put efforts in the storage project). We hope the ministry undertakes the task to reach those targets."

A 61-year-old landowner who has evacuated from Okuma to the Fukushima Prefecture city of Iwaki questioned the ministry's plan, saying that 40-70 percent of land acquisition in five years is "too slow." "I have decided to sell the land, but the government hasn't yet shown me the amount of compensation payment," the man said.
The village of Iitate, currently under radiation evacuation orders, is working toward the lifting of the evacuation orders by the end of March 2017, excluding areas that are designated as "difficult-to-return" zones with high levels of radiation. Iitate Mayor Norio Kanno says, "According to the ministry's plan, contaminated waste might not be removed (from the village) for five more years. There are piles of bags filled with contaminated soil and they are preventing disaster recovery efforts," adding, "I want the ministry to speed up the land acquisition process."

March 30, 2016

Recycling radioactive waste...

Govt. plans to recycle decontaminated waste

http://www3.nhk.or.jp/nhkworld/en/news/20160330_24/

Japan's Environment Ministry says waste from decontamination efforts in Fukushima Prefecture can be recycled into construction material if its radiation level becomes low enough.

The government plans to put contaminated soil and other waste into intermediate storage facilities, and dispose of it outside the prefecture within 30 years.

Environment Ministry officials said at a meeting of experts on Wednesday that waste whose level of radioactive material falls below 8,000 becquerels per kilogram can be used for roads, seawalls and other public works.

They said more than 90 percent of waste can be recycled if radioactive material is removed.

But no established technology for such processing exists, and the procedure is costly.

The ministry plans to decide on the amount to be recycled and the cost in fiscal 2025 or later.

State Minister for the Environment Shinji Inoue said recycling would help shorten the intermediate storage period and ease the burden of final disposal. He vowed to seek public support for the plan.

April 12, 2016

Tritium: To dump or not to dump?

Japan weighs release of tritium from Fukushima plant into sea

http://www.asahi.com/ajw/articles/AJ201604120059.html

THE ASSOCIATED PRESS

To dump or not to dump a little-discussed substance is the question brewing in Japan as it grapples with the aftermath of the nuclear catastrophe in Fukushima five years ago. The substance is tritium.

The radioactive material is nearly impossible to remove from the huge quantities of water used to cool melted-down reactors at the Fukushima No. 1 nuclear power plant, which was wrecked by the massive tsunami in northeastern Japan in March 2011.

The water is still accumulating since 300 tons are needed every day to keep the reactors chilled. Some is leaking into the ocean.

Huge tanks lined up around the plant, at last count 1,000 of them, each hold hundreds of tons of water that have been cleansed of radioactive cesium and strontium but not of tritium.

Ridding water of tritium has been carried out in laboratories. But it's an effort that would be extremely costly at the scale required for the Fukushima plant, which sits on the Pacific coast. Many scientists argue it isn't worth it and say the risks of dumping the tritium-laced water into the sea are minimal.

Their calls to simply release the water into the Pacific Ocean are alarming many in Japan and elsewhere.

Rosa Yang, a nuclear expert at the Electric Power Research Institute, based in Palo Alto, California, who advises Japan on decommissioning reactors, believes the public angst is uncalled for. She says a Japanese government official should simply get up in public and drink water from one of the tanks to convince people it's safe.

But the line between safe and unsafe radiation is murky, and children are more susceptible to radiation-linked illness. Tritium goes directly into soft tissues and organs of the human body, potentially increasing the risks of cancer and other sicknesses.

"Any exposure to tritium radiation could pose some health risk. This risk increases with prolonged exposure, and health risks include increased occurrence of cancer," said Robert Daguillard, a spokesman for the U.S. Environmental Protection Agency.

The agency is trying to minimize the tritium from U.S. nuclear facilities that escapes into drinking water.

Right after the March 2011 disaster, many in Japan panicked, some even moving overseas although they lived hundreds of kilometers away from the Fukushima no-go zone. By now, concern has settled to the extent that some worry the lessons from the disaster are being forgotten.

Tritium may be the least of Japan's worries. Much hazardous work remains to keep the plant stabilized, and new technology is needed for decommissioning the plant's reactors and containing massive radioactive contamination.

The ranks of Japan's anti-nuclear activists have been growing since the March 2011 accident, and many oppose releasing water with tritium into the sea. They argue that even if tritium's radiation is weaker than strontium or cesium, it should be removed, and that good methods should be devised to do that.
Japan's fisheries organization has repeatedly expressed concerns over the issue. News of a release of the water could devastate local fisheries just as communities in northeastern Japan struggle to recover from the 2011 disasters.
An isotope of hydrogen, or radioactive hydrogen, tritium exists in water form, and so like water can evaporate, although it is not known how much tritium escaped into the atmosphere from Fukushima as gas from explosions.
The amount of tritium in the contaminated water stored at Fukushima No. 1 is estimated at 3.4 peta becquerels, or 34 with a mind-boggling 14 zeros after it.
But theoretically collected in one place, it would amount to just 57 milliliters, or about the amount of liquid in a couple of espresso cups--a minuscule quantity in the overall masses of water.
To illustrate that point, Shunichi Tanaka, chairman of the Nuclear Regulation Authority, showed reporters a small bottle half-filled with blue water that was the equivalent of 57 milliliters.
Public distrust is running so high after the Fukushima accident that Tokyo Electric Power Co., or TEPCO, the utility that operates the Fukushima plant and oversees its decommissioning, has mostly kept quiet about the tritium, pending a political decision on releasing the water.
Privately, they say it will have to be released, but they can't say that outright.
What will be released from Fukushima will be well below the global standard allowed for tritium in the water, say Tanaka and others favoring its release, which is likely to come gradually later this year, not all at once.
Proponents of releasing the tritium water argue that tritium already is in the natural environment, coming from the sun and from water containing tritium that is routinely released at nuclear plants around the world.
"Tritium is so weak in its radioactivity it won't penetrate plastic wrapping," said Tanaka.

April 27, 2016

Final disposal in Genkai?

Genkai mayor ready to accept final disposal facility for nuclear waste

http://mainichi.jp/english/articles/20160427/p2a/00m/0na/014000c

Hideo Kishimoto, the mayor of Genkai, Saga Prefecture, that hosts Kyushu Electric Power Co.'s Genkai Nuclear Power Plant, told the Mainichi Shimbun on April 26 that he was willing to accept a government plan to build a final disposal facility for highly radioactive nuclear waste in his town.

The central government is planning to show a location deemed proper for a final disposal site as early as the end of this year. Genkai Mayor Kishimoto said in an interview with the Mainichi, "If the town is shown as a proper place, I would like to hold a briefing session for townspeople and hold talks with the state."
In 2007, the mayor of the Kochi Prefecture town of Toyo applied for a candidate site for a final disposal facility, but his proposal failed to get off the ground due to opposition. No local governments or heads of municipalities have since openly expressed their positive stance toward hosting a final disposal site. Therefore, the remarks by Genkai Mayor Kishimoto are certain to spark controversy.
On the occasion of the first anniversary on April 27 of the decommissioning of the Genkai No. 1 nuclear reactor, Mayor Kishimoto spoke to the Mainichi over two interviews on April 21 and 26, clearly stating that accepting a final disposal facility would be "one of the options."
In a questionnaire survey conducted by the Mainichi in July 2015 of municipalities hosting nuclear plants across the country, the Genkai Municipal Government replied that it would "turn down" if it was asked by the central government to accept a final disposal facility in the town. Regarding this, Kishimoto said, "We were thinking that there was no land to build a disposal site on." He added, however, that partly because a working group of the Economy, Trade and Industry Ministry showed a method on April 19 of burying a final disposal facility beneath the ocean floor in a coastal area, he changed his way of thinking. "I became positive. I think it is technically possible."
Kishimoto also said that he has become positive toward accepting a final disposal facility partly because of revenue cuts being caused by reduced subsidies and property tax revenue stemming from the decommissioning of the Genkai No. 1 nuclear reactor. He also said that Genkai registered only 2 to 3 on the Japanese intensity scale of 7 when two earthquakes measuring 7 on the intensity scale hit parts of Kumamoto Prefecture.
Some Genkai citizens were puzzled by Kishimoto's unexpected remarks. Kido Chushu, 86, who is involved in anti-nuclear activities in Genkai, said, "Can they take responsibility in the future as this is an issue that involves 100 and 200 years from now?"
Akira Fujiura, a 79-year-old Genkai Municipal Assembly member from the Japanese Communist Party, said, "We must never allow them (to build a final disposal facility). The final disposal of nuclear waste is not an issue just for 10 or 100 years."

May 6, 2016

Coalition measures radioactive contamination of soil

30 groups show radioactive soil levels to address Fukushima fears

http://www.asahi.com/ajw/articles/AJ201605060006.html

By MASAKAZU HONDA/ Staff Writer
A coalition of 30 private groups is digging deeper into radiation contamination from the 2011 Fukushima nuclear disaster to address persistent concerns from the public around Japan.

The coalition's website, titled the East Japan Soil Measurement Project, shows radiation levels in soil samples taken from more than 1,900 sites in Tokyo and 16 prefectures, from northeastern Japan to the Pacific side of the central Japan.
The project was started partly because parents were concerned that local governments were using only airborne radiation levels to determine if outdoor areas were safe for children.
While radioactive contamination in the air decreases as time passes, that is not necessarily the case with radioactive substances in the ground.
The group's survey of land contamination has found "hot spots," where levels are significantly higher than in the surrounding neighborhoods, five years after the disaster unfolded at the Fukushima No. 1 nuclear plant.
The radiation levels in some of those areas are comparable to those at nuclear reactor buildings and medical institutions that provide radiation therapy, where public access is restricted because annual radiation doses can exceed 5 millisieverts.
Three citizens groups, including the nonprofit organization Fukushima 30-Year Project, created the website after forming an extensive network of private entities in October last year.
The groups conduct the measurements in a unified manner. About 1,000 cubic centimeters of soil samples are taken by digging 5 cm deep in the ground in the shape of a 10-cm-by-20-cm block in residential areas and districts that ordinary citizens are allowed to enter.
Extreme anomalies in the radiation measurements are not posted on the site because the purpose of the project is to show average contamination in local communities.
"We want to prevent viewers from misunderstanding the pollution level of a given community just because of isolated cases of high numbers," said Hidetake Ishimaru, head of the coalition's secretariat. "Viewers can get tips on how to avoid risks in daily life by comparing figures that were measured in a standardized manner."
The highest reading so far was 135,000 becquerels of radioactive cesium detected in a forest near a home in the Hiso district of Iitate village, northwest of the embattled Fukushima No. 1 nuclear power plant.
The soil sample showed 111,028 becquerels of cesium-137 and 23,920 becquerels of cesium-134.
Radioactivity readings at many observation spots in Shizuoka Prefecture, which is far from the nuclear plant, were below the lowest detectable level.
But the survey this year still found sites in the Kanto region, south of the Tohoku region where the Fukushima plant is located, with readings exceeding 10,000 becquerels.
Save Child Iwate, a group in Iwate Prefecture, was the first of the 30 collaborating private organizations to take measurements in the soil.
Save Child Iwate started measuring radiation doses in the atmosphere and radioactivity in the soil throughout the prefecture in spring 2012. Many of the sites were at schools and parks. It has measured doses at 316 spots and publicized the results.
Kazuhiro Sugawara, a 39-year-old staff member of Save Child Iwate's secretariat, said the group began measuring radioactivity in soil after local governments had insisted that it was safe to let children play outdoors.
Local officials cited low radiation doses in the air in their safety assurances.
But the group remained skeptical because the evacuation order for residents from the 1986 Chernobyl nuclear disaster was issued in part based on the extent of ground contamination.
Sugawara's daughter was 10 years old and attending an elementary school in Iwate Prefecture when the disaster started at the Fukushima nuclear plant. Like other parents in the area, Sugawara was most concerned about the safety of the children.

"We cannot feel safe without data on soil contamination because children play with earth, wipe the mouths with their dirty hands and inhale dirt blown up by wind, exposing themselves to the risk of internal radiation exposure," Sugawara said about why he undertook the project. "If local officials would not bother to measure soil contamination, we decided to do so on our own."
The highest land contamination figure Save Child Iwate recorded came from samples from private property in Kanegasaki in the prefecture in June 2012.
At that spot, the radiation level in the air was 0.24 microsieverts per hour, while radioactivity in the soil sample exceeded 4,500 becquerels.
The coalition accepts sample soils sent by concerned citizens for free measurements using funds provided by businesses and donations from the public.
It currently lacks sufficient data from Niigata, Tochigi and Gunma prefectures.
"Part of the reason we cannot enlist cooperation from groups in the three prefectures, where agriculture is thriving, is that they fear possible negative publicity," Ishimaru said.
The coalition plans to hold workshops for citizens around the nation on how to gather samples to broaden support for the endeavor.
Tetsuji Imanaka, a researcher with Kyoto University's Research Reactor Institute who has been monitoring land contamination in Fukushima Prefecture and elsewhere, stressed the importance of gaining data from soil.
"Since numbers on land contamination are basic data needed to study the scope of pollution in a given region, detailed surveys are necessary," he said. "Ideally, local officials should do the task. I am hoping that the coalition will play a significant role."

June 29, 2016

Lifting the designation as "radioactive" waste?

Chiba wants radioactive designation lifted from Fukushima-contaminated waste

http://www.japantimes.co.jp/news/2016/06/29/national/science-health/chiba-wants-radioactive-designation-lifted-fukushima-contaminated-waste/#.V3NqjKJdeot

JIJI
CHIBA – The Chiba Municipal Government on Tuesday filed for Environment Ministry approval to lift the designation as radioactive for waste stored in the city that was contaminated by the Fukushima reactor meltdowns five years ago.
This marked the first application in Japan seeking to lift the radioactive designation for waste tainted by the 2011 meltdowns at Tokyo Electric Power Co. Holdings Inc.'s Fukushima No.1 nuclear power plant.
The move came after the city found that levels of radioactive materials in the designated waste are lower than the national designation standards of over 8,000 becquerels per kilogram.
At present, designated radioactive waste generated by the nuclear disaster is stored in 12 prefectures in eastern Japan, including Tokyo.
The ministry plans to judge whether to lift the designation for waste in Chiba in about one month.

In Chiba, 7.7 tons of designated waste is currently stored at a waste disposal center.
The lifting of the designation will allow the city to dispose of the waste the same way as general waste, but the city plans to continue storing the waste for the time being.

June 7, 2016

Govt. sets criteria for recycling Fukushima waste

http://www3.nhk.or.jp/nhkworld/en/news/20160607_29/

The Environment Ministry has worked out a plan to recycle waste from the decontamination of areas affected by fallout from the Fukushima nuclear accident. The plan calls for using such waste as construction materials after radiation levels drop low enough.

The ministry adopted the draft plan at a meeting of experts in Tokyo on Tuesday. The draft is designed to help implement a government plan to transfer contaminated soil and other waste in Fukushima Prefecture to intermediate storage facilities, with its final disposal to be made outside Fukushima within 30 years.

The draft plan calls for using such waste to build roads, railways, seawalls and waste storage facilities. It says the radiation levels must be below 8,000 becquerels per kilogram.
To avoid leakage or radiation exposure, the plan requires the waste to be covered with soil or concrete that is at least 10 centimeters to more than 1 meter thick.

Conventional rules say waste from nuclear facilities can be recycled if the radiation level is 100 becquerels or lower. The ministry now says waste with higher radiation levels is usable only for public works that can be strictly managed.

The State Minister for the Environment, Shinji Inoue, says recycling of radioactive waste is different from final disposal. He said he will make efforts to help people understand the safety of recycling and push for such recycling nationwide, not just in and around Fukushima.

July 22, 2016

In Chiba radioactive is no longer radioactive...

Designation of radioactive waste to be lifted

http://www3.nhk.or.jp/nhkworld/en/news/20160721_30/

Japan's Environment Ministry plans to lift the designation of radioactive waste for some ash and sludge tainted by the Fukushima Daiichi nuclear accident.

The ministry says the radioactivity of the waste in Chiba City near Tokyo has dropped below the government-set level 5 years after the crisis.

The case is the first among municipalities storing radioactive waste from the accident's fallout.

Many municipalities, mostly in eastern Japan, store waste with radioactivity levels above the government-set level of 8,000 becquerels per kilogram. The waste includes ash from incineration plants, rice straw and sewage sludge.

More than 5 years after the crisis, the government decided to allow waste with radioactivity levels below the threshold to be dumped as ordinary waste.

At the end of June, Chiba City applied for the lifting of the designation for some 7 tons of waste in the city.

State Minister of the Environment Shinji Inoue is to meet Chiba City Mayor Toshihito Kumagai on Friday to formally announce the change.

Gov't to lift special designation on 7.7 tons of radioactive waste in Chiba

http://mainichi.jp/english/articles/20160722/p2a/00m/0na/021000c

The Environment Ministry will lift the designation of 7.7 metric tons of waste stored in the city of Chiba that is contaminated with radioactive materials from the crippled Fukushima No. 1 nuclear plant as "specified waste," allowing it to be disposed of as regular trash, ministry officials said.

- 【Related】Reuse of radioactive soil feared to trigger illegal dumping

The decision, which is to be executed on July 23, comes after the level of radioactive cesium in the waste dropped below the government's standard of 8,000 becquerels per kilogram. It will be the first time for the ministry to lift the "specified waste" designation from waste tainted with radioactive substances from the Fukushima nuclear disaster.

Though the move will enable waste to be disposed of as ordinary trash, the Chiba Municipal Government is likely to store the waste, as it fears that disposal would cause anxiety to local residents and disposal businesses.

State Minister of the Environment Shinji Inoue met with Chiba Mayor Toshihito Kumagai on July 22 to notify him of the decision.

The Chiba Municipal Government retains 3.5 tons of zeolite and 4.2 tons of incinerated ash at a waste disposal facility in the city's Mihama Ward. The amount of radioactive cesium contained in the waste was above the government-set standard as of March 2014. However, measurements conducted by the municipal government in June show that the radioactive cesium levels in the zeolite and ash had fallen to 6,100 becquerels and 4,020 becquerels per kilogram, respectively.

The Environment Ministry worked out rules this past April under which the designation of radioactively contaminated waste is lifted based on the level of radioactive cesium in the waste.
The city of Chiba asked the ministry to lift the designation in June.
The ministry intends to build a specified waste disposal facility in each prefecture, and the city of Chiba hosts one candidate site for Chiba Prefecture. The municipal government urged the lifting of the designation, partly to make it easier for the city to refuse to host such a facility, as it would be without the designated waste in the city.

July 21, 2016

"There is no return to normal after this nuclear catastrophe"

Radiation along Fukushima rivers up to 200 times higher than Pacific Ocean seabed - Greenpeace

http://www.greenpeace.org/japan/ja/news/press/2016/pr201607211/

Radioactive contamination in the seabed off the Fukushima coast is hundreds of times above pre-2011 levels, while contamination in local rivers is up to 200 times higher than ocean sediment, according to results from Greenpeace Japan survey work released today.
"The extremely high levels of radioactivity we found along the river systems highlights the enormity and longevity of both the environmental contamination and the public health risks resulting from the Fukushima disaster," said Ai Kashiwagi, Energy Campaigner at Greenpeace Japan.
"These river samples were taken in areas where the Abe government is stating it is safe for people to live. But the results show there is no return to normal after this nuclear catastrophe," said Kashiwagi.
Riverbank sediment samples taken along the Niida River in Minami Soma, measured as high as 29,800 Bq/kg for radiocaesium (Cs-134 and 137). The Niida samples were taken where there are no restrictions on people living, as were other river samples. At the estuary of the Abukuma River in Miyagi prefecture, which lies more than 90km north of the Fukushima Daiichi plant, levels measured in sediment samples were as high as 6,500 Bq/kg.
The lifting of evacuation orders in March 2017 for areas that remain highly contaminated is a looming human rights crisis and cannot be permitted to stand. The vast expanses of contaminated forests and freshwater systems will remain a perennial source of radioactivity for the foreseeable future, as these ecosystems cannot simply be decontaminated.
Caesium-137 has a half life of 30 years, and will continue to pose a risks to the the environment and human health for hundreds of years. Cs-137 contamination in seabed samples near the Fukushima plant was measured at up to 120 Bq/kg – compared to levels pre-2011 of 0.3 Bq/kg. Further, the levels of contamination found 60km south of the Fukushima Daiichi nuclear plant were comparable with those found within 4km of the plant. Numerous marine science investigations, have concluded that these higher levels are one explanation for some marine species still showing higher cesium levels than the background levels in seawater.

“The radiation levels in the sediment off the coast of Fukushima are low compared to land contamination, which is what we expected and consistent with other research,” said Kendra Ulrich, Senior Global Energy Campaigner at Greenpeace Japan. “The sheer size of the Pacific Ocean combined with powerful complex currents means the largest single release of radioactivity into the marine environment has led to the widespread dispersal of contamination.”

Most of the radioactivity in Fukushima Daiichi reactor units 1-3 core fuel in March 2011 remains at the site.

“The scientific community must receive all necessary support to continue their research into the impacts of this disaster,” said Ulrich.

“In addition to the ongoing contamination from forests and rivers, the vast amount of radioactivity onsite at the destroyed nuclear plant remains one of the greatest nuclear threats to Fukushima coastal communities and the Pacific Ocean. The hundreds of thousands of tonnes of highly contaminated water, the apparent failure of the ice wall to reduce groundwater contamination, and the unprecedented challenge of three molten reactor cores all add up to a nuclear crisis that is far from over,” said Ulrich.

A radiation survey team onboard the research vessel Asakaze, supported by the Greenpeace flagship Rainbow Warrior, conducted underwater survey work along the Fukushima coastline from 21 February to 11 March this year, as well collecting samples in river systems. The samples were measured at an independent laboratory in Tokyo.

Notes to editors:

Link to the report, Atomic Depths, can be found here

Photo and video clip reel can be accessed here

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August 5, 2016

Storage facilities & Government promises

Japan’s new environment minister pledges to build trust, contaminated waste storage facility in Fukushima

http://www.japantimes.co.jp/news/2016/08/05/national/japans-new-environment-minister-pledges-build-trust-contaminated-waste-storage-facility-fukushima/#.V6WC-KJdeos

by Kazuaki Nagata

Staff Writer

Newly appointed Environment Minister Koichi Yamamoto said Friday he will further efforts to build trust with people in Fukushima Prefecture to facilitate a stalled project to build a temporary nuclear storage facility.

The 2011 triple meltdown at the Fukushima No. 1 nuclear power plant has contaminated a large part of the prefecture while massive amounts of radioactive waste have been generated by decontamination work.

The government is planning to construct a huge temporary storage site near the Fukushima plant, but needs more than 2,300 landowners to agree to use their property for the project. So far it has only secured about 4.9 percent of the 1,600 hectares of land needed, owned by 234 people.

Although the government says it plans to store the waste for 30 years, no other areas have volunteered to host a final disposal site, leading many local residents to fear that the Fukushima site will end up being permanent.

"I'm aware that getting landowners' consent is a very tough issue," said Yamamoto, 68, a veteran Liberal Democratic Party lawmaker, during a media interview.

Yamamoto has learned from ministry officials that the situation is improving, and hopes to accelerate the momentum.

Storing contaminated waste at the site is crucial for Fukushima's reconstruction work, which is currently stalled due to large amounts of waste piling up around the prefecture.

Meanwhile, some landowners are reportedly questioning the government's commitment on this matter, as environment ministers have already changed four times since Prime Minister Shinzo Abe took office in December 2012.

But Yamamoto said the ministers have handled affairs properly. "This administration has been led by the LDP, so of course we have continuity and even (if) the minister changes (often), we share the same thoughts," said Yamamoto.

He said 99 percent of the handover information he received from his predecessor, Tamayo Marukawa, was about Fukushima-related issues. "I have to make efforts to go to Fukushima often to make stronger connections than Marukawa did," he said. Yamamoto plans to visit the temporary storage facility on Tuesday.

The government hopes to begin construction of the temporary storage site in October, the ministry said.

August 20, 2016

State funds for decontamination

State funds planned for cleaning heavily contaminated zones in Fukushima

http://www.japantimes.co.jp/news/2016/08/20/national/social-issues/state-funds-planned-cleaning-heavily-contaminated-zones-fukushima/#.V7hWQaJddLM

Kyodo

The government plans to use state funds to finance the radiation cleanup in the areas most seriously contaminated by the Fukushima disaster in 2011, government sources said Friday.
It is the first plan to decontaminate the "difficult to return to" zones, including a large portion of the two towns hosting the crippled Fukushima No. 1 nuclear power plant and parts of other nearby municipalities in the prefecture.
The move is intended to expedite the cleanup process but may draw criticism because it will effectively reduce the financial burden on Tokyo Electric Power Company Holdings Inc., the utility responsible for the world's worst nuclear crisis since Chernobyl.
Under the current legal framework, the decontamination costs are first shouldered by the state, with Tepco told to reimburse the expenses over time. But since the costs are expected to far exceed the ¥2.5 trillion estimated earlier, the utility has requested more financial support.
The government plans to conduct decontamination in the difficult-to-return-to zones, which comprise about 337 sq. km of land where around 24,000 people used to live, the sources said.
The work within the designated "reconstruction bases" will include removing buildings, replacing soil and paving roads.
Tepco will only be asked to shoulder the costs of cleaning existing facilities and infrastructure that will continue to be used within the reconstruction bases.
The government hopes to officially endorse the plan this month, the sources said.
The Fukushima disaster, triggered by a huge earthquake and tsunami in March 2011, prompted the government to issue evacuation orders to 11 municipalities near the plant.
The areas have been reclassified into three categories based on radiation level — a zone where evacuation orders are ready to be lifted, a zone where human habitation is restricted, and a zone where residents will have difficulty coming back to for a long time.
The areas subject to evacuation are gradually being reduced, with the government setting a goal of lifting all the remaining orders apart from the difficult-to-return-to zones by next March.
In the heavily contaminated zones, the government plans to conduct costly and intensive radiation cleanup efforts that will allow it to lift the evacuation orders in five years' time.

September 26, 2016

Cesium accumulated in dams: Don't touch it

High levels of radioactive cesium pooling at dams near Fukushima nuke plant

http://mainichi.jp/english/articles/20160926/p2a/00m/0na/007000c

High concentrations of radioactive cesium have been accumulating at the bottom of 10 major dams within a 50-kilometer radius from the disaster-stricken Fukushima No. 1 Nuclear Power Plant, a survey by the Environment Ministry has found.
Radioactive cesium emanating from the 2011 nuclear disaster is pooling at those dams, which are used to hold drinking water and for agricultural use, after the substances flew into there from mountains, forests

and rivers. The radiation levels at the bottom of those dams top those set for designated waste at over 8,000 becquerels per kilogram.
While the Environment Ministry plans to monitor the situation without decontaminating the dams on the grounds that radiation levels in dam water is not high enough to affect human health, experts are calling for the ministry to look into measures to counter any future risks.
The ministry began a monitoring survey on those dams and rivers downstream in September 2011 to grasp the moves of radioactive substances flowing into them from mountains and forests that are not subject to decontamination work. The survey samples water at 73 dams in Tokyo, Iwate and seven other prefectures about once every several months.
Among them, there were 10 dams in Fukushima Prefecture where the average concentration of cesium in the surface layer of bottom soil measured between fiscal 2011 and 2015 topped the regulated levels for designated waste. Those dams include Ganbe Dam in the village of Iitate with 64,439 becquerels per kilogram of cesium, Yokokawa Dam in the city of Minamisoma with 27,533 becquerels, and Mano Dam in Iitate with 26,859 becquerels.
Meanwhile, the surface water at those 10 dams contained 1-2 becquerels per liter of cesium, which is below the drinking water criteria at 10 becquerels.
While the total amount of cesium deposited at the bottom of those dams is unknown from the environment ministry's survey, a separate study conducted at Ogaki Dam in the town of Namie by the Ministry of Agriculture, Forestry and Fisheries' Tohoku Regional Agricultural Administration Office estimated in December 2013 that there was a combined 8 trillion becquerels of cesium 134 and cesium 137 at the dam. The figure came about after estimating the amount of accumulated cesium every 10-meter-square area based on cesium levels in sedimentary soil sampled at 110 locations at the bottom of the dam, which is for agricultural use.
The National Institute for Environmental Studies in Tsukuba, Ibaraki Prefecture, will shortly begin a full-scale survey on cesium concentrations at several dams.
"At the moment, it is best to contain cesium at those dams. If we dredge it, the substance could curl up and could contaminate rivers downstream," said an Environment Ministry official.

Fukushima dams "storage facilities" for accumulating cesium

Anxiety soars as cesium builds up in Fukushima dams

http://mainichi.jp/english/articles/20160926/p2a/00m/0na/011000c

Ogaki Dam in Namie, Fukushima Prefecture, as seen from a Mainichi Shimbun helicopter in July 2016, contains high concentrations of radioactive cesium exceeding the limit set for designated waste. (Mainichi)

Dams surrounding the stricken Fukushima No. 1 Nuclear Power Plant operated by Tokyo Electric Power Co. (TEPCO) have become de facto storage facilities for high concentrations of radioactive cesium as the element continues to accumulate.

- 【Related】High levels of radioactive cesium pooling at dams near Fukushima nuke plant
- 【Fukushima & Nuclear Power】

With no effective countermeasures in sight, the government insists that water from the dams is safe, but to local residents, the government's stance comes across as the shelving of a crucial problem.
"It's best to leave it as it is," an official from the Ministry of the Environment says, with the knowledge that in 10 dams in Fukushima Prefecture, there is soil containing concentrations of cesium over the limit set for designated waste -- or over 8,000 becquerels per kilogram.
According to monitoring procedures carried out by the ministry, the levels of radioactive cesium detected in the dams' waters, at 1 to 2 becquerels per liter, are well below the maximum amount permitted in drinking water, which is 10 becquerels per liter. The air radiation doses in the dams' surrounding areas are at a maximum 2 microsieverts per hour, which the ministry says "does not immediately affect humans, if they avoid going near the dams." This information is the main basis behind the central government's wait-and-see stance. For the time being, the cesium appears to have attached itself to soil and is collected at the bottom of the dams, with the water above it blocking radiation from reaching and affecting the surrounding areas.
In a basic policy based on a special law, passed in August 2011, on measures for dealing with radioactive material following the onset of the Fukushima nuclear disaster, the Environment Ministry stipulates the decontamination of areas necessary from "the standpoint of protecting human health." The ministry argues that as long as high concentrations of cesium at the bottom of multiple dams in Fukushima Prefecture do not pose imminent danger to human health, there are no legal problems in the ministry refraining from taking action.

"If the dams dry up due to water shortages, we just have to keep people from getting close to them," the aforementioned ministry official says. "If we were to try to decontaminate the dams, how would we secure water sources while the work is in progress? The impact of trying to decontaminate the dams under the current state of affairs would be greater than not doing anything."
This stance taken by the central government has drawn protests from local residents.
"The Environment Ministry only says that it will monitor the dams' water and the surrounding areas. They say, 'We'll deal with anything that comes up,' but when asked what they plan to do if the dams break, they have no answers. It's painful to us that we can only give town residents the answers that the Environment Ministry gives us," says an official with the revitalization division of the Namie Municipal Government. The central government is set to lift evacuation orders for a part of the Fukushima Prefecture town of Namie in spring of 2017.
According to a Ministry of Agriculture, Forestry and Fisheries survey, Ogaki Dam, an agricultural dam in Namie, was estimated to have sediment totaling approximately 8 trillion becquerels of cesium as of December 2013. The agriculture ministry plans to re-survey the dam's accumulated cesium amounts and water safety before the water is used for agricultural purposes. Agricultural and fishery products from Fukushima Prefecture are tested to ensure that radioactive substances that they contain are below the maximum permissible amounts stipulated by law before they are shipped for distribution.
Still, one town official worries how revelations of high levels of radioactive material in local dams will affect consumers. "No matter how much they are told that the water is safe, will consumers buy agricultural products from Namie, knowing that there is cesium at the bottom of local dams?"
A 57-year-old vegetable farmer from Namie who has been evacuated to the Fukushima Prefecture city of Iwaki says, "The central government keeps on emphasizing that the dams are safe, but doesn't seem to be considering any fundamental solutions to the problem. If this state of affairs persists, we won't be able to return to Namie with peace of mind, nor will it be easy to resume farming."

September 27, 2016

Removing rubble in sea water around Fukushima plant

Debris recovery operation in sea carried out for first time since Fukushima nuclear disaster

https://www.japantoday.com/category/national/view/debris-recovery-operation-in-sea-carried-out-for-first-time-since-fukushima-nuclear-disaster

FUKUSHIMA —
For the first time since the 2011 nuclear crisis at the Fukushima Daiichi power plant, the removal of debris in seawater located up to 20 km from the plant site has finally started.
The recovery operation, which began Monday, focuses on the removal of rubble in seawater within 5 to 20 km of the wrecked plant, Sankei Shimbun reported.

Five and a half years after the disaster, fishing has yet to be carried out in these waters while tsunami debris on the ocean floor near the Fukushima plant has remained untouched.
With an aim to start trial fishing operations within this targeted cleanup area, the Soma-Futaba Fisheries Cooperative Association employed 32 fishing boats to recover debris such as driftwood and gill nets on Monday.
Following suit, from Tuesday, the Iwaki City Fisheries Cooperative Association started debris removal operations and will continue the cleanup efforts until February of next year.
Japan Today

October 23, 2016

Miyagi to start burning low-level radioactive waste

Low-level radioactive waste to be incinerated

http://www3.nhk.or.jp/nhkworld/en/news/20161024_01/

A prefecture in northeastern Japan plans to start burning low-level radioactive waste materials from the 2011 Fukushima Daiichi nuclear accident.

Miyagi prefectural officials say they will ask municipalities to burn pasture grass and other waste with levels of radioactivity lower than the government-set level of 8,000 becquerels per kilogram.

They plan to use incinerators across the prefecture on a test basis starting from January. They say such waste will be mixed with regular garbage in order to keep radioactivity levels low.

The officials plan to collect and analyze data on radioactivity levels of ash for 6 months. They say a full incineration operation will follow, once safety is confirmed.

October 24, 2016

Temporary waste sites: No harm done...

Radioactive contaminant levels can't be read at 31 Fukushima temp waste sites

http://mainichi.jp/english/articles/20161024/p2a/00m/0na/017000c

FUKUSHIMA -- It may be impossible to measure the radioactive contaminant concentrations of water leeching from soil and other waste produced by the Fukushima nuclear disaster cleanup at 31 temporary waste storage sites in Fukushima Prefecture due to a planning flaw, a Board of Audit inspection has found.

The cleanup waste is put in bags, put in piles and covered with a waterproof tarp at the temporary disposal sites. These piles are built atop a low convex mound of earth, which is also covered with a tarp and is supposed to funnel the water leeching out of the waste into underground tanks. Contaminant concentration measurements are then taken from these tanks.
However, though many temporary disposal sites have been built on soft ground such as agricultural land, apparently no provisions were made for land subsidence -- the earth being pushed down by the pressure of the waste bags -- during planning.
The Board of Audit chose 34 of the 106 disposal sites in the prefecture for inspection. The 34 sites were spread across five municipalities, had waste piles five to six bags (or about 5 meters) high, and had been established in the four years up to fiscal 2015. Of these, the earth beneath the waste stack had subsided -- going from convex to concave -- at 31 sites, meaning contaminated water was also not flowing into the storage tanks. It is possible the water is collecting in the tarps.
There are 15 such sites in the Fukushima Prefecture town of Kawamata, five in the town of Namie, four each in the city of Tamura and the village of Iitate, and three in the town of Naraha. The subsidence of the earth bases hasn't been confirmed, but the Board of Audit has pointed out that if contaminated water is pooling in the tarps, it could impact future operations to move the waste to a mid-term storage site. It has also called on the Environment Ministry, which operates the sites, to take necessary measures to rectify the problem.
The ministry told the Mainichi Shimbun, "The stacks are designed so that contaminated water won't escape even if the land underneath subsides, and no harm has been done by the treatment of the water. The waste bags themselves have been replaced with waterproof versions, but we would still like to consider ways to reinforce the ground (under the piles), such as by using sand in the middle."

Miyagi: Radioactive waste mostly below "government standard"...

Radioactivity level of waste diminishes

http://www3.nhk.or.jp/nhkworld/en/news/20161024_11/

Japan's Environment Ministry officials say they have found that radioactivity levels of waste materials from the 2011 Fukushima Daiichi nuclear accident have significantly decreased.

Officials checked the radioactivity of plants, soils and other waste stored in the northeastern prefecture of Miyagi, which neighbors Fukushima.

The waste had radioactivity higher than the government-set level of 8,000 becquerels per kilogram. The central government is responsible for the disposal of such waste.

But about 2,500 tons have not been designated as high-level radioactivity waste. Local people did not apply for designation mainly because it could create the impression that the area is dangerous.

Environment Ministry officials say the radioactivity levels of about 2,000 tons, or 77 percent of such waste, is now below the government standard.

Miyagi prefectural officials say they want to discuss with municipality leaders next month how to dispose of low-level radioactive waste.

They say they need to consider the fact that the levels of radioactivity have decreased more than 5 years after the nuclear accident.

October 30, 2016

Generate power from radioactive wood?

Black plastic bags containing radioactive soil, leaves and debris from decontamination operations are dumped at a seaside spot devastated by the March 2011 earthquake and tsunami in Tomioka, Fukushima Prefecture, near the Fukushima No. 1 nuclear power plant, in February 2015. | REUTERS

German firm aims to compactly convert radioactive Fukushima wood into power

http://www.japantimes.co.jp/news/2016/10/30/business/corporate-business/german-firm-aims-compactly-convert-radioactive-fukushima-wood-power/#.WBXoFMmDmos

by Brian Parkin

Japan is turning to a small German company to generate power from timber irradiated by the 2011 Fukushima No. 1 nuclear meltdowns.

Closely held Entrade Energiesysteme AG will sell electricity from 400 of its container-size biomass-to-power machines set up in Fukushima Prefecture, said Julien Uhlig, the Duesseldorf-based company's chief executive officer. The devices will generate 20 megawatts of power by next year and function like a "biological battery" that kicks in when the sun descends on the region's solar panels, he said.

Selling green power with Entrade's mobile units could support Japanese attempts to repopulate a region that's struggled to restore a degree of normalcy after the March 2011 earthquake and tsunami killed 18,000 people while also triggering the Fukushima nuclear meltdowns that displaced 160,000 others. The prefecture aims to generate 100 percent of its power from renewable energy by 2040.

Entrade's so-called E4 plants, four of which fit inside a 40-foot (12-meter) container, can reduce the mass of lightly radioactive wood waste by 99.5 percent, according to Uhlig. Shrinking the volume of waste could help Japanese authorities who need to reduce the volume of contaminated materials. Workers around Fukushima have been cleaning by scraping up soil, moss and leaves from contaminated surfaces and sealing them in containers.

"Burning won't destroy radiation but we can shrink detritus to ash and create a lot of clean power at the same time," said Uhlig, a former German government employee, in a phone call from Tokyo on Oct. 21. "There's a lot of excitement about this project but I also detected a high degree of reluctance in Fukushima to talk about radiation."

The decommissioning of Tokyo Electric Power Company Holdings Inc.'s stricken plant is set to take as long as four decades and the government estimates environmental cleanup costs may balloon to ¥3.3 trillion through March 2018.

Prime Minister Shinzo Abe said in March that Japan cannot forgo nuclear power. His government wants about a fifth of Japan's power generated by nuclear by 2030, compared with almost 30 percent before three of the six reactors melted down at the aged Fukushima No. 1 plant.

Currently, just two of the nation's 42 operable commercial reactors are running, which has translated into higher costs for imported fossil fuels as well as more greenhouse gas emissions.

Germany's Federal Office for Radiation Protection declined comment on the process of burning radioactive waste in Fukushima.

Entrade's biomass units will be located about 50 km (31 miles) from the Tepco reactors, said Uhlig.

Entrade's biomass plants, which rely partly on technology developed by Germany's Fraunhofer Institute, are "compactors" of lightly irradiated waste, said Uhlig. The "all in the box" technology is attractive to environmentally conscious clients who have a steady stream of bio waste but don't want to invest in a plant, he said.

Uhlig's company is cooperating with London's Gatwick Airport to turn food waste from airlines into power. Royal Bank of Scotland financed another project supplying power from 200 units to an industrial estate near Liverpool, in northwest England.

Entrade has experimented with 130 types of biofuel since beginning operation in 2009. The company claims its plants convert biomass to power with 85 percent efficiency.

"It's a bit like mixing muesli, taking what's available from clients or the locality and blending it," said Uhlig.

Entrade is moving its headquarters to Los Angeles to generate investment capital and help meet demand in the U.S. and Caribbean, he said. The company has 250 units in California and can hardly keep up with demand, Uhlig said.

November 15, 2016

Expected to start accepting

Work starts in Fukushima on intermediate waste facility

http://www.asahi.com/ajw/articles/AJ201611150040.html

The planned site for an intermediate storage facility of radiation-contaminated waste spans the towns of Futaba and Okuma and surround the crippled Fukushima No. 1 nuclear power plant in Fukushima

The Environment Ministry on Nov. 15 started building a facility in Fukushima Prefecture that will store radiation-contaminated debris for up to 30 years, despite obtaining permission for only 11 percent of the site.

The 16-square-kilometer storage facility is expected to hold up to 22 million cubic meters of materials contaminated by radioactive fallout from the disaster at the Fukushima No. 1 nuclear power plant in March 2011.

"I hope that you take pride in this project and cooperate to construct the facility," Tadahiko Ito, a vice environment minister, told workers.

The facility, which will span the towns of Futaba and Okuma, is expected to start accepting, sorting and storing the debris in autumn 2017 at the earliest, more than two-and-a-half years later than the initial schedule of January 2015.

The project has been delayed because the ministry has faced difficulties buying or borrowing land for the project.

In fact, only 445 of the 2,360 landowners of plots at the site have agreed to sell or lend their properties to the ministry for the storage facility as of the end of October.

Many of the reluctant landowners, who possess 89 percent of the land, fear the contaminated waste will remain at the facility well beyond 30 years.

The government has worked out a bill stipulating that contaminated materials kept in the intermediate storage facility will be moved out of Fukushima Prefecture in 2045. However, the government has yet to decide on the location of the final disposal site.

A huge cleanup operation after the triple meltdown at the Fukushima nuclear plant collected tons of radioactive soil and debris.

In March 2015, the ministry borrowed land and created a "temporary storage place" within a 16-square-km site on an experimental basis.

However, only about 70,000 cubic meters of the waste has been taken to the temporary storage site as of the end of October. The remaining waste, exceeding 10 million cubic meters, is being tentatively stored at about 150,000 locations in the prefecture.

"If the transportation of contaminated materials to the intermediate storage facility proceeds, the waste currently stored in residential areas and at company compounds will be transported there," said an official of the Fukushima prefectural government's section in charge of decontamination.

November 20, 2016

Is temporary storage the worst problem for Fukushima farmers?

Farmers harvest rice in one of Hisayoshi Shiraiwa's paddies in Katsurao, Fukushima Prefecture, on Oct. 19, 2016. Another rice paddy in the foreground serves as a temporary storage site for piles of black plastic bags containing radioactive soil. (Mainichi)

Temporary radioactive soil storage sites hinder Fukushima farmers

http://mainichi.jp/english/articles/20161120/p2a/00m/0na/004000c

FUKUSHIMA -- Wide swaths of temporary storage sites for radioactive soil and other waste generated from decontamination work in areas around the crippled Fukushima No. 1 Nuclear Power Plant are hampering locals from resuming farming, it has been learned.

The makeshift storage sites occupy roughly 1,000 hectares in total, or an area the size of 213 Tokyo Domes, across zones currently or formerly designated for evacuation in 11 municipalities in Fukushima Prefecture, according to the Ministry of the Environment. The high occupancy is the result of delayed work to develop interim storage facilities for contaminated soil.

Because slightly over 90 percent of those temporary storage sites lie on farmland, local governments are deprived of the very foundation for restoring farming -- a key local industry -- in those areas while farmers are concerned about possible damage caused by harmful rumors.

According to the Environment Ministry, there are about 280 temporary storage sites in areas designated as evacuation zones. Those storage sites -- which are leased to the ministry by local farmers -- accommodate over 7 million black plastic bags containing radioactive soil, grass and branches. Those flexible container bags -- each capable of containing 1 cubic meter of soil and other waste -- are commonly known as "flecon baggu" in Japanese.

Under the ministry plan, interim storage facilities will be built in areas totaling some 1,600 hectares in the so-called "difficult-to-return" zones in the prefectural towns of Futaba and Okuma around the Fukushima No. 1 plant. Under the scheme, radioactive soil temporarily stored at different locations in Fukushima Prefecture will be transported there for longer storage periods spanning up to 30 years before it is put to final disposal outside the prefecture.

While the ministry had initially sought to begin construction of interim storage facilities in July 2014, delays in negotiations with local residents and efforts to acquire land lots made it impossible to meet the schedule. The ministry aims to finish acquiring up to 70 percent of land necessary for the construction of interim storage facilities by the end of fiscal 2020, but the land it had managed to acquire by the end of October this year stood at a mere 170 hectares, or only 10 percent of the planned area.
The Environment Ministry estimates that up to 22 million cubic meters of contaminated soil and other waste will be generated across Fukushima Prefecture, but the interim storage facilities are expected to be able to accommodate no more than 12.5 million cubic meters of such waste by the end of fiscal 2020.
The Fukushima Prefecture village of Katsurao, where evacuation orders were lifted in most areas in June, has been pushing restoration of farming as a key policy measure. However, the total size of rice paddies in the village has dropped from some 130 hectares operated by roughly 270 households in 2010 -- prior to the Fukushima meltdowns -- to around 6 hectares operated by 11 households this year. Nearly 30 percent of the village's rice paddies totaling some 220 hectares now serve as temporary storage sites for radioactive soil and other waste.
Hisayoshi Shiraiwa, a 70-year-old farmer in Katsurao, harvested rice in his paddy in October, which is adjacent to another paddy that serves as a temporary storage site for piles of black plastic bags containing radioactive soil. As the price of rice from the area hasn't recovered to pre-disaster levels, local farmers are worried about prolonged reputational damage.
"As long as temporary storage sites remain here, farmers will lose their motivation and face a shortage of successors," Shiraiwa said.

November 26, 2016

Dealing with radioactive waste (2)

Editorial: Move forward with construction of interim storage sites for nuclear waste

http://mainichi.jp/english/articles/20161126/p2a/00m/0na/006000c

Construction of the main unit of interim storage facilities for radioactive soil and other waste produced during decontamination work in the wake of the Fukushima nuclear disaster has begun in the Fukushima Prefecture towns of Okuma and Futaba.

- 【Related】Radioactive waste from Fukushima plant water piling up with no final destination

Over two years have passed since the prefecture agreed on construction of the facilities, and it's nearly six years since the outbreak of the disaster triggered by the March 2011 Great East Japan Earthquake and tsunami. As interim storage facilities play an important role in Fukushima's recovery from the nuclear disaster, any further delays in building them are impermissible.
We hope that the government will steadily work toward putting the facilities into operation while maintaining safety.

The interim storage facilities will be placed around Tokyo Electric Power Co.'s crippled Fukushima No. 1 Nuclear Power Plant. They will cover a total area of about 1,600 hectares, storing up an estimated 22 million cubic meters of waste that will be moved there and administered for up to 30 years.
The reason that construction of the facilities has been delayed is that officials have had trouble negotiating with many of the approximately 2,360 landowners in the area. At first officials didn't know where many of those people had evacuated. As of the end of October this year, the Ministry of the Environment had signed land acquisition deals with 445 landowners, but the total area of land amounted to only about 170 hectares.
Under the latest development, about 7 hectares of land in Okuma and Futaba will be used to build a facility to measure the radioactivity of contaminated soil and a facility to store tainted soil. The Ministry of the Environment hopes to begin storing waste at the interim facility in autumn next year, but the storage capacity in both towns stands at about 120,000 cubic meters, far below the expected peak.
At present some 12 million cubic meters of contaminated soil remains temporarily stored at around 15 locations in Fukushima Prefecture, including temporary storage sites and the gardens of people's homes.
The Environment Ministry in March this year presented an outlook which stated that it would be possible to transport up to about 12.5 million cubic meters of waste to interim storage facilities by fiscal 2020, but this is based on the major assumption that it will acquire more land. To reach this figure, its only option is to carefully explain to landowners why the facilities are needed, and obtain their consent. There are about 110 land negotiators at the ministry, but there is probably a need to boost this team.
In addition to land negotiations, we hope to see progress in technology to reduce and reuse contaminated soil.
It has been decided that contaminated soil in storage will be moved out of Fukushima Prefecture within 30 years, but the final storage site has still not been decided.
Radioactive cesium easily attaches itself to tiny particles. Dividing up the contaminated soil by particle size and chemically processing the particles to remove the cesium could reduce the amount of soil that needs to go to the final storage destination. The Ministry of the Environment hopes to make advancements in this type of technology and use soil with low concentrations of radiation in the construction of soil bases for public works projects. But it would be a stretch to say it has obtained society's consensus to do this.
The first priority is to determine how much contaminated soil there will be and what level of radioactivity it will have at the time when the waste is moved to a final storage site. Based on those findings, officials will need to initiate procedures to win the public's approval on the location of a final disposal site and the reuse of contaminated soil.

December 10, 2016

Fukushima radiation all the way to Oregon

Fukushima’s radiation detected on Oregon’s shores

http://www.japantimes.co.jp/news/2016/12/10/national/science-health/fukushimas-radiation-detected-oregons-shores/#.WEv8AX2Dmot

AP
SALEM, OREGON – Researchers say seaborne radiation from the Fukushima nuclear disaster has been detected on Oregon's shores.
Seawater samples from Tillamook Bay and Gold Beach indicate radiation from the nuclear disaster, but at extremely low levels not harmful to humans or the environment.
Citing the Woods Hole Oceanographic Institution, the Statesman Journal newspaper reports the samples were taken last winter and later analyzed.
Massive amounts of contaminated water were released and continue to be released from the crippled Fukushima No. 1 nuclear plant following a 9.0 magnitude earthquake and tsunami in March 2011 that triggered a triple core meltdown.
Woods Hole chemical oceanographer Ken Buesseler runs a crowdfunded, citizen-science seawater sampling project that has tracked the radiation plume as it makes its way across the Pacific Ocean.

Reviving Fukushima

Cabinet to approve Fukushima restoration plan

https://www3.nhk.or.jp/nhkworld/en/news/20161210_23/

Prime Minister Shinzo Abe has visited Fukushima Prefecture to inspect the progress of restoration following the 2011 nuclear accident.

Abe visited a machinery parts manufacturer in Minamisoma City on Saturday.

The government and Fukushima Prefecture have been working to create a cluster of robotics' companies in the city.

The president of the manufacturer told the prime minister that he hopes the robotics industry will help revitalize the local economy.

Abe responded that the state-of-the-art robot testing facilities that had been built in the city should attract companies from around the world, and that he wants the region to develop around them.

Abe later visited the town of Kawamata, where an evacuation order is expected to be lifted next March.

He ate fermented natto soybeans manufactured in the town using local products.

Abe told reporters after the inspection that his government intends to help people from areas where the evacuation order will be lifted with housing and rebuilding their lives.

He also said his cabinet will approve a plan before the end of the month to accelerate Fukushima's restoration. He said it includes partial governmental funding for decontamination in non-entry zones.
See also : https://www3.nhk.or.jp/nhkworld/en/news/videos/20161208112102585/
Sending in the robot (video)

January 4, 2017

Cost effectiveness of decontamination questioned

Checks urged for cost-benefit of decontamination

https://www3.nhk.or.jp/nhkworld/en/news/20170104_11/

A Japanese academic has questioned the cost-effectiveness of decontamination efforts in areas struck by the 2011 nuclear disaster in northeastern Japan.

Professor Masafumi Yokemoto of Osaka City University Graduate School says the initial objective of clean-up work was to reduce radiation levels so residents could return.

But many people have decided not to go back after prolonged stays elsewhere. Government surveys show that more than half the evacuees from parts of Fukushima Prefecture say they do not plan to return.

Yokemoto says decontamination would be essential if it helped restore disaster-hit communities, but its usefulness must be verified.

More than 25.5 billion dollars have been spent to remove radioactive substances in areas around Tokyo Electric Power Company's Fukushima Daiichi nuclear plant and to establish initial storage sites for tainted waste.

Clean-ups have been conducted in 101 municipalities in 8 prefectures in the Kanto and Tohoku regions.

The Environment Ministry says the work was ongoing in 30 municipalities in 4 prefectures as of November 2016 and set for completion by the end of March this year.

Decontamination has not started in no-entry zones with the highest radiation levels. Work in those areas will start in or after April using government funds.

January 5, 2016

Minutes on contaminated soil: Many remarks deleted or changed

Environment Ministry deleted some of its remarks from minutes on contaminated soil meet

http://mainichi.jp/english/articles/20170105/p2a/00m/0na/007000c

The Ministry of the Environment deleted some of its remarks made in closed-door meetings on reuse of contaminated soil stemming from the Fukushima nuclear disaster from the minutes of the meetings, it has been learned.

When the ministry posted the minutes on its website, it said it had "fully disclosed" them. The deleted remarks could be taken to mean that the ministry induced the discussions. The remarks led the meetings to decide on a policy of reusing contaminated soil containing up to 8,000 becquerels of radioactive cesium per kilogram. An expert on information disclosure lashed out at the ministry's handling of the minutes, saying, "It is extremely heinous because it constitutes the concealment of the decision-making process."

The meetings were called the "working group to discuss safety assessments of impacts of radiation." The meetings were attended by about 20 people, including radiation experts, officials of the Environment Ministry and the Japan Atomic Energy Agency (JAEA) and others. The meetings were held six times from January to May in 2016.

The meetings discussed the reuse of radioactively contaminated soil generated when areas affected by the Fukushima nuclear crisis were decontaminated.

Initially, the meetings themselves were unpublicized. But because requests for information disclosure on the meetings were filed one after another, the Environment Ministry posted the minutes and relevant data on its website in August. As a matter of clerical procedures, the ministry said at that time that everything was disclosed.

The minutes that were disclosed contain "draft minutes" that were prepared before becoming official documents, but the Mainichi Shimbun obtained an "original draft" that was prepared even before then. Comparing the disclosed minutes with the original draft, the Mainichi found multiple cases of remarks being deleted or changed. According to the original draft, an Environment Ministry official said at the fourth meeting on Feb. 24, "With the assessments of soil with 8,000 becquerels, there have been cases in which the annual radiation dose slightly exceeds 1 millisievert in times of disasters and the like. But it will be good if it stays within 1 millisievert." But the remark was deleted from the disclosed minutes.

Soil contaminated with radiation exceeding 8,000 becquerels is handled as "designated waste," but discussions were held on reusing of contaminated soil containing 8,000 becquerels of radioactive cesium per kilogram during a series of meetings. In the Feb. 24 meeting, the JAEA showed an estimate that workers engaged in recovery work on a breakwater made of contaminated soil of 8,000 becquerels that has collapsed in a disaster would be exposed to radiation exceeding 1 millisievert per year -- the maximum dose allowed for ordinary people. Based on the estimate, there was a possibility of the upper limit for reusing contaminated soil being lowered, but the Environment Ministry official's remark

promoted experts and others to call for s review to make a new estimate, with one attendee saying, "If it collapses, it will be mixed with other soil and diluted."
A fresh estimate that the annual radiation dose will stay at 1 millisievert or lower was later officially presented, and the Environment Ministry officially decided in June on a policy of reusing contaminated soil containing up to 8,000 becquerels of radioactive cesium per kilogram.

January 9, 2017

NRA questions Gov't proposal to reuse radioactive soil

Bags containing contaminated soil and other materials produced through decontamination work are seen at a provisional storage site in Tomioka, Fukushima Prefecture. (Mainichi)

Nuclear watchdog questions Environment Ministry's plan to reuse radioactive soil

http://mainichi.jp/english/articles/20170109/p2a/00m/0na/012000c

The Nuclear Regulation Authority (NRA) has raised questions about the Environment Ministry's proposal to reuse radioactive soil resulting from decontamination work around the crippled Fukushima No. 1 Nuclear Power Plant due to the insufficiency of information on how such material would be managed, it has been learned.

- 【Related】Environment Ministry deleted some of its remarks from minutes on contaminated soil meet

As the ministry has not provided a sufficient amount of information, the nuclear watchdog has not allowed the ministry to seek advice from its Radiation Council -- a necessary step in determining standards for radiation exposure associated with the reuse of contaminated materials.
The Ministry of the Environment discussed the reuse of contaminated soil in closed-door meetings with radiation experts between January and May last year. The standard for the reuse of such materials as metal produced in the process of decommissioning nuclear reactors is set at 100 becquerels of radioactive cesium per kilogram. Materials with a contamination level topping 8,000 becquerels are handled as "designated waste" requiring special treatment. In examining the reuse of contaminated soil, the ministry in June decided on a policy of reusing soil containing up to 8,000 becquerels of radioactive cesium per kilogram as a base for roads with concrete coverings.
According to sources close to the matter, the ministry sounded the NRA out on consulting with the Radiation Council over the upper limit of 8,000 becquerels and other issues. An official from the NRA requested the ministry to provide a detailed explanation on how such soil would be handled, including the prospect of when the ministry would end its management of the reused soil, and how it would prevent illegal dumping. The official then told the ministry that the rule of 100-becquerel-per-kilogram rule would need to be guaranteed if contaminated soil were reused without ministry oversight.
The official is also said to have expressed concerns over the ministry plan, questioning the possibility of contaminated soil being used in somebody's yard in a regular neighborhood. Since the ministry failed to respond with a detailed explanation, the NRA did not allow the ministry to consult with the Radiation Council.
Government bodies are required to consult with the council under law when establishing standards for prevention of radiation hazards. It was the Radiation Council that set up the 8,000-becquerel rule for designated waste.
An official from the NRA's Radiation Protection and Safeguards Division told the Mainichi Shimbun, "We told the ministry that unless it provides a detailed explanation on how contaminated soil would be used and on how it will manage such material, we cannot judge if its plan would be safe."

January 17, 2017

What is the easiest way of disposing of nuclear waste?

Designation of radioactive waste lifted

https://www3.nhk.or.jp/nhkworld/en/news/20170117_13/

Japan's environment ministry has lifted the radioactive designation it applied to a batch of waste after the 2011 Fukushima Daiichi nuclear accident.

About 200 kilograms of waste stored at a private facility in Yamagata Prefecture can now be disposed of as general waste.

People familiar with the matter say the radioactivity level of the waste was confirmed to be lower than the

government-set level of 8,000 becquerels per kilogram.

The ministry said it sent a letter, dated January 13th, to notify the facility of its decision to lift the designation.

It is the first time the ministry has lifted the designation for waste kept by a private company in connection with the nuclear accident.
Last July, the ministry lifted the designation of radioactive waste stored in the city of Chiba, just outside Tokyo. It was the first case among municipalities storing radioactive waste from the Fukushima accident's fallout.

Ministry officials say as of September 30th last year, there was about 179,000 tons of waste designated as radioactive across the country.

February 6, 2017

Strong opposition forces reduction of radiation limit

Black bags containing radioactively contaminated soil are seen piled up at a temporary storage site in Minamisoma, Fukushima Prefecture, in this June 2016 file photo. (Mainichi)

Radiation limit for contaminated soil in reuse experiment lowered after local opposition

http://mainichi.jp/english/articles/20170206/p2a/00m/0na/009000c

The radiation limit for soil contaminated by the Fukushima nuclear disaster in an experiment to reuse it in construction was lowered from 8,000 becquerels per kilogram to 3,000 becquerels per kilogram after strong opposition from a local mayor, it has been learned.

- 【Related】Nuclear watchdog questions Environment Ministry's plan to reuse radioactive soil
- 【Related】Environment Ministry deleted some of its remarks from minutes on contaminated soil meet
- 【Related】Reuse of radioactive soil feared to trigger illegal dumping

The experiment is to be carried out at a temporary storage site in Minamisoma, Fukushima Prefecture, where around 1,000 bags of contaminated soil will be opened, made into construction foundations, and their radiation levels measured. The experiment will be done to check, among other things, whether the radiation exposure dose remains at the yearly limit of 1 millisievert or less. The experiment will cost around 500 million yen. The results are expected to be put together next fiscal year or later.
From soon after the Great East Japan Earthquake in 2011, municipalities including Minamisoma asked the national government to separate out lower-radiation level concrete and other debris for reuse in things like groundwork for coastal forests used to defend against tsunami. At first, the Ministry of the Environment was negative about this, but in December 2011 the ministry allowed such reuse for debris with a limit of 3,000 becquerels per kilogram. According to documents released in response to a release of information request made by the Mainichi Shimbun, some 350,000 metric tons of this kind of debris have been used in Minamisoma and the towns of Namie and Naraha in projects such as groundwork for coastal forests.
Then in June last year, the Ministry of the Environment decided on a policy of reusing contaminated soil with 8,000 becquerels or less per kilogram in structures such as soil foundations for public works projects.
The same month, Minamisoma's Mayor Katsunobu Sakurai visited then vice-minister of the environment Soichiro Seki, where he questioned Seki about the 3,000 becquerel limit that had been used until being replaced by the 8,000 becquerel limit. Sakurai reportedly called for the 3,000 becquerel limit to be used in the upcoming experiment in Minamisoma.
Sakurai says, "If they don't use the 3,000 becquerel limit it is inconsistent. It doesn't make sense for a ministry that is supposed to protect the environment to relax the standards it has set."
The ministry confirmed to the Mainichi Shimbun that the experiment will only use soil up to the 3,000 becquerel limit, and said that the soil used will on average contain about 2,000 becquerels per kilogram.

March 11, 2017

Decontamination far from completed

Decontamination work in Fukushima Pref. far from finished business

http://mainichi.jp/english/articles/20170311/p2a/00m/0na/027000c

FUKUSHIMA -- With six years having passed since the onset of the nuclear disaster at Tokyo Electric Power Co. (TEPCO)'s Fukushima No. 1 nuclear plant, the government's decontamination plan in this prefecture is fast approaching the end of its first phase at the end of March.

- 【Related】1,436 evacuees have died in temporary housing since 2011 earthquake
- 【Related】Over 120,000 evacuees remain 6 years after Great East Japan Earthquake
- 【Related】Editorial: Hearing the voices of victims, 6 years from the Great East Japan Earthquake

As a consequence of the decontamination project -- and the fact that radioactive material decays over time -- radiation levels in Fukushima Prefecture have declined to some extent.
However, in certain areas of the prefecture, radiation levels continue to be high, and the issue of what to do with decontamination waste still needs to be tackled. The government does plan to carry out decontamination work in the neglected "difficult-to-return" evacuation zones in fiscal 2017, but local residents are skeptical that the end is near.
To date, the Environment Ministry has carried out decontamination work in 11 municipalities across the prefecture subject to evacuation orders. However, no decontamination has been done yet in the "difficult-to-return" zones. In other municipalities, where the radiation dose is 0.23 microsieverts per hour or higher, decontamination work has been performed by the relevant local government office.
Initially, the central government-led decontamination was supposed to finish in March 2014, but this was pushed back to March 2017, owing to delays related to makeshift storage sites for contaminated soil. The Environment Ministry plans to finish its decontamination work by the end of March 2017, after which it plans to move the contaminated soil to interim storage facilities.
In areas where the central government is in charge of decontamination, "follow-up" decontamination will also take place in the event that radiation levels do not drop enough, in the hope that residents will eventually be able to return home. Conversely, there will be no follow-up in cases where decontamination is being handled by a local authority, making local residents anxious.
Nevertheless, there are a few spots where follow-up decontamination has taken place in addition to the work in the 11 municipalities overseen by the government. There are nine such spots in total, and they are all in the city of Soma. The Soma Municipal Government initially intended to conduct decontamination in about 30 locations across the city, but this was eventually reduced to nine locations, owing to radiation level-related criteria for follow-up decontamination as instructed by the Environment Ministry.
A Soma Municipal Government representative stated, "Radiation levels are particularly high in forests here, and it is unknown what the future impact of this might be. I want to have a system set up whereby decontamination can be easily conducted again in the future, as necessary." (By Hanayo Kuno, Science & Environment News Department, Kazuhisa Soneda, Fukushima Bureau, Makoto Ogawa, News Layout Center, and Yohei Kanno, Visual Group)

March 27, 2017

Decontamination?

SIX YEARS AFTER: Fukushima decontamination near-complete in evacuated areas

http://www.asahi.com/ajw/articles/AJ201703270039.html

THE ASAHI SHIMBUN

<image: https://img.over-blog-kiwi.com/1/22/53/68/20170327/ob_1e362a_decontamiantion-27-3.JPG>

Decontamination work in areas covered by the evacuation order from the 2011 Fukushima nuclear disaster is expected to conclude this month, paving the way for evacuees from the affected communities to return home.

With the project's completion, the government's focus will shift to the cleanup of heavily contaminated areas near the crippled Fukushima No. 1 nuclear power plant and infrastructure building.

The areas covered in the Environment Ministry's decontamination project constitute those in 11 municipalities, including Okuma and Futaba, the two towns co-hosting the nuclear complex.

The decontamination project got under way there in fiscal 2012 to remove soil, fallen leaves and other materials contaminated by radioactive substances primarily in residential areas, roads, and rice paddies and fields.

But the areas collectively known as the difficult-to-return zone where annual radiation doses were estimated to exceed 50 millisieverts as of the end of 2011 and still estimated at more than 20 millisieverts five years after the disaster were excluded from the decontamination work in those 11 local governments.

The cleanup in nine municipalities has already been completed, while the project in the remaining two is expected to finish this month, according to the government.

The completion of the project comes after the Cabinet approved a policy to finish decontamination by the end of March 2017 at a meeting in March 2016.

The evacuation order for Okuma and Futaba will remain in place even though the cleanup project will soon be over.

But the government expects to lift the order for people from the remaining nine municipalities, except for residents from the difficult-to-return zone, by April 1.

That will make the total area remaining under the evacuation order 30 percent of the size six years ago.

According to the ministry, decontamination operations have been carried out in 99 local governments in and outside of Fukushima Prefecture, costing about 2.6 trillion yen ($23.56 billion) over the past five years.

Although the government initially covers the costs of decontamination, it sends the bill to Tokyo Electric Power Co., the plant's operator.

Despite the cleanup project, many evacuees will likely remain anxious about radiation exposure when they return because forests and woods except for those close to residential areas have not been decontaminated.

The government envisages setting up hubs for rebuilding the difficult-to-return zone by carrying out an intensive cleanup to make the areas habitable by 2022.

(This story was written by Chikako Kawahara and Yu Kotsubo.)

April 25, 2017

Using radioactive soil for building purposes

Bags of radioactive soil in a temporary storage site in Iitate, Fukushima Prefecture, will eventually be transported to an interim storage facility. (Asahi Shimbun file photo)

Tests to start on radioactive soil for use in reconstruction

http://www.asahi.com/ajw/articles/AJ201704250038.html

By YU KOTSUBO/ Staff Writer

MINAMI-SOMA, Fukushima Prefecture--The Environment Ministry is exploring the idea of reusing tons of radioactive soil as gravel to rebuild infrastructure in this disaster-stricken prefecture and beyond.
To gauge the feasibility of the project, it will conduct tests on whether contaminated soil can be securely contained without spillage while controlling the level of radioactivity.
The experiment is being conducted in a corner of a temporary storage site in the Odaka district here, just north of the crippled Fukushima No. 1 Nuclear Power plant.
If the tests go off without a hitch, the government is looking at reusing the soil as a construction material in recovery efforts.
Bags of soil gathered through decontamination efforts are kept at temporary storage sites around the Fukushima plant, which went into triple meltdown in the aftermath of the 2011 earthquake and tsunami disaster.
The first phase of the experiment involves 1,000 or so bags of contaminated soil that have to be sorted according to levels of concentration of radioactive cesium.

Radioactive soil with readings of about 2,000 becquerels per kilogram will be used for mock-up construction of seawalls and other structures. The soil will then be covered by fresh soil that is not contaminated.
The test will also explore practical safety management issues, including ways to prevent scattering of contaminated soil and keeping track of measurements of radioactivity of structures once they are completed.
Project workers began opening bags and sorting soil on April 24.
The volume of contaminated soil collected within Fukushima Prefecture amounted to a whopping 16 million cubic meters as of the end of January.
It will be kept at an interim storage facility that has been constructed within the jurisdiction of the towns of Futaba and Okuma in Fukushima Prefecture. Within the next 30 years, the soil is supposed to be transported outside the prefecture for final disposal.
The Environment Ministry said it hopes the tests will show that the plan to reuse radioactive soil in construction is safe. Projects under consideration include building foundations for seawalls and roads.
The overall aim is to reduce the amount of soil that will need to be processed for final disposal.

July 31, 2017

Japanese data on marine life can be trusted, says IAEA

Japanese Data On Marine Samples Near Fukushima Reliable, IAEA Concludes

http://www.nucnet.org/all-the-news/2017/07/31/japanese-data-on-marine-samples-near-fukushima-reliable-iaea-concludes

Japanese laboratories analysing seawater, marine sediment and fish samples from near the Fukushima-Daiichi nuclear power station in Japan produce reliable data, according to an International Atomic Energy Agency report released on 31 July 2017.
The IAEA report says six missions organised between 2014 and 2016 had shown that Japan's sample collection procedures follow the standards required to obtain representative samples.

It further points out that the results obtained in interlaboratory comparisons "demonstrate a high level of accuracy and competence on the part of the Japanese laboratories involved in the analyses of radionuclides in marine samples for the sea area monitoring programme."

Interlaboratory comparisons and tests involve laboratories separately testing and analysing samples and then comparing results.

Seven Japanese laboratories and three labs from outside Japan took part in the comparisons.

The IAEA has worked with the Japanese laboratories since 2014, following a request by the Japanese government to help it in ensuring that its sea area monitoring around Fukushima-Daiichi maintains a high quality, and is comprehensive, credible and transparent.

The most recent interlaboratory comparison performed late last year involved seawater samples and six batches of fresh fish caught near the Fukushima-Daiichi station.

The seawater samples were analysed for tritium (hydrogen-3), strontium-90, caesium-134 and caesium-137.

The fish samples were analysed for caesium-134 and caesium-137.

Related reports in the NucNet database (available to subscribers):

- Tepco Says It Has Not Made Final Decision On Discharging Contaminated Water Into Sea (News in Brief No.140, 17 July 2017)

Hot particles from Fukushima: Accurate risk assessment needed

Radioactively-hot particles detected in dusts and soils from Northern Japan by combination of gamma spectrometry, autoradiography, and SEM/EDS analysis and implications in radiation risk assessment
http://www.sciencedirect.com/science/article/pii/S0048969717317953

- Marco Kaltofena,
- Arnie Gundersenb

Show more:

https://doi.org/10.1016/j.scitotenv.2017.07.091

Highlights

- Radioactive particles from Fukushima are tracked via dusts, soils, and sediments.
- Radioactive dust impacts are tracked in both Japan and the United States/Canada.
- Atypically-radioactive particles from reactor cores are identified in house dusts.
- Scanning electron microscopy with X-ray analysis is used for forensic examinations.

Abstract
After the March 11, 2011, nuclear reactor meltdowns at Fukushima Dai-ichi, 180 samples of Japanese particulate matter (dusts and surface soils) and 235 similar U.S. and Canadian samples were collected and analyzed sequentially by gamma spectrometry, autoradiography, and scanning electron microscopy with energy dispersive X-ray analysis. Samples were collected and analyzed over a five-year period, from 2011 to 2016. Detectable levels of ^{134}Cs and ^{137}Cs were found in 142 of 180 (80%) Japanese particulate matter

samples. The median radio-cesium specific activity of Japanese particulate samples was 3.2 kBq kg^{-1} ± 1.8 kBq kg^{-1}, and the mean was 25.7 kBq kg^{-1} (σ = 72 kBq kg^{-1}). The U.S. and Canadian mean and median radio-cesium activity levels were < 0.03 kBq kg^{-1}. U.S. and Canadian samples had detectable ^{134}Cs and ^{137}Cs in one dust sample out of 32 collected, and four soils out of 74. The maximum US/Canada radio-cesium particulate matter activity was 0.30 ± 0.10 kBq kg^{-1}. The mean in Japan was skewed upward due to nine of the 180 (5%) samples with activities > 250 kBq kg^{-1}. This skewness was present in both the 2011 and 2016 sample sets.

> 300 individual radioactively-hot particles were identified in samples from Japan; composed of 1% or more of the elements cesium, americium, radium, polonium, thorium, tellurium, or strontium. Some particles reached specific activities in the MBq μg^{-1} level and higher. No cesium-containing hot particles were found in the U.S. sample set. Only naturally-occurring radionuclides were found in particles from the U.S. background samples. Some of the hot particles detected in this study could cause significant radiation exposures to individuals if inhaled. Exposure models ignoring these isolated hot particles would potentially understate human radiation dose.

[…]

4. Conclusions

The combination of gamma spectroscopy, autoradiography and SEM/EDS analysis was effective in isolating and analyzing hot particles. Many of these particles would have gone unidentified if only one of these techniques has been employed.

Samples have provided evidence that local hot spots of contamination existed at the time of the Fukushima Dai-ichi meltdowns in 2011. Local hot spots still persisted in 2016, five years after the containment failures in 2011.

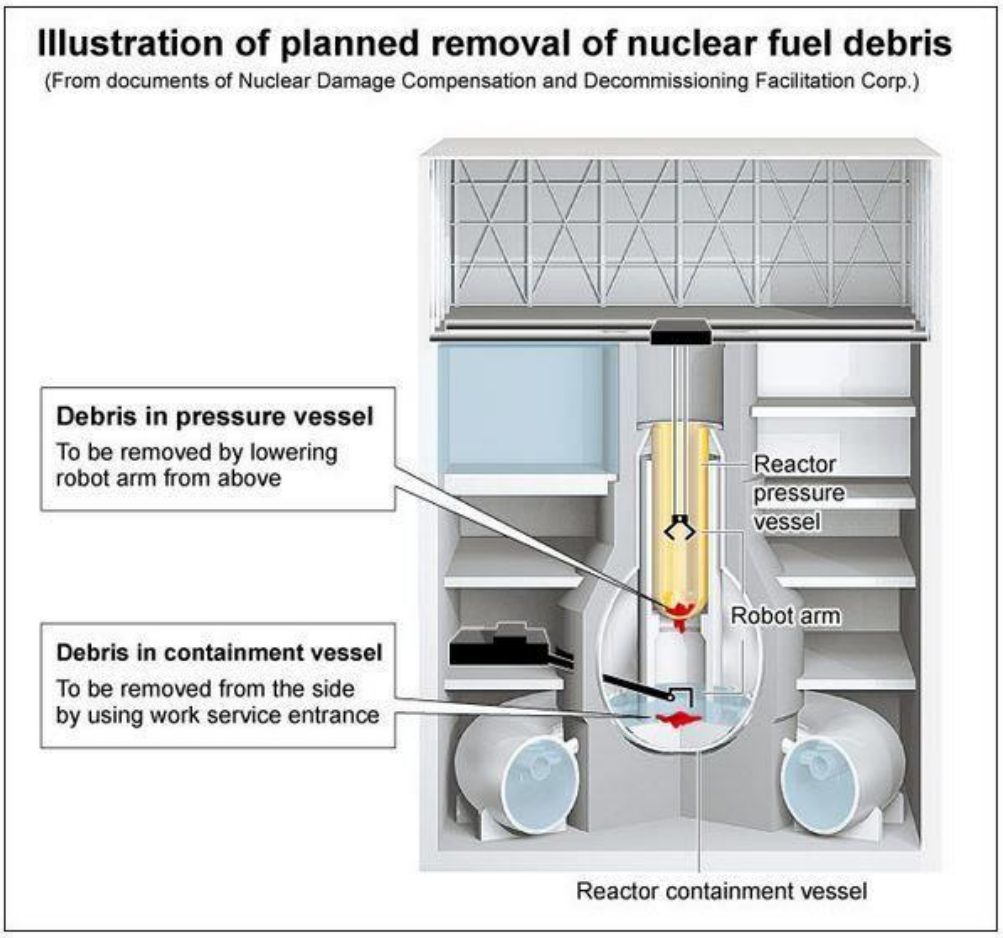
Radioactively-hot dust and soil particles were routinely detected in samples from Northern Japan in both the 2011 and 2016 sample sets, with autoradiographic and SEM/EDS data showing that isolated particles could have substantially-higher specific activities than the bulk samples from which they were isolated. Radioactive ^{131}I (April 2011 samples only), ^{134}Cs and ^{137}Cs were the most commonly encountered nuclides in Japan. Primordial nuclides unrelated to events in Japan were the dominant source of radioactivity in U.S. and Canadian environmental samples collected at the same times. Thorium was detected in radioactive particles from Japan, but this radioactive element has both natural and Fukushima Dai-ichi-related sources.

Fukushima Dai-chi-related radioactive contamination was found in 80% of the particulate matter samples from Fukushima Prefecture and surrounding areas in Northern Japan. This was true for both the 2011 and 2016 sample sets. Relative variability among dust samples from Japan was very high. The highest activity levels (3σ or more above the mean) are representative of the specific collection locations at the time of sampling, and are not representative of average Japanese radiation exposures. Most of the activity detected in Japanese samples came from ^{137}Cs and ^{134}Cs (and in the first post-accident weeks, from ^{131}I), although there were isolated detections of ^{60}Co and ^{241}Am.

Individuals in the contaminated zone, and potentially well outside of the mapped contaminated zone, may receive a dose that is higher than the mean dose calculated from average environmental data, due to inhalation or ingestion of radioactively-hot dust and soil particles. Accurate radiation risk assessments therefore require data for hot particle exposure as well as for exposure to more uniform environmental radioactivity levels.

August 1, 2017

Removing debris without water (2)



Air not water may be used to clean stricken power plant

http://www.asahi.com/ajw/articles/AJ201708010022.html

By CHIKAKO KAWAHARA/ Staff Writer

An organization looking into the decommissioning of the Fukushima No. 1 nuclear power plant proposed removing nuclear fuel debris without first submerging the material in water to prevent the spread of radioactive dust.
The Nuclear Damage Compensation and Decommissioning Facilitation Corp. (NDF) presented its proposal at a gathering held July 31 in Iwaki, Fukushima Prefecture, which was sponsored by the Ministry of Economy, Trade and Industry.
The so-called "water-covered method" for removing the fuel debris from the stricken reactors was considered soon after the March 2011 disaster at the Fukushima plant. However, major issues that would have to be resolved included repairing the containment vessels that were damaged by the hydrogen explosions following the meltdowns in the reactors. Leaks would have to be repaired before water could cover the nuclear fuel debris.
NDF officials have concluded that it would be difficult to repair the various holes in the containment vessel to make it sturdy enough to withstand the water pressure.
There were also concerns that handling the nuclear fuel debris in water could lead to the possibility of the material once again reaching a state of criticality.
Instead of a water-covered method, the NDF is leaning toward an "airborne method" in which air pressure within the containment vessel would be lowered to restrain the spewing of radioactive dust.
The nuclear fuel debris remaining in the pressure vessel would be removed using a remote-controlled robot arm. The debris in the containment vessel would be removed using the robots from entry points drilled into the side of the vessel.
The debris would be placed in specialized containers and stored within the grounds of the Fukushima plant.
Based on the new debris removal proposal, Yosuke Takagi, senior vice minister of economy, trade and industry, instructed ministry officials to begin work on revising the road map for decommissioning the Fukushima No. 1 plant reactors.
The central government and Tokyo Electric Power Co. are planning to release the new road map in September. Under the current schedule, the specific debris removal procedure will be decided on within fiscal 2018. Actual removal of the debris will begin at one of the three reactors from 2021.

August 9, 2017

Contaminated vehicles left the plant unchecked for 12 days after 3/11

Tainted cars left Fukushima compound unchecked

https://www3.nhk.or.jp/nhkworld/en/news/20170809_01/

The operator of the Fukushima Daiichi nuclear power plant says hundreds of vehicles contaminated with radioactive substances left the compound unchecked in the immediate aftermath of the 2011 accident.

Tokyo Electric Power Company says that in 2012 it began investigating what had happened to privately

owned vehicles at the plant, and found that about 460 had left the compound.

TEPCO officials located most of them by 2015. About 190 registered radiation levels that were higher than the government standards. They managed to track down all 190, but some of them had been sold to new owners.

Some of the cars were so contaminated that the radiation couldn't be measured by equipment capable of detecting levels nearly 10 times greater than the official limits.

Two vehicles remain unaccounted for.

TEPCO says it did not conduct radiation checks of cars leaving the compound for 12 days after the accident started on March 11th, 2011.

The company has apologized for causing concern and says it will keep trying to locate the 2 vehicles.
Excessive radiation detected in vehicles removed from Fukushima nuke plant
https://mainichi.jp/english/articles/20170809/p2a/00m/0na/013000c
Radiation topping the government-set limit has been detected in about 190 vehicles removed from the premises of the Fukushima No. 1 Nuclear Power Plant after the outbreak of the nuclear crisis, it has been learned.

- 【Related】Fukushima town aims to have evacuation order partially lifted by 2022
- 【Related】New proposal suggests removing Fukushima plant's melted nuclear fuel from side
- 【Related】TEPCO releases new footage of suspected melted fuel debris at Fukushima plant

Some of the cars were sold on the used-car market while two others remain unaccounted for, according to plant operator Tokyo Electric Power Co. (TEPCO).
Approximately 1,700 vehicles were parked on the premises of the power station when the nuclear crisis broke out after it was hit by the powerful earthquake and tsunami on March 11, 2011, TEPCO officials said. Of those, about 600 were owned by employees of TEPCO or companies contracted by the utility. Over a 12-day period until radiation screenings began on March 23 of that year, people could drive the vehicles out of the premises of the plant without checks.
The Economy, Trade and Industry Ministry instructed TEPCO in February 2012 to conduct a follow-up probe into the use of these vehicles for fear that next owners of those cars could be exposed to radiation without knowing that the vehicles were contaminated.
The power company conducted a survey on employees and contracted companies that parked their cars on the plant's premises at the time of the accident, and confirmed that about 460 vehicles were brought out of the plant by April 2015. It was learned that radiation levels for around 190 of the vehicles exceeded government-set safety standards, and some of them were found contaminated with radiation nearly 10 times over the limit. All the vehicles whose radiation levels exceeded the limit were collected from their owners and are now stored on TEPCO's premises situated in a Fukushima Prefecture area designated as a highly contaminated "difficult-to-return zone."
TEPCO is considering how to dispose of these heavily contaminated vehicles, with an official saying, "We'd like to continue searching for two vehicles that remain unaccounted for and respond to the situation in an appropriate manner."

August 18, 2017

Highly radioactive water leaks from ALPS facility

Highly radioactive water leak at Fukushima No. 1 nuke plant

https://mainichi.jp/english/articles/20170818/p2a/00m/0na/001000c

Highly radioactive water has leaked from the disaster-crippled Fukushima No. 1 nuclear plant, Tokyo Electric Power Co. (TEPCO) announced on Aug. 17.

- 【Fukushima & Nuclear Power】

The estimated 50 milliliters of contaminated water remained inside the station dike, and there was no leakage to the outer environment, plant operator TEPCO said. An analysis found that the tainted water contained 22 million becquerels per liter of beta-ray-emitting radioactive materials.
According to the utility, a worker from a company cooperating with TEPCO spotted water dripping from multi-nuclide removal equipment at the facility at around 2:15 p.m. on Aug. 16. After the worker mended the part with tape, the leakage stopped.

Dahr Jamail: Fukushima is "an ongoing disaster"

Dahr Jamail | Fukushima Plant Is Releasing 770,000 Tons of Radioactive Water Into the Pacific Ocean

http://www.truth-out.org/news/item/41564-fukushima-plant-is-releasing-tons-of-radioactive-water-into-the-pacific-ocean

By Dahr Jamail, Truthout *| Report

When Japan's Fukushima Daiichi nuclear plant suffered a triple-core meltdown in March 2011 as the result of devastating earthquake, most people had no idea this was only the beginning of a nuclear disaster that has arguably become the single worst industrial accident in human history.

Keeping the three core meltdowns cool has been an ongoing challenge that has yet to be met. As fresh water is pumped over the cores, it is then stored on site in massive tanks. The Tokyo Electric Power company (TEPCO), the operator of the plant, then has to figure out what to do with that water.

Recently, TEPCO announced that it would dump 770,000 tons of radioactive tritium water into the Pacific Ocean.

The announcement infuriated local fishermen and environmental groups across Japan. According to Mozhgan Savabieasfahani, an environmental toxicologist and winner of the 2015 Rachel Carson prize, their outrage and alarm is not without merit.

"The release of thousands of tons of radioactive tritium by a giant utility company into our aquatic and natural environments is a blood-chilling prospect," Savabieasfahani told Truthout.

She questions why there is not more outrage from those in the Japanese government who are responsible for safeguarding the health and wellbeing of the general public.

"Where are the defenders of our public's health?" she asked. "If they could pull the plug out of their mouth, they could tell us that tritium is a toxic radioactive isotope of hydrogen, and that, once released, tritium cannot be removed from the environment. Let that sink in."

"The Decision Has Already Been Made"

Takashi Kawamura, TEPCO's chairman, when asked about the decision to introduce this vast amount of radioactive water into the ocean, initially responded, "The decision has already been made."

While he quickly softened the statement, he has not stated that the action will not occur.

Meanwhile, the chairman of the Japanese Nuclear Regulation Authority (NRA), Shunichi Tanaka, has claimed that tritium is of little danger to humans and supports TEPCO's plans to dump the water into the ocean.

This claim, however, is vehemently disputed by toxicologists and nuclear experts with more background in toxicology than Tanaka.

M.V. Ramana is the Simons Chair in Disarmament, Global and Human Security at the Liu Institute for Global Issues at the University of British Columbia in Canada, and is also a contributing author to the World Nuclear Industry Status Report for 2016. He is critical of Prime Minister Shinzō Abe's administration's mishandling of Fukushima.

"The proposed release of radioactive, contaminated water from Fukushima against the wishes of the local residents, especially fishermen, represents yet another violation of people's rights to a clean environment and a decent livelihood so as to protect the financial interests of TEPCO," Ramana told Truthout.

Tanaka argued that dumping the radioactive water is safe because that level of tritium is unable to penetrate plastic wrapping. However, Ramana said that justification misses the point.

"NRA Chairman Tanaka is correct when he says that tritium is 'so weak in its radioactivity it won't penetrate plastic wrapping,' but that is irrelevant if the material is ingested," Ramana said. "Because the tritium that is released will be in the form of tritiated water, it can be easily absorbed by the body as it is chemically identical to water."

According to Ramana, a special concern with tritiated water is that, when ingested by pregnant women, it can pass through the placenta and affect the fetus.

"During this stage, the developing organism (the embryo and the fetus) is highly radiosensitive," he added.

And this is only one of the many ways in which tritium is dangerous for humans, at even the lowest levels.

Fukushima Is an "Ongoing Disaster"

Dr. Bruno Chareyron, an expert in radiation effects, won The Nuclear-Free Future Award in 2016. He is the director of the CRIIRAD lab (Commission de Recherche et d'Information Indépendentes sur la RADioactivité), founded in 1986, which not only monitors the environment for radiation contamination, but trains people to investigate radioactivity as well.

Chareyron was blunt with Truthout about what is happening at Fukushima.

"It is important to understand that the Fukushima disaster is actually an ongoing disaster," he said. "The radioactive particles deposited on the ground in March 2011 are still there, and in Japan, millions of people are living on territories that received significant contamination."

According to Chareyron, even territories located more than 200 kilometers away from the damaged nuclear reactors received significant fallout depending on wind direction, rainfall and/or snow.

And it's not just Fukushima prefecture that is affected by radioactive contamination.

"The Japanese authorities have launched a huge program of decontamination on a territory of about 2,400 square kilometers," Chareyron explained. "It is estimated that every day about 15,000 people are involved in this program. The ground and most contaminated tree leaves are removed only in the immediate vicinity of the houses, but a comprehensive decontamination is impossible."

Cesium 137 is a radioactive isotope that is one of the more common byproducts from the formation of Uranium-235 in nuclear reactors.

"Six years later, the radioactive Cesium 137 has decreased by only 14 percent," Chareyron said.

Chareyron said the powerful gamma rays emitted by Cesium 137 could travel dozens of meters in the air. Therefore, the contaminated soil and trees located around the houses, which have not been removed, are still irradiating the inhabitants.

To underscore these points, his lab produced a video that shows the power of gamma radiation emitted from outside a building in Fukushima city in May 2011. That video can be viewed here, as can another clip showing the contamination inside Fukushima city in June 2012.

"In the contaminated territories, people are also exposed to an internal contamination through the ingestion of food and inhalation of radioactive dust suspended by the wind," Chareyron said. "For example the forest fire that lasted several days in April and May 2017 in the contaminated forest of Mont Jûman has dispersed radioactive dust all around."

He also reminded us not to forget the workers in the nuclear plant who were exposed to radiation. This occurred even while managing the radioactive waste that continues to be generated by the disaster, as well as the management of the Fukushima Daiichi damaged reactors.

Chareyron said that, according to TEPCO, in May 2017, 8,862 workers were monitored for radiation exposure at the nuclear plant (of which 7,899 are contractors).

The most elevated individual external dose was 7.36 milliSievert in one month.

By comparison, the annual dose limit for a member of the public is 1 milliSievert per year.

"A Carcinogen, a Teratogen and a Mutagen All Rolled Into One"

Hydrogen is the most abundant element in living cells.

"Once toxic tritium makes it into the environment, it will bind anywhere hydrogen binds," Savabieasfahani said. "Imagine a toxic particle that can freely travel through our cells and bind to every molecule of life in our bodies and cause damage. Tritium is a carcinogen, a teratogen and a mutagen all rolled into one."

According to Savabieasfahani, there is no safe threshold level for tritium, as it can harm living organisms no matter how low its concentrations.

"Tritium can cause tumors, cancer, genetic defects, developmental abnormalities and adverse reproductive effects," she explained. "Tritiated water is associated with significantly decreased weight of brain and genital tract organs in mice and can cause irreversible loss of female germ cells -- eggs -- in both mice and monkeys even at low concentrations. This we know."

Even at very low concentrations, tritium causes cell death, mutations and chromosome breaks. Per dose, it is twice as damaging to our genetic makeup as x-rays and gamma rays

"Once tritium travels up the food chain it becomes even more dangerous to life," Savabieasfahani said. "When incorporated into animal or plant tissue and digested by humans, tritium can stay in the body for 10 years or more. Internally exposed individuals can expect to be chronically exposed to the toxic impacts of this carcinogen for years to come."

And for infants and growing children, tritium exposure is even more dangerous.

Savabieasfahani explained that qualitative, quantitative, physiological and epidemiological evidence show that the internal uptake of tritium is 10 times more likely to cause cancer and neurological deficit in infants and children than in adults.

"Infants' and children's higher vulnerability to tritium is attributed to their increased gut absorption and their smaller body mass, as well as their heightened sensitivity to radioactive exposures," she added. "We have already observed that childhood cancers and leukemia are 22 percent higher near nuclear reactors, and where tritium has leaked into the environment."

Citing numerous studies -- including research from the University of Florida and the journal Radiation Protection Dosimetry -- Savabieasfahani stated emphatically that it is not enough to store that knowledge in "dusty library stacks."

"That knowledge must be taken down from the shelf and broadcast now, before 777,000 tons of radioactive water hit us in the face," she said.

Surfing in Tritium?

Truthout recently reported on how the Japanese government, by allowing TEPCO to dump tritium and then encouraging people who fled the Fukushima contamination zone to return to their homes, is essentially planning to expose both its own people and 2020 Tokyo Olympians to Fukushima radiation. Furthermore, the International Olympic Commission is also working to paint conditions as "normal" -- it even has plans for the 2020 Tokyo Olympics to hold baseball and softball games at Fukushima.

Why are so many powerful entities engaging in this bizarre and harmful attempt at normalization?

Chareyron believes that a nuclear disaster like the one affecting the TEPCO nuclear reactors at the Fukushima Daiichi site simply cannot be "handled properly," because highly radioactive material that should usually be kept confined inside the core of nuclear reactors has been dispersed in the environment.

"Therefore, the Japanese government authorities and TEPCO both try to influence the general public and the workers so that a situation of exposure to radiation that would usually be considered as unacceptable becomes progressively 'accepted,'" he said. "For example, the annual dose limit of 1 milliSievert for the public has been changed into 20 milliSievert, the annual dose limit for the workers has been increased to 100 milliSievert for those exposed to 'especially high radiation,' contaminated water is still leaking into the sea, and the authorities are planning to re-use contaminated material for road construction in order to lower the cost of radioactive solid waste management."

Chareyron also said that corium, a highly radioactive material, accumulated at the bottom of reactors one and three and is still to this day has not been precisely located, and nobody yet knows when it will even be possible to dismantle the reactors.

Chareyron believes both the Japanese government and TEPCO face enormous difficulties, because of the fact that it is impossible to properly decontaminate the affected territories. Furthermore, Fukushima prefecture residents are more or less "forced" to come back to their houses while the radiation is still high, since the government announced it will cut housing subsidies that were being provided to any of them not under mandatory evacuation orders.

He also shed light on how this massive dumping of radioactive tritium water is not likely to be the last time this occurs. Chareyron said that TEPCO still must pump out on a daily basis massive amounts of heavily contaminated water that isused to cool the reactor cores, and this water is also already contaminating the water table with radiation. He also expressed concerns around the lack of monitoring of how the general population in the region is being affected by the contaminated water.

Chareyron emphasizes that both the Japanese government and TEPCO have been fundamentally dishonest with the public.

"Since the beginning of the crisis, the Japanese authorities and TEPCO have been lying to the people about the adverse impact of radiation on health and the extension of the disaster," he said.

Savabieasfahani noted that TEPCO has been rewarded with trillions of yen in government subsidies since the 2011 nuclear disaster began. That disaster was preceded by TEPCO's false reporting of technical data to authorities on hundreds of occasions, and by the 2008 shutdown of one of its nuclear power plants following an earthquake.

Instead of doling out future subsidies, Savabieasfahani said, the government should be holding the company accountable.

"A far better outcome would be to force TEPCO's shareholders, starting with the largest, to pay for cleaning up the damage their company has caused," she said. "Let it be a warning to everyone trying to make similar profits, worldwide, from similar nuclear power ventures. The insane alternative of dumping all that radiation into the seas, and letting TEPCO shareholders keep the trillions of yen they have made from poisoning and lying to the public, is simply unspeakable."

Savabieasfahani wonders why so many academics and universities are silent on these matters.

"From Los Angeles to Tokyo, the universities are loaded with environmental scientists, public health researchers, epidemiologists, medical school professors, and soon they will be drinking tritium along with everyone else," she said.
On July 27, the journal Science of the Total Environment published a peer-reviewed article about radioactively hot particles being detected in soil and dust across northern Japan.
The article details the analysis of radioactively hot particles collected in Japan following the Fukushima Daiichi meltdowns.

Based on 415 samples of radioactive dust from Japan, the USA and Canada, the study identified a statistically meaningful number of samples that were considerably more radioactive than current radiation models anticipated. If ingested, these more radioactive particles increase the risk of suffering a future health problem.
However, despite substantial scientific research that demonstrates the ongoing radioactive danger created by the Fukushima disaster, Savabieasfahani notes that -- much like the government and the industry -- most academics have chosen not to speak out about the contamination.
"Don't these academics have anything to teach us, before their fish, seaweed, plants, crops and children are poisoned with 770,000 tons of radioactive water?" Savabieasfahani asked. "The silence of the entire academic world, as these proposals to dump tritium in our laps are being favorably discussed in the media, teaches a very different lesson: to just drink it up and let the shareholders make another buck."

Dahr Jamail
Dahr Jamail, a Truthout staff reporter, is the author of The Will to Resist: Soldiers Who Refuse to Fight in Iraq and Afghanistan (Haymarket Books, 2009), and Beyond the Green Zone: Dispatches From an Unembedded Journalist in Occupied Iraq (Haymarket Books, 2007). Jamail reported from Iraq for more than a year, as well as from Lebanon, Syria, Jordan and Turkey over the last 10 years, and has won the Martha Gellhorn Award for Investigative Journalism, among other awards.
His third book, The Mass Destruction of Iraq: Why It Is Happening, and Who Is Responsible, co-written with William Rivers Pitt, is available now on Amazon.
Dahr Jamail is also the author of the book, *The End of Ice*, forthcoming from The New Press. He lives and works in Washington State.
***About Truthout:**
Our Organization and Mission
Truthout is a 501(c)3 nonprofit organization dedicated to providing independent news and commentary on a daily basis. Truthout works to spark action by revealing systemic injustice and providing a platform for transformative ideas, through in-depth investigative reporting and critical analysis. With a powerful, independent voice, we will spur the revolution in consciousness and inspire the direct action that is necessary to save the planet and humanity.

September 5, 2017

Fukushima city shows radiation level is same as in west Japan

http://www.asahi.com/ajw/articles/AJ201709050042.html

By SHINTARO EGAWA/ Staff Writer
MINAMI-SOMA, Fukushima Prefecture--Radiation readings here on the Pacific coast north of the crippled Fukushima No. 1 nuclear power plant are almost identical to those of sample cities on the other side of Japan.
The Minami-Soma government initiated the survey and hopes the results of the dosimeter readings, released Sept. 4, will encourage more evacuees to return to their home areas after they fled in the aftermath of the 2011 nuclear disaster.
A total of 100 portable dosimeters were handed out to 25 city employees from each of four cities--Minami-Soma, Tajimi in Gifu Prefecture, Fukuyama in Hiroshima Prefecture and Nanto in Toyama Prefecture. They were asked to take them wherever they went from May 29 through June 11.
The staff members were evenly dispersed with their homes in all corners of the cities they represented. In addition, only those living in wooden houses were selected as different materials, concrete walls, for example, are more effective in blocking radiation.
In July 2016, evacuation orders for most parts of Minami-Soma were lifted, but not many residents have so far returned.
The city's committee for health measures against radiation, which is made up of medical experts, analyzed the data.
The median value of the external radiation dosage of the 25 staff of Minami-Soma was 0.80 millisieverts per annum, while the average value was 0.82 mSv per annum, according to Masaharu Tsubokura, the head of the committee and a physician at Minami-Soma general hospital.
No significant difference was found in the three western cities.
Both figures were adjusted to include the natural radiation dose, and are below the 1-mSv per annum mark set by the national government as the acceptable amount of long-term additional radiation dosage, which is apart from natural radiation and medical radiation dosages.
The radiation doses in all cities were at levels that would not cause any health problems, according to Tsubokura.
"Making comparisons with other municipalities is important," Tsubokura said. "I am intending to leave the survey results as an academic paper."

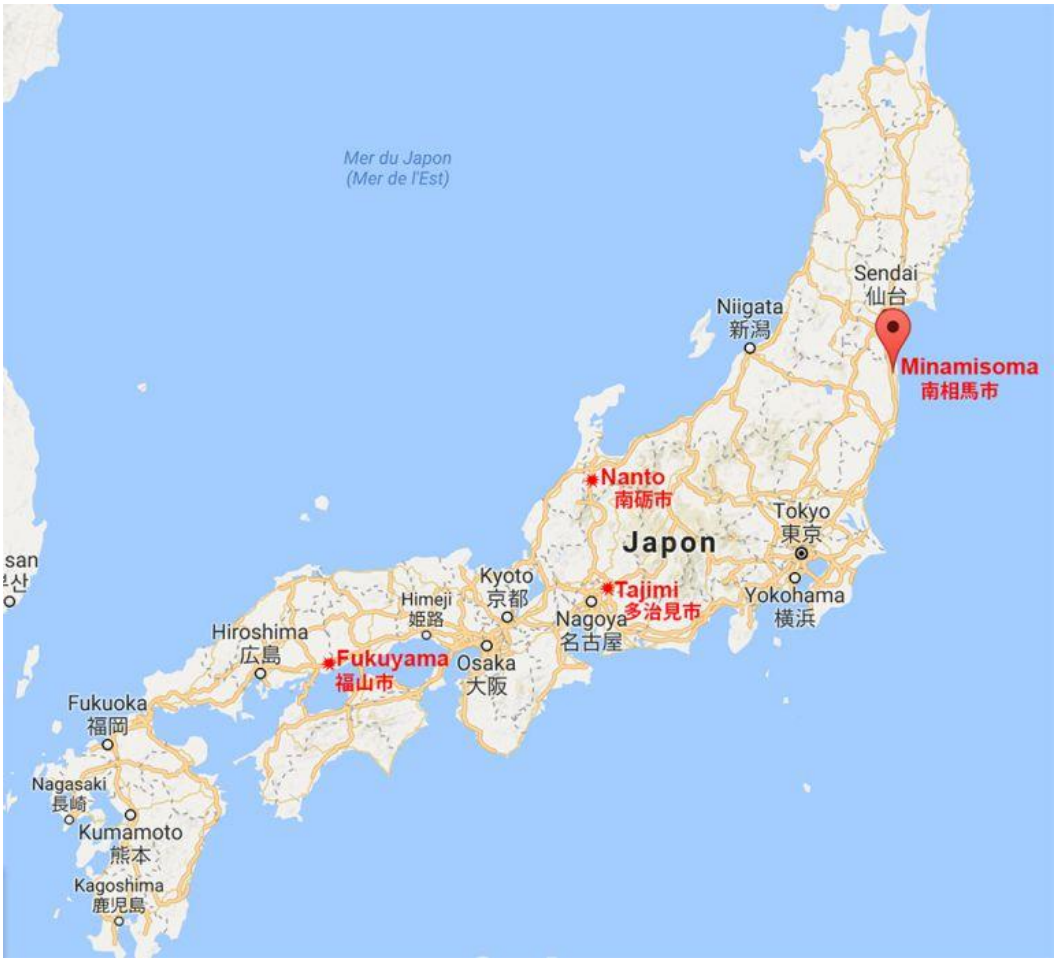
September 6, 2017

But is there such a thing as "acceptable" levels of radiation?

Fukushima 311 Voices refutes this article: Do they really expect us to believe this?

https://fukushima311voices.wordpress.com/2017/09/06/new-study-says-minami-soma-as-safe-as-western-japan-cities-do-they-really-expect-us-to-believe-this/

http://www.fukushima-is-still-news.com/2017/09/fukushima-311voices-do-they-really-expect-us-to-believe-this.html



September 11, 2017

New study says Minami-soma as safe as Western Japan cities – do they really expect us to believe this?

https://fukushima311voices.wordpress.com/2017/09/06/new-study-says-minami-soma-as-safe-as-western-japan-cities-do-they-really-expect-us-to-believe-this/
新しい調査によると、南相馬市は西日本の都市と同じくらい安全だそうです。こんな調査結果が信じられるでしょうか？

On September 5, 2017, Minami-soma city made a statement on the city's radiation levels compared to 3 cities in West Japan, which has been reported in several newspapers. It's important to comment on this study because the statement is intended to persuade the population to return to live there.
We are publishing comments on the articles below after having discussed with M. Ozawa of the citizen's measurement group named the "Fukuichi Area Environmental Radiation Monitoring Project". For English speaking readers, please refer to the article of Asahi Shimbun in English. For our arguments we refer to other articles published in other newspapers – Fukushima Minyu and Fukushima Minpo – which are only in Japanese.
2017 年 9 月 5 日、南相馬市は同市と西日本の 3 市の外部被曝ばく線量を測定し、その結果について発表しました。いくつかの新聞が報道しています。この発表は住民帰還を促す意図を持っていますので、コメントすることが重要かと思われます。
ふくいち周辺環境放射線モニタリングプロジェクトの小澤洋一さんにお話をお聞きし、以下のコメントを投稿いたします。以下に引用するのは朝日新聞の記事ですが、これは英語と日本語と両方で報道されているためです。朝日新聞には記載されていないことが福島民友と福島民報に報道されていますので、そちらも適宜引用させていただきます。
Here are the locations of Minami-soma and the 3 other cities.
南相馬市と記事に登場する 3 市の位置については下記の地図をご覧ください。

Here is the article of the Asahi Shimbun:

Fukushima city shows radiation level is same as in west Japan

By SHINTARO EGAWA/ Staff Writer
September 5, 2017 at 18:10 JST
MINAMI-SOMA, Fukushima Prefecture–Radiation readings here on the Pacific coast north of the crippled Fukushima No. 1 nuclear power plant are almost identical to those of sample cities on the other side of Japan.
The Minami-Soma government initiated the survey and hopes the results of the dosimeter readings, released Sept. 4, will encourage more evacuees to return to their home areas after they fled in the aftermath of the 2011 nuclear disaster.
A total of 100 portable dosimeters were handed out to 25 city employees from each of four cities–Minami-Soma, Tajimi in Gifu Prefecture, Fukuyama in Hiroshima Prefecture and Nanto in Toyama Prefecture. They were asked to take them wherever they went from May 29 through June 11.
The staff members were evenly dispersed with their homes in all corners of the cities they represented. In addition, only those living in wooden houses were selected as different materials, concrete walls, for example, are more effective in blocking radiation.
In July 2016, evacuation orders for most parts of Minami-Soma were lifted, but not many residents have so far returned.
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The radiation doses in all cities were at levels that would not cause any health problems, according to Tsubokura.
"Making comparisons with other municipalities is important," Tsubokura said. "I am intending to leave the survey results as an academic paper."
こちらが朝日新聞の記事です。

南相馬市での外部被曝線量、県外と「ほとんど差ない」

江川慎太郎

2017 年 9 月 5 日 13 時 00 分

福島県南相馬市は４日、５月末から２週間、市と交流のある岐阜県多治見市など３市と協力し、それぞれの市職員に小型の線量計を持たせ、外部被曝（ひばく）線量を測定したところ、南相馬市と３市の間で、測定結果に大きな差はなかったと発表した。

南相馬市では、昨年７月に小高区などで避難指示が解除されたが、住民帰還は思うように進んでいない。調査は、市民に客観的なデータを示すことを目的に市が実施し、専門家による市放射線健康対策委員会が分析などを担当した。

ほかに測定に参加したのは、広島県福山市と富山県南砺市。５月２９日から６月１１日まで、各市職員２５人ずつ計１００人に小型軽量積算線量計を着用させ、測定してもらった。

測定地区の偏りをなくすため職員の自宅が市内一面均等になるようにし、住宅の構造は木造に統一するように選定したという。

市放射線健康対策委員会委員の坪倉正治・市立総合病院医師によると、南相馬市の外部被曝線量の年換算値は２５人の中央値で０・８０ミリシーベルト。平均値も０・８２ミリシーベルトで、他の３市と大きな差はなかったという。値はいずれも自然界の放射線量を加味したものだ。

国が追加被曝線量の長期目標として示している年間１ミリシーベルトを下回っており、どの市も健康影響を考えるレベルにはないという。

坪倉医師は「ほかの自治体との比較は重要だ。今回の測定結果は論文化して残したい」と話し、学会誌などで発表していく考えだ。

Our comments

こちらがコメントです。

1) The difference of life style between city employees and local agricultural population
As we see in the article, portable dosimeters were handed out to city employees. They spend most of their day time in an office protected by concrete walls which are efficient for blocking radiation as stated in the article. However, in Minami-soma, most of the population spends more time outside, very often working in the fields. Their life style is different and therefore the external radiation dose cannot be similar to those of city employees. The result of the comparison between the external radiation dose of city employees cannot be used as an argument to say that it is safe for the local population to live in Minami-soma.

市の職員と農業を主たる生業とする多くの南相馬市の住民との生活様式の違い
記事に書かれているように、市職員に小型の線量計を持たせ、外部被曝（ひばく）線量を測定しています。市職員は日中、ほとんどコンクリートの壁に囲まれた建物の中のオフィスで過ごしています。

そして、英文記事には書かれていますが、コンクリートは遮蔽効果が高いのです。しかし南相馬市では、住民の多くの方々は屋外で過ごされますし、農作業をなさることが多いのです。皆さんの生活様式は市職員のそれとは異なっていますから、当然外部被曝線量も同様ではないはずです。報道された外部被曝線量の比較の結果をもって、南相馬市に住むのは安全、ということはできません。

2) In the article of Fukushima Minyu, it is stated that in Minami-soma the radiation dose has a wider range than in the other three cities. This means that there are hotspots, which leads to higher risks of internal irradiation.

福島民友の記事には「他県３市に比べ南相馬市は外部被ばく線量のばらつきが大きかった。」とあります。これは南相馬市には内部被ばくのリスクにつながるホットスポットが存在する可能性を示唆します。

3) The radiation dose expressed in terms of Sieverts is relevant for radioprotection when the source of radiation is fixed and identified. This is the case for most of the nuclear workers. However, in the case of Fukushima after the nuclear accident where the whole environment is radio-contaminated and the radioactive substances are dispersed widely everywhere, it is not a relevant reference for radioprotection. It is important in this case to measure surface contamination density, especially of soil.

シーベルトの単位で表される外部被曝線量は放射線源がわかっていて、固定されている場合の放射線防護に有効です。例えば放射線を扱う作業者の防護の場合などです。しかし、福島県のように、原発事故以来、環境が放射能汚染され、放射性物質が拡散しているスペースでは、放射線防護に有効ではありません。この場合は表面汚染密度、特に土壌を測定することが重要です。

4) 6 years and 6 months since the accident, cesium has sunk in the soil. It is thought to be between 6 and 10 cm from the surface. This means the top layer of soil from 0 to 5 cm is blocking the radiation, reducing the measures of the effective dose. However, this does not mean that the population is protected from internal irradiation, since cesium can be re-scattered by many means, by digging or by flooding, for example.

事故以来 6 年半経った今、セシウムは土壌に沈着していっています。現在は地表から 6 センチから 10 センチくらいの深さにあるものと思われます。これは、0 から 5 センチの土壌の層が放射線を遮蔽していることを意味します。しかし、だからといって、住民が内部被曝から守られていることにはなりません。というのは例えば掘り返えされたり、洪水にあったりなど、色々な原因でセシウムが再拡散することが考えられるからです。

5) The reliability of individual portable dosimeters has already been raised many times. This device is not adequate to capture the full 360° exposure in radio-contaminated environments as described in point 3 above.

小型の線量計の信頼性はこれまでにも何度も指摘されて来ています。このツールは 3)で記述されたような環境全体が汚染されているような場合の 360 度方向からの外部被曝線量の測定には適していないのです。

6) In the article, it is stated that background radiation is included in the compared values, but it does not mention the actual background radiation measurements in the 4 cities.

報道によると、比較された４市の値には自然放射線量を加味してあるとあります。しかし、各市の自然放射線量の値については記述がありません。

The Table of Fukushima Minyu

Radiation dose of the 4 cities

Median values

Sum of the dose (microsievert) Minami-soma

31.44	Tajimi in Gifu prefecture
27.55	Fukuyama in Hiroshima prefecture
30.41	Nanto in Toyama prefecture
30.91	0.81

Values include the background radiation dose

福島民報

To summarize, the sample study group does not represent the overall population. The study doesn't include the risks of internal radiation, for which the measurement of contaminated soil is indispensible. The dosimeters are not adequate to measure the full load of radio-contaminated environments. So, the research method is not adequate to draw the conclusion to say that it is safe for the population to return to live in Minami-soma.

要約すると、サンプルグループが全体の人口の代表していないこと、調査が 内部被ばくのリスクを考慮していないこと（内部被ばくのリスクのアセスメントには土壌汚染測定が必須）、小型線量計は放射能汚染された環境の全体的な測定には不適格であることなどが挙げられます。結論として、南相馬に帰還しても安全という結論を導くには、この調査方法はとても適切とは言えません。

October 28, 2017

All vehicles contaminated by nuke disaster will be scrapped by 2020

TEPCO to scrap all 1,010 vehicles contaminated in nuclear disaster

http://www.asahi.com/ajw/articles/AJ201710280001.html

By HIROSHI ISHIZUKA/ Staff Writer

The red sticker shows that this vehicle was contaminated during the Fukushima nuclear disaster. It designated for use only on the site of the crippled Fukushima No. 1 nuclear power plant. (Provided Tokyo Electric Power Co.)

All 1,010 vehicles contaminated by the 2011 Fukushima nuclear disaster that are currently designated for use at the crippled plant will be scrapped by the end of fiscal 2020, the plant operator said.

Tokyo Electric Power Co. officials said it is now undesirable for automobiles tainted with radioactive substances to continue operating at the site of the Fukushima No. 1 nuclear power plant, which is becoming cleaner thanks to decontamination and other efforts.

The officials said Oct. 12 that all contaminated vehicles will be replaced with clean automobiles.

The decision was announced when members of the Fukushima prefectural government's panel on occupational safety and health measures inspected facilities at the plant, including one for dismantling contaminated vehicles.

The panel includes experts in nuclear power technology and local government officials.

TEPCO officials said about 1,100 vehicles for business use and 600 automobiles of workers were at the plant site when the disaster unfolded.

Currently, 1,010 contaminated automobiles have red stickers showing that they were contaminated in the disaster.

However, 181 of them have fallen into disuse and others have long remained idle. That has caused problems, including a shortage of parking spaces.

October 29, 2017

Beginning of official storage of contaminated soil

Contaminated soil produced during cleanup in communities affected by the 2011 Fukushima nuclear disaster is carried on belt-conveyers covered with plastic sheets at an interim storage site in Okuma, Fukushima Prefecture, on Oct. 28. (Hiroshi Ishizuka)

Official storage of contaminated soil begins in Fukushima

http://www.asahi.com/ajw/articles/AJ201710290026.html

By HIROSHI ISHIZUKA/ Staff Writer

OKUMA, Fukushima Prefecture--Hailed by the government as a major step to rebuilding, radioactive soil from the cleanup of municipalities impacted by the 2011 Fukushima nuclear disaster began arriving at an interim storage site here on Oct. 28.

However, officials and residents with the towns of Okuma and Futaba fear the repository may end up being permanent as finding a final resting place outside Fukushima Prefecture is expected to be extremely difficult.

Still, local governments welcomed the start since rebuilding has been hampered by the countless number of bags containing polluted soil that have been kept in backyards.

“We are hoping to remove as many bags of contaminated soil as possible from people’s living spaces,” said Tadahiko Ito, vice environment minister who inspected the site on Oct. 28.

All the soil there is supposed to be taken out of the prefecture by March 2045 for final disposal under the law.

The repository began operating at the site, where soil from low-level pollution will be kept after being brought in via a belt-conveyor system. Bulldozers will afterward flatten the surface.

After a certain amount of soil is brought in, the ground will be covered with uncontaminated soil. The site can hold about 50,000 cubic meters of soil, according to the Environment Ministry, which oversees the project.
The ministry began building the interim storage facility about a year ago. As of the end of September, contracts had been signed for about 40 percent of the 1,600 hectares of land needed for storage in Okuma and Futaba, which co-host the crippled Fukushima No. 1 nuclear power plant.
A total of seven facilities will be built to keep polluted soil.
The ministry also plans to complete two facilities to store more radioactive waste in fiscal 2019.
Overall construction costs are estimated at 1.1 trillion yen ($9.67 billion) for all the interim storage facilities.
They can store up to 22 million cubic meters of soil and other waste.
According to the ministry, about 15.2 million cubic meters of contaminated soil from decontamination work are piled up or buried at about 150,000 location in Fukushima Prefecture, including plots near houses and schoolyards.
The ministry envisages moving 12.5 million cubic meters of the total to the interim sites by the end of March 2021.

see difference in figures in the Mainichi article of October 28:

Fukushima radioactive waste storage starts full operation

https://mainichi.jp/english/articles/20171028/p2g/00m/0dm/082000c

TOKYO (Kyodo) -- The government Saturday started full operation of its Fukushima facility to store radioactive waste resulting from the 2011 nuclear disaster after running it on a trial basis for about four months.

While the facility near the crippled Fukushima Daiichi nuclear complex is designed to store contaminated soil and other waste, collected in decontamination work in the eastern Japan prefecture, for up to 30 years, the storage is only half completed over six years after the disaster.

An estimated 22 million cubic meters of contaminated waste exists in Fukushima, but the facility does not yet have enough capacity to accept all of it, and local residents fear the waste will sit there permanently in the absence of a final disposal site.

The government plans to secure a total of 1,600 hectares of land for the facility, expecting 1.6 trillion yen ($14.1 billion) in construction and related costs.

It has been able to buy only 40 percent of land needed for the storage from land owners so far.

Still, completion of the storage is urgently needed when 13 million cubic meters of waste from cleanup work is scattered around the prefecture and waiting to be transported to the storage facility. Prolonged disposal work, among other concerns, is also said to be keeping evacuated residents from returning to Fukushima even after evacuation orders are lifted.

On Saturday, the government started full-fledged operation of the facility where waste for incineration such as trees and plants are removed from the rest.

Contaminated soil is sorted into different categories depending on the level of radioactive cesium before storage.

Unexpected observation must be borne in mind with all coastal nuke plants

Unexpected source of Fukushima-derived radiocesium to the coastal ocean of Japan

1. Virginie Saniala,1,
2. Ken O. Buesselera,1,
3. Matthew A. Charettea, and
4. Seiya Nagaob

Author Affiliations

5. Edited by David M. Karl, University of Hawaii, Honolulu, HI, and approved August 28, 2017 (received for review May 24, 2017)

Significance

Five years after the Fukushima Dai-ichi Nuclear Power Plant accident, the highest radiocesium (^{137}Cs) activities outside of the power plant site were observed in brackish groundwater underneath sand beaches. We hypothesize that the radiocesium was deposited on mineral surfaces in the days and weeks after the accident through wave- and tide-driven exchange of seawater through the beach face. As seawater radiocesium concentrations decreased, this radiocesium reentered the ocean via submarine groundwater discharge, at a rate on par with direct discharge from the power plant and river runoff. This new unanticipated pathway for the storage and release of radionuclides to ocean should be taken into account in the management of coastal areas where nuclear power plants are situated.

Abstract

There are 440 operational nuclear reactors in the world, with approximately one-half situated along the coastline. This includes the Fukushima Dai-ichi Nuclear Power Plant (FDNPP), which experienced multiple reactor meltdowns in March 2011 followed by the release of radioactivity to the marine environment. While surface inputs to the ocean via atmospheric deposition and rivers are usually well monitored after a nuclear accident, no study has focused on subterranean pathways. During our study period, we found the highest cesium-137 (^{137}Cs) levels (up to 23,000 $Bq \cdot m^{-3}$) outside of the FDNPP site not in the ocean, rivers, or potable groundwater, but in groundwater beneath sand beaches over tens of kilometers away from the FDNPP. Here, we present evidence of a previously unknown, ongoing source of Fukushima-derived ^{137}Cs to the coastal ocean. We postulate that these beach sands were contaminated in 2011 through wave- and tide-driven exchange and sorption of highly radioactive Cs from seawater. Subsequent desorption of ^{137}Cs and fluid exchange from the beach sands was quantified using naturally occurring radium isotopes. This estimated ocean ^{137}Cs source (0.6 $TBq \cdot y^{-1}$) is of similar magnitude as the ongoing releases of ^{137}Cs from the FDNPP site for 2013–2016, as well as the input of Fukushima-derived dissolved ^{137}Cs via rivers. Although this ongoing source is not at present a public health issue for Japan, the release of Cs of this type

and scale needs to be considered in nuclear power plant monitoring and scenarios involving future accidents.

- Fukushima Dai-ichi Nuclear Power Plant accident
- cesium
- submarine groundwater discharge
- radioactivity
- radium

Footnotes

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- Author contributions: K.O.B. and M.A.C. designed research; V.S., K.O.B., M.A.C., and S.N. performed research; V.S., K.O.B., M.A.C., and S.N. analyzed data; and V.S., K.O.B., M.A.C., and S.N. wrote the paper.
- Conflict of interest statement: K.O.B. has served in a consulting capacity related to radionuclides in Japanese fisheries products.
- This article is a PNAS Direct Submission.
- This article contains supporting information online at www.pnas.org/lookup/suppl/doi:10.1073/pnas.1708659114/-/DCSupplemental.

Also available on https://pubmed.ncbi.nlm.nih.gov/28973919/

December 25, 2017

Radiation cleanup in Futaba

Decontamination work begins in no-entry zone

https://www3.nhk.or.jp/nhkworld/en/news/20171225_20/

Decontamination and demolition of houses has begun in an area affected by the 2011 nuclear accident in Fukushima Prefecture.

The area in Futaba Town is designated as a post-disaster reconstruction hub inside the "no-entry" zone set up due to high radiation levels.

The Environment Ministry plans to administer the project, which will cover a 555-hectare area within the town.

Town Mayor Shiro Izawa spoke to the workers at the start of the operation on Monday.

He asked them to keep in mind that residents are looking forward to returning to the town as early as possible.

The first phase will continue until July next year and cover an area of about 7 hectares.

Workers will initially do weeding along roads near a railway station and around public facilities. They will then remove contaminated top soil, and demolish about 55 houses and public buildings.

Town of Futaba kicks off radiation cleanup with eye on 2022 revival

https://www.japantimes.co.jp/news/2017/12/25/national/town-futaba-kicks-off-radiation-cleanup-eye-2022-revival/#.WkDfbHkiGic

Kyodo
FUKUSHIMA – Cleanup work kicked off Monday to make radiation-tainted Futaba, one of the towns hosting the meltdown-hit Fukushima No. 1 power plant, habitable again by around spring 2022 under a government-led recovery project.

Cleanup and demolition crews are trying to decontaminate the town, which was tainted with fallout from the plant's triple core meltdown after the March 2011 mega-quake and tsunami. The plant's operator, Tokyo Electric Power Company Holdings Inc., is shouldering the cost.

The work at Futaba marks the beginning of a series of government-led projects to make areas designated as special reconstruction zones livable again, with an emphasis on new infrastructure.

About 96 percent of Futaba has been designated as “difficult to return to” zone, and an evacuation advisory is still in place for the entire town, which hosts the stricken power plant with neighboring Okuma.

The cleanup will be concentrated in the special reconstruction zone, which covers 555 hectares accounting for 11 percent of Futaba.

“The reconstruction efforts will help motivate residents to return to their homes,” Futaba Mayor Shiro Izawa told officials involved in the project.

“We want you to carry out the work while thinking about the feelings of the citizens awaiting the day they can return,” he said.

Overseen by the Environment Ministry, the first steps will involve removing the top layer of soil in the area near Futaba Station, trimming grass along the streets, and dismantling nearly 60 houses and public facilities.

Along with Futaba, seven municipalities in Fukushima Prefecture have been designated as zones that are difficult to return to.

The government is aiming to lift the evacuation advisory near Futaba station by the end of March 2020, when the Joban Line plans to fully resume operation.

Some evacuees from Futaba had mixed emotions about the start of the work.

A 69-year-old woman residing in a temporary shelter in Iwaki said that her house is in the special reconstruction zone but that she had given up hope of returning because she evacuated over six years ago.

“If this was two or three years after the disaster, I might have a choice to return. But my house became run-down and I got old. Realistically speaking, I don’t think I can live there now,” she said.

On the other hand, Masamichi Matsumoto, who also fled to Iwaki, welcomed the project, saying, “I’m glad that a step has been taken to rebuild the town for the future.”
He said it is unlikely many citizens will return, partly because a nearby facility will be storing contaminated soil collected from the cleanup work.
“But I hope that Futaba will become a town where people can visit some day,” Matsumoto, 54, added.

February 15, 2018

Cleanup to start soon in Namie

Japan to start nuclear cleanup of Fukushima town around May

https://mainichi.jp/english/articles/20180215/p2g/00m/0dm/069000c

TOKYO (Kyodo) -- Nuclear decontamination work using state funds will begin around May in Namie, a town in northeastern Japan hit hard by the 2011 earthquake and tsunami, **to make some of its most-contaminated areas habitable again,** the government said Thursday.
The government is seeking to lift an evacuation order for three areas in the town, covering about 660 hectares, by March 2023.
The order currently covers about 80 percent of Namie in Fukushima Prefecture, and the areas to be decontaminated make up some 3.7 percent of it where entry is prohibited in principle.
On Dec. 22, the government approved a plan submitted by the town to rebuild the areas affected by meltdowns at the Fukushima Daiichi nuclear power plant.
Similar rebuilding efforts have been underway in the neighboring town of Futaba since December and are also scheduled to begin in the town of Okuma in March.
For Namie, the first round of work covers some 30 hectares of land.
On March 11, 2011, a tsunami inundated the six-reactor plant located in Okuma, Fukushima Prefecture, and flooded the power supply facilities.
Reactor cooling systems were crippled and the Nos. 1 to 3 reactors suffered fuel meltdowns in the world's worst nuclear catastrophe since the 1986 Chernobyl disaste

April 13, 2018

French soil decontamination process used in Fukushima

French soil decontamination tested in Fukushima

http://www.world-nuclear-news.org/WR-French-soil-decontamination-tested-in-Fukushima-1304184.html#.WtQ2Zzb1maI.facebook

A demonstration test of a process to decontaminate radioactive soil was successfully carried out last November in Japan's Fukushima Prefecture, France's Alternative Energies and Atomic Energy Commission (CEA) announced on 11 April. The technology was developed by CEA, Orano and Veolia.

France launched the Demeterres project in 2013 to develop bio- and eco-technological methods for the decontamination of soil and effluents in support of a strategy for post-accident rehabilitation. The EUR19 million (USD23 million), five-year project involves CEA, Orano, Veolia, the Institute for Radiological

Protection and Nuclear Safety (IRSN), the National Institute for Agricultural Research (INRA), and the French Agricultural Research Centre for International Development (CIRAD) as partners.
One of the physiochemical processes developed within the framework of the Demeterres project by CEA, Orano and Veolia uses particulate flotation foams. The process involves mixing contaminated soil with water to form a suspension. This mixture is then introduced into the middle of a flotation column, with air injected into the bottom of the column to produce bubbles. The caesium-contaminated soil particles attach to the surface of the air bubbles, which float to the surface, while the non-contaminated particles sink to the bottom of the column.
The process was first tested in 2016 in a pilot column at CEA's Marcoule site using various non-contaminated soils. These tests served to collect date relating to the functioning of the process.
Some 22 million cubic meters of radioactive soil was removed from the surface of the ground in Fukushima Prefecture, Japan, following the March 2011 accident at the Fukushima Daiichi nuclear power plant. This was to make areas accessible to residents as soon as possible. The contaminated soil has been stored in giant bags at a number of dedicated storage sites. The Japanese authorities are seeking the best technology to reduce or remove the radioactivity from the soil.
In April 2017, the froth flotation technology was proposed within the framework of a call for projects for the demonstration of decontamination techniques launched by Japan's Ministry of the Environment. Last July, the process was one of ten technologies selected for on-site demonstration out of a total 19 put forward.
The technology was tested on several hundred kilograms of contaminated soil between 13-17 November at the municipality of Okuma in Fukushima Prefecture, which houses a storage facility for contaminated soil. On most of the soil tested, 70-80% of the fine particles previously released through agitation in water were separated by flotation. The radioactivity of this soil was reduced to 33-50% of the initial amount. In order to increase the amount of caesium extracted, changes in the way the soil is prepared - such as drying, crumbling, pre-sifting and dispersion in water - have been proposed.
"If the technology presented is selected by the Japanese authorities, the next stage will be to develop the process on a larger scale so that it can be used in the Japanese municipalities that house storage centres," CEA said.
Researched and written
by World Nuclear News

April 27, 2018

Fukushima officially worst nuclear disaster in history

Move Over Chernobyl, Fukushima is Now Officially the Worst Nuclear Power Disaster in History

https://www.counterpunch.org/2018/04/27/move-over-chernobyl-fukushima-is-now-officially-the-worst-nuclear-power-disaster-in-history/

by John Laforge

The radiation dispersed into the environment by the three reactor meltdowns at Fukushima-Daiichi in Japan has exceeded that of the April 26, 1986 Chernobyl catastrophe, so we may stop calling it the "second worst" nuclear power disaster in history. Total atmospheric releases from Fukushima are estimated to be between 5.6 and 8.1 times that of Chernobyl, according to the 2013 World Nuclear Industry Status Report. Professor Komei Hosokawa, who wrote the report's Fukushima section, told London's Channel 4 News then, "Almost every day new things happen, and there is no sign that they will control the situation in the next few months or years."

Tokyo Electric Power Co. has estimated that about 900 peta-becquerels have spewed from Fukushima, and the updated 2016 TORCH Report estimates that Chernobyl dispersed 110 peta-becquerels.[1](A Becquerel is one atomic disintegration per second. The "peta-becquerel" is a quadrillion, or a thousand trillion Becquerels.)

Chernobyl's reactor No. 4 in Ukraine suffered several explosions, blew apart and burned for 40 days, sending clouds of radioactive materials high into the atmosphere, and spreading fallout across the whole of the Northern Hemisphere — depositing cesium-137 in Minnesota's milk.[2]

The likelihood of similar or worse reactor disasters was estimated by James Asselstine of the Nuclear Regulatory Commission (NRC), who testified to Congress in 1986: "We can expect to see a core meltdown accident within the next 20 years, and it … could result in off-site releases of radiation … as large as or larger than the releases … at Chernobyl.[3] Fukushima-Daiichi came 25 years later.

Contamination of soil, vegetation and water is so widespread in Japan that evacuating all the at-risk populations could collapse the economy, much as Chernobyl did to the former Soviet Union. For this reason, the Japanese government standard for decontaminating soil there is far less stringent than the standard used in Ukraine after Chernobyl.

Fukushima's Cesium-137 Release Tops Chernobyl's

The Korea Atomic Energy Research (KAER) Institute outside of Seoul reported in July 2014 that Fukushima-Daiichi's three reactor meltdowns may have emitted two to four times as much cesium-137 as the reactor catastrophe at Chernobyl.[4]

To determine its estimate of the cesium-137 that was released into the environment from Fukushima, the Cesium-137 release fraction (4% to the atmosphere, 16% to the ocean) was multiplied by the cesium-137 inventory in the uranium fuel inside the three melted reactors (760 to 820 quadrillion Becquerel, or Bq), with these results:

Ocean release of cesium-137 from Fukushima (the worst ever recorded): 121.6 to 131.2 quadrillion Becquerel (16% x 760 to 820 quadrillion Bq). Atmospheric release of Cesium-137 from Fukushima: 30.4 to 32.8 quadrillion Becquerel (4% x 760 to 820 quadrillion Bq).

Total release of Cesium-137 to the environment from Fukushima: 152 to 164 quadrillion Becquerel. Total release of Cesium-137 into the environment from Chernobyl: between 70 and 110 quadrillion Bq.

The Fukushima-Daiichi reactors' estimated inventory of 760 to 820 quadrillion Bq (petabecquerels) of Cesium-137 used by the KAER Institute is significantly lower than the US Department of Energy's estimate of 1,300 quadrillion Bq. It is possible the Korean institute's estimates of radioactive releases are low.

In Chernobyl, 30 years after its explosions and fire, what the Wall St. Journal last year called "the $2.45 billion shelter implementation plan" was finally completed in November 2016. A huge metal cover was moved into place over the wreckage of the reactor and its crumbling, hastily erected cement tomb. The giant new cover is 350 feet high, and engineers say it should last 100 years — far short of the 250,000-year radiation hazard underneath.

The first cover was going to work for a century too, but by 1996 was riddled with cracks and in danger of collapsing. Designers went to work then engineering a cover-for-the-cover, and after 20 years of work, the smoking radioactive waste monstrosity of Chernobyl has a new "tin chapeau." But with extreme weather, tornadoes, earth tremors, corrosion and radiation-induced embrittlement it could need replacing about 2,500 times.
John Laforge's field guide to the new generation of nuclear weapons is featured in the March/April 2018 *issue of CounterPunch magazine.*

Notes.
[1]*Duluth News-Tribune & Herald*, "Slight rise in radioactivity found again in state milk," May 22, 1986; *St. Paul Pioneer Press & Dispatch*, "Radiation kills Chernobyl firemen," May 17, 1986;
Minneapolis *StarTribune*, "Low radiation dose found in area milk," May 17, 1986.
[2]Ian Fairlie, "TORCH-2016: An independent scientific evaluation of the health-related effects of the Chernobyl nuclear disaster," March 2016
(https://www.global2000.at/sites/global/files/GLOBAL_TORCH%202016_rz_WEB_KORR.pdf).
[3]*James K*. Asselstine, Commissioner, US Nuclear Regulatory Commission, Testimony in Nuclear Reactor Safety: Hearings before the Subcommittee on Energy Conservation and Power of the Committee on Energy and Commerce, House of Representatives, May 22 and July 16, 1986, Serial No. 99-177, Washington, DC: Government Printing Office, 1987.
[4] *Progress in Nuclear Energy*, Vol. 74, July 2014, pp. 61-70; ENENews.org, Oct. 20, 2014.

May 20, 2018

Radiation monitors: An expensive mismanagement

Fukushima Prefecture radiation monitoring posts installed after 3/11 hit by glitches

https://www.japantimes.co.jp/news/2018/05/20/national/fukushima-prefecture-radiation-monitoring-posts-installed-3-11-hit-glitches/#.WwHKnIouCos

Kyodo
Some 3,000 radiation monitoring devices installed in Fukushima Prefecture after the 2011 Fukushima No. 1 nuclear power plant disaster have been hit by glitches and other problems nearly 4,000 times, sources familiar with the matter said Sunday.
The Nuclear Regulation Authority, which operates the devices called monitoring posts, is planning to remove around 80 percent of them by the end of fiscal 2020 on grounds that radiation levels in some areas have fallen and steadied.

But the move can also be seen as an attempt to cut costs as the government is expected to terminate by the same year a special budget account for rebuilding the Tohoku region affected by the March 2011 earthquake and tsunami that triggered the nuclear crisis.
Some local governments and residents have opposed the planned removal of monitoring posts, expressing concerns about their health.
Around 3,000 monitoring posts were installed in locations such as kindergartens and schools to measure radiation levels in the air, according to the NRA.
But during the five years since fully starting the operation of the devices in fiscal 2013, the monitoring system has been hit by a variety of problems, such as showing inaccurate readings and failing to transmit data, 3,955 times.
The makers of the device and security system companies were called each time to fix the problems.
Managing the monitoring posts has cost the central government about ¥500 million a year.
In March, the NRA decided to remove some 2,400 monitoring devices set in areas other than 12 municipalities near the crippled No. 1 plant and reuse some of them in the 12 municipalities.
Local citizens' groups have requested the authority not to remove the monitoring posts until the decommissioning work is completed at the plant of Tokyo Electric Power Company Holdings Inc.
Terumi Kataoka, a housewife who lives in the city of Aizuwakamatsu, said she formed a group of mothers and submitted a petition to the authority in April to keep the monitoring devices, but the authority did not change the plan.
She also requested information disclosure about plans to reuse the devices, but she only received an answer that no official documents regarding such plans have been drafted.
"It's all about the budget in the end. They can't reuse the devices and there seems to be no concrete plans," she said.

May 24, 2018

New research: Release of 3/11 radioactive particles was significant

Source : Eurekalert

Fukushima radioactive particle release was significant says new research

https://www.eurekalert.org/pub_releases/2018-05/uom-frp052418.php

University of Manchester Public Release: 24-May-2018

Scientists say there was a significant release of radioactive particles during the Fukushima-Daiichi nuclear accident.
The researchers identified the contamination using a new method and say if the particles are inhaled they could pose long-term health risks to humans.

The new method allows scientists to quickly count the number of caesium-rich micro-particles in Fukushima soils and quantify the amount of radioactivity associated with these particles.
The research, which was carried out by scientists from Kyushu University, Japan, and The University of Manchester, UK, was published in *Environmental Science and Technology*.
In the immediate aftermath of the Fukushima Daiichi nuclear accident, it was thought that only volatile, gaseous radionuclides, such as caesium and iodine, were released from the damaged reactors. However, in recent years it has become apparent that small radioactive particles, termed caesium-rich micro-particles, were also released.
Scientists have shown that these particles are mainly made of glass, and that they contain significant amounts of radioactive caesium, as well as smaller amounts of other radioisotopes, such as uranium and technetium.
The abundance of these micro-particles in Japanese soils and sediments, and their environmental impact is poorly understood. But the particles are very small and do not dissolve easily, meaning they could pose long-term health risks to humans if inhaled.
Therefore, scientists need to understand how many of the micro-particles are present in Fukushima soils and how much of the soil radioactivity can be attributed to the particles. Until recently, these measurements have proven challenging.
The new method makes use of a technique that is readily available in most Radiochemistry Laboratories called Autoradiography. In the method, an imaging plate is placed over contaminated soil samples covered with a plastic wrap, and the radioactive decay from the soil is recorded as an image on the plate. The image from plate is then read onto a computer.
The scientists say radioactive decay from the caesium-rich micro particles can be differentiated from other forms of caesium contamination in the soil.
The scientists tested the new method on rice paddy soil samples retrieved from different locations within the Fukushima prefecture. The samples were taken close to (4 km) and far away (40 km) from the damaged nuclear reactors. The new method found caesium-rich micro-particles in all of the samples and showed that the amount of caesium associated with the micro-particles in the soil was much larger than expected.
Dr Satoshi Utsunomiya, Associate Professor at Kyushu University, Japan, and the lead author of the study says "when we first started to find caesium-rich micro-particles in Fukushima soil samples, we thought they would turn out to be relatively rare. Now, using this method, we find there are lots of caesium-rich microparticles in exclusion zone soils and also in the soils collected from outside of the exclusion zone".
Dr Gareth Law, Senior Lecturer in Analytical Radiochemistry at the University of Manchester and an author on the paper, adds: "Our research indicates that significant amounts of caesium were released from the Fukushima Daiichi reactors in particle form.
"This particle form of caesium behaves differently to the other, more soluble forms of caesium in the environment. We now need to push forward and better understand if caesium micro-particles are abundant throughout not only the exclusion zone, but also elsewhere in the Fukushima prefecture; then we can start to gauge their impact".
The new method can be easily used by other research teams investigating the environmental impact of the Fukushima Daiichi accident.
Dr Utsunomiya adds: "we hope that our method will allow scientists to quickly measure the abundance of caesium-rich micro-particles at other locations and estimate the amount of caesium radioactivity associated with the particles. This information can then inform cost effective, safe management and clean-up of soils contaminated by the nuclear accident".

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Notes to Editor

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The paper, 'Novel Method of Quantifying Radioactive Cesium-Rich Microparticles (CsMPs) in the Environment from the Fukushima Daiichi Nuclear Power Plant' has been published in the journal *Environmental Science and Technology* - DOI:10.1021/acs.est.7b06693
Energy is one of The University of Manchester's research beacons - examples of pioneering discoveries, interdisciplinary collaboration and cross-sector partnerships that are tackling some of the biggest questions facing the planet. #ResearchBeacons

June 24, 2018

Decontamination in Fukushima "all done"

Japan touts completion of Fukushima cleanup at tripartite environment meeting in China

https://www.japantimes.co.jp/news/2018/06/24/national/japan-touts-completion-fukushima-cleanup-tripartite-environment-meeting-china/#.WzDM4IoyWot

Kyodo
SUZHOU – Environment Minister Masaharu Nakagawa told his counterparts from China and South Korea on Sunday that radioactive decontamination work following the 2011 Fukushima nuclear disaster is "all done" except for so-called difficult-to-return-to zones.
At the 20th Tripartite Environment Ministers' Meeting held in Suzhou, in eastern China, Nakagawa also used the opportunity to again request the lifting of food import restrictions from prefectures hit by the Fukushima disaster.
Beijing has banned food imports from 10 prefectures surrounding the Fukushima No. 1 nuclear power plant, while Seoul has blocked Japanese seafood imports from eight prefectures.
Nakagawa explained to Chinese Ecology and Environment Minister Li Ganjie and South Korean Environment Minister Kim Eun-kyung that Japan has strict food safety standards in place that exceed international requirements. "Environmental regeneration in Fukushima is progressing steadily," he said.
The three ministers also agreed on a policy to discuss the problem of plastic microparticles and their effect on marine pollution at a Group of 20 ministerial meeting on energy transitions and the global environment for sustainable growth in Karuizawa, Nagano Prefecture, next June.
In addition, they adopted a joint statement including a pledge to promote information sharing on the problem of venomous fire ants, which have over the past year repeatedly been brought to Japan in containers shipped from China.
The ministers also decided to hold next year's tripartite meeting in Japan. It has been held annually in rotation among the three countries since 1999

June 28, 2018

Removing tritium from water

Radioactive tritium removed from water by Kindai University team, raising hopes for Fukushima cleanup

https://www.japantimes.co.jp/news/2018/06/28/national/science-health/radioactive-tritium-removed-water-kindai-university-team-raising-hopes-fukushima-cleanup/#.WzTNE4oyWos

OSAKA – A team of researchers at Kindai University and other collaborators has succeeded in removing the radioactive substance tritium from water, raising hopes of fully decontaminating the tainted water stored at the Fukushima No. 1 nuclear power plant.

Tritiated water is said to be difficult to separate from ordinary water as the two substances have similar chemical properties.

Tatsuhiko Ihara, a professor in the Faculty of Engineering at Kindai's Hiroshima campus, and others used processed aluminum powder to develop a filter that has numerous superfine pores with diameters of 5 nanometers or less, the university announced Wednesday. One nanometer is equal to 1 billionth of a meter.

After putting water contaminated with radioactive materials, including tritium, through the filter, only tritiated water was caught in the pores, making it possible to separate the substance in a highly efficient manner, according to the team.

The tritiated water can then be removed from the filter by heating it so the device can be reused, thus keeping costs down.

"We want to reduce the amount of contaminated water at the Fukushima No. 1 nuclear power plant," Ihara said.

The plant is set to be decommissioned over the next several decades, as three of its six reactors suffered nuclear meltdowns after being struck by tsunami triggered by the massive March 2011 earthquake.

Water contaminated with radioactive materials in the process of cooling the damaged reactors is building up in the storage tanks at the site as tritium, a radioactive isotope of hydrogen, cannot be removed using the existing water processing facility there.

Regulatory authorities have called for the processed water to be drained into the sea, but locals, especially fishermen, are opposed to the idea as the water still contains tritium.

The research team includes representatives of Kindai's Faculty of Engineering, the university's Atomic Energy Research Institute, Toyo Aluminium K.K. and A-Atom Technol Co., a startup that measures and analyzes radiation. The team has applied for an international patent on the technology.

July 23, 2018

Fukushima's radioactive legacy in Californian wine

Fukushima's Nuclear Imprint Is Found in California Wine (Drinkers, Don't Panic)

http://www.asahi.com/ajw/articles/SDI201807235851.html

By MIHIR ZAVERI/ © 2018 The New York Times

Ever since a huge earthquake off the coast of Japan sent a tsunami crashing into a nuclear plant in Fukushima, setting off one of the world's worst nuclear crises, scientists have been uncovering the radioactive legacy of the 2011 disaster.

The government warned about contaminated seafood around Japan, and toxic water, sludge and rubble. More frighteningly, radioactive wild boars marauded Japanese towns and attacked people.

Now a group of French nuclear physicists say they have stumbled on Fukushima's signature in Northern California wine. (No, it's not believed to be dangerous.)

In a new study, the researchers report testing 18 bottles of California rosé and cabernet sauvignon from 2009 onward and finding increased levels of radioactive particles in the wine produced after the Fukushima disaster. In the case of the cabernet, the levels of the radioactive materials doubled.

"We can measure some radioactive level that is much higher than the usual level," said Michael Pravikoff, a physicist at a French research center who worked on the study.

The French research team has in recent years examined wines from around the world, trying to correlate the level of radioactive material with the date the wine grapes were picked.

Wines made around major nuclear events, including U.S. and Soviet nuclear tests during the Cold War and the Chernobyl accident, should show higher levels of radioactive isotopes, called cesium-137, according to the researchers. The man-made isotope cannot be found in nature and would be present only at certain levels after the nuclear events.

This method of analysis, Pravikoff said, has become a way of verifying the authenticity of wine as fraud continues to be a persistent and lucrative crime. Wine with cesium-137 cannot have existed before the mid-20th century, and certain nuclear events would leave unique signatures based on time and proximity to the grapes.

Ingesting cesium-137 can result in an elevated risk for cancer, but the level of radioactive material from Fukushima in food and drink in countries outside Japan has been too low to result in a health hazard, according to the World Health Organization.

While the 2011 earthquake and tsunami killed an estimated 16,000 people in the Fukushima area and across Japan and more than 160,000 fled the area around the plant, nobody was believed to have been sickened or killed by the radiation, as most of the fallout was swept out to sea.

Fish off the coast of Japan showed elevated levels of radiation, including cesium, resulting in the Japanese government's banning or limiting their sale.

The California wine, however, is not seen as a health hazard, Pravikoff said. While the radioactive cloud from the disaster floated over the Pacific Ocean to California, settling on grapes there, the radioactive levels were low and drop with each passing year.

"These levels are so low, way below the natural radioactivity that's everywhere in the world," Pravikoff said.

He said the team's special equipment helped detect the change in levels of radioactive material.

The California Department of Public Health said Friday that it had not previously heard of the study, but that there were no "health and safety concerns to California residents."
"This report does not change that," a department spokesman, Corey Egel, said in an emailed statement.
Pravikoff said the California bottles had radioactive levels so low that the researchers had to use a special technique to measure them: burning the wine to ashes.
In other cases, where radiation is higher, the team's equipment can measure the radiation through the glass of the wine bottle, so the bottle does not have to be opened.
Typically, the test has been conducted on unopened bottles.
Pravikoff said the method was developed three decades ago and gained prominence as people became more attuned to wine fraud.
Two years ago, he said, he was shopping at a supermarket when he found several bottles of cabernet sauvignon from California's Napa Valley, produced years before, but after Fukushima. That spawned the idea to test for the disaster's imprint.
"I just bought them, just to see," he said. "It is more for the pure scientific aspect that we were interested in measuring them."
Pravikoff said he would like to do more testing on bottles produced before the disaster to build more confidence in the team's findings.
Maureen Downey, a wine authentication expert who leads Chai Consulting, a wine collection consulting firm, called the French researchers' method "fantastic science."
But she said it was of limited use to those in the wine industry, as prices could vary by thousands of dollars between neighboring vineyards, for example.
"Fifteen feet away is a difference in your bottle worth $15,000," she said.
Wine, for its part, still remains a hotly debated drink when it comes to health: One study found that patients with Type 2 diabetes who drank wine, most notably red wine, had a reduced cardiometabolic risk, or the chance of heart disease, stroke or other medical conditions. Many other studies warn of the health risks of alcohol abuse and the danger to pregnant women.
While radioactivity from Fukushima will probably not hurt those seeking California wines from 2011 and later, the lesson, as always, is to drink in moderation.
(July 20, 2018)

September 6, 2018

Disposing of tritium

News Navigator: What is tritium and why is its disposal difficult?

The Mainichi Shimbun answers some common questions readers may have about the characteristics of tritium, and why it is hard to dispose of water containing the radioactive element.

- 【Related】Gov't, TEPCO plan to dump treated water in sea angers Fukushima fishermen

- 【Related】Researchers develop technology to remove radioactive tritium from water
- 【Related】Decommissioning Fukushima reactors will take time but progress continues
- 【Related】Fukushima nuclear plant still plagued by tainted water 6 years after meltdowns

Question: I heard the term "water containing tritium" used when talking about the treatment of contaminated water at the Fukushima No. 1 Nuclear Power Plant operated by the Tokyo Electric Power Co. (TEPCO).
Answer: It refers to treated water including tritium. The element cannot be removed using the current purification method used at the crippled nuclear power plant. The government and TEPCO are considering ways to dispose of the liquid, which is continuing to fill waste water tanks at the plant.
Q: What kind of substance is tritium?
A: Tritium is a radioactive isotope of hydrogen containing one proton and two neutrons while the ordinary hydrogen nucleus contains just one proton. It has a half-life of about 12.3 years, which is the time required to reduce half of its radioactivity.
Q: Is tritium found only in the treated water from the damaged nuclear plant?
A: Tritium can also develop when oxygen and nitrogen in the atmosphere react to cosmic neutrons. Around 70 quadrillion becquerels appear naturally per year, and around a total of 223 trillion becquerels are contained in Japan's annual rainfall, according to data compiled by the Ministry of Economy, Trade and Industry (METI). Coolant in normal operating nuclear reactors also carries tritium. At the Fukushima No. 1 Nuclear Power Plant, tritium is generated in groundwater pouring into the buildings that house reactors, and in water used to cool melted fuel debris.
Q: Why is it difficult to dispose of tritium?
A: Other radioactive substances can be removed using specific disposal equipment for filtration and absorption to levels below the allowed ceiling. However, separation is very hard for water containing tritium because its characteristics, including the boiling temperature, are similar to those of normal water.
Q: What about the impact it will have on human health, as it is radioactive?
A: Tritium emits beta radiation that has weak energy, and will mostly pass through the body if drank. Its effects on the human body are said to be minimal compared to radioactive cesium. Nuclear power plants around the world are disposing water containing tritium according to regulations, in oceans and other places, once it has been diluted to a radiation level that falls below standard limits. According to METI, Japan released into oceans around 380 trillion becquerels of tritium per year on average for five years before the Fukushima nuclear disaster.
(Answers by Riki Iwama, Science & Environment News Department)

March 9, 2019

Examining radioactive particle... to understand

U.K. and Japan scientists probe radioactive particles from Fukushima meltdowns

https://www.japantimes.co.jp/news/2019/03/09/national/science-health/u-k-japan-scientists-probe-radioactive-particles-fukushima-meltdowns/#.XIPeirjjLyQ

Reuters

OXFORD, ENGLAND - Eight years after the Fukushima nuclear meltdown, radioactive particles collected from the site are undergoing new forensic investigation in Britain in an effort to understand the exact sequence of events.

A 9.0 magnitude earthquake struck on March 11, 2011, off the Japanese coast, triggering tsunami that killed some 18,000 people and the world's worst nuclear disaster since Chernobyl in 1986. Meltdowns at three of the Fukushima No. 1 plant's six reactors spewed radiation into the air, soil and ocean, forcing over 100,000 residents to flee. Many have still not returned.

The Japan Atomic Energy Agency is currently collaborating with British researchers to learn more about the state of the radioactive particles created by the meltdown.

Dr. Yukihiko Satou from the JAEA oversaw the transportation of particles collected from within the restricted zone, very close to the disaster site, to Britain.

"The particles were fundamentally extracted from those attached to soil, dust and debris," Satou said.

Encased in protective tape, the samples were brought to the Diamond Light Source, Britain's national synchrotron, or cyclic particle accelerator, near Oxford.

Here electrons are accelerated to near light speed until they emit light 10 billion times brighter than the sun, then they are directed into laboratories in "beamlines" which allow scientists to study minute specimens in extreme detail.

Researchers have created a 3D map of a radioactive sample using the synchrotron, allowing them to see the distribution of elements within the sample.

Understanding the current state of these particles and how they behave in the environment could ultimately determine if and when the area could be declared safe for people to return.

The head of the team leading the analysis, Tom Scott of Bristol University, said the particles have a structure like a pumice, a very light, porous volcanic rock.

"Studying … this glassy matrix tells us how available within the environment they are," he said.

The British and Japanese governments have awarded funding to the research team to examine larger particles closer to the site of the meltdown at Fukushima to better define radiation risk in the surrounding area.

The research could have significance beyond nuclear accidents, the team said, because the techniques employed could also be used to image particles in air pollution to better understand the risk they pose to human health

See also: http://www.asahi.com/ajw/articles/AJ201903090019.html

No.4 Fuel Removal

November 21, 2013

First batch transferred to nearby pool

In start of long operation, Fukushima removes first fuel rods

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201311210107

REUTERS

The operator of Japan's wrecked Fukushima nuclear plant completed on Nov. 21 the removal of the first fuel rods from a cooling pool high up in a badly damaged reactor building, a rare success in the often fraught battle to control the site.

The batch of 22 unused fuel assemblies, which each contain 50-70 of the fuel rods, was transferred by a trailer to a safer storage pool, the last day of a four-day operation, Tokyo Electric Power Co. (TEPCO) said in a statement.

The company must carefully pluck more than 1,500 brittle and potentially damaged assemblies from the unstable reactor No.4., the early stages of a decommissioning process following the 2011 earthquake and tsunami that wrecked the site.

TEPCO estimates removing the damaged assemblies from reactor No.4 alone will take a year. Some experts say that timeline is ambitious.

Still, it is an urgent operation. They are being stored 18 meters (59 feet) above ground level in a building that has buckled and tilted and could collapse if another quake strikes.

Carefully plucking the damaged fuel assemblies from the reactor building is being seen as a test of TEPCO's ability to move ahead with decommissioning the whole facility--a task likely to cost tens of billions of dollars and take decades.

The removal has to be conducted under water. If the rods are exposed to air or if they break, huge amounts of radioactive gases could be released into the atmosphere. Each assembly weighs around 300 kg (660 pounds) and is 4.5 meters (15 feet) long.

The hazardous removal operation has been likened by Arnie Gundersen, a veteran U.S. nuclear engineer and director of Fairewinds Energy Education, to trying to pull cigarettes from a crushed pack.

TEPCO started the operation on Nov. 18, slowly pulling the assemblies out of the submerged racks by crane, before transferring them to a heavy steel cask, designed to shield workers from radiation during the operation. The cask was transported to a building housing the station's common pool, which TEPCO says wasn't damaged in the quake or tsunami, where they will be deposited.

TEPCO will review the process before starting the removal of the next batch, it said in a statement.

Extracting spent fuel from the plant's other reactors, where radiation levels are much higher because of core meltdowns, will be even more challenging.

TEPCO has floundered for more than two and half years with rising levels of contaminated water that comes from its jerry-rigged cooling system for the melted reactor cores, power failures and water leaks that have led the government to step in an take a more active role.

TEPCO transfers 1st batch of fuel rods from Fukushima No. 4 spent fuel pool

http://mainichi.jp/english/english/newsselect/news/20131121p2g00m0dm078000c.html

TOKYO (Kyodo) -- The operator of the crippled Fukushima Daiichi nuclear power plant on Thursday transferred the first batch of fuel rod assemblies taken from the No. 4 unit spent fuel pool to a different building that provides more stable storage conditions.

The move came three days after Tokyo Electric Power Co. started a yearlong mission to eventually remove over 1,000 fuel assemblies from the spent fuel pool of the damaged No. 4 reactor building to address one of the major hazards remaining at the disaster-stricken plant.

After filling a container with 22 unused fuel assemblies by Tuesday, workers on Thursday used a crane to lower the container from the fifth floor of the building housing the spent fuel pool to the ground about 32 meters below.

The container was then placed on a trailer and taken to a different building about 100 meters away. There is a pool inside the building.

The 2011 nuclear crisis began when the Nos. 1 to 4 units lost their cooling systems as huge quake-triggered tsunami waves knocked out most of the emergency diesel power generators at the site.

The No. 4 unit suffered a hydrogen explosion but avoided a reactor meltdown, unlike the Nos. 1 to 3 reactors. At the time, all of its fuel was stored in the spent fuel pool because the reactor was undergoing periodic maintenance work.

"Cask" containing fuel moved into safer pool

http://www3.nhk.or.jp/nhkworld/english/news/20131121_36.html

The operator of the Fukushima Daiichi power plant says it has removed the first batch of nuclear fuel from the reactor 4 building to a safer storage pool.

Footage released by Tokyo Electric Power Company on Thursday shows workers lowering a steel cask containing 22 unused fuel assemblies from the 5th floor of the reactor building. Engineers used a huge crane to lower the cask, 5.5 meters long and two meters across, onto a trailer on the ground.

The container was transferred slowly to a separate pool in a building 100 meters away, and lowered into water to store the fuel more safely.

TEPCO plans to begin on Friday plucking the fuel assemblies out of the cask and placing them in storage racks inside the pool. The utility says it will review the process before starting a second round of fuel transfer.

Thursday's transfer involved unused fuel units. The reactor's storage pool has 1,511 fuel assemblies left, including 1,331 highly radioactive spent fuel assemblies.

TEPCO says the building housing the separate pool can withstand an earthquake as strong as the March 2011 disaster that badly damaged the plant.
Nov. 21, 2013 - Updated 11:07 UTC

TEPCO moves cask from reactor building

http://www3.nhk.or.jp/nhkworld/english/news/20131121_16.html

The operator of the crippled Fukushima Daiichi nuclear power plant has moved a container, or cask, of nuclear fuel outside of the number 4 reactor building.

Workers just after 1 PM on Thursday moved the cask on a trailer to a separate storage pool 100 meters away.

The cask contains 22 assemblies of unused nuclear fuel rods.

This is the first load of fuel to be removed from the reactor building in the operation that started on Monday.

Of the 1,511 fuel assemblies remaining in the number 4 reactor building's pool, 1,331 contain highly radioactive spent fuel rods.

Plant operator Tokyo Electric Power Company says the building housing the separate pool can withstand an earthquake as strong as the March 2011 one.

TEPCO says the fuel can be stored more safely there than in the reactor building, which was heavily damaged in an explosion following the massive quake and tsunami.

The workers will now proceed to transfer the 22 fuel assemblies from the cask to the pool.

Petition to the UN: The world must take charge

http://petitions.moveon.org/sign/the-world-community-must

The World Community Must Take Charge at Fukushima

By Harvey Wasserman (Contact)

To be delivered to: Ban Ki-Moon, Secretary-General, United Nations and Barack Obama, President, United States of America Petition Statement

At Fukushima Unit 4, the impending removal of hugely radioactive spent fuel rods from a pool 100 feet in the air presents unparalleled scientific and engineering challenges. With the potential for 15,000 times more fallout than was released at Hiroshima, we ask the world community, through the United Nations, to take control of this uniquely perilous task.

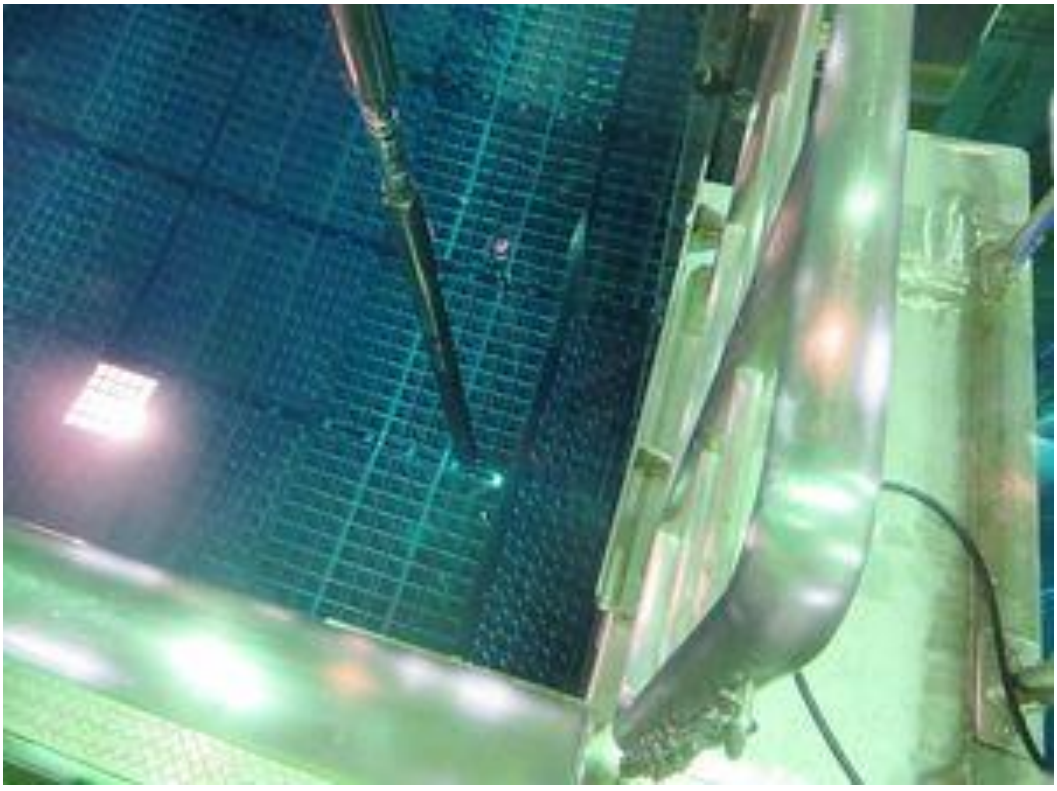
Petition Background

The danger of huge radiation releases from Fukushima 4 has taken on a new dimension; the world community must step in! There are currently 118,459 signatures
NEW goal - We need 125,000 signatures

November 22, 2013

First batch transferred

First batch of fuel from Fukushima reactor 4 pool now in different storage site



Kyodo

Electric Power Co. said Friday that it has finished transferring the first batch of fuel rod assemblies from the Fukushima No. 1 plants reactor 4 spent fuel pool to another building with more stable storage conditions.

"All of the fuel assemblies have been placed in the storage rack (inside the common pool), meaning the first fuel transfer work effectively ended," Tepco official Noriyuki Imaizumi told a press conference.

After reviewing the work flow that started Monday, the utility will move on to retrieve the next batch of fuel assemblies from the spent fuel pool of the damaged reactor 4 building.

The pool contains over 1,000 fuel assemblies and the process is expected to continue through the end of next year.
To get used to the operation, workers commenced with the removal of unused fuel assemblies, but they will also have to take out spent fuel, which is more difficult to handle because it is highly radioactive and emits heat as radioactive elements in the fuel decay.

The process starts with the transfer of fuel assemblies inside the water-filled spent fuel pool one by one into a transport container also placed inside the pool.

Once the container is filled with 22 fuel assemblies, workers lower it by crane from the fifth floor of the building where the pool is located so that it can be taken to the common pool about 100 meters away.

During the 2011 nuclear crisis, reactors 1 to 3 experienced core meltdowns, while unit 4 only suffered a hydrogen explosion as all of its fuel was stored in the spent fuel pool because the reactor was undergoing periodic maintenance work at the time.

However, the condition of the spent fuel pool on the highest floor of the crumbling building was a major source of concern in the early days of the crisis, as the water level was suspected to have dropped low enough to expose the fuel. Tepco later said the fuel in the reactor 4 pool probably did not sustain major damage.

1st fuel transfer ends at Fukushima Daiichi plant

http://www3.nhk.or.jp/nhkworld/english/news/20131122_45.html

The operator of the Fukushima Daiichi nuclear plant says the first batch of nuclear fuel has been transferred from a reactor building to a safer storage pool.

The first 22 fuel assemblies were moved from the storage pool in the No.4 reactor building on Thursday,

to a nearby facility housing the safer pool.

Workers unloaded the 22 unused fuel units from a cask container one by one and finished placing each in storage racks inside the pool on Friday evening.

Tokyo Electric Power Company plans to start the second transfer after reviewing whether there were any problems with the first round of work. If not, the utility may start removing spent fuel units that are highly radioactive.

The storage pool at the No 4 reactor still contains 1,511 more fuel units, many of which are spent.

TEPCO plans to repeat the process around 70 times to transfer all the fuel units by the end of next year.

November 23, 2013

And now...removal of spent fuel

Removal of used nuclear fuel from Fukushima No. 1 plant's reactor 4 said imminent

http://www.japantimes.co.jp/news/2013/11/23/national/removal-of-used-nuclear-fuel-from-fukushima-no-1-plants-reactor-4-said-imminent/#.UpEtMSewT9k

Kyodo

Work to remove spent nuclear fuel from the reactor 4 storage pool at the Fukushima No. 1 complex will begin Tuesday at the earliest, a source close to operator Tokyo Electric Power Co. said Saturday.

Fuel extraction operations started last Monday, with workers first removing 22 unused fuel assemblies that are relatively easier to handle than spent fuel.

Next up is a batch of 22 spent fuel rod assemblies as part of a yearlong effort to remove over 1,000 assemblies from the spent fuel pool of unit 4, a task seen as one of the major hazards in the early stages of dismantling Fukushima No. 1.

It is the first time Tepco is attempting to retrieve fuel assemblies from the reactor 4 pool since reactors 1 to 3 at the plant suffered core meltdowns in March 2011.

Unit 4 was badly damaged by a hydrogen explosion but avoided a meltdown because all of its fuel was in the spent fuel pool while the reactor underwent periodic maintenance work.

November 25, 2013

Extra caution needed with spent fuel

Spent fuel to be removed from Fukushima reactor

http://www3.nhk.or.jp/nhkworld/english/news/20131125_40.html

The operator of the damaged Fukushima nuclear plant says it will begin removing highly radioactive spent nuclear fuel from one of its reactor buildings on Tuesday.

On Friday, Tokyo Electric Power Company completed the removal of a cask containing 22 assemblies of unused fuel rods from the storage pool of the Number 4 reactor building to a nearby separate storage pool.

TEPCO says there were no problems with the first round of transfer, but sand and fine particles in the storage pool impaired visibility. The utility says it will use a pump to clear the pool of particles for the next round of transfers.

The next round will involve 1,331 assemblies of spent fuel rods, or nearly 90 percent of the 1,511 assemblies in the pool at the Number 4 reactor building. The spent fuel assemblies are highly radioactive so the operation will require extra caution.

This will be the first removal of spent nuclear fuel from a reactor building since a massive earthquake and tsunami seriously damaged the Fukushima plant in March 2011.

November 26, 2013

Beginning removal of spent fuel

Removal of spent fuel begins at Fukushima plant

http://www3.nhk.or.jp/nhkworld/english/news/20131126_35.html

The operator of the damaged Fukushima Daiichi nuclear plant has begun removing highly radioactive spent nuclear fuel from one of its reactor buildings.

Last week, Tokyo Electric Power Company began removing fuel from the Number 4 reactor pool, marking the first milestone in the process to decommission the plant's reactors.

Workers spent 5 days transferring 22 assemblies of unused fuel rods from the reactor building to a nearby storage pool. No problems were reported with the first round of transfer.

On Tuesday morning, a remote-controlled crane was used to lower a storage container cask into the pool. The fuel assemblies will be transferred into the cask. Once the cask is full, it will be lifted out and moved.
Radiation levels around the pool are as high as 300 micro-sieverts per hour, so a day's work is limited to 2 hours per person.

There are 1,331 spent fuel assemblies in the Number 4 reactor pool, nearly 90 percent of all the fuel there.

Assemblies of spent fuel rods require far more caution than unused assemblies. The spent fuel assemblies can be distorted by the effects of radiation or heat, which could cause them to get stuck when they're extracted from their holding rack.

In addition, the cask could fall or break during transfer --- a scenario that would potentially expose workers to massive doses of radiation.

TEPCO moves on to spent fuel removal at Fukushima No. 4 unit

http://mainichi.jp/english/english/newsselect/news/20131126p2g00m0dm070000c.html

TOKYO (Kyodo) -- The operator of the crippled Fukushima Daiichi nuclear power plant started removing spent fuel at the No. 4 reactor building Tuesday after successfully transferring a batch of less risky unused fuel assemblies to a more stable storage space.
It is the first time that plant operator Tokyo Electric Power Co. is extracting spent fuel from the plant's reactor buildings since a huge earthquake and tsunami triggered one of the world's worst nuclear crises in March 2011.
Spent fuel is more difficult to handle because it is highly radioactive and emits heat as radioactive elements in the fuel decay.
While TEPCO has said the spent fuel pool of the No. 4 unit is filled with sufficient water to shield workers from high levels of radiation, it has noted that the operation will require more caution than dealing with unused fuel because there could be changes in the form or size of used fuel assemblies.
The condition of the pool itself is not normal, with small pieces of rubble present as a result of a hydrogen explosion that severely damaged the roof and walls of the reactor building in the early days of the nuclear crisis. The rubble could make it difficult for the fuel to be removed from the racks smoothly.

With 22 unused fuel assemblies having already been removed in the operation that started on Nov. 18, the No. 4 unit spent fuel pool currently contains 180 unused fuel assemblies and 1,331 used ones. TEPCO plans to finish removing all of them by the end of next year.

The process starts with the hoisting of fuel assemblies one by one from the racks and their transfer to a transportation container placed in the pool.

After the transportation container is filled with 22 fuel assemblies, workers take the container from outside the pool and lower it by crane from the fifth floor of the building, where the pool is located, to the ground.

The container is then taken to another pool inside a different building about 100 meters away with a trailer.

During the nuclear crisis, the Nos. 1 to 3 reactors, all in operation at the time of the quake, experienced core meltdowns. While the No. 4 reactor, offline for periodic maintenance work, had all of its fuel stored in the spent fuel pool and avoided a meltdown, concerns have remained over the continued storage of the fuel in the building weakened by a hydrogen explosion.

November 27, 2013

First 22 spent fuel assemblies transferred into cask

Spent fuel transferred at Fukushima plant

http://www3.nhk.or.jp/nhkworld/english/news/20131127_41.html

Workers at the damaged Fukushima Daiichi nuclear plant have transferred the first batch of highly radioactive spent nuclear fuel into a cask for relocation.

Tokyo Electric Power Company personnel on Tuesday began moving the first 22 spent fuel assemblies within the storage pool of the number 4 reactor building.

They spent 2 days using a remote-controlled crane to maneuver one assembly after another into the storage cask, also submerged in the pool.

The workers have reported no problems so far.

They plan on Thursday to hoist the cask out of the pool for decontamination before transferring it to a safer pool in a nearby facility.

The number 4 reactor building's pool contains 1,331 assemblies of spent fuel rods, plus a much smaller amount of unused fuel.

Workers last week performed the removal of the first batch of unused fuel.

But they have to take far more care moving the used fuel. Spent fuel assemblies are not only more radioactive, but they can be warped from radiation or heat, complicating their removal from the holding rack.

Toxic Fuel Removal Underway (NHK video)

http://www3.nhk.or.jp/nhkworld/newsline/201311270500.html

- the pace has picked up
- use of two containers to save time
- should a container fall.. workers would be temporarily evacuated
- but the chances of that happening is virtually non-existent, says TEPCO
- A future challenge will be to secure experienced workers in sufficient numbers
- even now the radiaiton exposure of the workers at No4 is much higher than normal ."Procuring labour could prove difficult".
- and after o4 pool there remains another three pools in the other reactors to deal with...

November 29, 2013

TEPCO transfers batch of spent fuel from Fukushima No. 4 unit pool

http://mainichi.jp/english/english/newsselect/news/20131129p2g00m0dm066000c.html

TOKYO (Kyodo) -- The operator of the disaster-stricken Fukushima Daiichi nuclear power plant said Friday that it transferred a batch of spent fuel rod assemblies from the No. 4 unit spent fuel pool for the first time to a more stable storage space.

Plant operator Tokyo Electric Power Co. started removing spent fuel from the pool earlier this week after successfully transporting about 20 less risky unused fuel assemblies to another pool in a different building about 100 meters away.
The work will continue through the end of next year, until TEPCO finishes taking out over 1,000 fuel assemblies, including unused ones, from the spent fuel pool.

The fuel removal work marks a key step toward decommissioning the Nos. 1 to 4 reactors that have been largely affected by the nuclear crisis, triggered by a huge earthquake and tsunami in March 2011.

The Nos. 1 to 3 reactors, all in operation at the time of the quake, experienced core meltdowns. The No. 4 reactor, offline for periodic maintenance work, had all of its fuel stored in the spent fuel pool and avoided a meltdown, but concerns have remained over the continued storage of the fuel in the building weakened by a hydrogen explosion.

November 30, 2013

First batch of spent fuel safely transferred

TEPCO relocates spent fuel at Fukushima plant

http://www3.nhk.or.jp/nhkworld/english/news/20131201_01.html

The operator of the Fukushima Daiichi nuclear power plant says it has successfully transferred a batch of highly radioactive spent fuel to a safer pool for the first time since the 2011 accident.

Workers with Tokyo Electric Power Company on Tuesday began the process of moving the nuclear fuel from the storage pool of the number 4 reactor building. The task followed the transfer of less risky unused fuel rods in November.

Workers put the first 22 highly radioactive spent fuel assemblies into a storage cask that was submerged

in the pool.

They transferred the cask from the reactor building to a safer pool in a nearby facility on Friday.

On Saturday they took the spent fuel assemblies out of the cask and put them into the holding rack in the pool. The operation ended at around 5 PM.

TEPCO says the transfer ended without any problems.

The company plans to relocate the remaining 1,489 fuel assemblies in the storage pool of the number 4 reactor by the end of next year, a key step for decommissioning the crippled plant.

Spent fuel units, which account for about 90 percent of all nuclear fuel at the number 4 reactor, will be given priority.

December 1, 2013

1,533 minus 22, minus 22

Tepco says 22 used fuel assemblies moved from reactor No. 4 pool

http://www.japantimes.co.jp/news/2013/12/01/national/tepco-says-22-used-fuel-assemblies-moved-from-reactor-no-4-pool/#.Ups-0Sfij9k

JIJI

Tokyo Electric Power Co. has succeeded in moving another 22 fuel assemblies from the storage pool for the No. 4 reactor to another cooling pool in a more stable building 100 meters away at the Fukushima No. 1 nuclear plant, the utility said.

The operation to move the spent fuel assemblies was completed Saturday, according to Tepco officials. The work, which started at 1 p.m., took about four hours and was accomplished without incident, they said.

The transportation cask holding the 22 assemblies was transported on a trailer to the new building Friday afternoon.
It's the first time since the March 2011 catastrophe that spent fuel assemblies have been removed from the No. 4 reactor pool.

In the first step, 22 unused fuel assemblies were transferred Nov. 22.

Before the work started Nov. 18, there were a total of 1,533 fuel assemblies in the No. 4 pool.

December 2, 2013

Promotion video from TEPCO

Extraction of Fuel from Unit 4 Spent Fuel Pool and Transfer to Common Pool
http://photo.tepco.co.jp/en/date/2013/201312-e/131202-01e.html

January 8, 2014

Fuel removal starts again at No.4

Removal of nuclear fuel at Fukushima plant resumes after holiday break

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201401080059

FUKUSHIMA--Work to remove nuclear fuel from a damaged reactor building at the Fukushima No. 1 nuclear power plant was proceeding smoothly as efforts resumed Jan. 6 after the conclusion of the New Year's holidays.

Work initially got under way on Nov. 18 at the storage pool of the damaged No. 4 reactor building to remove 1,533 nuclear fuel assemblies, but was suspended Dec. 22 for the holiday period.

Two officials from the Fukushima prefectural government's safety management division observed the resumption of the removal work for an hour during the afternoon of Jan. 7. The officials observed Tokyo Electric Power Co. workers lifting a nuclear fuel assembly from the storage pool and putting it into a cask. It was the first fuel assembly removed this year and the 133rd to date.

TEPCO workers remove the fuel assemblies one at a time and place them in a storage cask that can hold 22 of the assemblies. The cask is then transported by vehicle to a common pool on the premises.

TEPCO plans to remove all 1,533 fuel assemblies by December 2014. The prefectural safety management division said it plans to conduct its next observation of the operation as soon as possible.

January 31, 2014

Mangled debris everywhere (reactor No.4... and others)

Debris hinders decommissioning work at Fukushima nuclear plant

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201401310216

Debris and equipment damaged by a 2011 explosion cover the fourth floor of the No. 4

The No. 4 reactor of the stricken Fukushima No. 1 nuclear power plant, where workers are removing spent nuclear fuel, is still a gutted shell and conditions there remain extremely hazardous.

The damage is extensive, with mangled debris seemingly everywhere.

A team of reporters from The Asahi Shimbun visited the site on Jan. 29.

Unlike the No. 1 to No. 3 reactors at the Fukushima facility, the No. 4 reactor did not experience a meltdown after the 2011 Great East Japan Earthquake and tsunami.

The No. 4 reactor has seen the most decommissioning work of those four reactors as radiation levels there are much lower than in the other reactors.

This is because it was undergoing regular inspection when the disaster struck. Even so, an explosion occurred at the No. 4 reactor building around 6 a.m. on March 15, 2011. It was caused by hydrogen that had entered through piping from the No. 3 reactor, where a meltdown had occurred.

The explosion damaged the cooling equipment for the spent nuclear fuel storage pool, leading to global fears that the fuel would become exposed once the coolant had dried up.

Climbing a narrow temporary staircase, the Asahi team reached the fourth floor of the No. 4 reactor building. While part of the wall was blown away by the explosion, a canopy that has since been installed kept the site in darkness. A flashlight shined on the destroyed wall to reveal its exposed steel framework. Rusted machinery parts and shattered measurement equipment lay buried in the debris.
The radiation level--0.03 millisievert per hour--was about half the level announced a year earlier.

In the area immediately above the explosion site, work began in November to remove fuel assemblies from the storage pool on the other side of the wall. A canopy and crane have been installed, giving a sense of how the site looked prior to the 2011 nuclear accident.

In the basement of the reactor building, a working pathway has been set up around the doughnut-shaped suppression chamber. Its bright paint has dulled, and in places has cracked and fallen off.
Water was visible about two to three meters below the pathway. The water is believed to have entered the reactor building when the site was deluged by tsunami triggered by the Great East Japan Earthquake.

In the neighboring No. 3 reactor, work continues to remove debris from the upper part of the reactor building. Robots are being used in the decontamination work because of the high radiation levels.

In the absence of knowledge about the state of the melted fuel in the No. 1 to No. 3 reactors, no decision has yet been made on how to remove that fuel. In the best-case scenario, plans call for work to begin removing the melted fuel from the No. 1 and No. 2 reactors from fiscal 2020.

Another major problem is the volume of water contaminated by radiation being stored on the plant site. Tokyo Electric Power Co., operator of the facility, said that around 400 tons of contaminated water continues to be generated daily. The accumulated total comes to 507,000 tons.

Problems with the ALPS (advanced liquid processing system) have delayed work to remove radioactive materials from the contaminated water.

In August 2013, 300 tons of highly radioactive water was found to have leaked from the storage tanks.

Due to concern about additional leaks, TEPCO has increased its patrol of the storage sites.

The H2 North area in the compound contains 17 tanks, each with a diameter of 12 meters or so.

Shortly before noon on the day of the reporters' visit, a team of three workers wearing protective gear inspected the tanks to measure and record radiation levels. The workers checked the connecting parts of the approximately 11-meter-tall tanks for leaks. They also inspected the barrier surrounding the tanks to prevent contaminated water from flowing outside the area. The valves and connecting parts of the barrier were scrutinized for leaks.

A number of pipes through which contaminated water flowed lay on the ground. Overhead was a network of equipment that had been installed after the discovery that contaminated water had leaked. There were cables for the water meter that was installed in November 2013 as well as pipes to remove rainwater from the top of the tanks.

All the equipment meant attention had to be paid when walking in order to avoid tripping and falling. The 900 or so tanks on the plant site are inspected four times a day by 10 three-person teams. Each team walks for at least four kilometers on each inspection trip, which can take between two to two-and-a-half hours.

Yuichi Okamura, the deputy head of the water treatment equipment department, said: "We believe it is inconceivable that contaminated water will suddenly squirt out. Because we have strengthened the patrol methods, we can discover and deal with problems more quickly."

Another problem exists underneath the embankment on the eastern side of the plant site. Radioactive materials have been found to be spreading under that embankment. Contaminated water in the underground trench may still be leaking into the ground.

Preparatory work began Jan. 29 to remove the contaminated water from the trench. The project involves constructing an underground wall of frozen soil to block water from leaking from the reactor buildings. Workers were opening holes in order to pump up the contaminated water that lies in the trench 5.5 meters underground.

The Asahi team spent about five hours at the Fukushima plant site. The level of radiation exposure was 0.09 millisievert, which is about one-tenth the annual exposure limit for the general population.
(This article was written by Shunsuke Kimura and Hisashi Hattori, a senior staff writer.)

February 25, 2014

Cooling of No.4 reactor pool stopped

Reactor pool cooling system stopped

http://www3.nhk.or.jp/nhkworld/english/news/20140225_31.html

The operator of Fukushima Daiichi nuclear plant says the cooling system for the spent fuel pool at the No.4 reactor stopped temporarily due to an accident.

Tokyo Electric Power Company, or TEPCO, says a short-circuit alarm went off at around 9:40 AM on Tuesday, and a part of the reactor pool cooling system lost power.

TEPCO says drilling work on a road south of the reactor damaged a power cable. Cooling resumed around 4 and half hours later after personnel switched the system to another power source.

The spent fuel pool was 13 degrees Celsius when the cooling system stopped. The utility says the temperature rose only slightly, and did not surpass the company's safety limit of 65 degrees.

Workers suspended removing spent nuclear fuel from the No.4 reactor pool due the power outage, but resumed shortly after 2:30 PM.
Feb. 25, 2014 - Updated 06:46 UTC

Fukushima No.4 reactor pool's cooling fan halts

http://www3.nhk.or.jp/nhkworld/english/news/20140225_19.html

The operator of the Fukushima Daiichi nuclear power plant says a cooling fan for the spent fuel pool at the No. 4 reactor has stopped working.

Tokyo Electric Power Company announced on Tuesday that a warning alarm for an electrical problem went off at 9:40 AM.

The firm says work to remove spent fuel from the pool has been suspended. But it says there are 2 cooling systems, so it will switch to the second one and cooling should resume by around 1 PM.

The pool temperature is now 13 degrees Celsius. TEPCO estimates that it will rise by about 0.3 degrees per hour.

The operator says a nearby electrical cable may have been damaged in excavation work. The company is looking into the cause of the fan failure.

All under control

Fukushima No. 4 spent fuel pool cooling system temporarily halts

http://mainichi.jp/english/english/newsselect/news/20140225p2g00m0dm062000c.html

TOKYO (Kyodo) -- The cooling system at the No. 4 unit spent fuel pool at the crippled Fukushima Daiichi nuclear power plant temporarily halted Tuesday after an alert over electrical equipment was issued, plant operator Tokyo Electric Power Co. said.

The operation to remove fuel from the spent fuel pool was also suspended. TEPCO said workers damaged a cable during drilling work taking place near the electrical equipment.

According to TEPCO, an alert over the electrical equipment at the site was issued at 9:40 a.m. and the cooling system for the No. 4 spent fuel pool stopped about five minutes later.

While the temperature of the water inside the pool rose to 13.1 C from 13 C while the cooling was suspended, TEPCO said it was able to restart the system by 2:16 p.m.

The damaged cable also caused a fire but it has been extinguished.

Major facilities other than the No. 4 pool cooling system have not shown any abnormalities.
TEPCO started the delicate work to remove over 1,000 fuel assemblies from the spent fuel pool inside the damaged No. 4 reactor building in November.

The Nos. 1 to 3 reactors, all in operation at the time of the earthquake in March 2011, experienced core meltdowns.

The No. 4 reactor, offline for periodic maintenance work, had all of its fuel stored in the spent fuel pool and avoided a meltdown, but concerns have remained over the continued storage of the large volume of fuel in the building, which was weakened by a hydrogen explosion.

March 26, 2014

Problem at Number 4

Trouble stops fuel removal at nuclear plant

http://www3.nhk.or.jp/nhkworld/english/news/20140326_33.html

Work has been suspended to remove spent nuclear fuel from a storage pool at a reactor building in the crippled Fukushima Daiichi nuclear plant.

Tokyo Electric Power Company said an accident occurred at around 9:30 AM on Wednesday when workers started removing fuel units at the No. 4 reactor building.

The utility explained a large crane used to hoist a cask containing 22 spent fuel units from the storage pool suddenly halted before lifting the cask. Workers were attaching a hook to the crane's wire at that time.

The company says no rise in radiation levels have been observed around the pool.

Workers are now trying to find out what caused the problem.

TEPCO began removing fuel units from the storage pool of the No.4 reactor in November of last year. The pool held 1,533 units of fuel, of which 1,331 are highly radioactive spent fuel.

As of Tuesday, 550 fuel units had been removed and transferred to another storage pool.

Trouble stops fuel removal at Fukushima plant

http://www3.nhk.or.jp/nhkworld/english/news/20140326_22.html

The work to remove nuclear fuel from a storage pool at a reactor building in the crippled Fukushima Daiichi nuclear plant has been suspended due to a problematic crane.

Tokyo Electric Power Company said the issue occurred at around 9:30 AM on Wednesday, when workers started removing fuel units at the No.4 reactor building. The utility explained a large crane used to hoist a

cask containing fuel units set off an alarm and stopped.

TEPCO added that the crane stopped before lifting the cask, and that no rise in radiation levels has been observed around the storage pool.

Workers are now trying to find out what caused the problem.
TEPCO began removing fuel units from the storage pool of the No.4 reactor in November of last year. The pool holds 1,533 units of fuel, of which 1,331 are highly radioactive spent fuel.

As of Tuesday, 550 fuel units had been removed and transferred to another storage pool.

March 27, 2014

Human error suspected at Number 4

Error suspected in spent fuel removal trouble

http://www3.nhk.or.jp/nhkworld/english/news/20140328_02.html

The operator of the Fukushima Daiichi nuclear plant says human error was most likely the cause of a problem that halted spent fuel removal at one of the crippled reactors.

Tokyo Electric Power Company has been transferring hundreds of spent and unused fuel assemblies from a pool in the damaged no.4 reactor building to a safer facility in the site.

But on Wednesday, a crane used to hoist a cask containing fuel assemblies from the pool suddenly stopped, halting work.

TEPCO officials say a worker mistakenly tried to operate the crane with an auxiliary brake on. Noticing the error, he released the brake and retried, but the crane failed to operate once the warning lamp had gone on.

The officials say the worker's error led to excess current to the crane's motor, which automatically locked operation. The problem didn't damage the crane or its motor.

They say they will soon resume fuel transfer operations, taking preventive measures including rechecking the work process.

In November last year, TEPCO started operations to remove more than 1,500 spent and unused fuel

assemblies from the pool in the crippled No.4 reactor building. As of Tuesday 550 assemblies had been removed.

March 30, 2014

Fuel removal resumed

Fuel removal resumes at Fukushima plant

http://www3.nhk.or.jp/nhkworld/english/news/20140330_18.html

The operator of the Fukushima Daiichi nuclear plant says it has resumed the process of removing spent fuel from one of the crippled reactors.

On Wednesday, an alarm suddenly activated and stopped a large crane, as workers were preparing to hoist a cask containing fuel assemblies from the pool at the No. 4 reactor building.

Tokyo Electric Power Company found that a worker had mistakenly operated the crane without releasing an auxiliary brake, causing it to become overloaded.

The problem was fixed, and the removal work resumed at noon on Sunday.

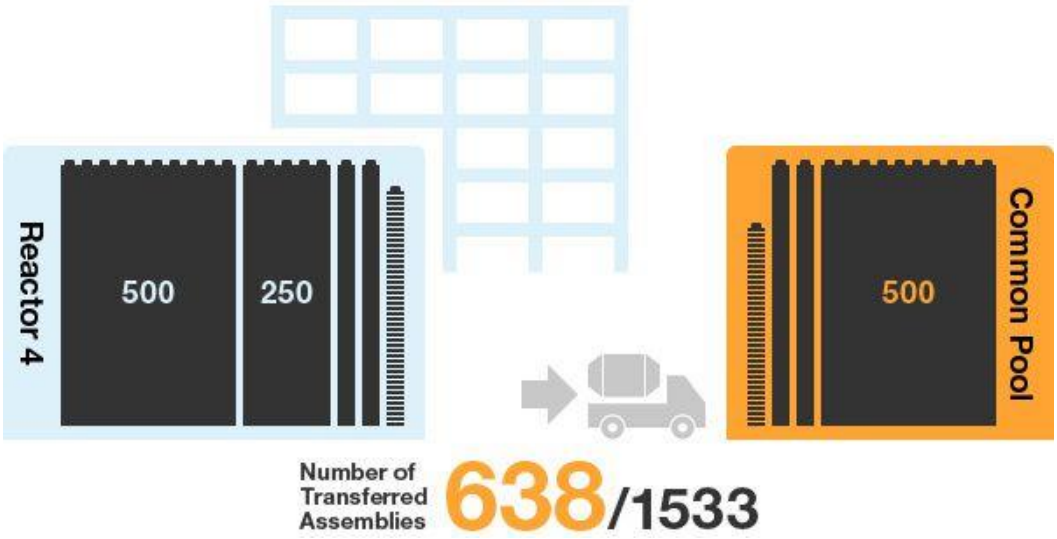
This was the first suspension of the operation since TEPCO started removing fuel units from the pool in the building last November. The utility is removing the fuel assemblies to decommission the Fukushima Daiichi nuclear plant.

1,533 fuel units were being stored in the pool at the time of the 2011 accident, and 983 were still there on Sunday.

April 14, 2014

616 + 22 assemblies removed from No.4

http://www.tepco.co.jp/en/decommision/index-e.html



Fuel Removal from Unit 4

- ◯Breakdown of transferred assemblies by kind
  Spent fuel 616 assemblies/1,331 assemblies
  Unirradiated (New) fuel 22 assemblies/ 202 assemblies
- ◯Number of times of cask transportation:
  29 times

as of Apr.14,2014
Completion status of transfer will be updated every Monday.
(If the holiday falls on a Monday, it will be updated on the next working day)

June 19, 2014

Unused fuel rods to go to No 6 building

TEPCO to transfer unused fuel rods to new location

http://www3.nhk.or.jp/nhkworld/english/news/20140619_05.html

The operator of the crippled Fukushima Daiichi plant will alter its plan to transfer the fuel rods from the number 4 damaged reactor building. Some fuel rods will be stored at a new location in the plant.

Tokyo Electric Power Company says it will apply for approval for the change of plan to the Nuclear Regulation Authority shortly.

As part of the decommissioning efforts of the reactor, work has been underway since last November at the damaged reactor building to transfer more than 1,500 assemblies of spent and unused fuel rods from its pool to a common fuel storage pool in the compound.

In the run-up to the transfer, TEPCO planned to make space in the common pool by removing fuel rods which had already been stored there. It decided to place them in casks.

But the utility says delayed confirmation of the casks' safety has prevented it from preparing the rods in time for the planned transfer.

The company says that with the common pool remaining partially occupied, it will be obliged to transfer and store part of the fuel rods from the number 4 building in the number 6 reactor building instead. Specifically, it will transfer the 180 assemblies of unused fuel rods that are emitting comparatively lower levels of radiation.

The number 6 reactor was offline at the time of the 2011 disaster and escaped serious damage.

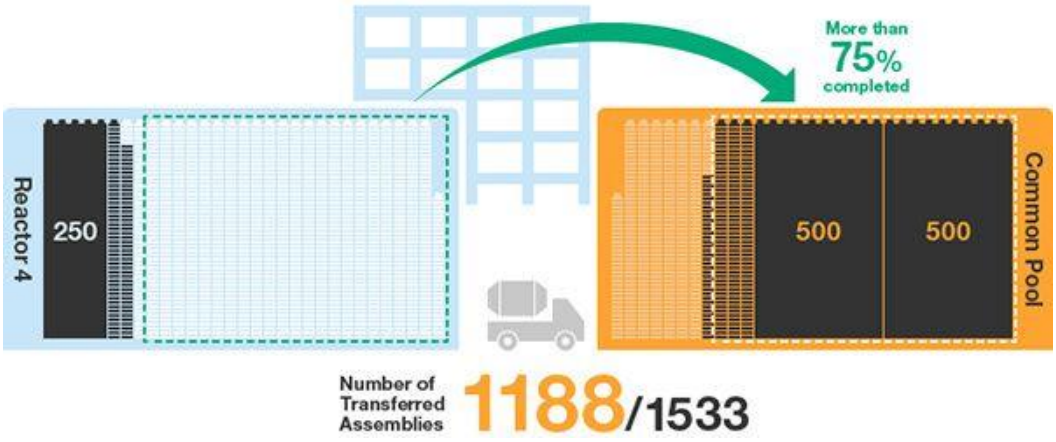
TEPCO officials say they hope to begin the transfer to the number 6 building in November. They plan to remove all rods from the number 4 building by the end of this year as scheduled.

July 1, 2014

Fuel removal from No.4 stopped till September

Fuel Removal from Unit 4

http://www.tepco.co.jp/en/decommision/index-e.html



- Breakdown of transferred assemblies by kind
  Spent fuel1166 assemblies/1,331 assemblies
  Unirradiated (New) fuel22 assemblies/ 202 assemblies
- Number of times of cask transportation:
  54 times

as of June.30,2014

＊The fuel removal work is stopped from July 1 to early September of 2014 due to annual ceiling crane checkup

August 21, 2014

Removal of rods at No 4 to finish ahead of time

No. 1 fuel rod removal to finish ahead of schedule, Tepco chief says

JIJI

FUKUSHIMA – Tokyo Electric Power Co. said Wednesday it expects to finish transferring all the fuel rods from the spent-fuel pool perched atop reactor 4 at the stricken Fukushima No. 1 nuclear power plant by November — one month ahead of the initial schedule, according to Tepco President Naomi Hirose.
Hirose made the comments in a meeting with assembly members from Fukushima Prefecture. Hazardous work to transfer the rods from reactor 4 to a spent-fuel pool at another location has been going more quickly than expected, he told reporters after the meeting.
Tepco began extracting hundreds of spent fuel assemblies from the plant — which was heavily damaged in the March 2011 earthquake and tsunami — in November. **As of July 10, 1,188 of the 1,533 fuel rods had been removed.**
In a related move aimed at drawing a line under the nuclear crisis, the government said it is planning a survey in September for a site in Miyagi Prefecture that could be used to store radioactive waste from the Fukushima disaster for good, a senior official said.

The survey should be complete by mid-November, Senior Vice Environment Minister Shinji Inoue said. He made the comments after visiting Kurihara and the towns of Taiwa and Kami — the three Miyagi municipalities picked as candidate sites.
After meeting with Inoue, Kami Mayor Hirobumi Inomata said he told the senior vice environment minister that his city will not accept the survey, adding such an investigation should not be launched without residents' consent.
Earlier this month, however, Miyagi Gov. Yoshihiro Murai told Environment Minister Nobuteru Ishihara that the prefecture was ready to accept the survey and that an agreement had already been reached.

November 4, 2014

Spent fuel from No.4: Finished!

All spent fuel removed from Fukushima No.4 reactor

http://www3.nhk.or.jp/nhkworld/english/news/20141105_02.html

Workers have finished removing highly radioactive spent nuclear fuel from one of the reactor buildings at the crippled Fukushima Daiichi plant.

The No.4 reactor had no nuclear fuel when the plant was hit by a massive quake and tsunami in March 2011. But there were more than 1,500 units of spent and unused fuel in the pool in the reactor building.

The operator, Tokyo Electric Power Company, is putting priority on removing spent fuel because it is highly radioactive. The utility began removing 1,331 units of spent fuel in November of last year. Workers completed the removal of the last 11 units by Tuesday.

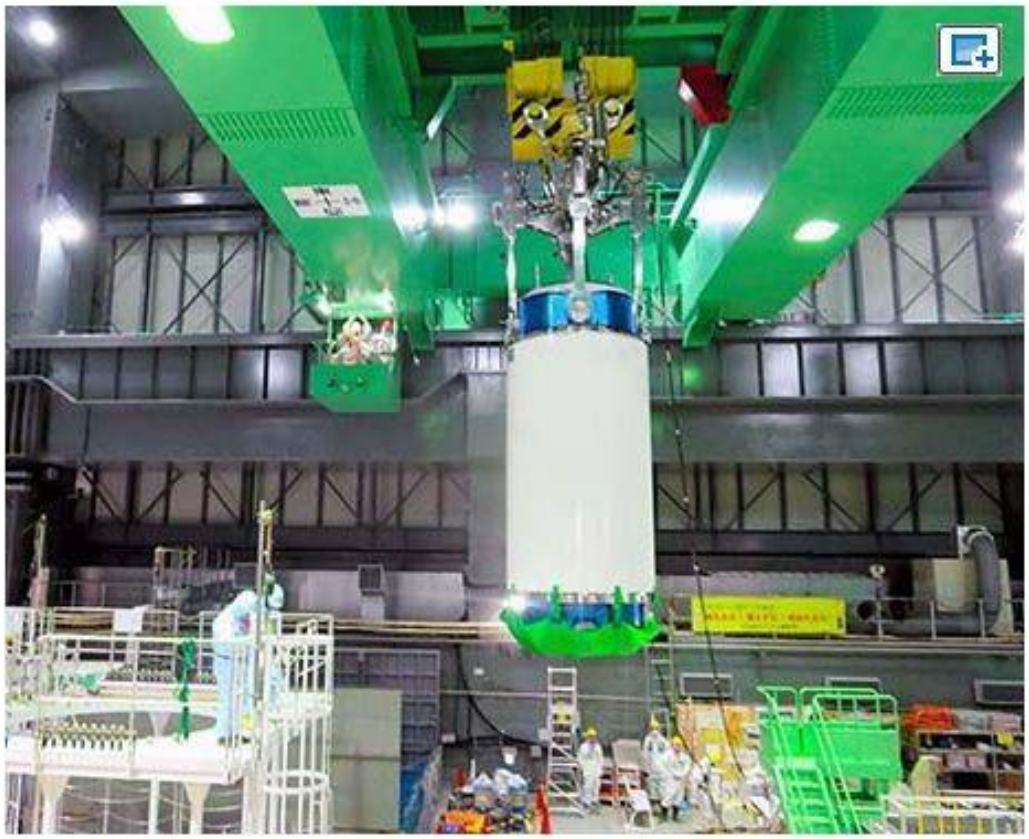
TEPCO plans to finish removing the **unused fuel** from the building by the end of the year.

The procedure will be more difficult at the No.1, 2 and 3 reactor buildings due to high radiation levels. The 3 reactors suffered meltdowns.

TEPCO plans to start removing fuel from the pool of the No.1 reactor building in fiscal 2019. That's a delay of 2 years from its plan.

The utility faces difficulties with melted fuel because the exact location and condition are unknown.

November 5, 2014



A special cask receptacle removes nuclear fuel assemblies from a storage pool inside

TEPCO to conclude most vital phase in fuel rod extraction from No. 4 reactor

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201411050045

Tokyo Electric Power Co. has removed all the spent nuclear fuel from the pool in the No. 4 reactor building at the Fukushima No. 1 nuclear power plant.

The utility plans to finish extracting all the fuel rods from the building by the end of this year, completing the most critical phase of the decommissioning of the reactor.

The operator of the crippled plant said that it will have successfully removed by Nov. 5 the last of the 1,331 spent fuel rods in the pool. There were a total of 1,535 fuel rods in all in the building when the extraction process began. The operation continues there with 24 of the 204 unused fuel rods having already been removed.

The No. 4 reactor was offline for a regular inspection when the Great East Japan Earthquake and tsunami struck northeastern Japan in March 2011. The building's roof and walls were subsequently blown off in a hydrogen explosion.

Due to the failure of the cooling systems, concerns arose that the 1,535 fuel rods stored there could face exposure to the open air and discharge large amounts of radioactive materials into the atmosphere.
TEPCO started a full-fledged operation to remove the nuclear fuel assemblies in the storage pool in the No. 4 reactor building in November last year, using a special cask receptacle.
The utility's mid- and long-term road map for decommissioning the Fukushima plant outlined three phases. The removal of fuel rods from the pools in the reactor buildings is part of the second phase.
The work at the No. 4 reactor is running ahead of that in the plant's No. 1 to No. 3 reactor buildings.
The reactor No. 4 building was exposed to less contamination compared to those housing the other reactors, all of which suffered meltdowns. High levels of radiation have prevented plant workers from entering the other reactors.
TEPCO recently started removing the canopy installed over the No. 1 reactor building in the first step in work to remove debris and nuclear fuel from inside the structure. The utility is also surveying the interior of the No. 2 reactor building with robots while removing debris at the No. 3 reactor building using remote-controlled machines.

November 21, 2014

Starting on unspent fuel

TEPCO starts transferring remaining unspent fuel from Fukushima No. 4 reactor

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201411210037

The operator of the crippled Fukushima No. 1 nuclear power plant has started removing unspent nuclear fuel from a storage pool at the No. 4 reactor building, which was heavily damaged by an explosion following the March 2011 Great East Japan Earthquake.
Tokyo Electric Power Co. said Nov. 20 it plans to transfer 180 unspent fuel assemblies stored in the pool to the No. 6 reactor building by the end of December.
On Nov. 18, workers packed 22 such assemblies into a transportation cask and started preparations to transfer it to the site, company officials said.
When the earthquake and tsunami struck on March 11, 2011, the No. 4 reactor was offline for routine inspections. In the days following, the reactor building was blown apart in a hydrogen explosion. A total of 1,535 fuel assemblies--1,331 spent and 204 unspent--were stored in a pool in the upper part of the building.
In November 2013, TEPCO began full-fledged work to remove the nuclear fuel assemblies in the No. 4 reactor storage pool. It transferred all of the spent fuel, which continues emitting heat and high levels of radiation, as well as 24 unspent assemblies, to a common pool on the plant premises by Nov. 5.
The completion of the work marked the end of one of the most difficult phases of preparations for decommissioning the No. 4 reactor, diminishing the risk posed by the fuel.
TEPCO had said it would be transferring the remaining unspent fuel to the No. 6 reactor building, which suffered relatively minor damage in the disaster, as the common storage pool has been filled to capacity.

December 20, 2014

Fuel removed from No.4 pool

Fuel removed from Fukushima reactor

http://www3.nhk.or.jp/nhkworld/english/news/20141220_22.html

The operator of the damaged Fukushima nuclear power plant has completed the removal of nuclear fuel from one of the reactor buildings.

By Friday, the Tokyo Electric Power Company had removed 1,331 units of spent fuel as well as 200 units of unspent fuel from the fuel pool of the Number 4 reactor building.

The company opened the operation to remove the last 4 units to the media on Saturday.

The work involved lifting a cask containing fuel from the pool and transporting it to the Number 6 reactor building to transfer the fuel to the pool there.

The plant chief, Akira Onodera, says the completion of the operation marks a step forward in the process toward decommissioning the reactors.

Workers have yet to remove the fuel from the Number 1, 2 and 3 reactor buildings. The operation will be more difficult because of the high levels of radiation

Nuclear fuel removal operation finishes at Fukushima No. 4 reactor

http://mainichi.jp/english/english/newsselect/news/20141220p2a00m0na014000c.html

Tokyo Electric Power Co. (TEPCO) removed the final four fuel rods from the spent fuel pool in the No. 4 reactor building at the Fukushima No. 1 nuclear plant on Dec. 20 -- one year ahead of schedule.
The timeline for the spent fuel removal project was moved up due to worries over whether the No. 4 reactor building -- heavily damaged by a hydrogen explosion following the March 2011 Great East Japan Earthquake and tsunami -- could withstand earthquakes.
The No. 4 reactor was undergoing a regular inspection when the disasters struck, so the fuel was not in the core at the time. A total of 1,535 fuel rods were inside of the unit's nuclear fuel pool -- 1,331 of which were spent fuel, and 204 were unused -- the highest number among all of the four damaged reactors at the Fukushima plant.

TEPCO began the operation to remove the extremely radioactive spent fuel in November 2013, and finished transferring them to a separate pool in November of this year before subsequently beginning removing the unused fuel. A TEPCO representative commented, "We'd like to use this experience with reactor No. 4 as a model for the other reactors."
While contaminated machinery from the time of the accident remains inside the No. 4 reactor building, removing it remains a low priority and there are no plans to do so yet.
Meanwhile, residents of six areas evacuated following the meltdowns will be allowed to stay overnight in their homes for the holiday season. Residents are usually only permitted to visit during daylight hours. According to the government's nuclear emergency response headquarters, overnight stays will be allowed for the 30-day period from Dec. 20 through Jan. 18 for residents from the village of Iitate, the city of Minamisoma, the town of Kawamata and the village of Katsurao; for the 9-day period from Dec. 27 through Jan. 4 for residents from the village of Kawauchi; and for the 15-day period from Dec. 24 through Jan. 7 for residents from the town of Naraha.
Some 9,880 households and 26,740 residents are eligible for the holiday overnight stay program. Meanwhile, residents from those areas designated "difficult-to-return zones," where yearly radiation levels are above 50 millisieverts, are not eligible.

All spent fuel removed from reactor 4 pool at Fukushima No. 1, Tepco says

Kyodo

Tepco said Saturday it has finished removing all fuel rods from the spent-fuel pool in the shattered reactor 4 building at the Fukushima No. 1 nuclear plant, in a rare piece of positive news from the decommissioning process.
A total of 1,535 fuel rod assemblies, comprising 1,331 deemed at risk and 204 that were unused, have been transferred to other buildings following a yearlong process by Tokyo Electric Power Co., the beleaguered operator of the wrecked plant.
According to Tepco, this will reduce the risk of the spent fuel rods being exposed in the event of a new earthquake or a major accident.
“Completion of the removal work is a milestone and I feel deeply about it,” plant chief Akira Ono told reporters, while stressing that the decommissioning of Fukushima No. 1 remains an extremely lengthy process.
The overall cleanup and dismantling of the plant, an operation that is expected to take decades, has been delayed by a relentless on-site buildup of toxic radioactive water.
Reactor 4 avoided a core meltdown when the tsunami spawned by the March 11, 2011, earthquake ripped through the No. 1 plant, as the unit was offline for a regular inspection and all of its fuel was stored in the pool on the upper level of the building.
But the building was torn apart by a hydrogen explosion just days later as the enormity of the nuclear crisis was only just becoming apparent. The over 1,500 fuel rod assemblies that continued to be stored at the top of the devastated structure had remained a major source of concern, in Japan and overseas.
Tepco hopes to begin extracting the fuel from the reactor 3 spent-fuel pool in the next fiscal year beginning in April, and to begin the same operation at reactor 1 during fiscal 2017. But it is unknown whether the work will follow that schedule given the sky-high radiation levels that continue to plague

reactors 1 through 3, which each suffered core meltdowns, and which put the levels clocked in reactor 4 in the shade.

December 21, 2014

Fuel removal work at No.4 completed

Risk in Fukushima No. 4 reactor mitigated as last of nuclear fuel removed

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201412210014

OKUMA, Fukushima Prefecture--Tokyo Electric Power Co. removed the last four nuclear fuel assemblies that remained in the No. 4 reactor building of the crippled Fukushima No. 1 nuclear power plant from its storage pool on Dec. 20.

The No. 4 reactor was offline at the time of the March 11, 2011, Great East Japan Earthquake and tsunami. However, an explosion occurred in the building four days later, seriously damaging it.

After the accident, experts pointed to the risk of nuclear fuel in the pool melting from insufficient cooling and releasing a large amount of radioactive materials. However, the threat has been mitigated with the removal of the last assemblies.

On Dec. 20, TEPCO allowed the media to watch the removal work.

Workers pulled up from the pool a cask containing the last four unspent nuclear fuel assemblies. They plan to transfer it to the No. 6 reactor building, which sustained relatively minor damage in the disaster, within a few days after decontaminating the outside of the cask.

The transfer will mean that all of the nuclear fuel in the No. 4 building has been removed from the building as scheduled by year-end.

The pool had held a total of 1,535 nuclear fuel assemblies, which consisted of 1,331 spent and 204 unspent nuclear fuel assemblies.

TEPCO started the removal of those assemblies from the pool in November 2013 after installing a new roof and a crane on the building. The removal of spent nuclear fuel assemblies concluded in November this year.

There will be no work in the No. 4 reactor building for the time being. TEPCO will be engaged in efforts at the No. 1, No. 2 and No. 3 reactor buildings and in dealing with the growing volume of contaminated water partly resulting from efforts to keep the reactors from overheating.

(This article was written by Yu Kotsubo and Hiromi Kumai.)

December 22, 2014

TEPCO's video on fuel removal

FUEL REMOVAL FROM UNIT 4 REACTOR BUILDING COMPLETED AT FUKUSHIMA DAIICHI

https://www.facebook.com/video.php?v=830159760376658

TEPCO has posted a video looking back at the work at Unit 4 fuel removal

Nuclear Workers

November 20, 2013

Atomic mafia

Atomic mafia: Yakuza ‘cleans up’ Fukushima, neglects basic workers' rights

http://rt.com/news/fukushima-workers-nuclear-yakuza-006/

Workers wearing protective suits and masks are seen next to the No.4 reactor at Tokyo Electric Power Co's (TEPCO) tsunami-crippled Fukushima Daiichi nuclear power plant in the town of Okuma, Fukushima prefecture (AFP Photo/Issei Kato)
Download video (22.94 MB)

Homeless men employed cleaning up the stricken Fukushima nuclear plant, including those brought in by Japan's yakuza gangsters, were not aware of the health risks they were taking and say their bosses treated them like “disposable people.”

RT's Aleksey Yaroshevsky, reporting from the site of the world's worst nuclear crisis since Chernobyl, met with a former Fukushima worker who was engaged in the clean-up operation.

"*We were given no insurance for health risks, no radiation meters even. We were treated like nothing, like disposable people – they promised things and then kicked us out when we received a large radiation doze*," the young man, who didn't identify himself, told RT.

The former Fukushima worker explained that when a job offer at Fukushima came up he was unemployed, and didn't hesitate to take it. He is now planning to sue the firm that hired him.

"*They promised a lot of money, even signed a long-term contract, but then suddenly terminated it, not even paying me a third of the promised sum,*" he said.

Workers wearing protective suits and masks check a transport container and a crane in preparation for the removal of spent nuclear fuel from a pool of spent fuel inside the No.4 reactor building at the tsunami-crippled Tokyo Electric Power Co.'s (TEPCO) Fukushima Daiichi nuclear power plant in Fukushima prefecture, November 7, 2013.
(Reuters/Kimimasa Mayama)

While some workers voluntarily agreed to take jobs on the nuclear clean-up project, many others simply didn't have a choice.

An investigative journalist who went undercover at Fukushima, filming with a camera hidden in his watch, says that many of the workers were brought into the nuclear plant by Japan's organized crime syndicates, the yakuza.

"*In Japan, quite often when a certain construction project requires an immediate workforce, in large numbers, bosses make a phone call to the Yakuza. This was the case with Fukushima: the government called Tepco to take urgent action, Tepco relayed it to their subcontractors and they, eventually, as they had a shortage of available workers, called the Yakuza for help*," Tomohiko Suzuki told RT.

According to Japanese police, up to 50 yakuza gangs with 1,050 members currently operate in Fukushima prefecture.

Although a special task force to keep organized crime out of the nuclear clean-up project has been set up, investigators say they need first-hand reports from those forced to work by the yakuza to crack down on the syndicates.

Earlier this year, Japanese police made their first arrest, detaining one yakuza over claims he sent workers to the crippled Fukushima plant without a license. Yoshinori Arai regularly took a cut of the workers' wages, pocketing $60,000 in over two years.

Workers are checked for radiation at the Tokyo Electric Power Corp's (TEPCO) tsunami-crippled Fukushima Daiichi nuclear power plant in Fukushima prefecture November 7, 2013. (Reuters/Kimimasa Mayama)

Meanwhile, according to Tepco's blueprint, dismantling the Fukushima Daiichi plant will require at least 12,000 workers just through 2015. But the company and its subcontractors are already short of workers. As things stand now, there are just over 8,000 registered workers. According to government data, there are 25 percent more openings for jobs at Fukushima plant than applicants. Tomohiko Suzuki says these gaps are often filled by the homeless and the desperately unemployed – people who have nothing to lose, including those with mental disabilities.

Due to the fact that the Japanese government has been reluctant to invite multinational workers into the country, its nuclear industry mostly uses cheap domestic labor, the so-called "nuclear gypsies" - workers from the Sanya neighborhood of Tokyo and Kamagasaki in Osaka, known for large numbers of homeless men.

"*Working conditions in the nuclear industry have always been bad*," the deputy director of Osaka's Hannan Chuo Hospital, Saburo Murata, told Reuters. "*Problems with money, outsourced recruitment, lack of proper health insurance – these have existed for decades*."

The problem is that after Japan's parliament approved a bill to fund decontamination work in August 2011, the law did not apply existing rules regulating the profitable construction industry. Therefore, contractors engaged in decontamination were not required to share information on their management, so anyone could instantly become a nuclear contractor, as if by magic.

Workers wearing protective suits and masks are seen from coastal side, in front of the No. 3 reactor building at the tsunami-crippled TEPCO's Fukushima Daiichi nuclear power plant in Fukushima prefecture, November 7, 2013. (Reuters/Kimimasa Mayama)

It is now emerging that many of the cleanup workers, including those recruited to work at the power plant by the yakuza – mostly with gambling debts to the organization or family obligations – often had no idea what they were dealing with.

"*They were given very general information about radiation and most were not even given radiation meters*," Tomohiko Suzuki told RT. "*They could have exposed themselves to large doses without even knowing it. Even the so-called Fukushima 50 – the first group of workers sent there immediately after the disaster – at least three of them were recruited by the yakuza*."

Suzuki published details of what he says is solid evidence, but Tokyo Electric Power Company officials strenuously deny that any mistreatment or organized crime involvement is taking place.

"*We are doing everything to ensure that our workers operate in safe conditions. We also deal harshly with law-violating subcontractors*," TEPCO spokesman Yoshimi Hitosug said.

There are no exact figures on how many people have worked on the Fukushima cleanup operation. Rough estimates suggest that this may be up to a quarter of a million people. With experts saying it may take another 40 years to completely liquidate the aftermath of the disaster, the lives of millions could be affected.

MESSAGE TO THE WORKERS OF FUKUSHIMA

http://kna-blog.blogspot.fr/2013/11/full-tyvek-jacket-aux-travailleurs-de.html

To the workers of Fukushima.

To the first to intervene at the most terrible moments of the nuclear disaster
To those who - day after day - are up against an ever-worsening situation
To those who will have to replace them for many years to come.
To their families and loved ones

This is a message of gratitude and sympathy from France.

You may not be able to rely on your employers or your political leaders to treat you properly, but this doesn't mean you have to face these formidable problems on your own, only being rewarded by criticism in the press.

This may only be a meagre consolation to you, but we want you to know that many thousands of kilometers away, complete strangers, ordinary citizens like you are thinking of you and are grateful for your courage and your dedication.

You are important people who deserve every respect, given the responsibilities you are constantly shouldering, without recognition or reward.

Who can criticize the worker who unplugged the wrong pipe, pressed the wrong button or caused a tank to overflow, when training, precise instructions and means of control are so scarce?

Who can blame the worker who falls into depression when he is confronted by difficult working conditions that endanger his health and his life?

There are probably, throughout the world, millions of people like us who are on your side and count on you, who offer you their trust and moral support, and who don't forget you exist.

We don't know you personally, but like you, we are human beings and citizens of the Earth. We cannot do much to help you, but we want to say **thank you for what you do, thank you for the risks you are taking for us all. You have our heartfelt support**.

Thank you, "Fukushima 50" and all the brave people who from the very beginning of the disaster did not hesitate to risk their lives to prevent an even more dire situation.

Thank you to all these people whose name will never get mentioned but who contribute each day to the colossal task of keeping the radioactive peril at the Fukushima plant in check.

May our moral support and our thoughts reach you, your loved ones, and the families of the victims who have lost their health and their lives in this permanent battle.

*This text can be **downloaded** in various languages:*

日本語

Deutsch

English

Espagnol

Espéranto
Français

Italiano

Added on Nov. 26, 2013 :

Aan de werknemers van Fukushima	http://goo.gl/rOMnfB	Portuguese
Aos trabalhadores de Fukushima	http://goo.gl/B1E3i1	Russian
Работникам на Фукусиме	http://goo.gl/s3wGze	Dutch

---------- Participants ----------
Franck http://kna-blog.blogspot.com
Georges http://www.vivre-apres-fukushima.fr/
Odile http://fukushima-is-still-news.over-blog.com/
Pectine http://pectineactualites.wordpress.com

Pierre http://www.fukushima-blog.com
4 from AFAZ http://afaz.at
Paolo http://www.aipri.blogspot.com
Citizenperth http://fukushimaemergencywhatcanwedo.blogspot.fr/

---------- Share this message ----------
I would be very happy for other individuals or groups to express their support to those who struggle on the Fukushima battlefield.
Spread this message on your website or your blog, contact us for translations in other languages and/or to be added to the list of contributors.
Write your own support message if you wish, and circulate it too.
You can also send a traditional letter. Here is the mailing address of the "rear base" of workers at J-Village:
〒979-0513 福島県双葉郡楢葉町大字山田岡字美シ森 8 番 J ヴィレッジ内
福島復興公社
福島第一原発の作業員の皆様へ

Fukushima Revitalization Headquarters at J-Village
8, Utsukushi-mori, Yamada-oka aza
Naraha-machi oaza, Futaba-gun
979-0513, Fukushima
Japan

If there are enough of us to relay and multiply the impact of this fraternal support movement, if enough media echo it, then maybe this will encourage Japan to do something for these brave men.
Thanks to all of you,
Franck
Kna-blog.blogspot.com

November 29, 2013

No collective bargaining at TEPCO

Ex-Fukushima plant worker accuses TEPCO of refusing collective bargaining

http://mainichi.jp/english/english/newsselect/news/20131129p2a00m0na008000c.html

A former worker at the disaster-crippled Fukushima No. 1 Nuclear Power Plant has accused its operator Tokyo Electric Power Co. (TEPCO) of unjustly refusing collective bargaining over his dismissal.

The Haken Union, a labor union for temporary and contract workers, filed for support from the Labor Relations Commission of the Tokyo Metropolitan Government on Nov. 28 on behalf of Tetsuya Hayashi, a 41-year-old resident of Nagano Prefecture who worked at the Fukushima No. 1 nuclear plant as a subcontract worker. The Haken Union accused TEPCO, its prime contractor and other companies of engaging in unfair labor practices by refusing to respond to collective bargaining.

According to the complaint and other sources, Hayashi entered into an employment contract with a fifth-tier subcontractor of TEPCO in Iwaki, Fukushima Prefecture, in June 2012. The company, which handled work at the Fukushima No. 1 nuclear plant, initially explained to Hayashi that his work assignments, such as management of work tools, would be risk-free.

However, his job was changed, exposing him to high levels of radiation at the plant. On June 19 that year, Hayashi was forced to engage in removal of glass near nuclear reactor buildings for two hours. He protested over the change, but he was dismissed the following day.

Hayashi joined the Haken Union and called for collective bargaining with TEPCO and four other companies, demanding that his dismissal be retracted. However, all companies but the fifth-tier firm refused to comply with his request.

Evaluation of radiation exposure for Fukushima workers

Press Release (Nov 29, 2013) Exposure Dose Evaluation of the Workers at Fukushima Daiichi Nuclear Power Station

http://www.tepco.co.jp/en/press/corp-com/release/2013/1232637_5130.html

We have been evaluating the exposure dose of the workers at Fukushima Daiichi Nuclear Power Station in two categories, internal and external exposure doses.

The evaluation results have been submitted to the Ministry of Health, Labor and Welfare in the order of the due dates of announcements.

(Previously announced)

Today we submitted a report on the exposure dose evaluation as of the end of October 2013 to the Ministry of Health, Labor and Welfare.

- The number of workers newly engaged in October was 561. The maximum external exposure dose was 15.22mSv, and no significant value was measured for the internal exposure.
- The exposure dose status of the "workers exposed to specially high radiation dose*" is provided separately.

The exposure dose evaluation result as of the end of November will be reported to the Ministry of Health, Labor and Welfare by the end of December.

* The workers who applied Emergency dose limit (100mSv) shown in "Ordinance on Prevention of Ionizing Radiation Hazards, chapter 7." Specifically, it means the workers who engaged in the work to maintain the function that cooling reactor facility or spent fuel tank at the area where the radiation dose exceed 0.1 mSv/h and reactor facility, steam turbine and related facilities and surrounding area in the power plant or the work to maintain the function to control or prevent release of huge amount radioactive material due to trouble or break of reactor facility.

< Attachment >: Exposure Dose Distribution (PDF 95.3KB)

December 12, 2013

Toshiba and subcontractors should stop overworking workers

18 firms told to end overwork at Fukushima plant

Japan's labor watchdog has told 18 firms to end overwork among employees at the Fukushima Daiichi nuclear plant.

A labor standards inspection office in Fukushima Prefecture gave the correction advice to Toshiba and its 17 subcontractors.

Officials with the Fukushima Labor Bureau say the firms made employees work around radioactive water longer than legally allowed.

Japan's labor standards law permits only 10 hours of work a day when there are potential health risks. That includes maximum overtime of 2 hours.

Toshiba and its subcontractors admitted having some workers put in a few hours more a day between July and October.

Company officials told NHK they mistakenly understood that hours spent in preparation or waiting did not have to be counted in the daily limit.

The officials say they have corrected their practices after receiving the advice.

December 25, 2013

NHK video on Fukushima workers

Workers face Uphill Struggle

http://www3.nhk.or.jp/nhkworld/newsline/201312250500.html

3,500 workers work in Fukushima Daiichi every day.

An NHK journalist was allowed to follow the workers who are removing fuel rods off reactor No.4.

The protective gear itself is a major impediment (eg.3 layers of gloves make it difficult to move your fingers, the mask makes it very difficult to breathe normally and of course to communicate). It limits the amount of work you can actually do.

Workers are “hot, thirsty and exhausted”.

They are screened after every shift (at least while the journalist was present).

The success of the decommissioning process rests entirely on their shoulders.

December 29, 2013

How to speed up decontamination in Fukushima

Workers given OK for overnight stay in Fukushima

http://www3.nhk.or.jp/nhkworld/english/news/20131230_01.html

Japan's central government has decided that under certain conditions workers will be allowed to stay overnight in some of Fukushima's off-limit areas.

The purpose is to speed up the decontamination process nearly three years since the March 2011 nuclear accident.

The decision applies to areas where residents are currently permitted visit their homes only during the daytime.

The conditions attached to over-night stays stipulate that workers be involved in projects deemed especially indispensable for restoration and revival, and that radiation levels are 20 milli-sieverts or less per year.

Businesses and local governments had requested that workers to be allowed to stay in affected areas because of road congestion caused by decontamination projects and the rebuilding of infrastructure.

The central government notified local authorities of the decision. It says that allowing workers to stay overnight is an exceptional measure.

Municipalities will confirm which projects fulfill the conditions and must then file requests with the central government's nuclear taskforce. A request from Iidate Village has already been approved.

Businesses involved will be in charge of monitoring the radiation exposure levels of their workers who stay in such areas.

Makoto Akashi is the Director of the National Institute of Radiological Sciences. He points out that stricter monitoring of radiation exposure levels will be needed for each worker, including their off-work hours.

Initiative from former TEPCO employee

Former TEPCO employee seeks donations for downtrodden Fukushima workers

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201312290006

By TAKURO NEGISHI/ Staff Writer

As a former employee of Tokyo Electric Power Co., Akihiro Yoshikawa says he knows about the miserable conditions, declining morale and how workers are treated like garbage at the crippled Fukushima nuclear plant.

His mission now is to spread awareness of the circumstances surrounding those struggling to deal with the accident at the Fukushima No. 1 nuclear power plant and to help them get through the winter.

"I wanted to get people thinking about their working environment and do something to improve it," Yoshikawa, 33, said.

Yoshikawa and his friends are now collecting donations to deliver heat packs and long underwear to the workers.

Born in Ibaraki Prefecture, Yoshikawa graduated from high school at Toden Gakuen, a now-defunct academy for training future workers of TEPCO, operator of the Fukushima No. 1 nuclear plant.

Yoshikawa's work at TEPCO included supervising equipment inspections at the No. 1 plant.

After the tsunami caused the meltdowns at the plant in March 2011, Yoshikawa and his wife fled from the town of Namie. They now live in evacuee housing provided by the prefectural government in the nearby city of Iwaki.

Yoshikawa worked at the Fukushima No. 2 nuclear power plant, which was also hit by the tsunami but shut down properly.

Whenever he talked with workers toiling at the No. 1 nuclear plant, he heard about their fears of radiation contamination and low morale.

"They used us and threw us away," he quoted an acquaintance as saying. The acquaintance could not return to the work site because he had been exposed to radiation above the limit immediately after the accident. He later quit his job at a TEPCO subcontractor.

Yoshikawa said many workers and their families hide the fact that they work at the Fukushima No. 1 nuclear plant because they fear their children will be bullied and discriminated against for being "exposed to radiation."

In June last year, Yoshikawa left TEPCO to "spread information about the work conditions from outside the company and deepen society's understanding of them."

He has been giving talks in the Tokyo area and elsewhere about the nuclear accident and the workers' situation.

During the winter months, workers huddle inside reactor buildings to escape the chilly weather. Sometimes their hands get so cold that they drop tools and cause injuries, according to Yoshikawa.

He recently came up with the idea of sending high-grade cold weather underwear and heat packs to the workers.

At the beginning of November, Yoshikawa and four of his friends began using the website for their group, Appreciate Fukushima Workers, to solicit donations. By Nov. 20, they had collected 1.92 million yen ($18,800).

Their goal is to gather 10 million yen to send 3,000 sets of top and bottom underwear and 300,000 heat packs to the Fukushima workers.

Their first delivery of 30,000 heat packs arrived on Nov. 22 at the J-Village work base in Naraha, Fukushima Prefecture.

December 30, 2013

How to recruit workers to clean-up the mess

Special Report: Japan's homeless recruited for murky Fukushima clean-up

http://mobilebeta.reuters.com/special-report-japans-homeless-recruited-for-1

By Mari Saito and Antoni Slodkowski

SENDAI, Japan - Seiji Sasa hits the train station in this northern Japanese city before dawn most mornings to prowl for homeless men.

He isn't a social worker. He's a recruiter. The men in Sendai Station are potential laborers that Sasa can dispatch to contractors in Japan's nuclear disaster zone for a bounty of $100 a head.

"This is how labor recruiters like me come in every day," Sasa says, as he strides past men sleeping on cardboard and clutching at their coats against the early winter cold.

It's also how Japan finds people willing to accept minimum wage for one of the most undesirable jobs in the industrialized world: working on the $35 billion, taxpayer-funded effort to clean up radioactive fallout across an area of northern Japan larger than Hong Kong.

Almost three years ago, a massive earthquake and tsunami leveled villages across Japan's northeast coast and set off multiple meltdowns at the Fukushima nuclear plant. Today, the most ambitious radiation clean-up ever attempted is running behind schedule. The effort is being dogged by both a lack of oversight and a shortage of workers, according to a Reuters analysis of contracts and interviews with dozens of those involved.

In January, October and November, Japanese gangsters were arrested on charges of infiltrating construction giant Obayashi Corp's network of decontamination subcontractors and illegally sending workers to the government-funded project.

In the October case, homeless men were rounded up at Sendai's train station by Sasa, then put to work clearing radioactive soil and debris in Fukushima City for less than minimum wage, according to police and accounts of those involved. The men reported up through a chain of three other companies to Obayashi, Japan's second-largest construction company. Obayashi, which is one of more than 20 major contractors involved in government-funded radiation removal projects,

has not been accused of any wrongdoing. But the spate of arrests has shown that members of Japan's three largest criminal syndicates - Yamaguchi-gumi, Sumiyoshi-kai and Inagawa-kai - had set up black-market recruiting agencies under Obayashi.

"We are taking it very seriously that these incidents keep happening one after another," said Junichi Ichikawa, a spokesman for Obayashi. He said the company tightened its scrutiny of its lower-tier subcontractors in order to shut out gangsters, known as the yakuza. "There were elements of what we had been doing that did not go far enough."

OVERSIGHT LEFT TO TOP CONTRACTORS

Part of the problem in monitoring taxpayer money in Fukushima is the sheer number of companies involved in decontamination, extending from the major contractors at the top to tiny subcontractors many layers below them. The total number has not been announced. But in the 10 most contaminated towns and a highway that runs north past the gates of the wrecked plant in Fukushima, Reuters found 733 companies were performing work for the Ministry of Environment, according to partial contract terms released by the ministry in August under Japan's information disclosure law.

Reuters found 56 subcontractors listed on environment ministry contracts worth a total of $2.5 billion in the most radiated areas of Fukushima that would have been barred from traditional public works because they had not been vetted by the construction ministry.

The 2011 law that regulates decontamination put control under the environment ministry, the largest spending program ever managed by the 10-year-old agency. The same law also effectively loosened controls on bidders, making it possible for firms to win radiation removal contracts without the basic disclosure and certification required for participating in public works such as road construction.

Reuters also found five firms working for the Ministry of Environment that could not be identified. They had no construction ministry registration, no listed phone number or website, and Reuters could not find a basic corporate registration disclosing ownership. There was also no record of the firms in the database of Japan's largest credit research firm, Teikoku Databank. "As a general matter, in cases like this, we would have to start by looking at whether a company like this is real," said Shigenobu Abe, a researcher at Teikoku Databank.

"After that, it would be necessary to look at whether this is an active company and at the background of its executive and directors."

Responsibility for monitoring the hiring, safety records and suitability of hundreds of small firms involved in Fukushima's decontamination rests with the top contractors, including Kajima Corp, Taisei Corp and Shimizu Corp, officials said.

"In reality, major contractors manage each work site," said Hide Motonaga, deputy director of the radiation clean-up division of the environment ministry.

But, as a practical matter, many of the construction companies involved in the clean-up say it is impossible to monitor what is happening on the ground because of the multiple layers of contracts for each job that keep the top contractors removed from those doing the work.

"If you started looking at every single person, the project wouldn't move forward. You wouldn't get a tenth of the people you need," said Yukio Suganuma, president of Aisogo Service, a construction company that was hired in 2012 to clean up radioactive fallout from streets in the town of Tamura.

The sprawl of small firms working in Fukushima is an unintended consequence of Japan's legacy of tight labor-market regulations combined with the aging population's deepening shortage of workers. Japan's construction companies cannot afford to keep a large payroll and dispatching temporary workers to construction sites is prohibited. As a result, smaller firms step into the gap, promising workers in exchange for a cut of their wages.

Below these official subcontractors, a shadowy network of gangsters and illegal brokers who hire homeless men has also become active in Fukushima. Ministry of Environment contracts in the most radioactive areas of Fukushima prefecture are particularly lucrative because the government pays an additional $100 in hazard allowance per day for each worker.

Takayoshi Igarashi, a lawyer and professor at Hosei University, said the initial rush to find companies for decontamination was understandable in the immediate aftermath of the disaster when the priority was

emergency response. But he said the government now needs to tighten its scrutiny to prevent a range of abuses, including bid rigging.

"There are many unknown entities getting involved in decontamination projects," said Igarashi, a former advisor to ex-Prime Minister Naoto Kan. "There needs to be a thorough check on what companies are working on what, and when. I think it's probably completely lawless if the top contractors are not thoroughly checking."

The Ministry of Environment announced on Thursday that work on the most contaminated sites would take two to three years longer than the original March 2014 deadline. That means many of the more than 60,000 who lived in the area before the disaster will remain unable to return home until six years after the disaster.

Earlier this month, Abe, who pledged his government would "take full responsibility for the rebirth of Fukushima" boosted the budget for decontamination to $35 billion, including funds to create a facility to store radioactive soil and other waste near the wrecked nuclear plant.

'DON'T ASK QUESTIONS'

Japan has always had a gray market of day labor centered in Tokyo and Osaka. A small army of day laborers was employed to build the stadiums and parks for the 1964 Olympics in Tokyo. But over the past year, Sendai, the biggest city in the disaster zone, has emerged as a hiring hub for homeless men. Many work clearing rubble left behind by the 2011 tsunami and cleaning up radioactive hotspots by removing topsoil, cutting grass and scrubbing down houses around the destroyed nuclear plant, workers and city officials say.

Seiji Sasa, 67, a broad-shouldered former wrestling promoter, was photographed by undercover police recruiting homeless men at the Sendai train station to work in the nuclear cleanup. The workers were then handed off through a chain of companies reporting up to Obayashi, as part of a $1.4 million contract to decontaminate roads in Fukushima, police say.

"I don't ask questions; that's not my job," Sasa said in an interview with Reuters. "I just find people and send them to work. I send them and get money in exchange. That's it. I don't get involved in what happens after that."

Only a third of the money allocated for wages by Obayashi's top contractor made it to the workers Sasa had found. The rest was skimmed by middlemen, police say. After deductions for food and lodging, that left workers with an hourly rate of about $6, just below the minimum wage equal to about $6.50 per hour in Fukushima, according to wage data provided by police. Some of the homeless men ended up in debt after fees for food and housing were deducted, police say.

Sasa was arrested in November and released without being charged. Police were after his client, Mitsunori Nishimura, a local Inagawa-kai gangster. Nishimura housed workers in cramped dorms on the edge of Sendai and skimmed an estimated $10,000 of public funding intended for their wages each month, police say.

Nishimura, who could not be reached for comment, was arrested and paid a $2,500 fine. Nishimura is widely known in Sendai. Seiryu Home, a shelter funded by the city, had sent other homeless men to work for him on recovery jobs after the 2011 disaster.

"He seemed like such a nice guy," said Yota Iozawa, a shelter manager. "It was bad luck. I can't investigate everything about every company."

In the incident that prompted his arrest, Nishimura placed his workers with Shinei Clean, a company with about 15 employees based on a winding farm road south of Sendai. Police turned up there to arrest Shinei's president, Toshiaki Osada, after a search of his office, according to Tatsuya Shoji, who is both Osada's nephew and a company manager. Shinei had sent dump trucks to sort debris from the disaster. "Everyone is involved in sending workers," said Shoji. "I guess we just happened to get caught this time."

Osada, who could not be reached for comment, was fined about $5,000. Shinei was also fined about $5,000.

'RUN BY GANGS'

The trail from Shinei led police to a slightly larger neighboring company with about 30 employees, Fujisai Couken. Fujisai says it was under pressure from a larger contractor, Raito Kogyo, to provide workers for Fukushima. Kenichi Sayama, Fujisai's general manger, said his company only made about $10 per day per worker it outsourced. When the job appeared to be going too slowly, Fujisai asked Shinei for more help and they turned to Nishimura.

A Fujisai manager, Fuminori Hayashi, was arrested and paid a $5,000 fine, police said. Fujisai also paid a $5,000 fine.

"If you don't get involved (with gangs), you're not going to get enough workers," said Sayama, Fujisai's general manager. "The construction industry is 90 percent run by gangs."

Raito Kogyo, a top-tier subcontractor to Obayashi, has about 300 workers in decontamination projects around Fukushima and owns subsidiaries in both Japan and the United States. Raito agreed that the project faced a shortage of workers but said it had been deceived. Raito said it was unaware of a shadow contractor under Fujisai tied to organized crime.

"We can only check on lower-tier subcontractors if they are honest with us," said Tomoyuki Yamane, head of marketing for Raito. Raito and Obayashi were not accused of any wrongdoing and were not penalized.

Other firms receiving government contracts in the decontamination zone have hired homeless men from Sasa, including Shuto Kogyo, a firm based in Himeji, western Japan.

"He sends people in, but they don't stick around for long," said Fujiko Kaneda, 70, who runs Shuto with her son, Seiki Shuto. "He gathers people in front of the station and sends them to our dorm."

Kaneda invested about $600,000 to cash in on the reconstruction boom. Shuto converted an abandoned roadhouse north of Sendai into a dorm to house workers on reconstruction jobs such as clearing tsunami debris. The company also won two contracts awarded by the Ministry of Environment to clean up two of the most heavily contaminated townships.

Kaneda had been arrested in 2009 along with her son, Seiki, for charging illegally high interest rates on loans to pensioners. Kaneda signed an admission of guilt for police, a document she says she did not understand, and paid a fine of $8,000. Seiki was given a sentence of two years prison time suspended for four years and paid a $20,000 fine, according to police. Seiki declined to comment.

UNPAID WAGE CLAIMS

In Fukushima, Shuto has faced at least two claims with local labor regulators over unpaid wages, according to Kaneda. In a separate case, a 55-year-old homeless man reported being paid the equivalent of $10 for a full month of work at Shuto. The worker's paystub, reviewed by Reuters, showed charges for

food, accommodation and laundry were docked from his monthly pay equivalent to about $1,500, leaving him with $10 at the end of the August.

The man turned up broke and homeless at Sendai Station in October after working for Shuto, but disappeared soon afterwards, according to Yasuhiro Aoki, a Baptist pastor and homeless advocate.

Kaneda confirmed the man had worked for her but said she treats her workers fairly. She said Shuto Kogyo pays workers at least $80 for a day's work while docking the equivalent of $35 for food. Many of her workers end up borrowing from her to make ends meet, she said. One of them had owed her $20,000 before beginning work in Fukushima, she says. The balance has come down recently, but then he borrowed another $2,000 for the year-end holidays.

"He will never be able to pay me back," she said.

The problem of workers running themselves into debt is widespread. "Many homeless people are just put into dormitories, and the fees for lodging and food are automatically docked from their wages," said Aoki, the pastor. "Then at the end of the month, they're left with no pay at all."

Shizuya Nishiyama, 57, says he briefly worked for Shuto clearing rubble. He now sleeps on a cardboard box in Sendai Station. He says he left after a dispute over wages, one of several he has had with construction firms, including two handling decontamination jobs.

Nishiyama's first employer in Sendai offered him $90 a day for his first job clearing tsunami debris. But he was made to pay as much as $50 a day for food and lodging. He also was not paid on the days he was unable to work. On those days, though, he would still be charged for room and board. He decided he was better off living on the street than going into debt.

"We're an easy target for recruiters," Nishiyama said. "We turn up here with all our bags, wheeling them around and we're easy to spot. They say to us, are you looking for work? Are you hungry? And if we haven't eaten, they offer to find us a job."

(Reporting by Mari Saito and Antoni Slodkowski, additional reporting by Elena Johansson, Michio Kohno, Yoko Matsudaira, Fumika Inoue, Ruairidh Villar, Sophie Knight; writing by Kevin Krolicki; editing by Bill Tarrant)

January 4, 2014

TEPCO wants money back from workers

TEPCO seeks refunds of evacuation payments from employees, rejects ADR settlement

http://mainichi.jp/english/english/newsselect/news/20140104p2a00m0na005000c.html

Tokyo Electric Power Co. (TEPCO) is seeking refunds of compensation payments made to employees who evacuated from their homes as a result of the Fukushima No. 1 Nuclear Power Plant disaster and has

rejected a settlement proposed by a dispute resolution organization in one case, it has been learned from inside sources.

Over 100 million yen in refunds are being sought, and young employees in their 20s have been leaving the company because of TEPCO's efforts to get the refunds. Critics say the dispute could adversely affect work to repair the Fukushima plant.

The government's policy on TEPCO's compensation to evacuees is that the evacuees receive, among other payments, 100,000 yen a month in emotional damages, money to cover transportation and other costs associated with temporary visits to their evacuated homes, and money to cover the costs of household appliances they purchase for their new homes after evacuating.

However, one male TEPCO employee had his compensation payments cut in fall 2012. The reason TEPCO gave was that his move in summer 2011 to a rented residence in an area without restrictions on entering and leaving was considered the end of his time as an evacuee. Since he had lived in a rented residence before the disaster as well, TEPCO considered his moving to another rented residence as a non-evacuation move. Meanwhile, however, non-TEPCO employees who move away from their pre-disaster homes receive compensation.

What surprised the employee was a letter that arrived in spring last year from a TEPCO department handling compensation for the nuclear disaster. It read, "A discrepancy has been confirmed in the amount (of compensation) paid and the correct amount," and listed the difference at some millions of yen. The discrepancy was for the money the employee had received since moving in summer 2011, and the letter said TEPCO would "withhold" the money. The man called the department to ask about this, and was told the company would subtract the difference from his compensation payments. However, since he wasn't being paid that compensation anymore, this essentially meant he would have to pay a refund. The man pressed to clarify this point but was only told the manner of returning the money was not yet decided.

The man took the situation to an out-of-court alternative dispute resolution (ADR) entity, set up to handle disputes over compensation payments stemming from the Fukushima disaster. The organization rejected TEPCO's argument and said that the man was still in evacuation and had no duty to return the funds. It also proposed a settlement in which TEPCO would pay several millions of yen to the man, but TEPCO refused to follow the organization's non-binding proposal.

Based on multiple testimonies, there are at least 15 TEPCO employees who have been asked to return compensation payments, with the total amount exceeding 100 million yen. One employee said, "Around 100 employees have had their compensation payments stopped, and many of them have been asked to return money."

In October, TEPCO held a meeting in Fukushima Prefecture between company executives and employees. In an audio recording of the meeting obtained by the Mainichi Shimbun, an employee says, "Asking us to return the money sent to us has made everyone's anger breach the tipping point." An executive responded, "We will look closely into this matter," but the situation has since remained unchanged.

Professor Aya Yamada of Kyoto University, who is knowledgeable about ADR, said, "In order for victims of the nuclear disaster to trust and be comfortable using the ADR organization for disputes over nuclear compensation, TEPCO has to follow their promise (to respect the organization's proposals). A justified reason is needed to reject the proposals, but no justified reason exists in this case."

TEPCO worker frustrated over company's treatment of employees

http://mainichi.jp/english/english/newsselect/news/20140104p2a00m0na008000c.html

An employee of Tokyo Electric Power Co. (TEPCO), who was asked by the utility to return evacuation compensation payments he received for the Fukushima No. 1 nuclear plant disaster, lamented the company's frosty attitude toward workers like him who had devoted themselves to bringing the crippled plant under control.

The employee was among those who worked on the front lines immediately after the onset of the nuclear disaster in March 2011, under the leadership of then plant manager Masao Yoshida. Amid high levels of radiation, the employee and his colleagues trembled with fear as they worked to contain the unprecedented atomic disaster.

Faced with TEPCO's unsympathetic treatment of them, however, young employees are leaving the company in despair. Declining morale among workers is casting a shadow on ongoing efforts to decommission the plant's reactors.

Hailing from outside Fukushima, the employee has developed a fondness for Fukushima after working for many years at the Fukushima No. 1 and No. 2 nuclear plants. "I feel as if this is my hometown," he says about Fukushima, where he is also involved in community activities.

"I can't stand any further contamination of my hometown," he thought in the wake of an explosion at the No. 1 reactor at the Fukushima No. 1 nuclear plant on March 12, 2011. He and his colleagues approached the reactor building, trembling. When they returned to a quake-proof building about 300 meters away from the No. 1 reactor after work, Yoshida was yelling angrily in a teleconference with TEPCO's Tokyo headquarters. But he was tender to local staff, often telling them, "You guys are doing great work."

The employee continued to work under harsh conditions, but felt what he was doing was worth it. However, he received a letter from TEPCO last spring asking him to return part of the compensation he received from the utility, and to sign and send back a letter of consent.

"That can't be possible," he thought, and read the letter over and over again. But it was unmistakably an invoice addressed to him by his employer. He shed tears of frustration and suffered sleepless nights. His coworkers had also received similar documents. A gloomy, depressing atmosphere prevailed, significantly undermining workers' morale.

The salaries of TEPCO employees were slashed by 20 percent immediately after the outbreak of the Fukushima nuclear disaster. Such cutbacks have been followed by the suspension of compensation payouts to employees in 2012 and the demand to return compensation in spring 2013. These changes resulted in more than 10 employees -- mainly in their 20s -- leaving TEPCO. Among them were employees who worked together with the male employee to bring the Fukushima No. 1 nuclear plant under control.

"Everyone felt responsible that a nuclear plant that we'd been operating caused this crisis, and we all persevered in our work (following the disaster)," the employee said, adding that motivation among his colleagues waned because of their maltreatment by the utility. The employee says he couldn't tell an outgoing coworker, "Let's hang in there together."

The employee recalls Yoshida telling them, "You guys tried very hard amid high radiation doses. I will look after you properly."

"If he (Yoshida) was alive, things wouldn't have turned out like this," the employee sometimes thinks to himself.

While he feels helpless, he tells himself he's going to stick it out for the sake of his "hometown."

January 5, 2014

Some have increased workers' wages, some haven't

TEPCO allows contractors to dip into 'labor fund' increase

http://mainichi.jp/english/english/newsselect/news/20140105p2a00m0na004000c.html

Tokyo Electric Power Co. (TEPCO), after announcing last November that "labor funds" would be increased for contract work on the Fukushima No. 1 Nuclear Power Plant, told contractors that not all the money had to go to wage increases, effectively reneging on its earlier announcement, it has been learned.

When contracting out work, in addition to base money for wages, TEPCO sets aside extra funds to pay workers at the plant based on radiation exposure and the type of work they do. However, until a Nov. 8 announcement the company had not revealed exact numbers, saying that doing so would "affect future contracts and bids." This was criticized as encouraging contractors and subcontractors to dip into the labor funds.

When TEPCO announced "emergency safety measures" for the Fukushima plant on Nov. 8 last year, it revealed that until then it had been setting aside 10,000 yen of these extra funds per worker. In order to improve workers' wages, however, the utility said it would increase this amount by another 10,000 yen per day starting with work contracted the following month. This was also clearly indicated in documents the company distributed to contractors.

TEPCO president Naomi Hirose said at a press conference, "I ask that prime contractors thoroughly enact (wage improvements). Workers will be aware of the 10,000 yen increase, so we ask that contractors follow through."

However, on Nov. 29, TEPCO sent a message to its contractors in the name of the chief of its supplies division. The message concerned the Nov. 8 announcement, and apologized that "the measure had not been understood correctly, bringing confusion to our business partners." It read that the increase of 10,000 yen was "for making efforts to improve workers' wages" but "does not mean that the amount (paid to workers) will be increased by 10,000 yen."

A representative of TEPCO's PR department told the Mainichi Shimbun, "The wages paid to workers are decided in contracts made between workers and subcontractors, so we explained that the labor funds we set and the actual wages paid to workers are different." Furthermore, the PR official said the increase of 10,000 to 20,000 yen in daily extra labor funds was "introduced as a representative case, but the actual amount could be lower." The official would not discuss the actual amount of increases made because it was "a contract matter."

The Nov. 8 announcement had been reported as a "doubling" of payments to workers by a local paper. One worker who works at the Fukushima plant said, "Some subcontractors have properly increased

wages and others haven't, creating a stronger feeling of unfairness amongst those on-site. These TEPCO documents could lower the morale of the workers."

January 6, 2014

TEPCO wants money back from workers (2)

TEPCO demands families of employees return compensation for evacuation

http://mainichi.jp/english/english/newsselect/news/20140106p2a00m0na019000c.html

Tokyo Electric Power Co. (TEPCO), the operator of the tsunami-ravaged Fukushima nuclear plant, is demanding that the families of employees return compensation paid to them for being forced to evacuate from their neighborhoods due to the nuclear disaster, sources close to the case said.

In one case, a household is under pressure to return more than 30 million yen in damages from the company, raising concerns about future livelihoods.

Critics pointed out that TEPCO's demands are unfair. "The families of employees aren't responsible for the nuclear disaster. As such, the firm's demands for the return of the compensation are inappropriate," one of them says.

According to the sources, one TEPCO employee under pressure to return compensation was living with his wife and two children in a rented house in an area near the Fukushima No. 1 Nuclear Power Plant -- where it has been deemed that evacuees are unable to return home in the foreseeable future with an annual radiation dosage of over 50 millisieverts. The family moved to another area several months after the March 2011 outbreak of the nuclear disaster.

TEPCO has paid 100,000 yen a month in compensation to each of those who have evacuated from their homes because of the nuclear crisis under the national government's guidelines. Residents of areas designated as a zone where homecoming is difficult in the foreseeable future later became able to demand a lump-sum payment of compensation over a five-year period from June 2012.

The employee demanded compensation for all his family members for the five-year period, and later received more than 20 million yen from the utility.

However, he subsequently received a letter from TEPCO's division handling compensation for the nuclear crisis, demanding that he return the compensation -- more than 30 million yen including that paid before the lump-sum payment -- to the company.

The company made the demand on the grounds that his family's evacuation ended when they moved to another rented house in summer 2011.

Under government guidelines, TEPCO pays compensation to nuclear disaster evacuees for mental anguish evacuees suffer for being unable to lead their pre-disaster daily lives. The company has continued to pay such damage to evacuees other than families of employees.

Moreover, the company covers the costs of evacuees temporarily returning to their homes in evacuation zones to get necessary items such as documents.

However, the employee's family has been not only denied such rights but has also been urged to return money that was received to buy electric appliances and furniture.

According to the sources, the families of at least four TEPCO employees have received demands that they return compensation to the firm, with two of them being required to repay over 10 million yen.
Another employee of the utility was quoted by the sources as saying, "I'm afraid because I could be urged to return the compensation at any time."

Tsuyoshi Kamata, a lawyer consulted by the families of TEPCO employees, criticized the utility's practice. "TEPCO's attitude to require families of employees to tolerate hardship is impermissible. The company needs to improve itself."

TEPCO defended its practice. "We respond to demands for compensation from our employees as well as their families in an appropriate manner," says an official of the firm's public relations department.

Be dedicated, TEPCO chairman urges workers

TEPCO Chairman gives instructions to employees

http://www3.nhk.or.jp/nhkworld/english/news/20140106_17.html

The chairman of Tokyo Electric Power Company has urged employees to dedicate themselves to work for people suffering from the 2011 nuclear accident at the Fukushima Daiichi plant.

TEPCO Chairman Kazuhiko Shimokobe made the remark while giving instructions on Monday during his New Year's speech at the Fukushima Daini plant, about 10 kilometers away from the damaged Daiichi plant. About 200 employees from both plants were present for the chairman's speech.

Shimokobe spoke about a new business plan submitted to the industry minister by the utility as well as a nuclear compensation fund jointly financed by the government.

He said the plan will push TEPCO step by step toward a strong recovery from the accident.
The chairman asked the employees to be firmly committed to support people in Fukushima Prefecture, using all resources available.

TEPCO President Naomi Hirose later told reporters that his company was late in dealing with problems last year. These included a radioactive water spill at the damaged plant. Hirose said he will see to it that the company will do its best this year not to have any problems.

He said TEPCO will support residents returning to their home communities.

January 21, 2014

Worker internally contaminated

something doesn't seem right here in the evaluation of the irradiation.
will check.

Man suffers internal radiation exposure at Fukushima nuclear plant

http://mainichi.jp/english/english/newsselect/news/20140121p2a00m0na001000c.html

A worker at the crippled Fukushima No. 1 Nuclear Power Plant has been confirmed to have suffered internal exposure to radiation, plant operator Tokyo Electric Power Co. (TEPCO) has announced.

The worker in his 50s was irradiated internally during decontamination work at the building housing the No. 2 reactor at the plant in Fukushima Prefecture, TEPCO said on Jan. 20.

A whole body counter test found that the estimated exposure level from the radioactive materials taken into his body would be 0.38 millisieverts over the next 50 years. The internal exposure doses from natural radiation is said to be 1.5 millisieverts per year.

According to TEPCO, the man worked for 50 minutes from around 11 a.m. on Jan. 20. He was quoted as telling the utility, "My full-face mask became foggy, so I loosened it to wipe the mist from inside."

No compensation for TEPCO employees?

TEPCO began stalling on evacuation compensation for staff in 2011

http://mainichi.jp/english/english/newsselect/news/20140121p2a00m0na010000c.html

Tokyo Electric Power Co. (TEPCO), operator of the stricken Fukushima No. 1 nuclear power plant, demanded in October 2011 that employees forced to evacuate due to the reactor meltdowns earlier that year suspend applications for evacuee compensation, according to documents obtained by the Mainichi Shimbun.

The demand was initially made due to the overwhelming number of evacuation compensation applications submitted by other disaster victims around that time. However, TEPCO apparently continued to deny employees' applications or refuse to pay compensation even months later. Regular disaster victims continue to receive compensation payments today, while TEPCO employees forced to flee the nuclear catastrophe remain out in the cold.

The Mainichi Shimbun reported previously that, beginning around spring 2013, TEPCO began demanding employees and their families return evacuation compensation already paid out by the company.

The new documents are dated Oct. 27, 2011, a month after TEPCO began paying evacuation compensation on the orders of the central government. The demand that Fukushima No. 1 plant employees suspend their own compensation applications was issued under the name of the plant's general affairs department chief.

The request stated that TEPCO's "Fukushima atomic compensation consultation section" -- the body in charge of dealing with disaster reparations -- was "already pushed to the limit of its capacities" by the volume of compensation applications from regular disaster victims, and that it was understood that "there are many (TEPCO) staff who are essentially in the same situation as others affected by the disaster. However, the company will properly compensate its employees, so we would like you to please wait to submit compensation applications."

Lastly, the document states that "things should calm down around the end of November or the beginning of December (2011)," and demands that employees make their reparation applications after that time.

Between 10 and 20 plant staff who abided by the directive and filed applications from the beginning of 2012 were denied any compensation at all, according to a source close to the situation. Under government guidelines, TEPCO must pay 100,000 yen per month in "emotional damage" reparations to every resident of restricted access zones for one year from the date those restrictions are lifted. There are some areas near the Fukushima No. 1 plant -- areas where between 10 and 20 people used to live -- that are still off-limits. Only non-TEPCO employees who resided in these zones are receiving compensation.

TEPCO has also refused to grant compensation to any employee who's moved out of Fukushima Prefecture or been transferred to a TEPCO post away from home. These include staff who waited to file reparation applications as demanded by the company, and have since been denied payments.

One such Fukushima No. 1 plant employee and his wife wondered aloud to the Mainichi, "If this life we're leading now isn't a refugee existence, then what is it?"

The couple and their two children used to live very close to the power station. Though they continued to rent, they had lived at the same address for more than 10 years, their residence surrounded by rural landscapes that came alive with fireflies in early summer. After the reactor meltdowns in March 2011, however, the area fell within the exclusion zone around the plant. The husband continued to work at the nuclear plant and moved to a new residence in Fukushima Prefecture in spring 2011. His wife and children, however, "felt ashamed to be family of a TEPCO employee," and evacuated outside the prefecture.

In October that year, when TEPCO demanded staff delay their compensation applications, the husband decided he "wanted regular people to have priority," and obeyed the directive. The family submitted their application at the beginning of 2012. A few months later, the reply arrived in the mail. The compensation amount to be granted: zero.

"Your refugee status officially ended when you moved to a new residence in spring 2011," the document said. The husband contacted the call center for compensation claims, but he was told only that he "no longer has evacuee status." The husband told the Mainichi that he blurted out, "But you said employees would get proper compensation, too!"

His wife, meanwhile, has lost touch with her social circle in her former community. There are regular get-togethers for nuclear disaster evacuees in the area where she lives now, but she never goes.

"I'm scared the people will look at me and say, 'Hey, you're the family of a TEPCO worker, aren't you?'"

The husband goes home to his family once a week. He says that his kids always ask him when he's coming home next, and it hurts every time.

"But I have to see things through until the reactors are decommissioned," he tells himself, and heads back to Fukushima.

January 22, 2014

Learning from Chernobyl (NHK video)

Nuclear Watch: Learning from Chernobyl

http://www3.nhk.or.jp/nhkworld/newsline/201401240500.html

Chernobyl has been decommissioning for 3 decades and the whole process could last 100 years.

The Japanese Gov't has sent a team of Japanese (Pr. Okazaki) to see how crews there are protected from radiation.

The workers at the plant are checked regularly for more than 200 diseases (also focus on the eyes since this is where the effects of radiation usually appear first) and the data is collected by a central institution which enables doctors to quickly spot any abnormality and act upon it.

The situation at Fukushima is very different: the health screening are left to the contractors and they are not obliged to submit data to the operator or to any national institution.

Pr. Okazaki thinks Japan has a lot to learn from what happened at Chernobyl and he would like to see a centralized system to collect all the data regarding workers' health. He will submit his findings to the Japanese Gov't soon.

February 4, 2014

In-depth study of Fukushima workers

Radiation study planned for Fukushima workers

http://www3.nhk.or.jp/nhkworld/english/news/20140205_01.html

Japan's government will conduct an in-depth study of workers at the Fukushima Daiichi plant to find out how they were affected by radiation from the 2011 nuclear accident.

The Ministry of Health, Labor and Welfare will soon set up a panel of radiologists and other experts to determine specifically what and whom to study.

The ministry has already conducted medical checks of about 19,000 workers who entered the plant in the immediate aftermath. It recorded the results in a database. Some 30,000 workers have been engaged in decommissioning the damaged reactors.

The database does not include radiation exposure levels before the accident or details of lifestyle habits that could cause cancer, such as smoking.
This would make it difficult to separate the impact of exposure from the accident from other factors if workers develop cancer or cataracts.

The panel is expected to present a report to the ministry around May. Ministry officials say they hope to start a study based on the report some time during fiscal 2015, which starts in April next year.

February 6, 2014

TEPCO to reduce exposure among workers

NRA tells TEPCO to reduce radiation exposure at Fukushima plant

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201402060060

By TOSHIO KAWADA/ Staff Writer

The Nuclear Regulation Authority said Feb. 5 it instructed Tokyo Electric Power Co. to reduce radiation exposure among workers who are removing spent and unspent fuel from a reactor building at the Fukushima No. 1 nuclear plant.

The NRA issued the instructions after it started studying radiation levels around the work site on the fifth floor of the No. 4 reactor building in December. NRA officials said they found high levels of radiation emitted from cobalt-60 that was apparently mixed with shavings produced when workers cut into reactor components inside the storage pool there.

TEPCO in November began moving nuclear fuel from the storage pool to a shared-use pool elsewhere on the plant's compound. The workers normally wear protective gear and full face masks to guard themselves against high radiation levels.

The NRA found that the use of lead plates on the floor with hoisting equipment above the storage pool reduced the radiation levels to about one-third.

The NRA cited that and other survey results for calling for increased protective measures as part of the work process. The agency said it will do follow-up studies on worker doses.

February 24, 2014

Checking exposed workers for thyroid cancer

2,000 Fukushima plant workers to be checked for thyroid cancer

http://www.japantimes.co.jp/news/2014/02/24/national/2000-fukushima-plant-workers-to-be-checked-for-thyroid-cancer/#.UwsIWYXrV1s

Kyodo

A health ministry team is studying whether around 2,000 workers who helped contain the nuclear disaster at the Fukushima No. 1 power plant that started in March 2011 are at risk of thyroid cancer, one of the team members said Sunday.

The research team of the Health, Labor and Welfare Ministry aims to determine how radiation exposure as a result of the nuclear crisis has affected the plant workers, who were exposed to greater levels of radiation than local residents, who in large part evacuated.

Tomotaka Sobue, an Osaka University professor who is part of the ministry team, announced the study during an international research gathering in Tokyo on radiation and thyroid cancer.

Sobue said the team will check whether 1,972 workers are suffering from cancer or have lumps. The workers engaged in work at the Fukushima No. 1 plant shortly after the disaster started and their thyroid glands were exposed to radiation doses exceeding 100 millisieverts.

The team will also examine another roughly 2,000 workers of Tokyo Electric Power Co. who were exposed to lower doses and compare the results of the high- and low-risk groups.

Radioactive iodine released in nuclear disasters tends to accumulate in thyroid glands, particularly in young people.
Fukushima Prefecture has examined the thyroid glands of people under age 18 and has so far found 33 with thyroid cancer.

But experts at the three-day international research gathering through Sunday concluded it is unlikely the cancer was due to radiation exposure caused by the Fukushima No. 1 meltdowns.

The experts said it is highly likely that some Fukushima residents discovered they had thyroid cancer because sophisticated equipment was used for health checks. None of the sufferers was a baby and the discovery of thyroid cancer was within three years of the 2011 nuclear disaster.

Citing the 1986 Chernobyl nuclear catastrophe, the experts said there was an increase in thyroid cancer in children in the following four to five years, and that babies or young children living in the affected areas then were at high risk of developing the cancer.

February 27, 2014

TEPCO should keep to Gov't guidelines on compensation

Gov't to instruct TEPCO to improve practices over nuclear disaster compensation

http://mainichi.jp/english/english/newsselect/news/20140227p2a00m0na011000c.html

Minister of Education, Culture, Sports, Science and Technology Hakubun Shimomura said Feb. 26 that the government had informally decided to instruct Tokyo Electric Power Co. (TEPCO) to improve its practices and abide by government guidelines in providing compensation for the nuclear disaster stemming from its crippled Fukushima plant.

Shimomura made the comment during a sectional committee meeting of the Lower House Budget Committee, in response to a question from Yosei Ide of the recently formed "Yui no To" party. Earlier it was learned that TEPCO had created its own compensation standards that ran counter to government guidelines.

Under TEPCO's standards, which it applied to its employees, nuclear disaster evacuees who had previously been living in rented dwellings or with their families had their payments for emotional damages cut off when they changed their place of residency. The payments totaled 100,000 yen per month. Guidelines set by the government's Dispute Reconciliation Committee for Nuclear Damage Compensation, however, state that compensation payments should continue for roughly one year after entry restrictions on areas in which evacuees were previously living are lifted. Reporting by the Mainichi Shimbun showed guidelines by TEPCO ran counter to those stipulated by the government.

"We will issue instructions (to TEPCO) to avoid severing compensation simply because a person has moved, and abide by the spirit of the committee's guidelines, paying sufficient consideration to individual circumstances," Shimomura said.

The amount of compensation is calculated by TEPCO upon receiving a claim from a person affected by the nuclear disaster. People who are unhappy with the amount of compensation presented by TEPCO can file a complaint with the Nuclear Damage Claim Dispute Resolution Center, an alternative dispute resolution entity that suggests resolution proposals.

However, it has emerged that TEPCO has refused to abide by some of the center's proposals. Until recently it was unclear how many resolution proposals TEPCO had refused to abide by, but on Feb. 26, Satoshi Tanaka, head of the Education Ministry's Research and Development Bureau, stated that there has been 15 such cases as of Feb. 25. All of these reportedly involved claims lodged by employees or their family members. Apparently no non-employees had been turned down.

Under a business turnaround plan that TEPCO announced in January, the utility cited "respect for resolution proposals," bringing its cold treatment of employees into relief.

At least one TEPCO employee was asked to return money that had already been paid out, and there have been claims of a decline in morale among workers, including those involved in decommissioning reactors.

Yuji Masuda, a managing executive officer of TEPCO, admitted that a considerable number of young people were leaving the company, and stressed that the treatment of employees in benefit plans would improve.

March 9, 2014

Protection of workers against exposure long overdue

THREE YEARS AFTER: Risks of radiation exposure remain high for Fukushima workers

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201403090018

About half of the workers at the Fukushima No. 1 nuclear power plant in the three years since the triple meltdown have been exposed to more than 5 millisieverts of radiation, a level used as a radiation exposure reference for humans.

The levels of radiation exposure among workers at the crippled Fukushima plant have decreased since the 2011 nuclear accident, but there was a spike from last summer with the problem of dealing with the growing volume of radiation-contaminated water.

The labor ministry instructed Tokyo Electric Power Co., the plant operator, at the end of last year to improve the measures taken to deal with radiation exposure.

About 3,000 people work at the Fukushima No. 1 plant on any given day. Workers who are exposed to radiation in excess of 50 millisieverts over the course of a year or greater than 100 millisieverts over a five-year period are prohibited from working at a nuclear plant.

The 5-millisievert annual radiation level is used to determine eligibility for the government's workers' compensation insurance program for those who develop leukemia, as well as to establish radiation control zones that restrict entry by residents.

According to TEPCO statistics, there were a total of 32,034 workers at the Fukushima No. 1 plant between the March 2011 nuclear accident and January 2014. Of that number, 1,751 workers were exposed to a combined total in excess of 50 millisieverts. Of that number, 173 workers were exposed to more than 100 millisieverts.

Close to half the overall number of workers, or 15,363, were exposed to more than 5 millisieverts.
While there were 2,925 workers who were exposed to more than 5 millisieverts over the course of one month in March 2011, that number has gradually decreased. In June 2013, 98 workers were exposed to more than 5 millisieverts in one month's time.

However, the number increased subsequently as TEPCO admitted in July 2013 that radiation-contaminated water had flowed into the ocean and began work to install an underground wall to shut off the seepage of water.

The number of workers exposed to more than 5 millisieverts over a one-month period was 117 in July, 186 in August, 312 in September and 398 in October.

The labor ministry became concerned about the increase and inspected the Fukushima plant site in November and December. Ministry officials instructed TEPCO to install shielding plates against radiation and to rotate workers at shorter intervals.

The Nuclear Regulation Authority also instructed TEPCO in October 2013 to develop more specific measures to deal with radiation exposure among workers.

In January, TEPCO came up with measures such as decontaminating the plant site, removing debris with high radiation levels, paving asphalt on the plant site, installing more than 50 radiation level indicators and more than 10 dust monitors, as well as shielding off areas in the plant site with high radiation levels.

However, the utility has set a March 2015 deadline for completing all of those measures.

"We will accelerate the rate at which we implement such measures," said Akira Ono, head of the Fukushima No. 1 nuclear plant.
(This article was written by Toshio Tada and Shinichi Sekine.)

March 14, 2014

Fukushima workers demonstrate against conditions

Fukushima No. 1 workers rally against Tepco

http://www.japantimes.co.jp/news/2014/03/14/national/fukushima-no-1-workers-rally-against-tepco/#.UyrLQ4XrXIU

Workers from the Fukushima No. 1 nuclear plant rallied Friday outside the headquarters of Tokyo Electric Power Co., complaining they are being forced to work for meager pay in dangerous conditions.

The group of about 100 demonstrators shouted and pumped their fists in the air as they railed against being cheated by contractors hired to find recruits to clean up the shattered site and surrounding area.

"Workers at the Fukushima plant have been forced to do unreasonable tasks with no decent safety measures," said one man in his 30s who declined to give his name.

Workers are forced to handle contaminated water in such grim working conditions, where any human being should not be put to work," he said. "They tend to make easy mistakes under the pressure, but it's not they who are at fault — it's the conditions that force them to do terrible tasks."

Three years since the tsunami plunged the Fukushima nuclear plant into darkness on March 11, 2011, and sent reactors into meltdown, plant workers have yet to even start the dismantling process.

The decommissioning process is expected to stretch over decades.

Several thousand employees at the plant are locked in a daily — and dangerous — scramble to keep the site as safe as possible, making myriad repairs and building tanks for the vast amounts of water contaminated after being used to cool reactors.

On Thursday, authorities moved closer to restarting a pair of reactors at the Sendai nuclear plant in Kagoshima Prefecture, with the Nuclear Regulation Authority saying it would conduct safety checks.

But winning the backing of local officials and an atomic-weary population will be a major hurdle to restarting the reactors.

On Friday, demonstrators also rallied outside the office of Maeda Corp., one of the contractors hired to run cleanup operations at the plant and in surrounding areas.

Questions have swirled about the working conditions created by the web of Fukushima contractors and subcontractors.
Some demonstrators said they received far less pay than promised as various layers of bosses docked money for supplying meals, transportation and other expenses.

They also said many had not received a ¥10,000 daily premium for decontamination work.

"Most people are working for small pay without getting the special compensation," said a 51-year-old man, who said he was doing cleanup work near the plant.

Maeda did not immediately respond to a request for comment about working conditions in the stricken area.

March 17, 2014

Raising the skills of nuclear workers

LDP mulls new credentials for nuclear workers

http://www3.nhk.or.jp/nhkworld/english/news/20140317_36.html

Japan's ruling party is considering creating new state credentials for workers involved in the cleanup of radioactive debris or the decommissioning of nuclear power plants.

The move comes as the need for skilled technicians in these areas grows. Work in Fukushima to cleanup radioactive materials from the nuclear accident has fallen behind schedule. The task of decommissioning aging reactors in the coming decades will also require more experts.

Liberal Democratic Party lawmakers point out that raising the skills of nuclear industry employees will improve safety overall and help minimize incidents of worker exposure at plants.

They are planning to create 3 levels of national qualifications in such areas as decontamination, reactor maintenance and radiation monitoring.

At present, the government has only one state license for nuclear workers, which covers management of reactor operations

March 18, 2014

Decontamination firms violate work regulations

Fukushima decontamination firms violate work rules

http://www3.nhk.or.jp/nhkworld/english/news/20140318_22.html

Labor officials in Fukushima Prefecture say they have found violations at nearly 70 percent of companies doing decontamination work after the March 2011 Fukushima nuclear accident.

The prefecture's Labor Bureau conducted spot inspections from July to December last year at 660 businesses in the prefecture.

It says it found illegal violations at 446, or 67.6 percent of the companies. 742 cases involved failure to explain wages or hours in writing, or not properly paying overtime and other wages.

363 cases involved safety and health, such as not properly using dust-filtering masks and dosimeters, or not giving workers health checkups.
The bureau carried out another survey covering 387 businesses from January to July last year and says it found violations at 68 percent of the companies.

A bureau official said it will give warnings to the violators to correct their practices. If the working conditions are not improved, stricter measures will be considered, including reporting businesses to prosecutors.

Checking workers to stop terrorism

Panel seeks law to investigate nuclear workers

http://www3.nhk.or.jp/nhkworld/english/news/20140318_13.html

A panel of security experts has agreed that Japan needs a law requiring background checks of workers at nuclear facilities to prevent terrorism.

The Nuclear Regulation Authority appointed the panel to study protection of nuclear facilities. It has been meeting behind closed doors since last March.

The NRA secretariat says the panelists agreed on Monday that acts of terrorism from inside nuclear facilities pose a real threat.

They broadly agreed on the need for a new law to check the personal information of workers for criminal records or personal debt.
Other countries already have systems for vetting workers to assess their risk of joining or collaborating with terrorist organizations.

The panel is still considering who should run the background checks and what type of worker should be targeted. It will also study how to safeguard privacy.

Government officials are expected to discuss the subject at next week's nuclear security summit in the Netherlands.

March 21, 2014

Cover-up: Deaths of Fukushima workers

EXPOSED: Death of Fukushima Workers Covered-Up by TEPCO and Government

http://nsnbc.me/2014/03/21/exposed-death-of-fukushima-workers-covered-up-by-tepco-and-government/

nsnbc : **The death of many Fukushima workers who die from radiation exposure is covered-up by Fukushima Daiichi power plant operator TEPCO and the Japanese government, said a Japanese journalist who investigated the unreported deaths, adding that she found a TEPCO memo instructing officials to "cut her questions short appropriately", and that police is following her around in an intimidating manner.**

The alarming disclosure came at an international conference on the "Effects of Nuclear Disasters on Natural Environment and Human Health" outside the German financial capital Frankfurt. The conference was co-organized by the German chapter of International Physicians for Prevention of Nuclear War (IPPNW) and the Protestant Church in Hesse Nassau, on March 6, 2014, reports Energy News.

Mako Oshidori, a Japanese freelance journalist and commedian, who was present at the conference and the subsequent press conference (recorded on video). Mako reported that she discovered a TEPCO memo, in which the Fukushima Daiichi operator TEPCO instructs officials to *"cut Mako-chan's (questions) short, appropriately"*. Mako Oshidori was enrolled in the School of Life Sciences at Tottori University Faculty of Medicine for three years.

Mako revealed that TEPCO and the government cover-up the death of Fukusjima workers and that government agents began following her around after she began investigating the cover-up. Mako said:

"I heard about it from researchers who were my friends as well as some government officials. I will show you a photo I secretly took of the agent, so you know what kind of surveillance I mean. When I would talk to someone, a surveillance agent from the central government's public police force would come very close, trying to eavesdrop on the conversation….

"I would like to talk about my interview of a nurse who used to work at (the) Fukushima Daiichi nuclear power plant (NPP) after the accident. .. He was a nurse at Fukushima Daiichi NPP in 2012. He quit his job with TEPCO in 2013, and that's when I interviewed him. …

"As of now of now, there are multiple NPP workers who have died, but only the ones who died on the job are reported publicly. Some of them have died suddenly while off work, for instance, during the weekend or in their sleep, but none of their deaths are reported. …

"Not only that, they are not included in the worker death count. For example, there are some workers who quit the job after a lot of radiation exposure, such as 50, 60 to 70 mili Sieverts, and end up dying a month later, but none of these deaths are either reported, or included in the death toll. This is the reality of the NPP workers".

Mako Oshidori's shocking revelation at the IPPNW press conference substantiates previous reports about TEPCO's criminal disregard for safety and human lives.

In October 2013, Michel Chossudovsky, the director of the Canada based Centre for Research on Globalisation , reported that the coordination of the multibillion dollar Fukushima decontamination operation relies on Japan's organized crime, the Yakusa, which is actively involved in the recruitment of "specialized" personnel for dangerous tasks.

One of the most important special qualifications for employment at the Fukushima Daiichi NPP is, according to many other reports, is to be stricken by unemployment and poverty, and in a situation where one has little other choice than to take an under-paid, high-risk job.

In late 2013, the Japanese parliament adopted new legislation to penalize the unauthorized publication of information about the crippled nuclear power plant with up to ten-years-long imprisonment. Mako Oshidori's testimony about intimidating surveillance adds an alarming perspective to this legislation with regard to the freedom of press and the safety of Japanese journalists.

March 26, 2014

Radiation readings for workers underestimated

Wrong radiation exposure readings found for 142 Fukushima workers

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201403260046

By TOMOHIRO YAMAMOTO/ Staff Writer

Tokyo Electric Power Co. underestimated internal radiation doses of 142 individuals who worked at its Fukushima No. 1 nuclear power plant immediately after the triple meltdown three years ago, according to the health ministry.

Also on March 25, the ministry said it instructed TEPCO to strictly monitor the health of workers according to established procedure.

The ministry said it revised the workers' radiation exposure records upward by an average of 5.86 millisieverts.

In one exceptional case, the radiation dose was amended by an additional 89.83 millisieverts, from 90.27 millisieverts to 180.10 millisieverts, exceeding the government-set limit of 100 millisieverts over five years.

The TEPCO employee continued to work at nuclear facilities because the utility believed the person's radiation dose was well under the limit, according to ministry officials.

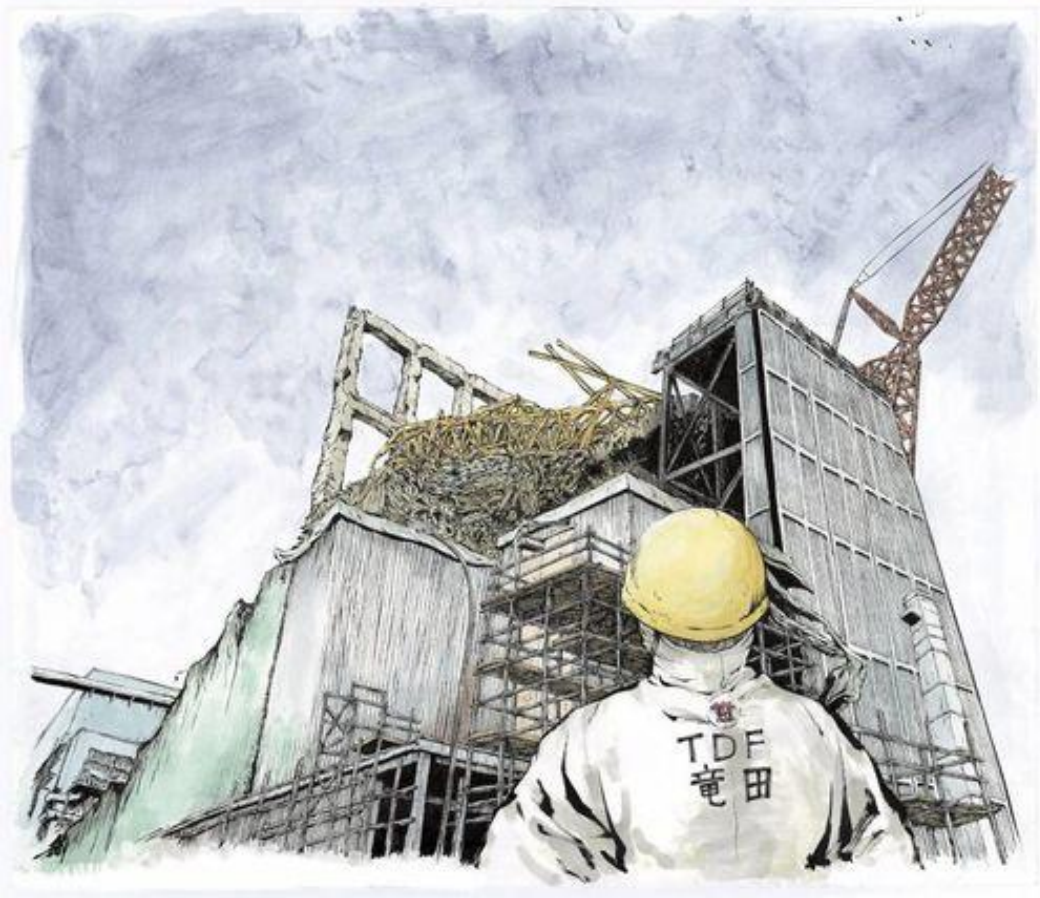
The health ministry also said an additional two individuals exceeded the legal annual limit of 50 millisieverts due to the new findings.

Twenty-four of the 142 individuals whose records were revised upward were TEPCO employees. The other 118 were contractors from 18 partner firms.

The government has examined the records of 1,536 of the 7,529 employees and contractors who worked at the plant between March and April in 2011. It did so after discovering in late January that TEPCO had used inadequate methods to estimate some workers' radiation doses while rechecking TEPCO's health management of workers.

The utility, for example, underestimated internal doses of those who had taken iodine tablets to protect their thyroid glands from radiation exposure. It remains unclear whether and how much the agent had reduced exposure levels.

Kazuto Tatsuta's manga: 1F



The main character in manga artist Kazuto Tatsuta's '1F: The Labor Diary Of Fukushima No. 1 Nuclear Power Plant' stares at one of the complex's damaged reactor buildings. | AP

Life at Fukushima No. 1 gets manga treatment

http://www.japantimes.co.jp/news/2014/03/26/national/life-at-fukushima-no-1-gets-manga-treatment/#.UzQB3YXrV1s

by Yuri Kageyama

AP

First off, no one who works at Tepco's wrecked nuclear plant calls it Fukushima "Dai-ichi," comic book artist Kazuto Tatsuta says in his book about his time on the job. It's "ichi efu," or 1F.

It's not "hell on earth," but a life filled with a careful routine to protect against radiation.

A good part of the day is spent putting on and taking off protective layer after layer: hazmat suits, gloves, boots and filtered masks. Even bus and van interiors are covered in plastic.

Workers say they will lose their jobs if they talk to reporters and their bosses find out. That makes Tatsuta's manga, "1F: The Labor Diary Of Fukushima No. 1 Nuclear Power Plant," a rare look at the nuclear complex that suffered three meltdowns after the 2011 tsunami and will take decades to decommission.

Tatsuta worked at the plant from June to December 2012, in part because he was struggling as a manga artist, but "1F" is his biggest success yet.

The opening episode won a newcomer award and was published last year in Morning, a weekly manga magazine with a circulation of 300,000. The first several episodes are coming out as a book next month, and publisher Kodansha Ltd. plans on turning "1F" into a series.

Tatsuta said "1F" is not about taking sides in the debate over nuclear power, but simply a story of what it's like to work there.

"I just want to keep a record for history. I want to record what life was like, what I experienced," he said in his studio outside Tokyo this week.

Tokyo Electric Power Co. rarely provides media access to the inner workings of the plant, except for orchestrated media tours.

Tatsuta is a pen name. The 49-year-old artist asked that his real name not be used for fear of being barred from working at the No. 1 plant in the future.

He said the job is surprisingly similar to other construction work, which also carries its risks, such as flying sparks and crashing walls.

"I never felt I was in physical danger. You can't see radiation," he said.

Tatsuta's story, complete with drawings of shattered reactor buildings, brings to life everyday details — how gloves get drenched with sweat, or how annoyingly itchy a nose can get behind the mask.

Laughter and camaraderie fill the rest area, where drinks and food are plentiful but there are no flushing toilets. In one telling scene, an elderly worker says: “This is like going to war.” Drawings show the daily routine, different kinds of masks, the layout of the grounds.

After Tatsuta had to quit when his radiation exposure neared the annual legal limit of 20 millisieverts, he decided to put down what he had undergone in manga.

Almost every profession — baseball player, salaryman, samurai, chef — has been depicted in manga. But no manga had ever depicted the life of the nuclear worker.

Tatsuta stressed that he does not want to glorify them but insists they deserve to get paid more. The work starts at about ¥8,000 a day, although it goes up to ¥20,000 per day for the most dangerous tasks.

Tepco declined to directly comment on the book. “It’s just manga,” said spokesman Koichiro Shiraki, who has read the work.

The Facebook link to the English translation of an excerpt from “1F” can be found at www.facebook.com/ichiefu/posts/1415129962074416 .

March 28, 2014

Worker dies at Fukushima Daiichi

Nuclear plant worker dies in accident

http://www3.nhk.or.jp/nhkworld/english/news/20140328_40.html

A construction worker at the damaged Fukushima Daiichi nuclear plant has died following the collapse of a concrete foundation of a warehouse.

The plant's operator, Tokyo Electric Power Company, says the man in his 50s was buried by concrete and soil in the accident on Friday afternoon.

The man was among workers reinforcing the warehouse. He was in a 2-meter-deep hole in the ground at

the time of the collapse.

He was pulled out of debris and taken to a hospital, but later died.

The warehouse, about 400 meters north of the plant's No. 1 reactor building, is used to store equipment.

The firm says the fatality is the first to occur due to an accident during work at the plant since the 2011 nuclear disaster, and that it is examining safety management at the site.

March 29, 2014

Mudslide kills Fukushima worker

Japan Fukushima nuclear worker dies in mudslide

http://mainichi.jp/english/english/newsselect/news/20140329p2g00m0dm025000c.html

This photo released by Tokyo Electric Power Co. shows a pit where a worker was buried under a mudslide while working near a storage area at the Fukushima No. 1 nuclear plant in Okuma, Fukushima Prefecture, on March 28, 2014. (AP Photo/Tokyo Electric Power Co.)

拡大写真

TOKYO (AP) -- A worker died Friday at the Japanese nuclear plant devastated by the 2011 tsunami after getting buried in a mudslide, in the first death from an accident during efforts to control and decommission the facility.

The man, who had been working near a storage area at the Fukushima Dai-ichi plant, was dug out and rushed to a hospital, but he was unconscious and his heart had stopped beating.

Three hours after the mudslide swallowed him, the man, who was in his 50s, was pronounced dead at the hospital, according to Tokyo Electric Power Co., the utility that operates the plant.

"Some danger is always involved," company spokesman Masayuki Ono told reporters. "We are deeply sorry."
Three reactors went into meltdown and exploded after the March 11, 2011, tsunami damaged the plant's cooling system.

Thousands of workers, wearing masks and suits to guard against radiation, are working on the cleanup and decommissioning, which is expected to take decades.

Workers have collapsed from heat and ailments, but this was the first fatal accident involving a plant employee since two workers went missing after the tsunami hit the plant. Those workers were later found dead.

The worker who died Friday had been carrying out what is similar to regular construction work in a hole in the ground when mud and pieces of concrete collapsed on him, TEPCO said.

The specific cause of death was still under investigation, and the man's name was not disclosed, it said.

The worker was employed at one of the layers of subcontractor companies that supply labor to TEPCO. Workers' exposure to radiation is monitored, and they must quit when they reach the annual limit.

TEPCO said the worker was the seventh to die over the last three years. It said three died from heart attacks and one from leukemia, but that none of the deaths has been related to radiation exposure.

April 3, 2014

Discrepancies between TEPCO's and UN panel's dose levels for workers

U.N. panel takes issue with radiation exposure data submitted by TEPCO

http://ajw.asahi.com/article/behind_news/social_affairs/AJ201404030060

By YURI OIWA/ Staff Writer

A United Nations report on the effects of radiation released in the Fukushima nuclear disaster said findings by the plant operator, Tokyo Electric Power Co., may have underestimated the levels of exposure by contract workers.

In its report on April 2, the U.N. Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) also said there was no discernible rise in overall cancer rates among residents of Fukushima Prefecture.

As part of the study, the U.N. committee reviewed data on about 4,000 TEPCO workers and 21,000 other workers employed by its contractors and subcontractors at the Fukushima No. 1 nuclear plant up to October 2012.

It also asked TEPCO and the government to submit internal radiation exposure records on workers and the actual measurement values and density of radioactive materials, on which dose values are based, for its experts to compare their estimates to. Experts from various countries reviewed the data.

Comparison of the data found reasonable agreement between the committee's independent assessments of effective doses related to TEPCO workers and those reported by TEPCO.

However, the internal dose levels among subcontract company workers that were reported tended to be lower compared with the estimates of the U.N. experts.

In several cases concerning dose levels detected in the thyroid glands of contracted workers, the report said TEPCO's levels were less than half of those calculated by the committee.

The committee also pointed out that no consideration was given to the possibility that TEPCO or contract workers were exposed to the shorter-lived isotopes of iodine than iodine-131 through inhalation.

"As a result, the assessed doses from internal exposure could have been underestimated by about 20 percent," the report said.

Doubts raised by UNSCEAR on the effective exposure by workers from affiliated companies reported in an earlier study prompted the Japanese government last year to instruct TEPCO and its contractors to re-evaluate the internal dose levels.

Based on the re-evaluation, TEPCO revised dose levels upward for 500 workers last July.

In March, the utility revised the exposure level upward again for an additional 140 workers.

In terms of impact on the health of Fukushima Prefecture residents, UNSCEAR chair Carl-Magnus Larsson told a news conference on April 2 that cases of thyroid cancer may increase among infants who were 1 year old and lived within 30 kilometers of the nuclear plant at the time of the triple meltdown.

He added, however, that the committee is not sure if that will be reflected in thyroid cancer statistics in the future.

The committee emphasized that Fukushima Prefecture should continue its thyroid cancer screening on young people who were 18 or younger at the time of the nuclear accident.

The data should be analyzed in the future, it said.

The committee also said data collected from similar screening procedures on children in areas not affected by the accident would help determine the influence of radiation exposure on thyroid gland cancer.

April 4, 2014

Better conditions for workers?

TEPCO's new firm eyes better working conditions

http://www3.nhk.or.jp/nhkworld/english/news/20140404_33.html

The head of a new body to decommission the crippled Fukushima Daiichi nuclear plant has expressed his resolve to improve the working environment at the plant. He hopes this will facilitate its mission.

Tokyo Electric Power Company, or TEPCO, launched the "Fukushima Daiichi Decontamination and Decommissioning Engineering Company" on April 1st.

Naohiro Masuda, who leads the new entity, spoke to reporters on Friday.

He said he is very sorry that residents from municipalities near the Daiichi plant are still living in shelters and temporary housing 3 years after the nuclear accident.

The chief decommissioning official said he understands the worries of workers. One main concern is that they cannot work at the plant after their exposure to radiation has reached a certain level.

To ease these worries, Masuda said the company will consider ways to outsource work more systematically so that the workers can be assigned to low-radiation jobs and stay at the plant longer.

He added that the company will hold on-site media conferences more frequently to provide information about the decommissioning process, which is necessary for people in Japan and around the world.

April 17, 2014

Workers blamed for leak

TEPCO suspects worker error in wastewater problem

http://www3.nhk.or.jp/nhkworld/english/news/20140417_02.html

The operator of the crippled Fukushima Daiichi nuclear plant says a mix-up over switches may have sent 200 tons of highly contaminated water into the wrong building.

Tokyo Electric Power Company says workers may have turned on water pumps instead of air conditioners. The utility found the problem on Friday.

TEPCO says it is investigating why 4 pumps that were supposed to be offline sent the water into the

basement of a building instead of temporary storage houses.

It says the switchboard has similar switches for pumps and air conditioners, with no indication to show their functions except for numbers.

The utility says it is investigating whether the problem was caused by worker error or a deliberate act.

Officials say they marked the switches accurately but are working out stricter measures to prevent technical errors.

April 25, 2014

Improve workers' awareness?

TEPCO body head: Work level must improve

http://www3.nhk.or.jp/nhkworld/english/news/20140425_01.html

The head of a new body to scrap the damaged Fukushima Daiichi nuclear plant says both the facilities and workers' awareness at the site need to be improved.

Naohiro Masuda held a news conference on Thursday. He leads the Fukushima Daiichi Decontamination and Decommissioning Engineering Company founded on April 1st by plant operator Tokyo Electric Power Company.

The body deals with the cleaning up of radioactive water at the site and the decommissioning of crippled reactors.

Masuda referred to a series of recent problems related to water treatment. Four supposedly offline pumps sent radioactive water into an unrelated building.

In addition, operation of a key water treatment system called ALPS was disrupted due to a valve that was wrongly shut down. The valve is for injecting a necessary chemical agent. Investigators suspect human error was the cause of these mistakes.

Masuda said that, after spending nearly a month at the plant, he is increasingly convinced that makeshift equipment set after the 2011 accident as well as workers awareness has to be improved.

He noted the glitches are due to poor maintenance of facilities built quickly after the disaster. These include radioactive water storage tanks, pump valves and other temporary equipment. Masuda added that work procedures are not checked enough.

Masuda said he will urgently review the maintenance system and also create a post specifically in charge of regularly monitoring the equipment.

April 26, 2014

Ichiefu

The cover of the first volume of the manga "Ichiefu" (Provided by Kodansha Ltd.)

Manga gives real-life look at Fukushima plant workers in action
http://ajw.asahi.com/article/0311disaster/fukushima/AJ201404260059

By KENSUKE NONAMI/ Staff Writer

A manga that describes the reality of daily life at the crippled Fukushima No. 1 nuclear power plant through the eyes of a worker is enjoying popularity.

"Ichiefu" (1F), written by Kazuto Tatsuta, 49, first appeared in autumn 2013 as a serial comic in the weekly magazine "Morning," published by Kodansha Ltd. Ichiefu stands for the Fukushima No. 1 plant among locals.

The comic was published in book form on April 23. The publisher shipped a total of 150,000 copies of the first volume, which is an unusually large number for a little-known manga artist.

Tatsuta said he changed jobs repeatedly after graduating from university. At the same time, he also worked as a comic strip artist.

It was when he was considering another job change that the March 2011 Great East Japan Earthquake and tsunami occurred, triggering the nuclear accident at the Fukushima plant.

While seeking a better-paying job, Tatsuta also wondered what part he could do as a citizen of Japan to help. As a result, he began to work at the Fukushima No. 1 nuclear power plant from June 2012 for a total of six months.

"Ichiefu" describes the situation at the plant in great detail. The descriptions of equipment, such as the masks and protective gear the workers used, and the procedures they took to measure radiation levels make readers feel as if they are there and reading actual worker manuals.

The comic also depicts intimate practices only workers there would know. For example, the workers always say "Be safe" to each other before starting their shifts.

Each of the workers was also required to stop working when his dosimeter issued a fourth warning sound.

"As a manga artist, I was interested in the overall atmosphere and scenery at the plant. But in those days, I was too busy working to do anything with it," Tatsuta recalled.

When the amount of radiation he was exposed to reached the maximum annual limit after six months, he temporarily returned home to Tokyo. It was then that he decided to write the manga because what he was reading and hearing in the media about the situation at the plant was different from what he experienced and saw himself.

"The media were reporting that the workers in the plant were placed under miserable working conditions. But the working conditions there are not that different from those in other workplaces," Tatsuta said. "In the compound (of the nuclear plant), workers eat meals and enjoy chatting (like those in other workplaces do).

"It was physically hard to work while wearing all the protective gear, though. That is because it was hot," he added. "Besides I was not able to scratch my nose when it was itchy. And answering the call of nature or relieving oneself was a problem, so I refrained from drinking water as much as possible."

Despite the tense working conditions depicted in the media, the descriptions of daily life presented by Tatsuta's comic shows a much more easygoing atmosphere. Some readers who also worked at the plant sent messages to Tatsuta saying they felt nostalgic after reading his work.

At present, the serial comic still runs in the weekly magazine. After some time, however, he wants to work at the plant again.

"I have this growing feeling that I want to see the situation at the plant through to the end. Though I worked there for only six months, there were many drastic changes during that period," Tatsuta said.

For example, a full face mask was initially necessary to wear in certain places. But (six months later when Tatsuta left), only a simple mask was sufficient there.

"Though we cannot currently see an end, the situation at the plant is making progress little by little. As a worker, I want to continue to be part of the process until workers like me are no longer necessary," he added.

May 2, 2014

Just the wrong switch

TEPCO: Switch mix-up blamed for wastewater trouble

http://www3.nhk.or.jp/nhkworld/english/news/20140502_22.html

The operator of the damaged Fukushima Daiichi nuclear plant says workers' selection of the wrong switches was the likely cause of highly contaminated water being sent to the wrong facilities last month.

Tokyo Electric Power Company investigated the incident.

On April 13th, it was discovered that 4 pumps that were supposed to be offline had sent about 200 tons of tainted water into the basement of a facility known as the Incineration Workshop Building, instead of into temporary storage.

TEPCO's investigation found that contaminated water had also flowed into another facility. Officials say the pumping appears to have started on March 20th.

They say workers are suspected of having turned on water pumps instead of air conditioners.

Officials say the switches for the pumps and air conditioners were on the same control board. The switches were reportedly numbered, but were not clearly identified.

The officials ruled out any leak of the wastewater from the facilities because no change was seen in the levels of radioactive substances in nearby well water.

The utility says it has taken preventive steps by labeling the switches at the plant.

May 7, 2014

Worker sues TEPCO because of exposure to radiation

Former Fukushima Daiichi worker files damages suit

http://www3.nhk.or.jp/nhkworld/english/news/20140507_35.html

A former worker at the damaged Fukushima nuclear power plant is demanding compensation from the operator Tokyo Electric Power Company and others. He says he was exposed to radiation just after the March 11th 2011 accident.

A 48-year-old resident of Iwaki City filed a lawsuit with the local branch of the Fukushima District Court on Wednesday. He is seeking around 11 million yen, or about 108,900 dollars in damages.

The man was employed by a TEPCO subcontractor. On March 24th, 2011, he says he was engaged in work to connect power cables in the turbine building basement of the Number 3 reactor.

The former worker says there were puddles of contaminated water in the basement, and radiation in the air measured 400 millisieverts per hour. The man says he received a dose of more than 20 millisieverts within about 90 minutes.

He says he was assigned to this work without being informed about the high radiation levels at all and that the exposure was unnecessary. He says he has filed the suit to seek better working conditions.

Healthcare has become a major issue for the more than 30,000 people who have worked at the plant since the accident.

Tokyo Electric Power Company officials say the firm will handle the matter sincerely, after it learns the details of the court filing.

May 8, 2014

Worker sues TEPCO (2)

Fukushima worker sues TEPCO for exposure to radiation

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201405080045

A worker at the Fukushima No. 1 nuclear power plant who was exposed to high levels of radiation in the early days of the disaster is seeking compensation from plant operator Tokyo Electric Power Co. and other parties.

It is the first such lawsuit by a Fukushima worker, according to the man's lawyers. Their client's identity was withheld.

"I wish (the utility) had informed us of possible risks in advance," the 48-year-old man said at a news conference in Tokyo on May 7. "I want (TEPCO) to create safer conditions for workers because the decommissioning of the reactors will not finish anytime soon."

Arguing that he was unnecessarily exposed to high levels of radiation due to slipshod instructions from TEPCO, the man is seeking 11 million yen ($107,000) in compensation. The lawsuit was filed at the Iwaki branch of the Fukushima District Court.

Just 13 days after the Great East Japan Earthquake on March 11, 2011, the man was among the six workers from TEPCO's original contractor and its subcontractor who entered the basement of the No. 3 reactor turbine building, which had been flooded by tsunami, to install cables.

Three of the workers waded through contaminated water up to their ankles and were exposed to up to 180 millisieverts of radiation. They were later hospitalized.

According to the man's complaint and other documents, he did not enter the radioactive water, but worked near a puddle of contaminated water for 90 minutes. He estimated that he received a radiation dose of at least 20 millisieverts at that time.

The man argued that TEPCO should have been aware of the risks of working in the basement because it had previously discovered highly contaminated water around the No. 1 reactor on March 18. The man insists that the utility, however, told the six workers that the basement was safe to work in.

"That is a breach of responsibility to ensure safety," the man said. "(The utility) put us in a position of being exposed to high doses of radiation unnecessarily."

So far, the man has suffered no health issues.

"After carefully examining the contents of the demand and his arguments, we will sincerely respond to the claim," TEPCO said in a statement issued the same day.

May 16, 2014

Lifelong health survey for Fukushima workers?

Panel urges lifelong survey for Fukushima workers

http://www3.nhk.or.jp/nhkworld/english/news/20140516_41.html

An expert panel is to ask Japan's government to conduct a lifelong survey on people who worked in the immediate aftermath of the Fukushima nuclear accident.

A draft report released on Friday by the health ministry panel urges the government to follow 19,000 workers for the rest of their lives to see whether their exposure to radiation causes cancer or other illnesses.

The people worked at the plant after the accident in March 2011, until the government announced in December that year that damaged reactors had stabilized.

The panel says workers whose radiation exposure exceeded a government limit should undergo blood tests as part of detailed checks.

Panel head Toshiteru Okubo says the survey would provide internationally important knowledge on radiation's impact on health and serve as a guideline for residents of Fukushima Prefecture.

Mikiko Watanabe, a member of a nonprofit group supporting nuclear plant workers, says scrapping the damaged plant would put workers at greater risk.

She says the survey would lose significance if it covered only those who worked during the initial phase of the accident.

The panel plans to finalize the report in May.

The ministry says it hopes to start a test survey in the second half of this year.

Keeping workers safe (NHK video)

Nuclear Watch: Keeping Clean-Up Workers Safe

http://www3.nhk.or.jp/nhkworld/newsline/201405162116.html

This Nuclear Watch looks at the way workers at Fukushima Daiichi are hired and managed.
About 4,000 people work every day at the plant but only about a quarter of them are employed by TEPCO. The majority are contract workers.

NHK interviews a man who has worked at Fukushima in 2012. He said :

- · He had absolutely no contact with TEPCO

- · The workers work under unfair conditions

- · There is total lack of consideration for their safety : see the video under hidden camera of an official of the company who hired the interviewee giving false information on radiation exposure to reassure the workers.

TEPCO in fact has one prime contractor who provides the workers for the plant and….5 more subcontractors!

Last month, TEPCO launched a new company to deal exclusively with decommissioning. The new director, Naohiro Masuda, wants to improve the system and ensure the workers' safety.

Dale Klein, one of the foreign experts, reckons TEPCO should establish "a fair and transparent employment system". This is essential to guarantee a safe decommissioning of the plant.

May 20, 2014

Can people be expected to remain at their posts in an emergency?

90% of TEPCO workers defied orders, fled Fukushima plant in 2011

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201405200031

By HIDEAKI KIMURA/ Staff Writer

Almost all workers, **including managers required to deal with accidents**, defied orders and fled the Fukushima No. 1 nuclear plant at a critical juncture when the disaster was unfolding in March 2011, documents showed.

Amid fears that a reactor containment vessel had been destroyed, around 650, or 90 percent, of the approximately 720 workers at the plant left the premises despite being told to remain at the site by the plant's manager, Masao Yoshida.

Tokyo Electric Power Co., the operator of the No. 1 plant, has never mentioned the orders Yoshida issued on March 15, 2011, four days after the Great East Japan Earthquake and tsunami caused the meltdowns of three reactors. The company now says Yoshida's orders were flexible, and that no breaches of company rules occurred.

Yoshida's orders were revealed in a document covering exchanges when prosecutors on loan questioned him on behalf of the government's Investigation Committee on the Accident at the Fukushima Nuclear Power Stations of Tokyo Electric Power Co.

The Asahi Shimbun obtained a copy of the document, consisting of more than 400 pages.

Yoshida was questioned on 13 separate occasions between July 22, 2011, and Nov. 6, 2011, for a total of 29 hours, 16 minutes, including an hour and eight minutes of breaks.

He died in July 2013 of esophagal cancer.

According to the document, Yoshida was in the emergency command center on the second floor of a quake-proof building on the plant site when he received two reports around 6:15 a.m. on March 15, 2011. One was about the sound of an explosion coming from the direction of the No. 2 reactor. The other described pressure falling to zero in the reactor's suppression chamber.

Both were signs that the No. 2 reactor containment vessel was damaged or destroyed, which would have been a crisis situation at the plant.

However, Yoshida judged that the containment vessel had not been damaged because radiation levels were not increasing in the emergency command center.

At 6:42 a.m., Yoshida ordered workers to temporarily evacuate to locations at the plant site where radiation levels were comparatively low. He told them to wait in locations from where they could immediately return to their posts.

He added that the workers would be asked to return once confirmation was made that there were no abnormalities.

In the document, Yoshida said he considered areas at the plant where radiation levels were low as the temporary evacuation sites.

According to Yoshida's testimony to the government panel, some workers around 7 a.m. told drivers of buses waiting outside the command center to head to the Fukushima No. 2 nuclear power plant about 10 kilometers to the south. Other workers hopped into their own vehicles and drove to the No. 2 plant, also operated by TEPCO.

The roads were damaged by the quake and tsunami, and the workers who fled would have to wear and remove protective clothing and face masks when entering and leaving the Fukushima No. 2 plant. That means they would have been unable to follow Yoshida's order to return immediately to their posts at the No. 1 plant.

Designated group managers, who are required under TEPCO regulations to remain at their posts to provide support in operating and controlling nuclear reactors when a major accident occurs, were among the 650 people who fled to the No. 2 plant.

According to the document, Yoshida told a government panel questioner: "In fact, I never told the workers to go (to the No. 2 plant). I thought I gave an order to temporarily evacuate to a location where radiation levels were low near the Fukushima No. 1 plant and await further instructions.

"After the workers arrived at the No. 2 plant, I contacted them and asked that the group managers be the first to return."
Yoshida did not seem to blame the rank-and-file workers for fleeing, telling his questioner "it may have been unavoidable." However, he did express surprise that group managers were among those who had left.

Only 69 workers remained at the No. 1 plant. It was not until around noon on March 15 that other workers returned from the No. 2 plant.

During their absence, white steam was seen spewing out of the No. 2 reactor and a fire occurred at the No. 4 reactor. Radiation levels reached the highest levels near the main gate of the No. 1 plant.

Yoshida's testimony raises questions about whether utility workers can be depended upon to remain at their posts in the event of an emergency.

TEPCO's internal documents do not mention Yoshida's orders for workers to remain near the No. 1 plant. The company's report on its own investigation into the Fukushima disaster explains that about 650 workers evacuated to the No. 2 plant, but it gives the impression the move was in line with ordinary procedures.

In 2012, TEPCO released videos of teleconferences after the Fukushima nuclear accident started. In one scene, Yoshida is seen giving orders to a large number of workers in the emergency command center. However, it was unclear what Yoshida said at that time because TEPCO said no audio recording had been made.

Even today, TEPCO officials avoid placing blame on those workers, including the group managers, who left for the No. 2 plant.

"Evacuating temporarily to the No. 2 plant was not a violation of regulations because Yoshida's order left open the possibility of leaving for the No. 2 plant if there were no locations at the No. 1 plant where radiation levels were low," a TEPCO official said

Gov't refuses to comment

Suga refuses comment on report that 90% of Fukushima workers left after chief's order to stay

Government silent on report Fukushima No. 1 workers fled during crisis

http://www.japantimes.co.jp/news/2014/05/20/national/government-silent-report-fukushima-1-workers-fled-crisis/#.U3tHFSji-1s

by Reiji Yoshida and Kazuaki Nagata
Staff Writers

The government on Tuesday refused to comment on a media report that Masao Yoshida, the now-deceased chief of the Fukushima No. 1 nuclear plant at the time of the meltdowns, was quoted as saying most of the plant's workers evacuated in spite of his order to remain.

The daily Asahi Shimbun, which claims to have obtained a copy of an interview with Yoshida carried out by the government panel investigating the Fukushima crisis, started running excerpts of the interview Tuesday. No record of the exchange has been officially disclosed.

Yoshida allegedly told the panel that about 90 percent of the plant's 720 workers left the premises during the meltdown crisis despite having been ordered by him to stay.

On March 15, 2011, with the plant's No. 2 reactor out of control, Yoshida and the workers feared its core could melt through the containment vessel, releasing massive amounts of radioactive materials into the environment.
Yoshida, who stepped down as plant chief in December 2011, died of esophageal cancer.

Yoshida allegedly told the panel that about 90 percent of the plant's 720 workers left the premises during the meltdown crisis despite having been ordered by him to stay.

On March 15, 2011, with the plant's No. 2 reactor out of control, Yoshida and the workers feared its core could melt through the containment vessel, releasing massive amounts of radioactive materials into the environment.
Yoshida, who stepped down as plant chief in December 2011, died of esophageal cancer on July 9 last year.

The latest report has also revived a lingering question about who should stay behind in the event of a nuclear crisis.

At a news conference Tuesday, Chief Cabinet Secretary Yoshihide Suga declined to comment on the Asahi report. The interview, he said, was conducted on condition that it not be publicized, and is kept under wraps by the Cabinet.

"We don't know what the Asahi Shimbun has obtained and we can't say its contents are identical to those the government has," Suga said.

According to the morning edition of the Asahi, four days after the meltdown crisis erupted, Yoshida ordered about 720 plant workers to evacuate within the plant's compound as radiation levels from the damaged reactors rose significantly.

Instead, about 650 workers evacuated to the Fukushima No. 2 power plant, about 10 km south, Yoshida reportedly told the panel, leaving about 70 workers behind.

Overseas media outlets then erroneously reported that about 50 workers — dubbed the "Fukushima Fifty" — bravely stayed on to battle the crisis.

"In fact, I didn't tell (workers) to go to 2F," the Asahi quoted Yoshida as saying, referring to the still-functioning Fukushima No. 2 power plant.

"I meant to tell (them) to evacuate somewhere within the premises of No. 1 where radiation was low and wait for further instructions," he told the panel, according to the Asahi.

Yoichi Funabashi, a former senior Asahi writer and now chairman of the Rebuild Japan Initiative Foundation think tank, says that the government has yet to lay out contingency plans for a catastrophe at a nuclear power plant.

"This country operated nuclear plants without such systems. And the situation still hasn't changed yet," Funabashi told The Japan Times.

"(Japan) is still unable to draw up a (contingency) plan to deal with the worst-case scenario," he said.

Funabashi advocates establishing a disaster-response body like the U.S. Federal Emergency Management Agency, which, with presidential approval, can even mobilize military troops.

Meanwhile, Haruki Madarame, the chairman of the Nuclear Safety Commission at the time of the Fukushima meltdowns, played down the significance of the Asahi report.

The plant workers, he argues, might have evacuated to Fukushima No. 2 because Yoshida's order wasn't delivered properly and they could find few safe places at the No. 1 plant.

"(You) would be in trouble if asked to find a safe place by yourself without any instructions" from plant managers, Madarame told The Japan Times.

"I don't know what exactly Yoshida said, and would like to read all of the text" of the interview, he added. "I don't think (the record) is something that should be hidden from the public eye."

June 25, 2014

Working conditions no better

Tepco admits need for better working conditions at Fukushima No. 1

http://www.japantimes.co.jp/news/2014/06/25/national/tepco-admits-need-for-better-working-conditions-at-fukushima-no-1/#.U6pxKLHi91v

Later title: Conditions at No. 1 no better: official

Tepco workers at the Fukushima No. 1 nuclear plant help move fuel rods from the cooling pool in the shattered reactor 4 building to an undamaged structure last Nov. 22. | TEPCO/AFP-JIJI

by Satoshi Iizuka

Kyodo

A government official involved in measures to combat the toxic water buildup at Fukushima No. 1 emphasized the importance of improving working conditions for the roughly 6,000 workers at the crippled nuclear plant during a recent media tour.

"I sincerely felt the hardships workers have experienced, as what's going on here is different from ordinary construction work in terms of the severe heat due to protective suits and high radiation level," said Masato Kino, the Natural Resources and Energy Agency's director for management of the contaminated water at the plant.

The water buildup is a major headache for Tokyo Electric Power Co. and the government as they work toward decommissioning all six reactors at the complex. The contaminated water is increasing at a rate of around 400 tons per day as groundwater flows into the damaged buildings for reactors 1 through 4.

A group of reporters were permitted last Friday to visit key working areas to tackle the radioactive water, accompanied by Kino and some Tepco officials.

"Hurry up, the dose of radiation here is high," said a Tepco official, urging reporters to finish quickly at a work site for the underground ice wall near reactor 1, one of the three that suffered a meltdown in the initial stage of the crisis.

Tepco began constructing the huge underground ice wall early this month. It will surround reactor buildings 1 through 4 in an attempt to prevent more groundwater from seeping into their basements and mixing with heavily contaminated water.

Under the unprecedented government-funded project, 1,550 pipes will be inserted deep into the ground to circulate coolant and freeze the nearby soil, thereby forming a 1.5-km-long perimeter. Tepco aims to finish construction of the wall and put it into operation by next March.

However, the work is taking place in conditions of high radiation. "A worker is permitted to continue to do his job for about three hours a day due to legal limits on radiation exposure," said Kino.

"Look at that crane! Three out of only six or seven of that supergiant kind existing in Japan are operating here," Kino said. "The current work is dominated by construction."

In addition to the huge cranes, various kinds of heavy machinery and trucks are operating in the area, making it look like a large-scale construction site.

All of the people at the site, including the reporters, were wearing white protective suits and full face masks. A signboard reads "Highly contaminated water here."

Since May, Tepco has employed a "groundwater bypass system" in which it has dumped thousands of tons of groundwater into the Pacific Ocean collected from wells dug near the reactor buildings. The utility claims the water's radiation level meets safety guidelines.

The system is designed to pump out the groundwater before it reaches the heavily contaminated area near the reactors.
By repeating the pumping and dumping, the utility is aiming to slow the pace of highly radioactive water accumulating at the plant.

"We will not be sure whether this measure is working effectively until one or two months have passed," said Kino.
An Advanced Liquid Processing System, or ALPS, has been developed to reduce the radiation level of the highly contaminated water accumulating at the plant.

ALPS is reportedly capable of removing 62 different types of radioactive substances from the contaminated water, but not tritium.

The system has been plagued by glitches and is still in the trial stage, with all three of its lines resuming Sunday for the first time in about three months.

With the outlook unclear for the countermeasures to contain the contaminated water, "this year is a crucial period," Kino said. "We have to do everything we can."

"The number of workers on the site has increased to roughly 6,000, double from a year ago. It is projected to out at 7,000 within one or two years," said Kenichiro Matsui, a Tepco official in charge of public relations.

“Providing infrastructure including rest facilities and equipment such as dosimeters has been falling behind, although countermeasures were taken,” Matsui added.

Tepco has been building a large-scale rest house and center to provide food and other amenities for workers.

“There will be no problem in securing enough workers for the time being, but I am not sure what will happen in 10, 20 or 30 years. Improving working conditions is what is really necessary,” said Kino.

June 30, 2014

Workers exposure doses

Exposure dose of Evaluation of the Workers at Fukushima Daiichi Nuclear Power Station

http://www.tepco.co.jp/en/press/corp-com/release/2014/1238643_5892.html

We have been evaluating the exposure dose of the workers at Fukushima Daiichi Nuclear Power Station in two categories, internal and external exposure doses.
The evaluation results have been submitted to the Ministry of Health, Labor and Welfare in the order of the due dates of announcements.

(Previously announced)

Today, we have submitted a report on the exposure dose evaluation as of the end of May 2014 to the Ministry of Health, Labor and Welfare.

-The number of workers newly engaged in May was 822 persons. The maximum external exposure dose to those workers engaged in the operation in May was 20.70 mSv, and no significant value was measured for the internal exposure.
-The exposure dose status of the "workers exposed to especially high radiation dose*" is provided separately.
The exposure dose evaluation result as of the end of June will be reported to the Ministry of Health, Labor and Welfare by the end of July 2014.

* The workers who applied Emergency dose limit (100mSv) shown in "Ordinance on Prevention of Ionizing Radiation Hazards, chapter 7." Specifically, it means the workers who engaged in the work to maintain the function that cooling reactor facility or spent fuel tank at the area where the radiation dose exceed 0.1 mSv/h and reactor facility, steam turbine and related facilities and surrounding area in the power plant or the work to maintain the function to control or prevent release of huge amount radioactive material due to trouble or break of reactor facility.

To see table of exposure dose distribution :

http://www.tepco.co.jp/en/press/corp-com/release/betu14_e/images/140630e0101.pdf

July 21, 2014

"Giant social stigma" attached to Fukushima workers

Stigmatized workers quitting Tepco in droves

http://www.japantimes.co.jp/news/2014/07/21/national/stigmatized-workers-quitting-tepco-droves/#.U807ErHi91s

by Yuri Kageyama

AP

Stigma, pay cuts and risk of radiation exposure are among the reasons why 3,000 employees have Tepco, the utility at the center of the 2011 Fukushima nuclear disaster. Now there's an additional factor: better paying jobs in the feel-good solar energy industry.

Engineers and other employees at Tokyo Electric Power Co. were once typical of the nation's corporate culture that is famous for prizing loyalty to a single company and lifetime employment with it. But the March 2011 tsunami that swamped the Fukushima No. 1 nuclear power plant, sending three reactors into meltdown, changed that.

Tepco was widely criticized for being inadequately prepared for tsunami despite Japan's long history of being hit by giant waves and for its confused response to the disaster. The public turned hostile toward the nuclear industry and Tepco, or "Tohden" in Japanese, became a dirty word.

Only 134 people quit Tepco the year before the disaster. The departures ballooned to 465 in 2011, another 712 in 2012 and 488 last year. Seventy percent of those leaving were younger than 40. When the company offered voluntary retirement for the first time earlier this year, some 1,151 workers applied for the 1,000 available redundancy packages.

The exodus, which has reduced staff to about 35,700 people, adds to the challenges of the ongoing work at Fukushima to keep the meltdowns under control, remove the fuel cores and safely decommission the reactors, which is expected to take decades.

The factors pushing workers out have piled up. The financial strain of the disaster has led to brutal salary cuts while ongoing problems at Fukushima No. 1, such as substantial leaks of irradiated water, have reinforced the image of a bumbling and irresponsible organization.

"No one is going to want to work there, if they can help it," said Akihiro Yoshikawa, who quit Tepco in 2012.
After leaving he started a campaign called "Appreciate Fukushima Workers," trying to counter what he calls the "giant social stigma" attached to working at Fukushima No. 1.

Many of the workers, as residents of the area, also lost their homes to no-go zones, adding to personal hardships.

The Fukushima stigma is such that some employees hide the fact they work at the plant. They even worry they will be turned away at restaurants or that their children will be bullied at school after a government report documented dozens of cases ofdiscrimination.

While Tepco is out of favor with the public, the skills and experience of its employees that span the gamut of engineers, project managers, maintenance workers and construction and financial professionals, are not.

Energy industry experience is in particular demand as the development of solar and other green energy businesses is pushed along by generous government subsidies.

Currently the government pays solar plants ¥32 per kilowatt hour of energy. The so-called tariff for solar power varies by states and cities in the U.S., but they are generally lower than Japan's version. The rate in Germany is about half that in Japan.

Sean Travers, Japan president of EarthStream, a London-based recruitment company that specializes in energy jobs, has been scrambling to woo Tepco employees as foreign companies do more clean energy business in Japan.

"Tepco employees are very well trained and have excellent knowledge of how the Japanese energy sector works, making them very attractive," he said.

Two top executives at U.S. solar companies doing business in Japan, First Solar director Karl Brutsaert and SunPower Japan director Takashi Sugihara, said they have interviewed former Tepco employees for possible posts.

Besides their experience, knowledge of how the utility industry works and their contacts, with both private industry and government bureaucracy, are prized assets.

"It's about the human network and the Tepco employees have all the contacts," said Travers, who says he has recruited about 20 people from the utility and is hoping to get more.

Since September 2012, all Tepco managers have had their salaries slashed by 30 percent, while workers in nonmanagement positions had their pay reduced 20 percent.

But last year, Tepco doled out ¥100,000 bonuses to 5,000 managers as an incentive to stay on.

July 30, 2014

Raising emergency limits for nuclear workers?

Emergency radiation exposure limit may be raised

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Jul. 30, 2014 - Updated 07:46 UTC+2

Japan's nuclear watchdog is considering raising the radiation exposure maximum limit for nuclear plant workers for serious accidents.

Nuclear Regulation Authority Chairman Shunichi Tanaka told at the body's regular meeting on Wednesday that the possibility of a nuclear accident, where workers could be exposed to radiation beyond the current legal accumulative limit of 100 millisieverts, cannot be denied. His proposal to study raising the limit was approved at the meeting.

The authority will decide on the level by referring to overseas standards. It will also confer on how to get prior consent from workers and train them for such cases. If a legal amendment is necessary, it plans to

send its findings to a relevant government panel for deliberations.

When the Fukushima Daiichi nuclear power plant was hit by meltdowns in 2011, many workers were exposed to radiation above the legal limit. As an extraordinary measure, the government had to raise the limit to 250 millisieverts, for 9 months, 3 days after the onset of the accident.

An official of Tokyo Occupational Safety & Health Center said the move is one step in progress. He warned, however, that workers' health risks and how to manage their health should fully be debated before deciding on the specific level.

He said the authority should carefully study the matter by conducting hearings on workers who were involved in the Fukushima disaster.

August 19, 2014

Health checks neglected

Firm rapped for neglecting to get Fukushima decontamination workers health checks

http://www.japantimes.co.jp/news/2014/08/19/national/firm-rapped-for-neglecting-to-get-fukushima-decontamination-workers-health-checks/#.U_Sc4WOnq1s

Kyodo
YOKOHAMA – A Yokohama-based firm has been reprimanded for not having one or more of its workers undergo required health checks after sending them to Fukushima Prefecture for decontamination work in the wake of the 2011 nuclear crisis, labor authorities said on Tuesday.
The Tsurumi Labor Standard Inspection Office issued an order to the firm, which is now undergoing bankruptcy proceedings, in June to take corrective measures for being remiss in its duty to have its workers medically examined.
The inspection office said the firm was a subcontractor for a joint venture led by Tokyo-based general contractor Kajima Corp. that received an order from the Environment Ministry to do work decontaminating soil and houses affected by radioactive fallout from the triple meltdown at Tokyo Electric Power Co.'s Fukushima No. 1
The office is investigating whether the firm, based in Tsurumi Ward, drew up fake health examination reports to make it appear that one or more workers who were dispatched to do decontamination work in Tamura, in Fukushima Prefecture, underwent health checks.
Under the rules of the Ministry of Health, Labor and Welfare, workers involved in decontamination work must undergo medical examinations, including blood and cataract tests and a check for radiation exposure.
Failing to do so is against the law.
In Tamura, workers were responsible for decontaminating the roofs and walls of houses and trying to lower radiation levels in farmland soil, according to the Environment Ministry.

September 1, 2014

Worker's testimony

Testimony from former chief of crippled Fukushima nuclear plant encourages ex-worker

http://mainichi.jp/english/english/newsselect/news/20140901p2a00m0na025000c.html

A former Tokyo Electric Power Co. (TEPCO) employee who worked to bring the nuclear disaster at the company's Fukushima No. 1 Nuclear Power Plant under control has welcomed the release of a report recording the words of the late chief of the plant immediately after the disaster broke out.
"I had wanted to know this information for a long time," the worker, who is in his late 20s, said. The report provides testimony that former plant chief Masao Yoshida provided to the government's Investigation Committee on the Accident at the Fukushima Nuclear Power Stations.
The former worker, whose name is being withheld, said he was supported by the sight of Yoshida dealing with head office executives without budging an inch. At the same time he says he and other workers were insulted by news reports that claimed 90 percent of workers had disobeyed orders and left the plant.
On March 12, 2011, the worker was heading by car to the plant's No. 1 reactor, where work was continuing to inject coolant water into the reactor core, when the first hydrogen explosion hit. The force of

the explosion shook his car vertically, and he temporarily fell senseless. When he came to, he saw that the reactor building had been blown apart. He was just 100 meters away.
Workers continued toiling at the plant without sleep, but on the morning of March 14, the building housing the No. 3 reactor exploded, and that evening he heard that the No. 2 reactor was also in serious danger. His boss, who was normally calm, aimlessly murmured, "We're done for, you know."
As clocks ticked past midnight, marking the start of a new day, several hundred workers continued to wait on the first floor of the plant's main quake-resistant building. At dawn, someone came from the emergency response office on the second floor of the building, from which Yoshida and other officials had taken command, and told them to leave.
The heavy double-layer doors of the building were opened, and the workers headed by bus and car to the Fukushima No. 2 Nuclear Power Plant.
The workers napped for about two hours before being woken up by his boss, with instructions to return to the No. 1 plant. A fire had broken out in the building housing the plant's No. 4 reactor, and help was needed, he was told. His co-workers said they would return, and he had no option but to go along with them.
"I want to return alive," he thought. But at the same time he felt he couldn't give up when Yoshida was trying so hard to handle the disaster. During television conferences in the emergency response office, he saw Yoshida ripping into executives from the head office numerous times. At the same time, Yoshida dealt with young workers who went in to hand over material in a friendly manner, which made him happy.
An article that appeared in the Asahi Shimbun in May that year stated that workers pulled out in violation of Yoshida's orders. The worker objects to this report. "At the time there was a shared awareness among workers that we would be evacuating to the Fukushima No. 2 plant," he said. If workers had searched for places to evacuate to on the grounds of the No. 1 plant "everyone would have died, fully masked, if they had stayed there for several hours," he said.
It was on April 2, 2011, that the worker finally left the No. 1 plant and went home. He later resigned from TEPCO, and has found new work. But even now, he is afflicted by flashbacks. Soon after the accident, he went to inspect equipment in the building housing the plant's No. 3 reactor. Shouldering an oxygen tank, he finished his work inside, where radiation levels were high, and tried to open the double-entry doors, but there had been a power cut, and when he pressed the button nothing happened. For several minutes he struggled until he found the emergency release lever. He thought he was going to be trapped inside and die. He breaks into a cold sweat when he remembers the scene.
The man feels that the records containing Yoshida's testimony will guide him when he faces crises in his life in the future.
"These records are a compass for me in my life," he says.

September 3, 2014

Workers sue TEPCO over unpaid hazards pay

Fukushima plant workers sue for proper hazard pay

http://www3.nhk.or.jp/nhkworld/english/news/20140903_26.html

Workers at the crippled Fukushima Daiichi nuclear plant have filed a lawsuit against the plant's operator and its contractors, demanding proper payment for their work, which is extremely dangerous.

The plaintiffs are 4 men in their 30s to 60s who work for subcontractors that have helped to install piping for wastewater tanks and remove debris.

Last year, Tokyo Electric Power Company doubled a hazard allowance to about 190 dollars per day, to attract a sufficient number of workers to the reactor decommissioning effort.

Wages and the hazard allowances and are paid to workers through contractors and subcontractors. But the plaintiffs say their income remains unchanged.

The 4 men filed a lawsuit with the Iwaki branch of Fukushima District Court on Wednesday, demanding that TEPCO, its contractors and subcontractors pay them more than 570,000 dollars in damages.

The plaintiffs claim the contractors and subcontractors have taken the hazard pay instead of giving it to those who actually do the work.

They accuse TEPCO of failing to arrange the proper distribution of the hazard pay.

The plaintiffs' lawyers say this is the first lawsuit holding Tokyo Electric Power accountable for improving wages and working conditions at the crippled nuclear plant.

One of the plaintiffs said it's outrageous that companies that only introduce jobs to workers get extra payment, while those who do the hard work get nothing.

TEPCO said will study details of the lawsuit and respond honestly.

Fukushima workers sue Tepco over unpaid hazard wages, reliance on contractors

http://www.japantimes.co.jp/news/2014/09/03/national/fukushima-workers-sue-tepco-over-unpaid-hazard-wages-reliance-on-contractors/#.VAb9xGOnq1s

Reuters

IWAKI, FUKUSHIMA PREF. – A group of Fukushima workers on Wednesday sued Tokyo Electric Power Co. for unpaid wages in a potentially precedent-setting legal challenge to the utility and its reliance on contractors to shut down a nuclear plant destroyed by the industry’s worst accident since Chernobyl.

The lawsuit, filed by two current and two former workers at the Fukushima No. 1 nuclear power plant, claims that Tepco and its contractors failed to ensure workers are paid promised hazard allowances, a court filing showed.

The workers say Tepco, allowed subcontractors to skim funds allocated for wages to bolster their own profits on the decommissioning project at the expense of workers.

The lawsuit seeks the equivalent of roughly ¥62 million in unpaid wages from Tepco and related contractors. It marks the first time that the utility has been sued for the labor practices of the construction companies it employs.
The lawsuit also asks that the 6,000 workers partaking in the nuclear clean-up project either be made effectively government employees, be put on the Tepco payroll directly or be fairly paid.
Tsuguo Hirota, 68, the lawyer coordinating the lawsuit, said he expects two additional workers will join the action immediately and that more could follow. Japanese law allows for additional plaintiffs with related claims to join an existing lawsuit.
"A year ago, Prime Minister (Shinzo) Abe told the world that Fukushima was under control," Hirota said in an interview. "But that's not the case. Workers are not getting promised hazard pay and skilled workers are leaving. It's becoming a place for amateurs only, and that has to worry anyone who lives near the plant."
Tepco had no immediate comment.
The lawsuit was filed Wednesday morning by Hirota, the four plaintiffs and a group of supporters at a branch of Fukushima court in Iwaki, about 60 km south of the wrecked nuclear plant.

4 workers hired to decommission Fukushima plant plan 90 million yen suit on unpaid hazard pay

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201409020056

Four workers involved in the decommissioning process at the crippled Fukushima No. 1 nuclear power plant plan to sue the operator, Tokyo Electric Power Co., and the general contractors who hired them for skimming off their danger allowances.
According to their lawyers, the workers say that TEPCO and their employers failed to ensure that they received the hazard pay to which they are entitled.
They are demanding a total of 90 million yen ($865,385) in damages.
The lawsuit, expected to be filed at the Fukushima District Court on Sept. 3, would be the first such suit to be brought by workers at the plant, the lawyers said.
The plaintiffs, aged 34 through 65, previously worked or are now employed on the decommissioning project, including clearing radioactive debris and decontaminating vehicles used at the plant. They were employed by general contractors to which the utility outsourced the work.
Two of them still work at the nuclear complex.
TEPCO's payment to its contractors includes danger allowances for their workers at the plant.
The utility doubled the allowance to 20,000 yen a day per person for work that it outsourced starting in December last year.
But the four say they have never received such hazard pay since they started working at the plant, according to the lawyers.
"TEPCO is responsible for ensuring that the danger allowances are actually paid to workers," said Tsugio Hirota, who leads a team of lawyers for the plaintiffs. "We intend to reveal the payment practices in which the allowances have been skimmed off."
A TEPCO public relations official declined to be interviewed regarding the planned suit.

“We cannot comment since we have yet to confirm the facts of the situation,” the official said.

September 14, 2014

Responders cowed by explosion at reactor 3 building of Fukushima No. 1

http://www.japantimes.co.jp/news/2014/09/14/national/responders-cowered-by-explosion-at-no-3-reactor-building/#.VBc3kBanq1s
Kyodo

FUKUSHIMA – At 9:25 a.m. on March 13, 2011, workers at the Fukushima No. 1 power plant started pumping water into the No. 3 reactor from firetrucks after finding a way to ease the internal pressure more than six hours after it lost its cooling ability and started to overheat.

Despite their efforts, a blast would gut the No. 3 reactor building a little over 24 hours later, blowing off its roof and sides and leaving a towering mushroom cloud overhead. It would be the second hydrogen explosion to rock the plant since it was crippled by tsunami from the magnitude-9.0 earthquake on March 11.

But this one was more powerful. Tokyo Electric Power Co. employee Mitsuhiro Matsumoto, 47, was outside during both explosions. As a member of the restoration team, he was trying to restore power to the reactors by connecting a power truck to a switchboard in the No. 2 reactor’s turbine building, which still looked viable after being flooded by the waves.

After the first explosion, Matsumoto was reluctant to go out again, but he knew there was still a lot of work to do after rubble from the previous explosion, at reactor No. 1, damaged the heavy electrical cables he was trying to lay.

The thundering second explosion came at 11:01 a.m. on March 14, just after he had finished checking the switchboard’s insulation in the No. 2 turbine building and was walking toward a nearby vehicle.

The explosion kicked up so much dust that he couldn’t see anything around him, including his car, which was only about 10 meters away. When finally reached it, he found the driver’s seat had been crushed by a concrete block.

“I shuddered at the sight. If I had been inside, I would have been dead,” he recalled.

Around the same time, four other workers were trying to connect cables in a corridor between the No. 2 reactor building and its turbine building. After the explosion, banging sounds pelted them over and over again from overhead. They later found out it was chunks of concrete from the No. 3 reactor building, landing on the roof.

The workers felt it was impossible to continue laying cable due to the damage and the climbing radiation.

After the dust settled, Matsumoto ran along the road between reactors 2 and 3 toward the emergency response building. It was hard to breathe with a full face mask, but he kept running anyway. He just wanted to get away from wherever he was as quickly as possible.
When he arrived, a member of his restoration team, Kimio Ikeda, 50, began sobbing.

"You're alive! I'm so glad!" he said upon seeing Matsumoto covered head to toe in dust.
But Matsumoto laid into him: "You told us we would be OK. You liar!"

Ikeda, in fact, hadn't given Matsumoto any reassurances. But Matsumoto couldn't help himself — he was incensed.

After the explosions, he was unable to believe anyone or any of the information he received.

"I completely lost my will to fight. I was determined to never go out again," he recalled.
The explosion at No. 3 remains a vivid memory in Matsumoto's mind.

"I have heard people in the office saying that after the nuclear accident broke out, they were prepared to die," he said. "But in my case, I wasn't prepared to die, even when I actually came very close to dying. And death was staring me in the face."

Finding time to spare, Ikeda phoned his wife for the first time since the crisis began.
His wife started crying over the phone. Ikeda also heard his parents and son rejoicing.

"I cannot believe you are alive even after those explosions. You are alive!" she said.

"Yes, I am alive," he answered, keeping his voice low in consideration of those who hadn't been able to contact their families yet.

About 30 people in charge of the electricity equipment, including Matsumoto and Ikeda, had hardly slept. Many had already absorbed more than 100 millisieverts of radiation — the maximum allowed by Tepco over a five-year period.

After the second explosion, Yumiko Kato, 37, rushed to the emergency care room on the first floor of the emergency response building to help the injured.

A man injured by the rubble was soon brought in on a stretcher. Kato had to send him to the hospital because there were no doctors on hand. Before doing so, she wiped down his body with a wet cloth to remove some of the radiation-tainted dust.

The man moaned, his face distorted by pain.

Another man in the room was uninjured but in a state of panic.

"It's my fault," he said, as if he was the one to blame for the explosion.

Those feeling ill were taken to a meeting room on the second floor, next to the emergency response office. But Tepco quickly ran out of mattresses and had to put down cardboard for them to lie on.

Among them was a reactor operator who was in the main control room at the time of the explosion. Kato entered the room to see how he was doing.

But when the door closed behind her, the operator shouted: “Is that an explosion? Again?”
He then clasped his arms around his knees and trembled, muttering “I am afraid, afraid, afraid.”

Kato patted him on the back and assured him he was in a safe place, frustrated that she couldn’t do anything else.

Four Tepco employees, three contractors and four Self-Defense Force soldiers were injured by the explosion at No. 3.

Those at the emergency response office were mentally shaken.

“I want to go home,” a young female Tepco employee said as she started to cry. “What are we all doing here? What are we going to do if there is another explosion?”

She then asked Kato to take her away from the plant.

Kato put her arm around her shoulder and said, “Let’s believe in our people, because they are working very hard.”

The situation, however, only got worse, cornering everyone at the plant.

September 22, 2014

No violations of labour laws to be tolerated

Japan to step up Fukushima contractors oversight

http://www3.nhk.or.jp/nhkworld/english/news/20140922_40.html

Japan's labor minister says he's ready to strengthen government monitoring of companies that are dispatching workers to decommission the Fukushima Daiichi nuclear power plant.

Yasuhisa Shiozaki visited a labor standards inspection office in Iwaki City on Monday. The office oversees areas surrounding the Fukushima plant.

His visit follows nearly 130 complaints from April to August alone of unpaid wages and inadequate safety measures for workers employed to decommission the Fukushima plant.

Contractors and subcontractors are also accused of not handing over promised danger pay allocated for workers that undertake the cleanup work.

Shiozaki told reporters that decommissioning and decontamination work requires the support of subcontractors far removed from the plant operator.

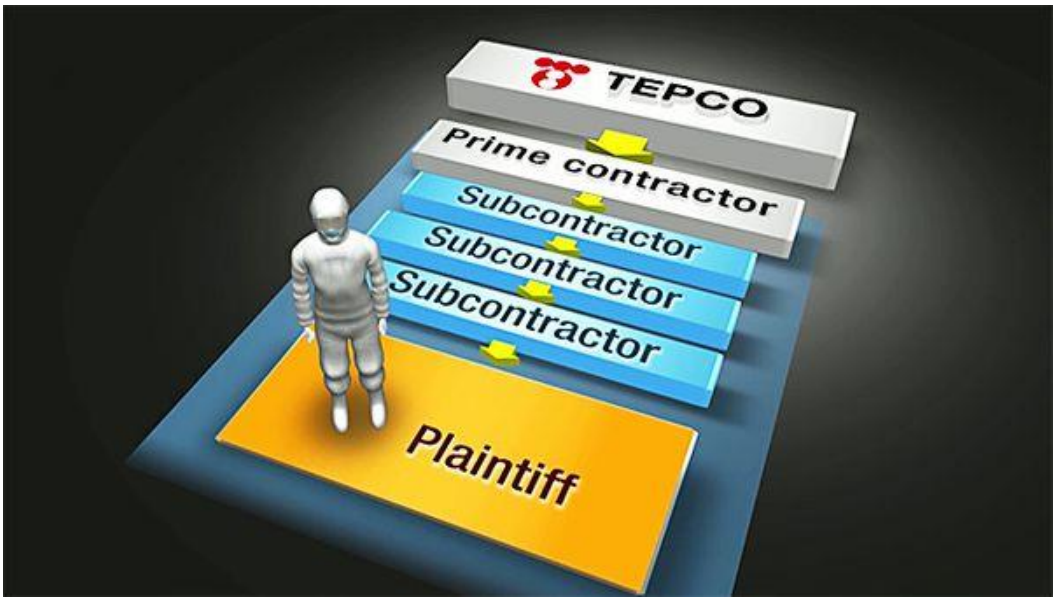
He stressed that **no violations of labor laws can be tolerated in the securing of a workforce to shut down the plant.**

The labor minister hinted that if the problem is not dealt with, it will have a negative impact on the ongoing project to decommission Fukushima Daiichi plant.

September 24, 2014

Workers Sue TEPCO over Hazard Pay

http://www3.nhk.or.jp/nhkworld/english/news/nuclearwatch/20140924.html



Some workers at Japan's Fukushima Daiichi Nuclear Plant are taking legal action. They're suing the Tokyo Electric Power Company and 16 other businesses. They say they were promised about 600 thousand dollars in overtime and hazard pay. But, say they've never seen it on their pay checks. NHK WORLD's Yoshihito Kametani reports on this edition of Nuclear Watch.

The 4 plaintiffs were hired to remove debris from the site and check tanks containing contaminated water. Two of them are still working there.
According to the lawsuit, the men were employed by TEPCO subcontractors. They allege their employers failed to pay a special allowance for hazardous work.
"We are not being fairly rewarded for our efforts."
Plaintiff
This 55-year-old plaintiff still works at Fukushima Daiichi. He normally logs in 22 days a month there. TEPCO pays an extra 200 dollars per day as a special allowance for hazardous work. This should amount to about 4,400 dollars for 22 days -- on top of the normal wage. But he takes home only about 2,200 dollars a month.
The plaintiff blames this gap on multiple layers of sub-contractors. Here's what the system looks like in his case. The company he works for is a fourth-tier subcontractor. The compensation originally paid by TEPCO is gradually reduced as each company takes its cut along the way.
The plaintiff argues that the workers' fair share of regular and hazard pay disappears in the process. He's demanding unpaid hazard pay and overtime for a period of 2 years and 8 months.
"All the sub-contractors do is take a cut of my pay on a daily basis. There's no way I can accept that."
Plaintiff
Tsuguo Hirota is the plaintiffs' lawyer. He warns that the current system could endanger the entire decommissioning process.
"Having many layers of subcontractors means more people are taking a cut. The workers at the bottom don't get their fair share. TEPCO should be held accountable for turning a blind eye. It needs to improve labor conditions. Otherwise this situation will make it impossible to secure enough workers to deal with the nuclear accident."
Tsuguo Hirota / Plaintiffs' lawyer
TEPCO officials say they will examine the claims and respond accordingly. But they say they're not thinking about hiring workers directly at this point.
The amount of work required to decommission Fukushima Daiichi continues to grow -- and so does the demand for workers.
The number of people working at the facility has nearly doubled in one year, reaching almost 6-thousand per day in July.
The government and TEPCO say decommissioning Fukushima Daiichi may take as long as 4 decades. This lawsuit may force them to reconsider the way workers there are paid to ensure the supply of qualified laborers doesn't evaporate.

September 29, 2014

Over 5,000 workers working every day at Fukushima Daiichi

Workers at Fukushima plant doubled in past year

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html
Sep. 29, 2014 - Updated 05:53 UTC+2

The number of workers taking part in the decommissioning and other work at the Fukushima Daiichi nuclear plant has doubled to more than 5,700 in the past year.

The plant operator, Tokyo Electric Power Company, says **an average of 5,730 people were working at the damaged facility each day as of July.**

The figure is nearly double from a year earlier, as more work is being done to contain contaminated water at the plant.

TEPCO says it is not facing a labor shortage at present, and that more than 10,000 workers are registered on its contractors' lists.

But analysts say the decommissioning process could take up to 40 years. They say more workers will be needed when work gets underway to remove nuclear fuel from the damaged reactors.

They also say additional workers will be needed to implement a plan to freeze the earth surrounding the facility to prevent groundwater from flowing into the plant's highly contaminated compounds.

TEPCO says it plans to improve the working conditions by reducing the amount of radiation around the plant, and simplifying procedures to hire workers.

October 8, 2014

What hazard pay?

Fukushima No. 1 plant workers kept in the dark over hazard pay

http://www.japantimes.co.jp/news/2014/10/08/national/nuclear-workers-kept-in-dark-about-fukushima-hazard-pay/#.VDUIhhanp1s

by Mari Saito **and** Antoni Slodkowski
Reuters
HIRONO, FUKUSHIMA PREF. – Almost a year after Japan pledged to double hazard pay at the stricken Fukushima No. 1 nuclear plant, workers are still in the dark about how much extra they are getting paid — if anything — for cleaning up the worst nuclear disaster since Chernobyl.
Under pressure to improve working conditions at the crippled Fukushima plant after a series of radioactive water leaks last year, Tokyo Electric Power Co. President Naomi Hirose promised in November to double the hazard pay the utility allocates to its subcontractors for plant workers. That would have increased the amount each worker at the nuclear facility is supposed to earn to about ¥19,000 ($180) a day in hazard pay.
Only one of the more than three dozen workers interviewed by Reuters from July through September said he received the full hazard pay increase promised by Tepco. Some workers said they got nothing. In cases

where pay slips detailed a hazard allowance, the amounts ranged from $36 to about $90 a day — at best half of what Hirose promised.

In some instances, workers said they were told they would be paid a hazard bonus based on how much radiation they absorb — an incentive to take additional risks at a dangerous work site.

One worker interviewed by Reuters said he was told he would get an additional $45 per day every time he was in so-called hot zones near Reactors 1 and 2. Another worker was told he would receive an hourly rate that worked out to about ¥485,000 ($4,500) extra in hazard pay for being exposed to the radiation limit for the nation's nuclear workers over a five-year period. And a third worker said he was told the payout for that same exposure would be about ¥3.9 million ($36,000).

Assessing how much Fukushima workers are being paid is complicated by Tepco's insistence that pay is a private matter for its contractors. The power utility, which runs Fukushima No. 1 and has been nationalized, sits at the top of a contracting pyramid that includes construction giants such as Taisei Corp. Tepco has declined to disclose details of any of its legal agreements with its subcontractors.

The top Tepco official at the plant conceded during a July press tour of the complex that he did not know how much of the increase in hazard pay was being disbursed.

"When it comes to the pay rise, I don't have an exact understanding of how much money is getting directly to the workers," said Akira Ono, the Fukushima No. 1 plant manager.

Tepco said in a statement to Reuters that it instructs subcontractors to ensure workers' pay is included in all contracts and it also asks companies working at the plant to submit documentation for all the subcontractors they use. The utility said it had recently begun random checks of some of the smaller contractors to determine how much of the hazard pay is reaching workers. A worker who filled in a Tepco survey told Reuters in September that one of the questions was directly related to hazard pay.

Tepco still relies on **some 800 mostly small contractors** to provide workers for the cleanup after the tsunami that swamped the plant on March 11, 2011, sparking meltdowns at three reactors.

Subcontractors provide almost all of the 6,000 workers now employed at the plant. Tepco employs only about 250 on its own payroll at the facility.

The workforce at the plant has almost doubled over the past year, mostly as part of an effort to protect groundwater from being contaminated and to store water that comes in contact with melted fuel in the reactor buildings.

Some of the workers who arrived recently at the plant have been building bunkers to store highly radioactive sludge, which is a byproduct of the process whereby contaminated water is treated. Others are installing equipment to freeze a ring of earth around four reactors at Fukushima No. 1 to keep groundwater from reaching the melted cores, an unprecedented effort directed by Kajima Corp. that is expected to cost nearly $300 million.

Kazumitsu Nawata, a professor at the University of Tokyo's department of technology who has researched conditions inside Fukushima No. 1, said that if workers do not receive pay that is commensurate with the risks they are taking, they will ultimately look elsewhere for employment. If more experienced workers leave for safer jobs in Tokyo, where construction projects are accelerating ahead of the 2020 Olympic Games, it will also increase the likelihood of accidents at the plant, Nawata said in an interview.

"Until now, we have relied heavily on the goodwill of workers. But it's already been three years since the accident. This is no longer sustainable," he said.

Like other workers, Koji Sakurada learned about the hazard pay pledge soon after Tepco President Hirose made his announcement last November. News of the promised increase spread by word of mouth and text messages at a crowded break room at the plant.

“I expected one of my (subcontractor) employers to call a meeting to talk about a raise, but there was nothing,” Sakurada said. “They completely ignored Tepco’s announcement.”
By then, Sakurada, 52, had already spent 18 months scanning buses and work vans for radiation as they left the plant. Wearing a protective suit and mask, he worked a nine-hour shift running a Geiger counter over the vehicles in a makeshift tent set up as a decontamination station. He was paid about $9 an hour.
Sakurada was one of four Fukushima workers who last month filed a lawsuit seeking to hold Tepco responsible for conditions at the plant, even for workers it does not employ directly. It marks the first time Tepco has been sued for a failure to police the employment practices of its subcontractors.
The lawsuit, which was filed in a court in the city of Iwaki, about 60 km (37 miles) south of the nuclear plant, seeks $600,000 in unpaid wages. It also seeks to have Fukushima workers put on Tepco’s payroll or have the utility otherwise take responsibility for their pay.
Tepco said it had not yet received Sakurada’s lawsuit.
“If a suit has indeed been filed, we will check the demands and claims and make a sincere effort to deal with it,” the company said.
Interviews with 37 current and former workers, almost all of whom spoke on condition of anonymity, revealed a wide variance in how they were being compensated, particularly for hazard pay. Six workers employed by different subcontractors for Taisei and who were working side by side in July building concrete bunkers were receiving a hazard allowance that ranged from zero to $90 a day.
Taisei said it could not comment on the claims without more details about the identity of the workers. The company said it oversees and monitors all the subcontractors it employs.
Only one worker interviewed by Reuters, a crane operator who reports to Raito Kogyo, a large Tokyo-based construction company, said he was receiving the promised hazard allowance of $180 per day.
Tepco’s pledge last November to increase hazard pay came after a nudge from the government, which was seeking to burnish its image in the weeks leading up to Prime Minister Shinzo Abe’s pitch last year for Tokyo to host the 2020 Olympics. Abe assembled a previously undisclosed public relations team for this purpose, including officials from the trade and foreign ministries, according to two members of the team.
With Fukushima spinning back into crisis as new revelations emerged of radioactive water leaks, the Japanese were concerned that their chances of pulling off a successful Olympic bid might be damaged. Abe’s then-trade minister compared Tepco’s attempts to control the leaks to a game of “whack-a-mole.”
In Buenos Aires in early September, Abe told the International Olympic Committee that the water leaks from Fukushima were “under control,” a remark that attracted widespread criticism from opposition lawmakers and environmental activists back home.
By late October, after Tokyo was awarded the games, Abe’s PR team was battling negative publicity over working conditions at Fukushima, the two team members said. Abuses at the plant were outlined in a report by Reuters that exposed illegal labor practices as well as the involvement of organized crime in providing workers for the cleanup.
The government encouraged Tepco to take action, partly in response to the reports. That led to Hirose’s announcement in November to double hazard pay, according to one of the people on the PR team.
Within weeks of the pledge, Tepco was quietly backpedaling. In a letter issued to contractors in late November, first reported in the daily Mainichi Shimbun, the company said the promise to double the hazard allotment was “aimed at improving pay for workers,” but that did not mean each worker would necessarily see a pay increase of that amount.
In March testimony before the Diet, where he was questioned about hazard pay, Hirose said he wanted to encourage Tepco’s contractors to pay “an appropriate wage to each and every worker.”

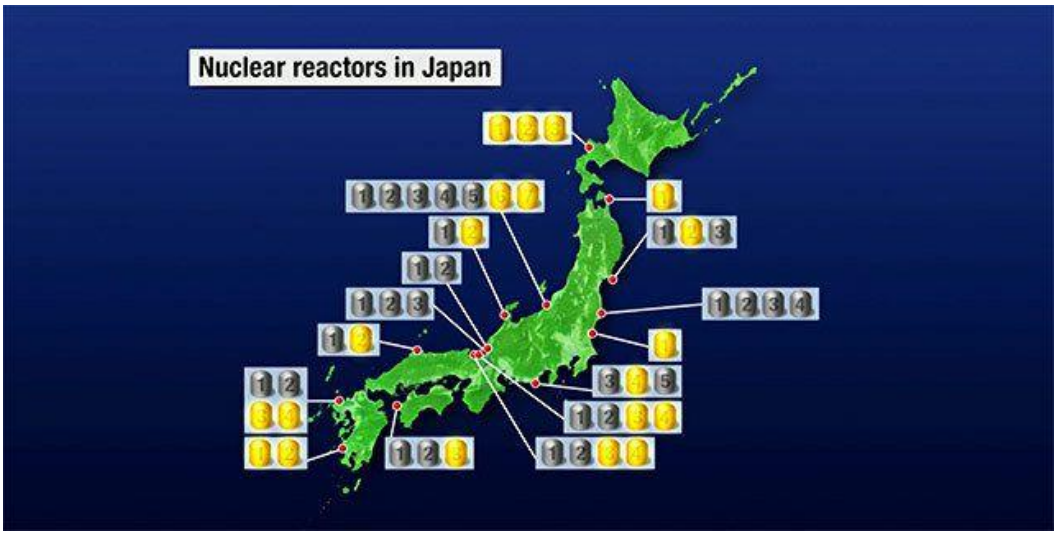
Sakurada moved to Fukushima in May 2012 to be closer to his fiancee in Iwaki. He took a job with a local company because he was promised a place to stay.
TOP, a local firm that supplies workers for construction, only told Sakurada he would be working in the nuclear plant two days before he started. When Sakurada asked for a pay rise to compensate for the increased danger, he said a TOP manager told him it would be unfair to others to pay him more.
By early 2014, Sakurada said he'd seen a 56-year-old worker fired for reaching his radiation limit. He had also watched another middle-aged worker — a man he did not know — die in front of him of an apparent heart attack. None of the other workers knew how to revive him with a defibrillator kept in the break room, he said.
Sakurada quit in May. Unlike the other plaintiffs in the lawsuit, he agreed to be interviewed and identified by name for this report.
TOP's manager did not respond to repeated calls to the company headquarters or faxed questions about Sakurada's claims.
"The whole structure at Fukushima, everything from working hours to radiation levels, needs to be made clear. Like hitting a reset button," Sakurada said.

October 23, 2014

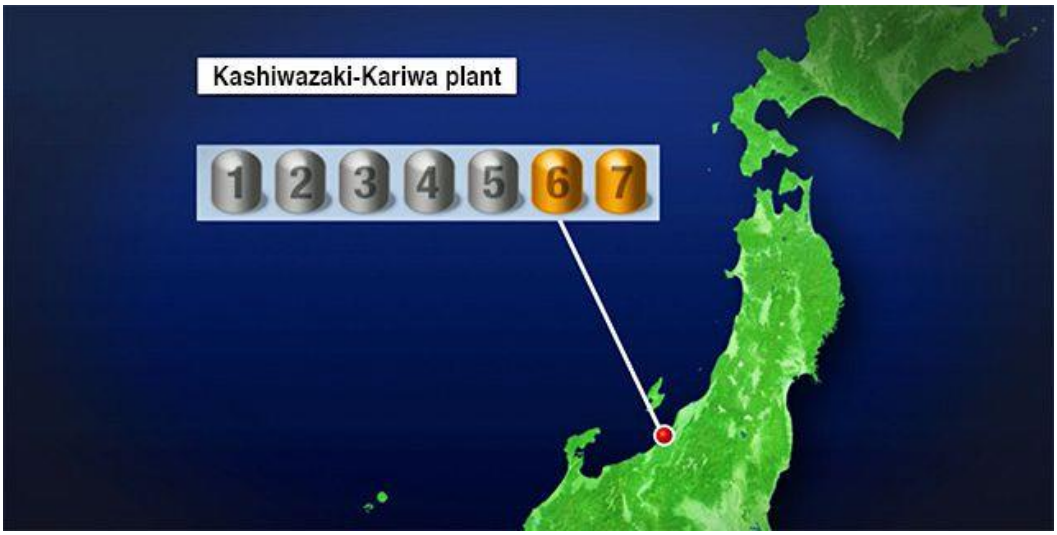
Nuclear watch : Working to Prove Safety

http://www3.nhk.or.jp/nhkworld/english/news/nuclearwatch/20141023.html

A nuclear power plant operator has launched a campaign to convince the public that it's ready to restart its reactors. The facility has been offline, as the Nuclear Regulation Authority checks whether it can withstand a severe accident. The operator has opened its doors to the world to showcase its new safety measures. NHK WORLD's Kurando Tago reports.
Diplomats from various countries got a firsthand look on Wednesday at TEPCO's nuclear plant in Niigata Prefecture, on the coast of the Sea of Japan.
The Kashiwazaki-Kariwa plant has 7 reactors.
During a tour, the group looked at the main anti-earthquake building that'll serve as a command center in case of an emergency. They also viewed power vehicles, water pumps and flood barriers that can withstand 15-meter tsunamis.
Many had questions about the plant's safety. They wanted to know more about the specifications of the equipment to be used in a disaster.
"It's hard for me to make any judgment on this. I can only appreciate to gain access to see by my own."
Vitor Diniz / Brazilian Embassy official
"I was quite impressed by the reactors, turbine buildings, anti- tsunami, and anti-seismic measures. I was also impressed with the firefighting systems at the facility."
Alexander Khokhev / Russian Embassy official
Japan has 48 nuclear reactors and all are currently offline. So far, the Nuclear Regulation Authority has received applications to re-start 20 of them.



Last September TEPCO applied for the NRA's screening process to restart 2 reactors at this plant.



TEPCO's business has been deteriorating since the 2011 Fukushima nuclear accident. A senior official says the company is staking its fate on the restart of the Kashiwazaki-Kariwa plant. The company hopes to do so by stressing the plant's safety.

"We organized today's event in the hope of letting people around the world know what types of measures we have taken at the nuclear power plant that we hope to restart. We want people to feel reassured."

Katsuhiko Hayashi / TEPCO official

Plant operators in Japan still need to satisfy all mandatory government regulations. They include a re-examination of the faults that run under the facilities.

The operators are doing all they can to pass the regulations.

They're working hard to improve safety measures. They hope to win back public trust by communicating their progress to the world.

November 25th, 2014 |

What will happen if water changes route?

TEPCO's Trench Saga Could Have Unintended Consequences

http://www.fukuleaks.org/web/?p=14165

TEPCO has made multiple attempts to deal with the unit 2 trench full of highly contaminated water. In 2011 they tried to block leaking water in the area. After it was admitted in 2013 that the tunnel still contained highly radioactive water, plans were put in place to empty the tunnel of water.
First TEPCO tried to freeze it, then they dumped in ice when the freezing didn't completely work. The next attempt was to dump concrete in the end near the turbine building. As they tried to empty the trench they realized it was still somehow filling back up with water. They also cited that the water going back in must also be contaminated as radiation levels were not going down.
The latest attempt began today. They are dumping in a hydro-cement to try to fill the trench with concrete while pumping out contaminated water. TEPCO said this work would result in considerable worker exposures. TEPCO now plans to do the same tactic to the trench for the unit 3 reactor that they admit has the same problem.
TEPCO also admitted this highly contaminated water in the trench is mixing with groundwater and making it out to sea. This is the first really clear admission of this mechanism by TEPCO. They also now admit to the NRA that all the efforts at the unit 2 trench earlier this year were not necessary and were unlikely to work. They did not say why they didn't advocate for the concrete filling of the trench back then and instead did two rounds of considerable work they knew wouldn't work.
Currently the mechanism for more highly contaminated water to reach the trench and refill it either isn't understood or isn't admitted by TEPCO. This makes the work to fill the trench even more risky. The concrete filling of the trench could have new consequences if it forces this flow of highly contaminated water to take a different route rather than stopping it from flowing. Without knowing the exact source of the water and the exact route it takes to the trench, what happens next is anyone's guess.

October 26, 2014

Nuclear workers' criminal records won't be checked

Panel likely to drop plan to check nuclear workers

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

A panel to Japan's nuclear regulator will likely shelve proposals for a system of criminal record checks and other screenings of workers at nuclear facilities designed to prevent terrorism. Facility operators will likely run background checks instead.

The panel of the Nuclear Regulation Authority has been studying the logistics of checking the personal information of workers, including criminal records held by the government and financial debt.
Similar systems are in use in other countries. A system was proposed for Japan as a way of preventing terrorists and collaborators from entering nuclear facilities.

Panel members agreed that the operators of facilities, such as utilities, should run background checks on workers based on worker statements.
Some members pointed out the limitations of a system based on voluntary declarations.

But the panel agreed that introducing a system for vetting workers' criminal records and other information will require law revisions and cautious discussions.

The panel now plans to study which items will be declared by workers and submit a proposal to the Nuclear Regulation Authority as early as January.

December 1, 2014

Baverstock on UNSCEAR report: does not qualify as "scientific"

British researcher blasts U.N. report on Fukushima cancer risk as unscientific

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201412010036

By MASAKAZU HONDA/ Staff Writer
A British scientist who studied the health effects of the 1986 Chernobyl disaster panned a United Nations report that virtually dismissed the possibility of higher cancer rates caused by the 2011 Fukushima nuclear crisis.
Keith Baverstock, 73, made the comments during a visit to Tokyo at the invitation of a citizens group related to the Fukushima disaster.
In response to questions from The Asahi Shimbun, Baverstock said a report released in April by the U.N. Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) was “not qualified to be called ‘scientific’” because it lacked transparency and independent verification. He added that the committee should be disbanded.
The U.N. report said any increase in overall cancer rates among residents of Fukushima Prefecture due to fallout from the accident was unlikely.

However, Baverstock, former head of the radiation-protection program at the World Health Organization's Regional Office for Europe, said radiation levels shown in the report were enough to cause a spike in cancer rates.
For example, the report said nearly 10,000 workers at the crippled Fukushima No. 1 nuclear plant were exposed to radiation levels exceeding 10 millisieverts over about 18 months following the outbreak of the crisis in March 2011.
Baverstock said such an exposure level was enough to cause an increase in cancer among about 50 of the workers.
After studying the health effects from the Chernobyl nuclear disaster, Baverstock was the first to point out an increase in thyroid cancer among residents of areas hit by radioactive fallout.
He also questioned UNSCEAR's neutrality, given that members are nominated by nations that have a vested interest in nuclear power. He noted that such nations provide funds to the committee.
Baverstock also suggested a conflict of interest, as committee members are not required to disclose their history working in the nuclear industry or sign pledges stating that no conflict of interest exists in evaluating radiation risks.
Baverstock said that when he was working for the WHO, he felt constant pressure from the International Atomic Energy Agency, a major promoter of nuclear power. He also questioned why it took more than three years for UNSCEAR to release its Fukushima report.
Referring to what he called inside information, Baverstock raised the possibility that the delay was caused by criticism about the report's conclusion and the influence of other U.N. agencies, such as the IAEA.

December 6, 2014

ID checks for nuclear workers?

NRA draft plan to require ID checks for nuclear plant workers

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201412060042

A preliminary anti-terrorism plan to create a system that requires identity checks for people accessing nuclear power plants has been approved by a Nuclear Regulation Authority draft committee.
The working committee for the NRA agreed to the plan Dec. 5 in accordance with recommendations made by the International Atomic Energy Agency. The IAEA said countries with nuclear power plants should have systems to identify workers in the plants. Currently, among major countries that produce nuclear power, Japan is the only one that does not have such a system.
The committee will next examine the methods taken by electric utilities for identification based on guidelines stipulated by the NRA. It will then report its recommendations to the regulatory agency in January, after which it will decide on concrete steps that will be taken.
Those committee meetings are closed to the public.
Initially, they considered revising current laws to mandate a system. However, that plan was eventually dropped.

Individuals subject to identification checks at the plants will be those who enter sensitive areas alone and who handle confidential information on radioactive material.
Under the new guidelines, the utilities will be required to allow entry only to workers who consent to background checks. Their identities will also be further confirmed through official documentation, such as driver's licenses, and interviews.
The working committee is also considering introducing aptitude tests for workers. However, it has yet to be decided on whether it will also check to see if those entering the plants have criminal records or if there are special risk factors, such as being in debt.

December 10, 2014

Back to 250 millisieverts in case of emergency?

NRA mulls raising exposure limit in emergency

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Japan's nuclear regulation authority is considering raising the radiation exposure limit for workers in the event of an emergency, such as a nuclear accident.

During the Fukushima Daiichi plant's accident in 2011, many workers were exposed to radiation beyond the government limit of 100 millisieverts.

The government had to raise the limit for workers to 250 millisieverts, as a temporary exception.

Commissioners at the Nuclear Regulation Authority on Wednesday discussed revising the existing limit during an emergency.

They agreed that **the revision should require power companies to get the prior consent of workers for possible health risks.** Companies would also be required to provide education and training for workers to avoid unnecessary exposure.

NRA Chairman Shunichi Tanaka proposed that it would be appropriate to set the new limit at 250 millisieverts. He cited the temporary increase to that level during the Fukushima Daiichi accident.

Tanaka also said the emergency limit would be comparable to medium exposure levels set by countries overseas. He also stressed the importance of gaining prior consent and providing training for workers.

The commissioners agreed to continue discussing details of the new rules based on Wednesday's talks.

December 31, 2014

Another example of sloppy management of workers' safety

TEPCO's sloppy handling of suppressant led to spread of radioactive dust in 2013

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201412310025

By MIKI AOKI/ Staff Writer

Tokyo Electric Power Co. diluted a dust suppressant that rendered it ineffective and allowed the spread of radioactive materials that contaminated 12 workers at the Fukushima No. 1 nuclear plant in summer 2013, officials said.

The suppressant is supposed to prevent radioactive dust from getting into the air and spreading.

However, TEPCO not only diluted the suppressant to levels well below the manufacturers' recommended standard, but it also did not use the suppressant on a daily basis when removing rubble at the stricken nuclear plant.

The sloppy use of the dust suppressant continued for about a year.

"As a result, the effectiveness of the suppressant decreased and likely led to the spewing of radioactive materials in the summer of 2013," an official with the Secretariat of the Nuclear Regulation Authority said.

The NRA Secretariat issued administrative guidance to TEPCO, instructing the utility to use the suppressant in a safe manner.

According to an official with a dust suppressant manufacturer, the product is an alkaline liquid that solidifies after a few hours. It is mainly used to prevent the spread of asbestos.

The company recommends that when removing asbestos, the dust suppressant should be used as is or diluted in 10 parts water. It should also be sprayed daily throughout the removal process.

According to TEPCO officials, when workers were removing rubble from the No. 4 reactor at the Fukushima No. 1 plant, the dust suppressant was sprayed on the day before work and right before the removal of the rubble. The suppressant was either undiluted or diluted in 10 parts water.

However, from August 2012, when rubble removal began at the No. 3 reactor, the suppressant was diluted in 100 parts water, and it was used only once every several days or even once every several weeks, the officials said.

In summer 2013, when the spread of radioactive dust came to light, the suppressant had been used at the No. 3 reactor only twice, in mid-June and on Aug. 13.

"Dilution in 100 parts water produces the same result as using only water," said an official at a dust suppressant manufacturer. "Because work should, in principle, only be conducted when the dust has been moistened with the suppressant, not using the suppressant for several days will naturally lead to the spewing of radioactive dust."

In fact, on Aug. 12 and 19, 2013, when rubble was being removed, alarms went off at the Fukushima No. 1 plant because the spread of radioactive dust raised the radiation levels there. Twelve workers were confirmed to have been contaminated by radioactive materials.

On Aug. 19, the volume of radioactive materials released was 6,700 times normal levels, according to an estimate made by the NRA Secretariat.

On one occasion, airborne radiation levels increased at a location 3 kilometers from the Fukushima No. 1 plant.

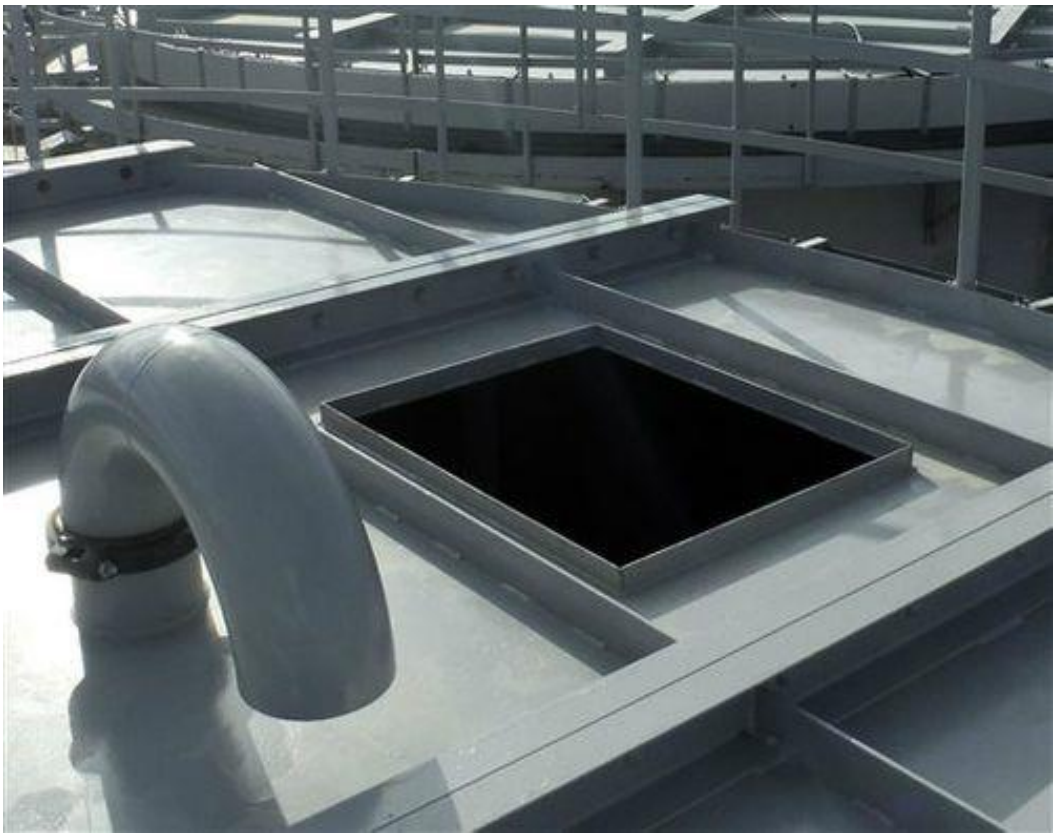
TEPCO officials admitted that was likely caused by the spewing of radioactive dust after the improper spraying of the dust suppressant.
"When the dust suppressant was mixed in the nuclear fuel storage pool, the level of alkalinity increased, and there were concerns about the effect on equipment," a TEPCO official said. "While we were aware there was no problem with the effectiveness of the suppressant, our actions in the end were insufficient."
The utility returned to using suppressant diluted in 10 parts water from October 2013, and the liquid was sprayed daily before and after work to remove rubble.
TEPCO did conduct an experiment to find out if dust solidified when the suppressant was diluted by 100 parts water, but no tests were done on the duration of that effect.
"The thinking toward safety management was extremely sloppy," said Hiroyuki Mori, a professor of public policy at Ritsumeikan University who has conducted studies on the spread of asbestos at disaster-stricken areas. "The work should have been conducted while thinking foremost about the safety of the workers and local residents."
An official with the NRA Secretariat's office dealing with the accident at the Fukushima No. 1 plant said: "Initially, we did not check the concentration of the dust suppressant or the frequency with which it was used. We have since strengthened monitoring."

January 20, 2015

Two Fukushima Workers die in 2 days

2 workers die at Fukushima Daiichi, Daini nuclear plants

http://mainichi.jp/english/english/newsselect/news/20150120p2g00m0dm064000c.html



This photo taken on Jan. 19, 2015 and provided by Tokyo Electric Power Co. (TEPCO) shows an opening atop a water storage tank which a worker fell into, at Fukushima Dai-ichi nuclear power plant in Okuma, Fukushima Prefecture, northeastern Japan. (AP Photo/Tokyo Electric Power Co.)

TOKYO (Kyodo) -- Two workers died Tuesday in separate accidents at the Fukushima Daiichi nuclear power plant and the nearby Daini complex, despite Tokyo Electric Power Co.'s pledge to improve working conditions at the site of the 2011 nuclear disaster.

According to TEPCO and local police, a 55-year-old worker fell into a 10-meter-high water storage tank during inspections on Monday. He was taken to hospital but confirmed dead early Tuesday.

Later Tuesday, a worker aged 48 at the Daini nuclear power plant, which escaped severe damage in the 2011 earthquake-tsunami disaster, died when crushed by equipment.

The fatal accidents follow the death of a worker buried by gravel last March at the Daiichi complex. The number of industrial accidents at the Daiichi site has increased this fiscal year as TEPCO stepped up its cleanup efforts and had up to 7,000 workers engaged there.

TEPCO said 23 workers were injured in fiscal 2013 at the Daiichi site, while at least 40 laborers were involved in accidents there from April to November 2014. The increase in accidents prompted labor inspectors last week to call for thorough preventive measures.

"We will do our utmost to prevent such accidents and to steadily proceed with the decommissioning work," Akira Ono, the head of the Fukushima Daiichi plant, told a press conference on Tuesday.

TEPCO said it plans to suspend all cleanup work at the plant on Wednesday for safety checks.

s died Tuesday in separate incidents at the Fukushima No. 1 power plant and the nearby No. 2 complex.

The fatality at No. 1 was first there since March, although there has been a rise in the number of industrial accidents at the site as Tokyo Electric Power Co. stepped up cleanup efforts and brought in more workers.

Tepco has said at least 40 workers were involved in accidents at No. 1 from last April to November, prompting labor inspectors last week to call for thorough preventive measures.
The utility has routinely pledged to improve work conditions at the site.

Two workers die in accidents at Fukushima No. 1 and No. 2 plants

http://www.japantimes.co.jp/news/2015/01/20/national/fukushima-no-1-plant-worker-dies-after-falling-into-water-storage-tank/#.VL6Eci51Cos

Two workers died Tuesday in separate incidents at the Fukushima No. 1 power plant and the nearby No. 2 complex.

A 55-year-old worker at No. 1 fell into a 10-meter-high water tank during inspections Monday. He was taken to a hospital but was confirmed dead in the early hours of Tuesday.
Later, a worker in his 40s at the No. 2 plant, which escaped severe damage in the 2011 earthquake and tsunami, died after equipment fell on him.
In a statement, Akira Ono, manager of the No. 1 plant, expressed sorrow for the death of the first worker, who was not named but was identified as an employee of construction company Hazama Ando Corp.
"We are deeply sorry for the death of the worker and express our deepest condolences to the family," Ono said. "We promise to implement measures to ensure that such tragedy does not occur again."
Hazama Ando had no immediate comment.
The number of accidents at Fukushima No. 1 has almost doubled this fiscal year to 55. The increase came as Tepco ramped up cleanup efforts and doubled the number of workers at the site to nearly 7,000.
In March, a worker died after being buried in gravel while digging a ditch.
Tepco has been widely criticized for its handling of the cleanup. Until last year it struggled to contain leaks of radioactive water from hastily built tanks at the site, and it has repeatedly promised to improve working conditions.
Most workers inside the plant are contract laborers hired by multiple layers of construction companies. Reporters in 2013 revealed widespread labor abuses, including workers who said their pay was skimmed and that there was little scrutiny of working conditions.
"It's not just the number of accidents that has been on the rise. It's the serious cases, including deaths and serious injuries that have risen," said Katsuyoshi Ito, a local labor inspector overseeing Fukushima No. 1. "We have asked Tepco to improve the situation."

Worker dies in accident at Fukushima Daini

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

A worker at the Fukushima Daini nuclear power plant has died after getting his head stuck in machinery.

The accident occurred Tuesday morning inside a waste disposal building.

The man in his 40s had been doing inspection work on the 5th floor. He died at a hospital in Iwaki city after being airlifted by emergency helicopter.

The accident comes a day after another worker fell into an empty water tank during inspection work at the damaged Fukushima Daiichi nuclear plant. The man in his 50s died early Tuesday.

Safety has been an issue for Tokyo Electric Power Company, which operates both plants.

In March last year, a worker died after being buried under a pile of earth and sand. In November, 3 workers were injured when steel construction material fell on them.

Both occurred at the Fukushima Daiichi facility, where about 7000 people work every day to scrap its reactors.

TEPCO officials say the company will investigate the cause of the accidents and take steps to prevent a recurrence.

January 21, 2015

Fukushima workers should be better trained

TEPCO to beef up on-site training after 2 deaths at Fukushima plants

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201501210064

Two workers died Jan. 20 in separate accidents at the Fukushima No. 1 and No. 2 nuclear power plants, prompting the operator to step up training programs to prevent a recurrence.
Akira Ono, manager of the Fukushima No. 1 power plant, told a news conference Jan. 20 that industrial accidents have been on the rise since the crippled No. 1 plant entered the full-fledged decommissioning phase.
He said many of the accidents involved inexperienced workers. Tokyo Electric Power Co., the plant operator, will strengthen worker training programs to prevent further incidents, he said.
According to TEPCO and Fukushima prefectural police, a 55-year-old worker fell from a rainwater storage tank on Jan. 19 at the No. 1 plant. He apparently had neglected to securely fasten a safety harness. The man died on Jan. 20.
The same day, a 48-year-old worker at the No. 2 plant, located 12 kilometers south of the No. 1 plant, died after his head became caught in machinery at a waste disposal facility.
Fukushima prefectural authorities on Jan. 20 called on TEPCO to take prompt steps to prevent further accidents at the plants.

The number of industrial accidents, both minor and serious, at the No. 1 plant has risen in recent years. TEPCO doubled the number of workers to 7,000 last December, from 3,400 a year earlier, to step up cleanup efforts.
“Many workers recruited in recent months are scratch workers, having no previous experience at nuclear power plants,” said a plant worker in his 30s.
A 56-year-old man, who was engaged in disposal work of contaminated water, blamed face masks worn by workers to protect them from radiation, noting that the gear makes verbal communication extremely difficult.
According to the prefectural government’s labor bureau, the number of serious industrial accidents involving decommissioning workers at the No. 1 plant doubled to eight in 2014 from a year earlier. Bureau officials cited inadequately trained new workers and poor visibility caused by the radiation protection masks for the rise in accidents and worker injuries.
The bureau had instructed TEPCO on Jan. 16 to take steps to prevent industrial accidents at the facility.

January 30, 2015

Difficulties with contaminated water ungoing

Editorial: TEPCO must settle problems hampering water treatment at nuclear plant

http://mainichi.jp/english/english/perspectives/news/20150130p2a00m0na001000c.html

Tokyo Electric Power Co. (TEPCO) has abandoned its goal of completing treatment of all radioactively contaminated water stored at its tsunami-ravaged Fukushima No. 1 Nuclear Power Plant by the end of March this year. The decision once again demonstrates the difficulties of treating such highly contaminated water.
The utility made the decision as the Advanced Liquid Processing System (ALPS) that it installed at the plant to remove radioactive substances from the contaminated water is not functioning properly. The situation could affect the company's work to decommission and dismantle reactors at the power station. The government and TEPCO should identify problems relating to the treatment of tainted water and steadily press forward with the treatment of such water.
Numerous tanks to hold radioactive water have been constructed at the Fukushima plant, making it look like an oil storage station. The amount of contaminated water is increasing by about 300 to 400 metric tons a day, as ground water flowing beneath the plant's nuclear reactor buildings comes into contact with nuclear fuel that has melted into the ground. If TEPCO were to continue to store highly contaminated water in tanks, it would increase the risk of such water leaking. Since tainted water emits a large amount of radiation, workers struggling to bring the nuclear crisis under control could be exposed. TEPCO has treated radioactive water using the ALPS and other devices, but over 270,000 tons of water remains untreated.
TEPCO promised to finish treating radioactive water at the plant by the end of fiscal 2014, while Prime Minister Shinzo Abe declared during Japan's 2020 Olympic bid that the crisis at the Fukushima No. 1 plant "is under control." Since taxpayers' money has been used to introduce ALPS, Prime Minister Abe has

stated that the national government will take the lead in efforts to treat contaminated water. As such, the government and the prime minister cannot evade responsibility for the delay.
ALPS can remove 62 types of radioactive materials, **excluding tritium**. However, since it employed a newly developed technology, there was no guarantee that it would function as expected. The government and the plant operator should reflect on their lack of foresight.
TEPCO intends to freeze soil around the atomic power station's four reactors by March to block ground water from flowing onto the premises of the reactor buildings. Since the attempt is the first of its kind in the world, many experts have raised doubts as to whether the system will function as designed.
The government and TEPCO are expected to review their road map toward decommissioning the reactors at the plant as early as March. They should take effective measures that reflect the lessons learned from past mistakes rather than getting caught up with abiding by a schedule.
The central government set up Japan's Nuclear Damage Compensation and Decommissioning Facilitation Corp. in August 2014 to increase state involvement in decommissioning the Fukushima No. 1 power plant. There are also other government organizations regulating nuclear plants, such as the Nuclear Regulation Authority. The government should clarify how it will supervise and instruct TEPCO, and state which organizations are responsible for what.
Fatal work-related accidents occurred at the Fukushima No. 1 and No. 2 nuclear plants this month, and work to bring the nuclear crisis under control has been suspended at the No. 1 power station to conduct an emergency inspection of safety measures.
Approximately 7,000 people work at the No. 1 plant a day. The figure is two times higher than two years ago because additional workers have been assigned to work to freeze soil around the plant's reactors. If further work-related accidents were to occur at the power station, it would obstruct efforts to decommission and dismantle the plant's reactors. **Top priority should be placed on the safety of workers.**

January 31, 2015

TEPCO's safe and steady mantra

EDITORIAL: Safe and steady needs to be TEPCO’s mantra in Fukushima cleanup

http://ajw.asahi.com/article/views/editorial/AJ201501310041

Workers wipe water from a cask containing nuclear fuel that was removed from the No. 4 reactor at the Fukushima No. 1 nuclear power plant on Dec. 20. (Pool)

Come March, it will have been four years since the triple meltdown at the Fukushima No. 1 nuclear power plant triggered massive leaks of radioactive material.

Work to remove unspent nuclear fuel from a storage pool at the heavily damaged No. 4 reactor building was completed at the end of last year as planned. Efforts to clear debris, a major source of radiation, from the wrecked nuclear plant have also made progress. As a result, the areas where workers need to wear full-face protection masks have narrowed.

These facts seem to suggest that the Fukushima cleanup work is finally beginning to move smoothly forward.

However, Tokyo Electric Power Co., the operator of the plant, said last autumn that operations to remove spent and melted nuclear fuel from the No. 1 reactor will be delayed by two to five years from the original schedule. Earlier this month, the embattled electric utility also said the disposal of radioactive water stored in on-site tanks will not be finished on schedule.

Behind these delays is the grim reality that existing technology and expertise is not up to the task of dealing with this unprecedented situation. Things are not going as planned in many ways.

The crippled nuclear plant still poses all sorts of risks and hazards to workers. TEPCO should place top priority on safety and steady progress in proceeding with cleanup work. What it must not do is adopt a slapdash approach in pursuit of accomplishing the task quickly.

Some 7,000 workers can be found on any given weekday at the Fukushima No. 1 plant, more than double the 3,000 or so that were there in April 2013.

The precise locations of the melted nuclear fuel rods of the No. 1 reactor are still not known, nor is their condition. Another unknown is from which part of the reactor the melted fuel can be removed.

First of all, technology has to be developed to ascertain the state of the nuclear fuel under the high levels of radiation.

TEPCO has decided to delay to fiscal 2021 the start of the removal of spent fuel from the No. 1 reactor. The work was originally slated to begin in fiscal 2019 under the road map for decommissioning that was unveiled in June 2013 by the government and TEPCO. Similarly, the start of the removal of melted fuel rods will be postponed to fiscal 2025 from fiscal 2020. The situation is more or less the same with the No. 2 and No. 3 reactors.

In September 2013, Naomi Hirose, TEPCO president, promised Prime Minister Shinzo Abe that the disposal of highly radioactive water would be completed by the end of March 2015. But only about 60 percent of the work has been done so far as a raft of problems, including glitches in equipment to filter out radioactive substances, caused delays.

There are special circumstances behind the individual cases of delay.

A worker at the plant died on Jan. 20 after falling into an 11-meter-high water tank during an inspection. The cause of the accident is under investigation.

The number of work-related accidents at the plant has increased significantly as TEPCO brought in more workers for cleanup operations.

The number of accidents in the current fiscal year, which runs through March, grew to 40 as of November, up sharply from 23 for all of fiscal 2013.

This troubling data raises concerns that safety management may have been put on the back burner under pressure to carry out tasks according to schedule. Errors that lead to accidents involving workers could also cause more cases of radioactive contamination.

Last week, the Nuclear Regulation Authority announced a draft medium-term timetable for efforts to reduce risks at the plant. The draft points out that the growing number of work-related accidents is a serious problem. **It calls for a marked improvement in working conditions.**

In order to make sure that cleanup work will be carried out safely and steadily, the NRA and the government need to provide appropriate support based on the actual conditions at work sites, which are often fraught with risks.

February 17, 2015

Workers first...

TEPCO vows safety first in training program for workers at Fukushima

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201502170029

Workers check safety conditions near storage tanks for radioactive water before starting the day's work at the Fukushima No. 1 nuclear power plant on Feb. 3. (Provided by Tokyo Electric Power Co.)

Tokyo Electric Power Co. submitted its plan to provide wide-ranging training programs for workers engaged in decommissioning of its crippled nuclear power plant in Fukuskima Prefecture following a string of accidents, some of them fatal.

"We will promote safety awareness among contractors through communication in the management of daily operations," said a report by the operator of the Fukushima No. 1 nuclear power plant.

"Our operational coordination meetings will also properly arrange work areas and times to ensure thorough safety control," the report went on.

The number of serious work-related accidents at the facility, which experienced a triple meltdown as a result of the 2011 earthquake and tsunami disaster, doubled in 2014 from the previous year.

Nine serious accidents occurred between March 2014 and January 2015, resulting in two deaths and eight serious injuries.

The labor ministry ordered TEPCO to develop measures to prevent similar incidents following the death of a 55-year-old worker in January after he fell from the roof of a rainwater storage tank.

The power utility submitted the plans on Feb. 16 to the labor ministry and the Fukushima Labor Bureau outlining countermeasures against occupational injuries and deaths. The report attributed the accidents to tight schedules and a lack of experience at the plant among recruited workers.

At a news conference the same day, a TEPCO official vowed that the utility would proceed with decommissioning the reactors with the highest priority on safety, saying, "We will ascertain (the pressure on the workers imposed by tight deadlines) by enhancing communication."
The installation of additional storage tanks for radioactive water, as well as other equipment, has added to the workload of TEPCO employees and contractors, raising the proportion of unskilled workers at the site.
The power utility thus said in its report that it would set up a special facility to provide hands-on training to such workers.
"We have to prevent a situation in which workers feel it is no longer safe to work at the Fukushima plant," a TEPCO official said.
The plant operator also intends to accelerate decommissioning and improve efficiency of other operations so employees will be able to work longer at the plant site before reaching the annual radiation exposure limit of 50 millisieverts.
(This article was written by Yu Kotsubo and Akifumi Nagahashi.)

February 19, 2015

15-year old and a nuclear worker

Nagoya exec exploited boy, 15, for radioactive clean-up work

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201502190050

NAGOYA--Police arrested the manager of a construction firm here for using a teenager to help remove soil and debris contaminated by radioactive substances released in the nuclear accident in Fukushima Prefecture.
Yuji Chiba, 49, an executive of the Moriyama Ward company, is suspected of knowingly dispatching a 15-year-old to Fukushima for the work, in violation of the labor standards law.
According to the Aichi prefectural police, Chiba sent the boy to a large-scale commercial facility in the Minami-Yanome district on July 22, 2014, to help remove soil and grass tainted by the disaster at the Fukushima No. 1 nuclear power plant in March 2011.
Officials believe that such shady business dealings in the northern region may just be the tip of the iceberg.
Chiba, who lives in Fukushima, acknowledged his involvement but downplayed the seriousness of the matter.
"All I did was send him to a company conducting decontamination work so he could work part-time," he said.
Chiba apparently told the teenager not to reveal his real age, saying: "Our construction sites do not allow minors under 18 years of age to work. If anyone questions you, tell them you're 18."

The boy, now 16 years old, graduated from junior high school last March. He found the construction company through a public employment security office the following month and was hired to set up scaffolding.
The youth was to be paid a daily wage of 3,000 yen ($25.25) for the decontamination work. However, he left before being paid after he was physically assaulted by Chiba.
The construction company only told the teen that he would be setting up scaffolding and did not inform him that he would actually be doing decontamination work.
Mitsuo Nakamura, a 63-year-old member of a Tokyo-based network that monitors radiation exposure among laborers, said: "A young, cheap workforce is attractive to firms (conducting decontamination work), but a number of them are engaged in malicious practices. The government must ascertain the reality of the situation, by examining what labor practices are like on-site."
According to the police, other minors have been made to participate in similar jobs in the region.
The Koriyama branch of the Fukushima District Court sentenced the president of a Fukushima-based construction firm to two years and two months in prison in October 2013 for having seven minors lie about their ages and participate in decontamination work.
The involvement of criminal organizations in the business has also become a growing concern.
The Yamagata District Court sentenced a member of one such group to eight months in prison, suspended for three years, in March 2013 for arranging the participation of seven people in decontamination work, despite lacking authorization to provide temporary jobs.
The crime syndicate member apparently skimmed their wages, revealing a grim situation in which tax money for decontamination work is likely funding criminal organizations.
In an effort to mitigate the problem, the Environment Ministry, municipal governments, police and businesses established a committee to discuss how to thwart the presence of criminal groups at decontamination sites.

March 4, 2015

First long-term survey of workers' health

Long-term study of Fukushima workers to start

http://www3.nhk.or.jp/nhkworld/english/news/20150304_11.html

A Japanese government-affiliated research organization will launch a long-term health study of people who were working at the Fukushima Daiichi nuclear power plant right after the nuclear disaster in March of 2011.

The Radiation Effects Research Foundation in Hiroshima Prefecture says it will start the survey in fiscal 2015, which begins in April. The research body is supported by the Japanese and US governments.

The study will focus on about 20,000 people doing such jobs as debris removal at the plant immediately after the nuclear accident.

Researchers say they have already sent documents to these people explaining the survey and seeking applicants. They say they hope to start with residents of Fukushima Prefecture.

The study will ask people when, where and what tasks they performed at the plant. It will estimate each individual's radiation exposure and continue to monitor their health.

The project will be an epidemiological study on the long-term effects of radiation. It will be conducted with subsidies from Japan's health ministry, with the cooperation of universities and medical institutions.

The health ministry says the program is **the first long-term nationwide health survey of people who were working at the power plant immediately after the disaster.**

March 5, 2015

First long-term survey of workers' health (2)

Hiroshima institute plans lifelong health monitoring for 2011 Fukushima No. 1 plant workers

http://www.japantimes.co.jp/news/2015/03/05/national/science-health/hiroshima-institute-plans-lifelong-health-monitoring-2011-fukushima-1-plant-workers/#.VPgaaS51Cos

JIJI
HIROSHIMA – A Hiroshima-based research institute plans to conduct lifelong health monitoring of people who worked at the Fukushima No. 1 nuclear plant after the tsunami-triggered meltdown disaster struck there on March 11, 2011, it was learned on Wednesday.
This will be the first such long-running survey on the people who worked there, according to the health ministry.
Last July, the ministry sought research institutes that hoped to carry out the lifelong health survey, and the Radiation Effects Research Foundation was selected in October.
RERF is seeking those who are willing to participate in the survey from among some 20,000 people engaged in reactor cooling, rubble removal and other work at the Tokyo Electric Power Co. plant between March and December in 2011.
It plans to set up local monitoring bases as the former plant workers are scattered across the country now.
The institute has already sent letters about the survey to about 5,000 former plant workers living in Fukushima Prefecture, home to the crippled nuclear plant, and has so far received replies from some 1,000 of them.
The institute plans to begin the health monitoring by the end of this month.
“If we can learn what radiation dose level begins to affect health, that would be a breakthrough,” said Toshiteru Okubo, chairman of RERF.

It will be the first time for RERF to carry out a survey on people other than victims of the U.S. atomic bombings of Hiroshima and Nagasaki and their families.

March 9, 2015

RERF will study effects of radiation on Fukushima nuclear workers

FOUR YEARS AFTER: A-bomb survivors research institute to monitor Fukushima plant workers

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201503090032

A research institute formed to study the effects of radiation on the survivors of the atomic bombings will start lifelong health surveys on workers at the Fukushima No. 1 nuclear power plant following the March 2011 accident.

The Radiation Effects Research Foundation (RERF), jointly operated by Japan and the United States, will survey about 20,000 workers who were engaged in emergency work, such as the removal of debris, during the period to Dec. 16, 2011.

The survey will begin in fiscal 2015 that starts in April.

According to the Ministry of Health, Labor and Welfare, it will be the first health survey to cover all the people who worked during the crisis at the crippled plant.

According to RERF, based in Hiroshima, the research organization will investigate whether the workers are suffering from cancer or leukemia. It will undertake the survey, which will be subsidized by the health ministry, in cooperation with universities and medical institutions throughout the country.

Researchers at RERF plan to ask several questions, including what jobs the workers did, when they performed them, and the location. Based on their responses, the researchers will estimate how much radiation each worker was exposed to.

The researchers will continuously conduct health checkups on the workers to determine the aftereffects of their exposure to radiation. The survey will continue until the deaths of the workers.

According to the health ministry, the upper limit of accumulated radiation each worker is exposed to at the nuclear plant had been determined to be 100 millisieverts in five years in conventional cases. During the period from March 14 to Dec. 16, 2011, however, the government raised the limit to 250 millisieverts so that workers could remain on the job for longer hours.

Of the 20,000 people who worked at the plant during the nine-month period, 174 were exposed to accumulated radiation of more than 100 millisieverts. Because of that, an experts' council of the ministry last year discussed the implementation of health surveys.

Of the 20,000 workers, about 2,000 currently reside in Fukushima Prefecture. As for these workers, the RERF plans to start health surveys as early as this month.

The predecessor of RERF is the Atomic Bomb Casualty Commission (ABCC), which was set up by the United States in 1947 to determine the health effects the atomic bombings of Hiroshima and Nagasaki in August 1945 had on survivors. As the successor to the organization, the RERF was jointly established by the governments of Japan and the United States in 1975.

Volunteers not covered

Radiation decontamination volunteers not supported by national gov't

http://mainichi.jp/english/english/newsselect/news/20150309p2a00m0na016000c.html

At least 30,000 volunteer workers have been involved in forays into areas in Fukushima Prefecture that fall under direct management of the national government due to high level of radiation, it has been learned from volunteer organizations.

These volunteer workers, who are not given any support by the national government for the management of their radiation levels, have engaged in decontamination work such as cutting grass over 2,500 times, efforts supposed be carried out by the government.

While the national government introduces volunteers to work in areas of relatively low radiation that are being decontaminated by municipal governments, it has little awareness of volunteer work in areas under its own direct jurisdiction.

Since April 2012, one volunteer group, "Minamisoma Volunteer Katsudo Center," has been operating mainly in Minamisoma's southern district of Odaka, which is an area under the national government's jurisdiction for radiation removal. The district was previously part of the 20-kilometer no-go zone set up around the Fukushima No. 1 Nuclear Power Plant, but in April 2012 had its entry restrictions loosened.

The group has recorded around 4,500 instances of its volunteer work, and around 32,000 people had been dispatched in the area by February 2014. Of these, the ones that constitute radioactive decontamination work include: cutting grass around 1,800 times, removing mud from ditches around 200 times, and cutting down trees around 500 times.

In decontamination work carried out by local and central governments, measurement and record-keeping of radiation levels are required by law, but for the work by the volunteer group, the center just measures the area beforehand, and if the radiation levels are high it makes the workers carry dosimeters.

In its guidelines for decontamination work, the Ministry of the Environment lists, in addition to grass-cutting, the cutting down or trimming of trees as effective ways to lower the radiation levels. In its instructions, however, the ministry advises that tree removal will generally not be done, and trimming will be limited to evergreens and only at up to four meters in height. The instructions say this trimming is done because rain and fallen leaves bring radiation from the branches to the ground, and the four-meter limit is for both reasons of safety and efficiency.

However, a 2013 test by the Fukushima Prefectural Government found that the removal of contaminated conifers cut radiation levels by 4 to 12 percent and removal of contaminated broad-leaf trees cut radiation levels by 11 to 21 percent. The center says that these results led to an increase in residents asking them to cut down trees around their houses.

According to the Environment Ministry, as of the end of January this year, 7 percent of homes in Odaka district and some neighboring areas had been decontaminated in work by the national government. Volunteers are helping to shoulder the rest of the burden.

In October 2013, the volunteer group "Soso Volunteer" was founded. Currently, it has around 130 registered members. The group has handled around 50 volunteer jobs, including around 30 in restricted areas. Those jobs included cleaning houses, retrieving property and cutting grass. The group says that it

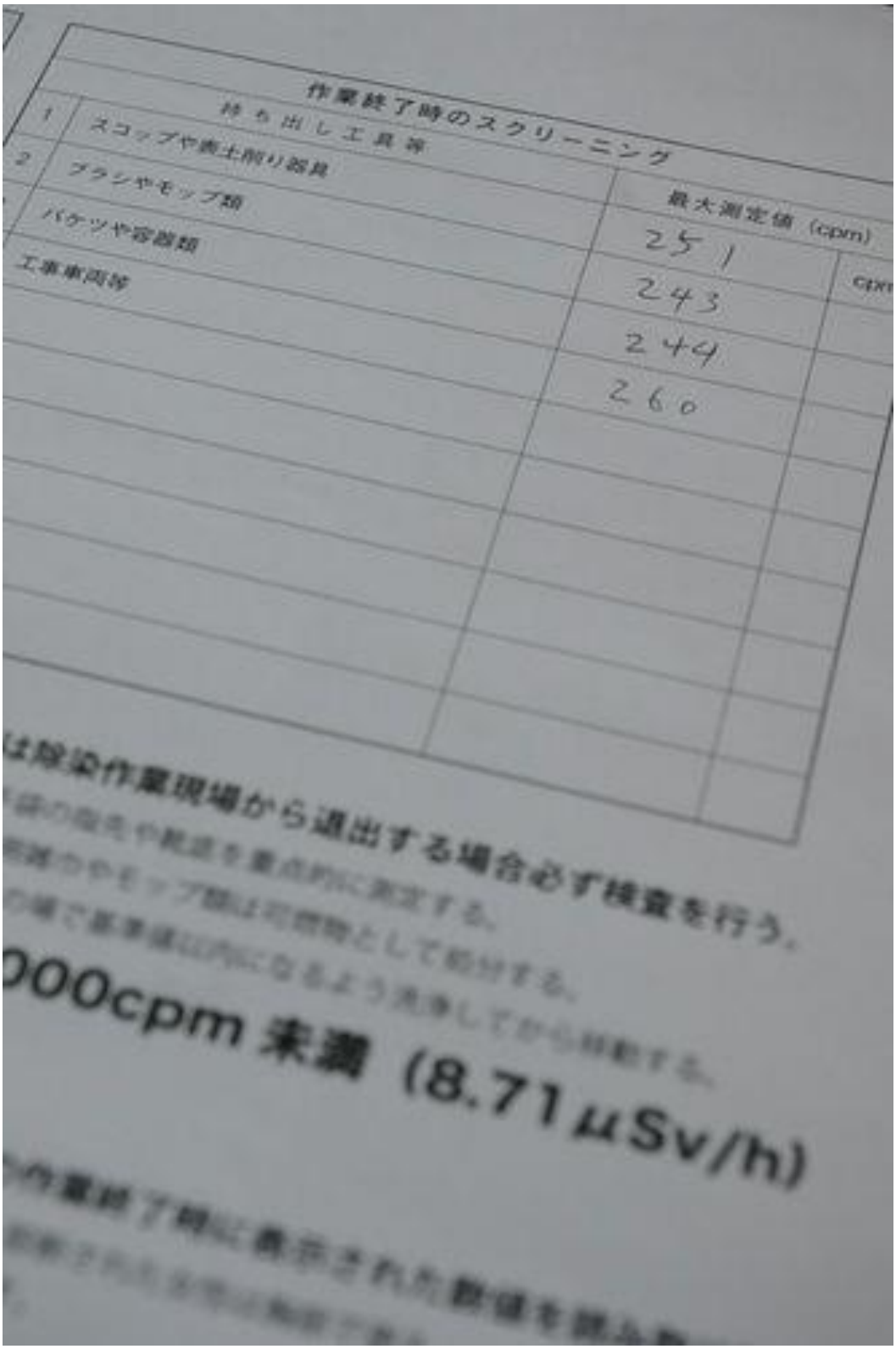
has been contacted for help by residents when moving companies have refused to enter the restricted areas.
Another volunteer group, Skilled Veterans Corps for Fukushima, has conducted radiation monitoring in restricted areas including the town of Naraha with around 200 workers.
According to the Ministry of Health, Labor and Welfare, volunteers are not covered by the Industrial Safety and Health Act, and therefore are not subject to the radiation safety limit of 50 millisieverts for one year and 100 millisieverts for five years. They also cannot receive accident compensation under the Industrial Accident Compensation Insurance Act. Furthermore, volunteer work insurance does not cover radiation exposure.
Regarding the volunteer work in Odaka, an official from the Environment Ministry's office for Fukushima Prefecture environmental rehabilitation commented, "We don't have detailed knowledge of it. The national government is proceeding with decontamination work in special areas marked for decontamination (such as Odaka district.)"

March 12, 2015

Radiation records without actual measurements

Problems remain in management of decontamination workers' radiation exposure

http://mainichi.jp/english/english/newsselect/news/20150312p2a00m0na006000c.html



A record shows radiation counts per minute for equipment removed from a decontamination site that the person in charge wrote without taking measurements. (Mainichi)

This year, around 10 workers were dispatched by the Fukushima Municipal Government to decontaminate part of the city. On their work reports, the figure 0.002 was repeated for each worker day after day. This was the "record" of their estimated radiation exposure in microsieverts per hour at the time they finished their work.

The repetition of figures was unveiled by a subcontractor in charge of work at the site.

"No actual measuring took place," he said. "I just wrote what the boss ordered, though I thought the figures were too low."

The subcontractor also disclosed that job equipment was not screened after the work was completed. Instead, he was just told to write a figure "between 180 and 260 cpm (counts per minute)," he says. Equipment cannot be removed from the site when the reading is 13,000 cpm or higher.

"The prime contractor also approved of the reports we submitted," he said.

Sloppy management at decontamination sites was not limited to radiation exposure readings. The man was also ordered to fabricate the effectiveness of decontamination work. Normally radioactive materials have to be carefully washed from the roofs and walls of homes with high-pressure sprayers, but instead they were just splashed with water. Furthermore, the readings of survey meters placed at other locations were used.

The man submitted photos outlining these actions to the prime contractor. A Fukushima Municipal Government representative commented, "We are visiting the sites and checking the work details and documentation," but added, "We haven't heard that any illicit activities took place."

In January 2012, the Industrial Safety and Health Act Regulation Concerning Prevention from Radiation Hazards Due to Ionizing Radiation came into force. It gave decontamination workers the same radiation exposure limits as nuclear power plant workers had (a maximum of 50 millisieverts per year and 100 millisieverts over five years). Employers must have their workers undergo special health checks, and they must record and preserve their radiation readings. But sloppy record-keeping is not the only obstacle to achieving thorough management of radiation levels. The existence of "decontamination gypsies" who travel from one site to another also plays a part.

At the time the regulation on ionizing radiation hazards came into effect, there was no centralized system for managing individual workers' total radiation exposure. As a result, it was hard to grasp the accumulated exposure of workers who moved from one site to another or who engaged in decontamination work after having taken part in efforts to bring the disaster at the Fukushima No. 1 Nuclear Power Plant under control.

In November 2013, major construction companies involved in prime contract joint ventures got together and built a uniform management system. The system called for workers' radiation dosages to be recorded in radiation management handbooks, just like those of workers at nuclear power plants. The same figures were also to be recorded in the central registration center for radiation workers at the Radiation Effects Association in Tokyo.

The system, however, is governed by private rules alone, and only covers workers involved in decontamination commissioned directly by the central government. Work by Fukushima and other municipalities, in which the level of radiation is deemed to be relatively low, is not included.

However, one 45-year-old man who has been at seven decontamination sites since October 2012 comments, "In decontamination by cities, towns and villages, there are areas where the radiation level is actually higher than the levels seen during decontamination managed directly by the central government."

There are so-called "microspots" where radiation levels are high even in areas being decontaminated by municipal governments.
The man says that at government-commissioned decontamination sites he has been to, radiation is now being managed properly, with dosimeters handed out to workers. But when it comes to locally commissioned decontamination work, he doesn't know how much radiation he has been exposed to, and he wonders what his accumulated dosage is.
The man set up a company with four workers in February last year. This enabled him to take on government-commissioned decontamination at the fourth tier of subcontracting. However, since his company does not meet the requirements established by the Ministry of the Environment for subcontracting firms, his workers ostensibly take on jobs as employees of the first-tier subcontractor. At decontamination sites there are many businesses like his one. Labor sharks also have a presence at these sites.
At sites with both true and ostensible employers on the scene, it is unclear who takes responsibility for management of radiation doses, the man has noticed.
"If they're not going to manage it properly, I want to show them that our company can do it," he said.
According to the Fukuoka branch of credit research company Teikoku Databank Ltd., nearly all of Fukushima Prefecture's 8,000 or so construction companies are thought to be involved in decontamination work. But cleaning and delivery companies also take part. In many cases, a company's head office is outside the prefecture, but it also has a branch within the prefecture. This makes it difficult to ascertain the actual number of businesses involved.
One 58-year-old man who applied to take part in decontamination work through the governmental Hello Work employment center came to Fukushima from Kyushu. He soon learned that the employer was assembling workers even though it had no prospect of securing contracts to perform decontamination work. He quickly found another business in Fukushima and worked at three decontamination sites. Last year he moved to a construction site in Kanagawa Prefecture.
"Decontamination has produced a temporary economic bubble, and all sorts of businesses have got in on it," he said. But it is not all good.
"I get looked at as if I'm doing something dirty, and I think I've had enough of it," he said.
According to the Ministry of the Environment and the Fukushima Prefectural Government, about 28,000 people per day were involved in decontamination work during the summer last year. This winter the figure reached about 20,000. The overall situation regarding radiation exposure remains unclear.

March 15, 2015

Not so easy to get workers to agree to participate in health survey

Only 35% of Fukushima nuclear plant workers agree to 1st round of health checks

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201503150018

By TAKESHI SUEZAKI/ Staff Writer

Only 35 percent of the targeted workers who tackled the Fukushima nuclear accident are willing to undergo a health check in a survey to determine the effects of their radiation exposure, a research institute reported March 14.

Experts with the Radiation Effects Research Foundation, which is conducting the survey, said at a meeting in Tokyo that the total of 704 who agreed is significantly smaller than the targeted 2,000 subjects, because many could not be reached.

Toshiteru Okubo, foundation chairman, stressed the importance of convincing the workers to participate in the health checks.

“It is not easy to determine their whereabouts," he said. "But we need to make an effort to convince them to join the survey."

The foundation, a Japan-U.S. institute based in Hiroshima and Nagasaki, plans to carry out the health survey of 2,000 workers who were mobilized to respond to the accident that unfolded at the Fukushima No. 1 nuclear power plant on March 11, 2011.

It is expected to get under way by the end of March, ahead of a check of 18,000 more such workers that will be launched in fiscal 2015, which starts in April.

In all, the foundation is seeking to survey 20,000 workers who were employed at the plant between March and December in 2011 on emergency tasks, including removing debris.

During that period, the government temporarily raised the limit of their radiation exposure to 250 millisieverts, from 100 millisieverts, to allow them to work longer periods in tackling the accident, triggered by the Great East Japan Earthquake and tsunami.

The survey is designed to determine whether the workers are developing health problems such as leukemia and other types of cancer throughout their lifetimes, with the foundation collaborating with health centers across the nation.

At the meeting, a health expert said of an inquiry sent to 5,466 workers in Fukushima Prefecture asking whether they intend to get a health checkup, 299 were returned due to an unknown address.

Such papers have been sent from January. The number of replies received stood at 1,071. Of these, 295 workers opted out of the survey.

Some cited a lack of compensation for taking time off from work for a health exam. Others replied that the health centers are not within easy access.

Many of the workers at the plant are employed by subcontractors, who hire them on a temporary basis from around the nation.

April 3, 2015

Working without being notified of risks

100 people worked near Fukushima nuclear plant without radiation knowledge

http://mainichi.jp/english/english/newsselect/news/20150403p2a00m0na015000c.html

A man holds a copy of his radiation control notebook, which does not mention his radiation dose from his work as a traffic patrol worker. (Mainichi)

Roughly 100 people worked in a former no-go zone near the crippled Fukushima No. 1 Nuclear Power Plant between December 2012 and March 2013 without knowledge that their work was subject to a special radiation dose limit, it has been learned.

The workers were employed by a contractor that secured jobs for them under a deal with the central government's Cabinet Office to monitor passing vehicles. Labor standards authorities ordered the contractor to correct its practices after the problem came to light.

The contractor says it had only about two weeks to begin work after winning the government contract, and did not have much time to check pertinent laws. The case highlights the central government's hasty approach in requesting such work -- without a sufficient preparatory period or explanation.

The Health, Labor and Welfare Ministry has asked both contractors and outsourcers to comply with legal requirements.

According to the Cabinet Office and other sources, the deal called on the contractor to assign 20 regular cars to the former no-go zone within 20 kilometers of the nuclear plant run by Tokyo Electric Power Co. to direct and monitor other motor vehicles. The Cabinet Office hastily asked a local taxi company to do the job after local governments were given permission to issue passes to local government officials and reconstruction workers in December 2012.

The taxi company, which had handled requests from local residents for temporary homecomings, procured regular vehicles and temporary workers to do the job.

However, the Tomioka Labor Standards Inspection Office was alerted by third parties about a possible violation of regulations for jobs other than decontamination work that are subject to special radiation limits. It launched an investigation and ordered the contractor in August last year to rectify the situation, pointing out that the job fell under the category of work in which people would be exposed to an air dose of over 2.5 microsieverts per hour.

Although the contractor independently monitored the traffic patrol workers' radiation exposure through their dosimeters, it did not check their respective radiation exposure records, conduct an 150-minute course on radiation effects on the human body and measurement methods, carry out advance research on air doses or issue dose records.
The contractor sent workers their radiation dose records after receiving the improvement order from the labor standards inspection office, but some of the records returned unopened because the workers had changed their addresses.
The Cabinet Office says the traffic patrol work has changed somewhat in content since April 2013, and another contractor is now engaged in tasks subject to the special radiation dose limit.
The health ministry's guidelines for jobs subject to the radiation limit say that an outsourcer can place an order after confirming that a contractor has in place a system to secure enough workers who have been educated to carry out the assignment.
The taxi company's president told the Mainichi Shimbun that his company barely managed to secure enough people and cars. The company, he said, is a novice when it comes to nuclear radiation. He said that the firm might have checked the special radiation dose regulations if there had been a longer preparatory period. The Cabinet Office says it has no clear-cut recollection of its request, but acknowledged that the request was urgent. It added it was not required to explain whether or not the job was subject to the special radiation dose limit because the contractor was primarily responsible for making judgments.
The health ministry declined comment on the specific case other than to say that it has urged outsourcers including the Cabinet Office and contractors to honor pertinent regulations.
A 63-year-old man who was a member of the vehicle patrol team says the central government should care more for people working in no-go zones.
The man was recruited after a suspension of decontamination work. He and other prospective workers assembled at an izakaya restaurant in Iwaki, Fukushima Prefecture, and were briefed in December 2012. They received explanations about granting motor vehicles passes and reporting suspicious vehicles, but were not notified about outdoor radiation levels.
On the evening of the following day, the man and another man got into a used car and set up four checkpoints along National Route 6 in the onetime no-go zone and checked passing vehicles from their car. The closest checkpoint was less than 2 kilometers from the nuclear plant, and they were scared as their dosimeters showed high levels of radiation.
The man learned about the special radiation dose limit last year and inquired with the Cabinet Office. He was told that the contractor said the job was not subject to radiation dose limits. He wanted to know his overall radiation dose because he had engaged in decontamination work in the past.
After the labor standards inspection office issued its order, he received his radiation dose record for his traffic patrol duty. It said his dosage was less than 1 millisievert.
"It's wrong to continue to work without advance notification of the risks," he said.

April 15, 2015

Clean-up workers' radiation exposure released

http://www3.nhk.or.jp/nhkworld/english/news/20150416_07.html

A survey shows that radiation exposure was below the legal limit for workers engaged in the decontamination effort after the Fukushima Daiichi accident in 2011.

The Radiation Effects Association gathers radiation data for people engaged in government-run projects of soil decontamination and radioactive waste disposal.

The association announced on Wednesday the results of the survey on more than 26,000 people who worked before 2014.

This is the first time exposure levels for workers in the decontamination effort have been made public.

Association officials said no worker's exposure reached the legal limit of 50 millisieverts a year.

They said the average exposure was 0.5 millisieverts a year.

They also said that in 2013, 14.6 percent of workers were exposed to an annual dose of more than one millisievert. One millisievert is the annual permissible level for the general public.

Health ministry officials said they will continue to supervise operators undertaking the work so that radiation exposure can be properly managed.

April 16, 2015

Nuclear decontamination workers: Within limit

Average radiation exposure of Fukushima decontamination workers within limit: gov't

http://mainichi.jp/english/english/newsselect/news/20150416p2a00m0na007000c.html

The average radiation exposure of workers removing radioactive contamination from the Fukushima nuclear disaster has been 0.5 millisieverts a year, according to an April 15 announcement from the Radiation Effects Association (REA), which is managing workers' radiation exposure.
It was the first release of such information from the REA, and it covered around 26,000 workers. The highest yearly radiation exposure for any of the workers was 13.9 millisieverts, and the Ministry of Health,

Labor and Welfare says, "We have been able to see that the health limit of 50 millisieverts of exposure per year was abided by."
The radiation exposure of decontamination workers is required to be recorded by ministry order, and businesses involved in the work have been registering their records with the REA. The data released by the REA covered areas including the special decontamination areas under direct management by the national government.
In the data, the highest average exposure for a yearly quarter was 0.8 millisieverts, for January through March in 2012. April through June that year saw an average of 0.4 millisieverts, and for the quarters afterwards up to December 2014, the averages were between 0.2 and 0.3 millisieverts. The number of decontamination workers covered by the data was 11,058 for 2011 and 2012, and 20,564 for 2013. The average yearly exposure for both the 2011 through 2012 period and for 2013 was 0.5 millisieverts per worker.
According to the Ministry of Health, Labor and Welfare, the average radiation exposure for nuclear plant workers not involved with the Fukushima cleanup is one millisievert, twice that of the decontamination workers.

Radiation exposure of cleanup workers around Fukushima plant well under safety ceiling

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201504160052

Cleanup crews around the crippled Fukushima No. 1 nuclear power plant were exposed to an average dose of 0.5 millisievert of radiation per year, well below the government safety standard, a report shows.
Released April 15 by the government-affiliated Radiation Effects Association, the report said the maximum dose for decontamination workers was 13.9 millisieverts per year, while the average dose was half the mean exposure level for ordinary nuclear plant workers of 1 millisievert.
Decontamination work is currently under way in broad areas near the Fukushima plant, which experienced a triple meltdown in the 2011 earthquake and tsunami disaster.
The association surveyed individuals who had been involved in state-led decontamination work between 2011 and 2013.
According to the report, no cleanup workers exceeded the health ministry's annual exposure limit of 50 millisieverts during the study period.
The report said 11,058 individuals were engaged in decontamination work around the Fukushima plant in 2011 and 2012. The highest exposure level of 13.9 millisieverts was detected during the period for one worker, with the average radiation dose being 0.5 millisievert.
In 2013, 20,564 people were engaged in the cleanup work and were exposed to a maximum radiation level of 6.7 millisieverts. The average exposure for 2013 was 0.5 millisievert per year.
The association also released preliminary readings for each quarter.
According to the data, cleanup crews received an average radiation dose of 0.8 millisievert between January and March 2012. The figure was relatively high compared with other quarters because the government conducted decontamination in areas with higher radiation levels on a trial basis during the period.

However, the health ministry said the number of workers surveyed is different from the total number of cleanup personnel reported by the Environment Ministry, which could mean the association failed to record radiation doses of all individuals working around the Fukushima plant.

Decontamination workers got up to 13.9 millisieverts of radiation

http://www.japantimes.co.jp/news/2015/04/16/national/science-health/fukushima-decontamination-workers-got-up-to-13-9-millisieverts-of-radiation/#.VS_qN5PwlLM

JIJI

The decontamination workers cleaning up the hot zone around the Fukushima No. 1 power plant received as much as 13.9 millisieverts of radiation from 2011 to 2013, well within government-mandated levels, the Radiation Effects Association said in its first report on the subject.

The average cumulative dose was 0.6 millisievert among the 26,382 workers tasked with decontaminating 11 municipalities in Fukushima Prefecture tainted by fallout from the March 2011 core meltdowns, said the association, which is in charge of managing their radiation exposure.

The Health, Labor and Welfare Ministry's present limit for decontamination workers is 50 millisieverts a year and 100 millisieverts over five years.

According to the association's tally, the cumulative radiation received by 22,015 workers, or 83.4 percent of the total, was 1 millisievert or lower, but 34 workers, or 0.1 percent, received a dose of over 10 millisieverts.

The association reported on Wednesday that a group of 6,037 people, or 22.9 percent, worked on different projects, with seven of them completing seven assignments. Their average radiation dose came to 2.6 millisieverts for workers who engaged in six different decontamination projects.

Exposure levels were higher for decontamination workers in municipalities in the northern part of Fukushima, including the village of Iitate and the city of Minamisoma, with the average in 2012 standing at 0.8 millisievert.

The number of decontamination workers in the northern municipalities was about half the number in the southern ones, including the village of Kawauchi.

Some 15.4 percent of the total in 2013 were aged 60 to 64. Most were men, with women only accounting for 2.6 percent.

Quarterly records show that the number of decontamination workers is climbing and totaled 17,988 in the July-September quarter of 2014, according to the association.

The average radiation dose peaked at 0.8 millisievert in January-March 2012 but leveled off to 0.2 to 0.3 millisievert after October-December 2012.

The association is commissioned to keep records of worker radiation doses in a database linked to general contractors and other companies that undertake the decontamination work. Since 2014, the database has covered at least 99 percent of the workers, according to the association.

Separately, a Fukushima Labor Bureau survey of 1,152 companies in charge of the decontamination work found some 800 violations of safety and sanitary regulations had been committed, including the failure to measure aerial radiation levels and have workers carry dosimeters.

If violations of labor regulations are included, nearly 70 percent of the companies committed violations, according to the bureau of the ministry.

According to the Environment Ministry, which is supervising the decontamination effort, some 12,000 people work on the cleanup every day. Work is complete in four of the 11 municipalities, and the ministry aims to finish the rest by March 2017.

April 17, 2015

Raising workers' exposure in cases of emergency

Experts propose raising exposure limit for workers

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

Japanese experts have proposed raising the radiation exposure limit for nuclear plant workers in the event of a severe accident.

An expert panel of the labor ministry came up with the proposal on Friday based on lessons from the Fukushima Daiichi nuclear accident in 2011.

During the nuclear crisis, many workers at the plant were exposed to radiation beyond the government limit of 100 millisieverts. It had to be temporarily raised to 250 millisieverts.

On Friday, the panel's report said the labor minister should be able to raise the limit up to 250 millisieverts in some emergencies.

These would include a serious nuclear accident in which local residents are exposed to radiation. An accident might also make a plant's radiation levels too high and thus workers could not get the job done if the 100-millisievert limit is maintained.

The proposal requires nuclear plant operators get prior consent from workers who might have to deal with such a situation.

It also requires the operators provide the workers with training on protective gear and other radiation precautions.

The labor ministry plans to revise regulations on worker safety based on the report.

April 18, 2015

Doubling workers' maximum dose

Health ministry proposes more than doubling radiation exposure limit

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201504180025

By TOMOYO FUKUMIYA/ Staff Writer

The health ministry recommends raising the maximum radiation-exposure limit for nuclear plant workers during an emergency from the current 100 millisieverts to 250 millisieverts.

The proposed figure, contained in a report completed April 17 by a panel of experts at the Ministry of Health, Labor and Welfare, would then be precisely half that of the 500-millisievert limit set by the International Atomic Energy Agency.

After the 2011 Fukushima nuclear disaster, the maximum limit of exposure in emergencies was temporarily raised to 250 millisieverts for workers at the plant as an exceptional measure. Nine months later it was returned to 100 millisieverts.

The health ministry began considering raising the maximum radiation exposure limit for workers at all nuclear plants to 250 millisieverts following a suggestion by the Nuclear Regulation Authority in December. The new limit will be rubber-stamped after being examined by two ministry committees.

Currently, the health ministry also sets the upper limit of cumulative radiation exposure at 100 millisieverts over a five-year period in nonemergency cases.

It instructs plant operators not to exceed this limit for workers even when the accumulated exposures in emergency and nonemergency cases are combined.

Gov't committee recommends more than doubling Fukushima plant workers' max radiation dose

http://mainichi.jp/english/english/newsselect/news/20150418p2a00m0na003000c.html

The maximum radiation dose for staff doing emergency work at the Fukushima No. 1 nuclear plant should be hiked from 100 millisieverts to 250 millisieverts, an expert government panel stated in an April 17 report.

The expert panel under the Ministry of Health, Labor and Welfare is charged with considering policy on the long-term health of workers at the Fukushima No. 1 plant, operated by Tokyo Electric Power Co.

The panel recommendations must undergo a public comment phase, as well as pass the ministry's labor policy and radiation committees before they are incorporated into official safety standards. The ministry is aiming to make the necessary revisions to anti-radiation damage regulations in autumn this year.

At present, regulations state that a worker can be exposed to a maximum level of 50 millisieverts of radiation per year, and 100 millisieverts over five years. This upper limit had been raised to 250 millisieverts for emergency workers at Fukushima No. 1 plant, though this was later repealed. The expert committee decided, however, that this higher limit was appropriate.

April 28, 2015

Workers get radioactive water on their faces

Plant workers splashed with radioactive water

http://www3.nhk.or.jp/nhkworld/english/news/20150429_02.html

It's been disclosed that 3 employees were accidentally splashed with radioactive water last week at a nuclear power plant in Shimane Prefecture, western Japan.

Officials at the plant's operator, Chugoku Electric Power Company, said on Tuesday that the workers do not have any health problems and radioactive substances did not leak outside the facility.

They say the workers had been using a pump to transfer contaminated water from a tank in the basement of the Shimane plant's number one reactor building on April 22nd.

They say a hose to the pump got unhooked, and the 3 employees were exposed to about 4 liters of radioactive water that splashed on their faces and legs. They say the radiation level of the water was one-tenth of the government's safety limit.

Company officials say they did not immediately announce the accident as the workers did not absorb any of the tainted water and the radiation level was not that high.

They say they will find the exact cause of the accident and work to prevent a recurrence.

April 30, 2015

More workers getting injured

More workers hurt in Fukushima Daiichi scrapping

http://www3.nhk.or.jp/nhkworld/english/news/20150501_04.html

More people are getting hurt working on decommissioning of the Fukushima Daiichi nuclear plant as the number of inexperienced employees increases.

Tokyo Electric Power Company says 63 people were injured and one died during the year through the

end of March. The death resulted from falling off a storage tank.

Six people were heavily injured. 42 people had light injuries. 15 people were hit by heatstroke.

The number of injured was twice that for the previous year. More than 70 percent of them had worked less than a year.

The number of plant workers doubled to about 7,000 a day compared to the figure a year before, due to the increasing construction of water storage tanks.

The utility plans to set up a training facility where people can learn how to work wearing full-face masks as well as several gloves at a time.

May 1, 2015

More workers getting injured (2)

Worker injuries double at Fukushima plant; TEPCO cites inexperience

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201505010037

One worker died and 63 others were injured in industrial accidents at the Fukushima No. 1 nuclear power plant in fiscal 2014, double the casualty figure from a year earlier, the plant operator said.
Tokyo Electric Power Co. said April 30 that about half of the injured workers in fiscal 2014 had worked at the crippled plant for less than six months, indicating that inexperience was a key factor behind the rise in labor accidents during decommissioning and other work.
TEPCO said 32 workers were involved in labor accidents at the plant in fiscal 2013.
The utility said it will improve training facilities and information-sharing mechanisms at the plant.
Six of the workers suffered serious injuries that prevented them from working for at least 14 days.
Another six were sidelined for between one and 13 days because of their injuries.
Overall, 15 workers suffered from heatstroke, 13 fell or stumbled, and 13 had mishaps with machinery and other equipment.
TEPCO pointed to an inability of its workers to learn from their experiences as a potential factor behind the increase in accidents. Company employees also failed to visit work sites on a sufficient number of occasions to supervise other workers, it said.

May 10, 2015

Increased number of workers exposed to higher doses

Fukushima No. 1 workers exposed to high radiation surged 1.5-fold in 2014

http://www.japantimes.co.jp/news/2015/05/10/national/fukushima-1-workers-high-radiation-doses-1-5-fold/#.VU-3iJPwmic

JIJI
The number of workers exposed to high radiation at the crippled Fukushima No. 1 power plant in fiscal 2014 has grown 1.5-fold from the year before, data from Tokyo Electric said Saturday.
A total of 992 workers, mostly those employed by subcontractors, saw their doses top 20 millisieverts in the year ended in March. The previous year, the number of workers with such high exposure levels stood at 660, according to the data.
Since the five-year radiation limit for Fukushima No. 1 workers is 100 millisieverts per person, many could be barred from working at the plant.
The yearly limit for decontamination workers stands at 50 millisieverts, according to the Health, Labor and Welfare Ministry.
Of those who topped the 20-millisievert level in 2014, only 11 are from Tepco, with 981 from subcontractors. The highest doses logged were 29.5 millisieverts among Tepco's staff and 39.85 millisieverts among the subcontractors.
The data also showed that 20,695 plant workers were exposed in fiscal 2014, with doses averaging 4.99 millisieverts. That's higher than the 14,746 exposed in the previous year, but lower in terms of dosage, which averaged 5.25 millisieverts in 2013.
The jump in exposures was partly attributable to an overall increase in workers at the plant since the previous year.
A public relations official at Tokyo Electric Power Co., which runs the meltdown-hit plant, said the amount of decontamination and debris-removal work in high-radiation zones there is also rising.

June 22, 2015

Risk of death from leukaemia increases with radiation doses

Thanks to Georges of the « Vivre après fukushima » blog for his article on this extremely interesting piece of information :

PRESS RELEASE N° 235

Even low doses of radiation increase risk of dying from leukaemia in nuclear workers, says IARC

http://www.vivre-apres-fukushima.fr/meme-a-de-faibles-doses-lexposition-aux-rayonnements-accroit-le-risque-de-deces-par-leucemie-chez-les-travailleurs-du-nucleaire/

Lyon, France, 22 June2015-
A study coordinated by the International Agency for Research on Cancer (IARC), the specialized cancer agency of the World Health Organization, shows that protracted exposure to low doses of ionizing radiationcan cause leukaemia. The study, published today in The Lancet Haematology, shows that the risk of death from leukaemia increases linearly with the radiation dose.

«*Ionising radiation and risk of death from leukaemia and lymphoma in radiation-monitored workers (INWORKS):an international cohort study*
This study provides strong evidence of positive associations between protracted low-dose radiation exposure and leukaemia.

Summary of the article in English :
http://dx.doi.org/10.1016/S2352-3026(15)00094-0

The complete article in English :
http://www.thelancet.com/journals/lanhae/article/PIIS2352-3026%2815%2900094-0/fulltext

June 30, 2015

New permissible radiation level for bus drivers and local officials

Gov't to raise maximum annual radiation exposure ahead of restart of nuclear reactors

http://mainichi.jp/english/english/newsselect/news/20150630p2a00m0na018000c.html

The government will raise the maximum permissible radiation dose for people including local government officials and bus drivers who will give evacuation guidance to local residents or transport materials in the event of a nuclear accident from the current 1 millisievert per year.
At the time of the outbreak of the crisis at the Fukushima No. 1 Nuclear Power Plant, efforts to evacuate and transport materials were hampered because a sufficient number of necessary people such as government staff were not secured for the local task force near the crippled nuclear power complex. The government plans to set a new standard for a permissible upper limit of radiation exposure in order to ensure steady and smooth evacuation of local residents as part of preparations ahead of a restart of idled nuclear reactors. But it is likely to raise concerns among local governments near nuclear power plants over whether they will be able to secure sufficient staffing numbers.
The government plans to set up a working group within the Cabinet Office as early as next month to start discussing a new standard. The new maximum permissible radiation dose will be applied mainly to local public servants other than police and fire department officials and local bus and truck drivers.

Under the scheme worked out by the then-Nuclear Safety Commission in 1999, those people who are supposed to guide local residents to evacuate, among other tasks, in the event of a nuclear accident are listed as "persons in charge of anti-disaster operations." Of such people, police and fire department officials as well as national public servants and other relevant personnel are allowed to be exposed to up to 100 millisieverts per year in emergency situations -- far higher than 1 millisievert set for ordinary residents. On the other hand, there is currently no special standard for a permissible upper limit for such people as local government officials and bus drivers and they are subject to the same standard as that for ordinary local residents even in emergency situations.

The working group to be established in the Cabinet Office will be comprised of seven experts including Nagasaki University Vice President Shunichi Yamashita. Apart from the Cabinet Office, the Health, Labor and Welfare Ministry and the nuclear regulatory agency, industry organizations such as the Nihon Bus Association will join the working group.

The working group will ascertain radiation doses to which workers such as local government officials were exposed while working outside the premises of the crippled Fukushima nuclear complex. Based on the findings, the Cabinet Office and the health ministry will set a specific maximum permissible radiation dose.

Currently, nuclear plant workers are allowed to be exposed to up to 100 millisieverts per year and decontamination workers 50 millisieverts per year. The then-Nuclear Safety Commission had held the view that the "appropriate" level of the permissible maximum radiation dose for "persons in charge of anti-disaster operations" was 50 millisieverts per year. But before the commission formally decided on the standard, the Fukushima nuclear accident occurred. A Cabinet Office official in charge said, "As it is possible that local officials and bus drivers will carry out their duty where radiation levels are relatively high, we need a new standard in order to provide effective evacuation guidance as well."

July 31, 2015

Radiation exposure limit more than doubled for workers in emergencies

Rows of tanks storing radiation-contaminated water occupy the compound of the Fukushima No. 1 nuclear power plant on July 28. (Eiji Hori)

Nuclear watchdog proposes raising maximum radiation dose to 250 millisieverts

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201507310057

By HIROMI KUMAI/ Staff Writer

Nuclear plant workers in Japan will be allowed to be exposed to more than twice the current level of radiation in emergency situations, according to the Nuclear Regulation Authority's Radiation Council.

The radiation exposure limit will be raised from the current 100 millisieverts to 250 millisieverts in emergencies, the radiation council announced in a report released July 30.

The higher level is still only half of the accepted international safety level of 500 millisieverts set by the International Commission on Radiological Protection, an influential independent organization that provides guidelines on radiation protection, for rescue workers in emergency situations at nuclear facilities.

The new cap will be activated from April 2016 after revisions to the nuclear reactor regulatory law and the Industrial Safety and Health Law.

The limit was temporarily raised to 250 millisieverts by the radiation council following the triple meltdown at the Fukushima No. 1 nuclear power plant triggered by the Great East Japan Earthquake and tsunami in March 2011.

The decision was quickly made by the council members through e-mail discussions as the 100 millisieverts limit could have caused a shortage of workers tackling the emergency at the plant. Later, the limit was returned to 100 millisieverts.
Under the revised law, the exposure limit for plant workers will be immediately raised to 250 millisieverts when certain conditions arise, including the risk of radioactive materials leaking from the facility into the surrounding area.
The workers affected will include employees of utility companies and their contractors, inspection officers from the Secretariat of the NRA and other on-field workers.
Of the 174 workers who were exposed to radiation doses more than 100 millisieverts following the Fukushima accident, six were exposed to 250 millisieverts or more.
The radiation council decided that workers are protected if they wear masks and other gear even when exposed to 250 millisieverts. The health damage from acute radiation poisoning below that limit is negligible, it said.
The council's report calls for nuclear plant operators to carefully explain to workers tackling emergency situations about their tasks and obtain their consent to work in such an environment.
It also requests utility companies to conduct proper training of workers, while one of the council members also called on them to conduct follow-up medical checks to detect cancer and other illnesses.
The report also acknowledges that nuclear plant workers could be required to engage in tasks that cause them to be exposed to more than 250 millisieverts in acute emergency situations.
At Kyushu Electric Power Co.'s Sendai nuclear power plant in Kagoshima Prefecture, which the company aims to restart in August, workers will carry out their tasks with an exposure limit of 100 millisieverts until the maximum limit is raised to 250 millisieverts.
A plant worker who has worked at nuclear facilities for 20 years said he suspects that workers from subcontractors will agree to work under the raised limit.
"The cancer checkups and other measures also sound to me as stopgap efforts to ease our anxiety," he said.

August 6, 2015

New limit for workers official

NRA OKs bill to raise exposure limit for workers

http://www3.nhk.or.jp/nhkworld/english/news/20150806_16.html

Japan's nuclear regulators have approved an amendment bill to raise the maximum radiation exposure for nuclear plant workers in emergencies.

The Nuclear Regulation Authority approved on Wednesday a limit up to 250 millisieverts in the event of a severe accident.

The revised bill stipulates that the government basically maintains the current limit of 100 millisieverts.

But it says the limit will be raised up to 250 millisieverts if there's a possibility that radioactive materials could disperse from a nuclear plant to outside of the facility compound.

The bill also requires nuclear plant operators get prior written consent from those who might work in emergencies. The operators must give workers prior education on the health impact of radiation and measures to prevent radiation exposure.

The Authority says it will check whether nuclear power companies are providing workers adequate education on the health risks.

The bill is expected to come into effect in April, 2016.

The approval came based on lessons from the Fukushima Daiichi nuclear plant's accident in 2011. In the accident, many workers were exposed to radiation beyond the government limit of 100 millisieverts.

The government had to temporarily raise the limit for workers to 250 millisieverts as an emergency measure.

August 8, 2015

Worker dies at Fukushima Daiichi

Fukushima nuclear plant worker dies in accident

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

A worker at the damaged Fukushima Daiichi nuclear plant has died in an accident.

The plant's operator, Tokyo Electric Power Company, and paramedics say the 52-year-old man was found stuck in the lid of a tanker on a large vacuum vehicle at around 6:30 a.m. on Saturday.

They say the worker had been employed by a subcontractor. He was taken to a hospital in the neighboring town of Hirono but was later confirmed dead.

TEPCO says he had been cleaning the vacuum vehicle when the accident happened.

The car is being used by workers building a wall of frozen soil around the nuclear complex to keep groundwater from seeping into the 4 reactor buildings.

The company says the man began working early in the morning to avoid scorching summer heat.

TEPCO says the accident took place at a soil storage site in the northern part of the plant's premises. It says it is investigating the cause of the accident.

Worker dies at Fuushima Daiichi (2)

Worker at wrecked Japan nuclear plant dies from head injury

TOKYO (AP) -- A worker at Japan's wrecked nuclear power plant has died after his head got stuck in a hatch on the back of a septic tank truck while inspecting the vehicle, the latest accident at a site still struggling with the cleanup of the 2011 Fukushima disaster.
The operator of the Fukushima Dai-ichi plant says the 52-year-old worker was pronounced dead at a nearby hospital after his colleague, who operated on the hatch from near a driver's compartment, found him slumped at the back of the vehicle Saturday.
The operator, Tokyo Electric Power Co., says the cause of the accident is unknown and police are investigating.
The plant's decades-long decommissioning involves thousands of workers. The number of injuries last year doubled from a year earlier.

August 9, 2015

Worker dies at Fukushima Daiichi (3)

Worker at wrecked Fukushima nuclear plant dies from head injury

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201508090018

THE ASSOCIATED PRESS
A worker at the crippled Fukushima No. 1 nuclear power plant died after the hatch at the back of a truck closed on his head on Aug. 8, the latest mishap at a complex still struggling with the cleanup from the 2011 disaster.
Tokyo Electric Power Co., operator of the plant, said the 52-year-old man was rushed to a nearby hospital but was pronounced dead soon after.
A man who was working with the victim told plant officials that he found him slumped at the back of a 7.9-meter-long tank truck used to transport underground water and dirt dug from a frozen wall construction site to a dump site, according to TEPCO.

The co-worker told company officials that minutes before the incident, the victim indicated to him that he had finished cleaning and inspecting the truck's tank and wanted him to close the hatch, TEPCO spokesman Shinichi Nakakuki said.
The co-worker said he then closed the hatch using a lever behind the driver's compartment. Officials said that he most likely could not see his partner at the back of the truck from that position.
The workers' full-face masks and helmets make it difficult to communicate.
There were no other workers present at the site of the incident.
TEPCO officials said they did not know why the victim could not escape when the hatch started coming down, or whether any screaming was heard.
Police are investigating the incident, said TEPCO, which did not disclose the victim's name.
The decades-long decommissioning of the plant, which was wrecked in the March 2011 earthquake and tsunami that devastated northeastern Japan, involves thousands of workers.
The number of accidents last year, including injuries and sickness, doubled to 64 from a year earlier. The death on Aug. 8, the second this year, occurred weeks after the government and TEPCO announced plans to slow down projects to improve safety. In January, a worker died after accidentally falling from atop a storage tank.
The two men involved in the latest incident were assigned to the truck used at the site where a frozen underground wall is being installed near highly contaminated reactor buildings, a project aimed at curbing a contaminated water problem hampering the decommissioning of the plant.

August 31, 2015

Press release from TEPCO

Evaluation of the exposure dose of workers at the Fukushima Daiichi Nuclear Power Station

http://www.tepco.co.jp/en/press/corp-com/release/2015/1259422_6844.html

TEPCO has been evaluating the exposure dose of workers at the Fukushima Daiichi Nuclear Power Station under two types, internal and external exposure to radiation, and has submitted the evaluation results to the Ministry of Health, Labour and Welfare by the submission deadlines. (Previously announced)
TEPCO today submitted to the Ministry of Health, Labour and Welfare a report on the exposure dose evaluation the data of which are those we collected until the end of July 2015. Here is part of the report: five hundred seven workers joined the workforce at the Fukushima Daiichi Nuclear Power Station in July 2015. The maximum value of the external exposure dose among the workers who engaged in the work of the power station in July 2015 was 10.72mSv, and regarding the internal exposure dose, no significant value was measured. The data about the exposure dose of "workers exposed to especially high radiation*" are provided separately from the data about those of other radiation workers.
The data of the exposure dose evaluation until the end of August 2015 will be reported to the Ministry of Health, Labour and Welfare by the end of September 2015.

* "Workers exposed to especially high radiation" means workers who are involved in operations in which they could be exposed to the emergency dose limit (100mSv), which is stipulated in "Ordinance on Prevention of Ionizing Radiation Hazards, Chapter 7." In more detail, they are workers engaged in the work to maintain the function of the reactor facility or the cooling facility to cool down the spent fuel tank in the reactor facility, the steam turbine and its related facilities or the surrounding area where the radiation doses exceed 0.1mSv/h. Or they are workers who would engage in keeping running the function to control or prevent the release of a large number of radioactive materials should it be likely to occur due to malfunction or damage of the reactor facility.

Exposure Dose distribution :
http://www.tepco.co.jp/en/press/corp-com/release/betu15_e/images/150831e0101.pdf

September 1, 2015

Ex-Fukushima No. 1 worker sues Tepco over cancer

http://www.japantimes.co.jp/news/2015/09/01/national/ex-fukushima-no-1-worker-sues-tepco-cancer/#.VeaVZJfwmic

JIJI
SAPPORO – A former worker at the Fukushima No. 1 power plant has filed a damages suit against Tokyo Electric Power Co. and others, claiming that he developed cancer due to exposure to radiation after the March 2011 nuclear disaster.
His lawyers said Tuesday the suit, filed in the Sapporo District Court, is the first litigation on causal relations between cancer and work to deal with the crisis.
The 57-year-old man is seeking a total of ¥65 million in damages from Tepco, contractor Taisei Corp. and its subcontractor.
According to his complaint, cancer was detected in his bladder in June 2012, in his stomach in March 2013 and in his sigmoid colon in May 2013 after he worked as a heavy equipment operator at Fukushima No. 1 between July and October 2011.
In August 2013, the man filed for workers accident compensation with the Tomioka Labor Standard Inspection Office in Fukushima Prefecture.
After the application was rejected in January this year, he requested that the Fukushima Prefectural Labor Bureau review the decision.
Records show that the man received a total of 56.41 millisieverts during his work at the power plant, but he claims to have been subjected to more than 100 millisieverts and says he sometimes worked without a dosimeter.
The government uses the 100-millisievert threshold to consider whether cancer has a causal link with radioactive exposure.
Tepco said it will respond sincerely after examining the lawsuit.

September 2, 2015

Ex-worker sues TEPCO over cancers

Former laborer sues TEPCO, blaming radioactive debris for his cancer

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201509020039

SAPPORO--A 57-year-old man is suing Tokyo Electric Power Co. and a contractor on grounds he developed multiple cancers from radiation exposure while performing cleanup work around the crippled Fukushima No. 1 nuclear power plant.

The lawsuit filed in the Sapporo District Court on Sept. 1 is seeking 65 million yen ($541,666) in damages.

According to the man's lawyers, it is the nation's first lawsuit to assert a correlation between the onset of cancer and radiation exposure stemming from work to contain the nuclear crisis that unfolded at the plant in March 2011 after the earthquake and tsunami disaster.

The lawsuit also names construction company Taisei Corp., which was contracted by the utility to help with the cleanup in which the plaintiff was involved, as well as other parties.

The man was involved in removing debris near the plant for about four months from July 2011, according to court documents.

In addition to directing heavy machinery via remote control, he operated heavy equipment and removed debris by hand at a site with high radiation readings.

He was diagnosed with bladder cancer in June 2012, stomach cancer in March 2013 and colon cancer in May of that year.

Records show that the man was exposed to 56.41 millisieverts of radiation during the four months he worked around the plant.

But the plaintiff argued that the total must have exceeded 100 millisieverts because he occasionally worked without a dosimeter to ensure that his radiation readings remained below the legal limit.

A dose of 100 millisieverts over a year is considered enough to raise the risk of cancer.

"We will respond to this suit in a sincere manner after we get more details about his claim," a TEPCO representative said.

Taisei Corp. said it will consider a response after receiving the court documents.

Former worker at Fukushima plant sues for damages after suffering cancer

http://mainichi.jp/english/english/newsselect/news/20150902p2a00m0na005000c.html

SAPPORO -- A former worker who removed debris at the disaster-hit Fukushima No. 1 Nuclear Power Plant and later developed cancer filed a suit against Tokyo Electric Power Co. (TEPCO) for damages at the Sapporo District Court on Sept. 1.

According to the 57-year-old's representatives, the lawsuit is the first one in the country to make accusations about the connection between working at the damaged nuclear plant and developing cancer.
The man worked at the plant from early July 2011, some four months after the disaster, until the end of October that year, doing work including the removal of debris using heavy machinery, according to the lawsuit papers and other sources.
The man says that he had been told that the work would be done by remote controlling the heavy machinery from inside a lead-covered control room, but he says that he also had to go outside and remove debris by hand in cases when machinery was unusable.
Officially, the man had 56.41 millisieverts of radiation exposure during the four months, already in excess of the legally-defined 50 millisievert yearly limit for nuclear plant workers during normal plant operations. He says that he was not wearing a dosimeter, however, and his real exposure was probably higher.
In June 2012 the man developed bladder cancer, in March 2013 he developed stomach cancer, and in May 2013 he developed colon cancer. The cancers occurred separately, not by spreading from each other.
The man is seeking around 54.72 million yen from TEPCO under the Act on Compensation for Nuclear Damage, as well as a combined 10 million yen from his employers during the plant work, Yamazaki Construction Co. and Taisei Corp.
TEPCO has commented, "We have not received the lawsuit papers yet, so we do not know the details, but we will respond sincerely."
In August 2013 the man applied with the Tomioka Labor Standards Inspection Office for workplace accident compensation, but in January this year he was denied. He says he is now applying with the Fukushima Labor Bureau.
In a press conference after the lawsuit was filed, lawyer Toru Takasaki, who is representing the man, said, "There are people who will have to work for decades doing dangerous duties to decommission the plant. We want to make it clear where responsibility lies and open a path to help the victims (of workplace accidents at the plant.)"

October 2, 2015

Workers needed where robot not good enough

TEPCO gets closer to robot probe of No.2 reactor

http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html

The operator of the crippled Fukushima Daiichi nuclear power plant has made progress toward a robot inspection of the interior of one of its reactors. Its workers **removed obstacles from the path to the containment vessel surrounding the reactor core.**

The operator, Tokyo Electric Power Company, plans to maneuver the robot to film molten nuclear fuel in the No.2 reactor for the first time. The reactor experienced a meltdown after the 2011 earthquake and tsunami.

The company had previously postponed its plan to run the robot probe in August as chunks of concrete were blocking the pipe to be used as an entry point for the robot. **The reactor site also had an extremely high radiation level of above 1,000 millisieverts per hour.**

The utility decided that clearing away the concrete blocks would be difficult by remote control. Instead, its workers started to remove them by operating, in turns, heavy machinery equipped with radiation-resistant steel plates. They completed the work on Thursday.

The company says the workers were exposed to up to 2.5 millisieverts of radiation during the removal operation.

Tokyo Electric says **it will take more than 2 months to decontaminate the area** and wants the robot probe in operation early next year. But the firm adds that it cannot set a specific schedule for the inspection as the cause of the high radiation level remains unknown.

October 20, 2015

First cancer case confirmed for nuclear worker

First cancer case confirmed from Fukushima cleanup

http://www3.nhk.or.jp/nhkworld/english/news/20151020_27.html

Japan's labor ministry has confirmed the first cancer case related to work at the Fukushima Daiichi nuclear plant.

The worker was involved in recovery and cleanup efforts at the plant after it suffered a meltdown in March 2011. He was in his late 30s at the time.

He has been diagnosed with leukemia and the ministry has approved workers' compensation. Radiation exposure has been linked to the onset of leukemia.

The plant's operator, Tokyo Electric Power Company, says **more than 44,000 people have been involved in the decommissioning work since the disaster.**

Ministry recognizes link between Fukushima nuclear worker's leukemia and radiation exposure for 1st time

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201510200086

By YURI OIWA/ Staff Writer

Acknowledging a link between leukemia and exposure to radiation from the nuclear accident, the health ministry has awarded workers' compensation to a former worker at the Fukushima No. 1 nuclear power plant for the first time.

The recipient is a 41-year-old resident of Kita-Kyushu in Fukuoka Prefecture, who formerly worked for Tokyo Electric Power Co.'s partner company, and was engaged in construction and welding operations near the No. 3 and No. 4 reactors of the crippled Fukushima plant between 2012 and 2013.

In January 2014, the worker was diagnosed as suffering from acute myelogenous leukemia. While he had been exposed to 16 millisieverts of radiation at the Fukushima facility by that time, he also received a dose of 4 millisieverts during a three-month periodic inspection of the Kyushu Electric Power Co.'s Genkai plant in 2012.

At the worker's request, the Labor Standards Inspection Office examined the extent of his radiation exposure and work records. It concluded the state should pay compensation insurance for his temporary disability and medical expenses, after consulting an expert panel of the health ministry about the issue.

According to government insurance standards for nuclear industry workers introduced in 1976, the government pays workers' compensation to those who are exposed to 5 millisieverts or higher levels of radiation annually and develop leukemia more than a year after they first engaged in work that could expose them to radiation.

In those cases, workers are eligible for insurance payments unless they are exposed to viruses and other factors that could cause leukemia.

The health ministry said eight people who have worked at the Fukushima plant since the 2011 accident have applied for workers' compensation after developing diseases that are said to be associated with radiation exposure.

In three of the eight cases, applicants were not granted compensation, while one worker later withdrew the application. The remaining three are now under consideration, and details of their applications have not been disclosed.

According to TEPCO, 21,000 of the 45,000 people who have worked at the Fukushima No. 1 nuclear plant since the disaster had been exposed to more than 5 millisieverts of radiation by the end of August. More than 9,000 workers have received a dose of 20 millisieverts or more, TEPCO said.

It is therefore expected that the number of applications for workers' compensation related to the Fukushima disaster will surge in the near future.

JP Gov admitted Fukushima worker's cancer from Fukushima accident for the first case

http://fukushima-diary.com/2015/10/jp-gov-admitted-fukushima-workers-cancer-from-fukushima-accident-for-the-first-case/

MHLW (Ministry of Health, Labour and Welfare) officially recognized a former Fukushima worker's leukemia to be caused by Fukushima accident. This is their first time to admit the connection between health effect and Fukushima accident.

This is a male nuclear worker (41), who was a subcontract worker of Tepco. He was involved in welding and construction near Reactor 3 and 4 in crippled Fukushima plant. The reported integral exposure dose

was 16 mSv from 2012 to 2013, and he was diagnosed with acute myelogenous leukemia in January of 2014.
The investigation committee of MHLW to consist of experts admitted the relationship with radioactive exposure from medical viewpoints.

http://next2ch.net/poverty/1445321098
http://www.2nn.jp/newsplus/1445318376/

Worker cancer case confirmed (2)

NUCLEAR WATCH : Fukushima Cancer Case

http://www3.nhk.or.jp/nhkworld/english/news/nuclearwatch/20151020.html

Japanese officials have confirmed the first diagnosis of cancer related to work at the Fukushima Daiichi nuclear plant. The Ministry of Labor made the announcement on Tuesday.
The male worker was involved in recovery and cleanup efforts after the meltdown in March 2011. He has been diagnosed with leukemia and the Ministry has approved a workers' compensation payout.
Radiation exposure has been linked to the onset of leukemia.
Officials at the plant's operator, Tokyo Electric Power Company, say more than 44,000 people have been involved in the decommissioning work since the disaster.

A case of industrial accident

Ex-Fukushima worker's leukemia certified as industrial accident

http://mainichi.jp/english/english/newsselect/news/20151020p2g00m0dm081000c.html

TOKYO (Kyodo) -- The health ministry certified a man with leukemia on Tuesday as having suffered an industrial accident and being entitled to benefits after he was exposed to radiation as a construction worker at the crippled Fukushima Daiichi nuclear power plant.

The man in his 40s has become the first person to receive the certification for developing the illness stemming from the triple reactor meltdowns at the complex in the wake of a powerful earthquake and tsunami on March 11, 2011.

He was involved in work to install covers for damaged reactor buildings at the plant between October 2012 and December 2013 before being diagnosed with leukemia, according to the ministry. He developed the disease while in his 30s.

"While the causal link between his exposure to radiation and his illness is unclear, we certified him from the standpoint of worker compensation," said an official of the Health, Labor and Welfare Ministry.

Workers who are injured or become ill due to work or commuting can receive benefits under the nation's Industrial Accident Compensation Insurance. To receive compensation, they must submit claims to a labor standards inspection office, which will examine and pass judgment on them.

For leukemia to be certified as an industrial accident caused by radiation exposure, a claimant must meet some requirements, such as being exposed to radiation of at least 5 millisieverts times the number of years of such exposure, and having developed the illness more than a year after they were first exposed to radiation.

In the aftermath of the nuclear disaster, plant operator Tokyo Electric Power Co. installed covers over the damaged reactor buildings to prevent the further dispersal of radioactive material.

Fukushima worker to get cancer compensation

http://www3.nhk.or.jp/nhkworld/english/news/20151020_34.html

Japan's labor ministry says it will provide compensation to a man confirmed to have developed cancer as a result of working at nuclear power plants including Fukushima Daiichi.

The man was in his late 30s when he worked from November 2011 to December 2013 at various nuclear plants. They include the Fukushima Daiichi plant that suffered a meltdown in March 2011.

The labor ministry says the man discovered he had the illness after quitting his job at Fukushima Daiichi. He applied for compensation granted to workers suffering from work-related illnesses.

The ministry decided to accept the application and notified him of the decision on Tuesday.
Ministry experts determined that he was likely to have contracted leukemia following cleanup work at Fukushima Daiichi. They found he had been exposed to a total of 19.8 millisieverts of radiation from his work at various plants. He was exposed to 15.7 millisieverts at the Fukushima plant.

Compensation is granted if a nuclear power plant worker has been exposed to annual radiation of 5 milliseverts and has developed cancer more than a year afterward.

Ministry officials say that so far, 13 nuclear plant workers have been granted compensation for work-related cancer. This is the first such case involving the Fukushima plant.

About 45,000 people have been involved in work at the Fukushima plant since the accident. More than 21,000 of them have been exposed to annual radiation levels of 5 millisieverts.

October 21, 2015

Fukushima worker's case setting a precedent?

Leukemia-stricken Fukushima welder hopes he is first of many granted workers' comp

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201510210076

By YURI OIWA/ Staff Writer
A welder who was the first worker to win compensation from the government after contracting leukemia following radiation exposure at the Fukushima No. 1 nuclear power plant hopes his victory will lead the way for similar cases.
“I was fortunate to be the first, and I hope that my case will give impetus for other nuclear plant workers who suffer from cancer to receive compensation,” said the man, 41, in an interview with The Asahi Shimbun. “If there are other people who worked at the Fukushima plant and became cancer patients, I hope they promptly get proper compensation.”
The health ministry announced Oct. 20 that it had awarded workers' compensation to the married father of three children, who was exposed to radiation at the plant in Fukushima Prefecture following the nuclear disaster triggered by the March 2011 earthquake and tsunami.
The man, who lives in Kita-Kyushu, Fukuoka Prefecture, formerly worked for Tokyo Electric Power Co.’s partner company, and was engaged in construction and welding activities near the No. 3 and No. 4 reactors of the crippled plant between 2012 and 2013.
He said he was notified by phone of the ministry’s decision to award compensation from an official at a labor standards inspection office on the morning of Oct. 20.

“I was relieved to hear the decision,” he said.
The man was first diagnosed as suffering from acute myelogenous leukemia during a checkup in January 2014, two weeks after he left the Fukushima plant.
While he had been exposed to 16 millisieverts of radiation at the Fukushima facility by that time, he also received a dose of 4 millisieverts during a three-month periodic inspection of the Kyushu Electric Power Co.’s Genkai plant in Saga Prefecture in 2012.
“Initially, I did not think the illness was caused by radiation exposure,” the man said.
At one time, he became critically ill from an infection as his immunity had deteriorated through the use of anticancer drugs. He said he desperately fought to stay alive because he was worried about his family's financial situation if it was deprived of its breadwinner.
His cancer is now in remission with it no longer being detectable by medical tests, but the possibility for a relapse remains. He has no idea when he can return to his welding job.
But the man emphasized he does not regret applying to work at the Fukushima plant.
“I decided to go to Fukushima hoping that I could make some contribution to the recovery of the disaster-stricken communities, and I have no regret over my decision,” he said.
He said he has heard about a case of another former worker who contracted leukemia after working for many years at nuclear power plants. That worker could not file an application for the government compensation as his company did not recognize a causal link between the disease and his job.
According to government insurance standards for nuclear industry workers introduced in 1976, the government pays compensation to workers who are exposed to 5 millisieverts or higher levels of radiation annually and develop leukemia more than a year after they first engaged in work that could expose them to radiation, if other factors can be excluded.
During a news conference on Oct. 20, the health ministry officials said the certification of compensation did not mean that a link between radiation exposure and effects on his health had been scientifically proved.
“Based on the spirit of workers’ compensation insurance, we gave consideration to his case from a standpoint that he should not miss compensation (he might be eligible for),” a ministry official said.
“We also took into account that the maximum permissible radiation dose for ordinary people was 5 millisieverts annually when it was introduced in 1976,” the official said.

October 26, 2015

38% emergency workers over 1 millisievert dose in March 2011

Survey: 38% of Fukushima emergency workers exposed to 1 millisievert in March 2011

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201510260046

Thirty-eight percent of emergency personnel who worked in the immediate aftermath of the Fukushima nuclear disaster received radiation doses exceeding the 1-millisievert annual safety level for ordinary people, a survey showed.
But none of 167 police officers and firefighters or the 2,800 members of the Self-Defense Forces surveyed received a dose of 100 millisieverts, the acceptable limit for nuclear plant employees and emergency workers.
In fact, the highest dose found in the survey was 10.8 millisieverts for an SDF serviceman, according to the Cabinet Office's survey released on Oct. 26.
The survey is the first to disclose the actual values of radiation exposure among those who worked outside the Fukushima No. 1 nuclear power plant after the Great East Japan Earthquake and tsunami struck the plant on March 11, 2011, a Cabinet Office official said.
The surveyed workers were engaged in evacuation, rescue and cargo transfer operations within 20 kilometers of the nuclear plant between March 12 and 31 that year.
According to the findings, 62 percent of the surveyed workers were exposed to less than 1 millisievert of radiation during the period.
Nineteen percent received a radiation dose of between 1 millisievert and 2 millisieverts, and 5 percent were exposed to 5 millisieverts or higher.
Those exposed to at least 5 millisieverts were all SDF personnel, whose work included dismantling off-site structures and setting up camp for other activities.
The Fukushima prefectural government has estimated the average radiation exposure level for local residents at 0.8 millisievert and a maximum dose of 25 millisieverts.
Employees of Tokyo Electric Power Co., operator of the nuclear plant, received an average dose of 21.57 millisieverts in March 2011, with one worker exposed to a maximum 670.36 millisieverts in the month.
Firefighters who dumped water on the site to cool the damaged reactors were exposed to up to 29.8 millisieverts of radiation, according to the measurements.

Over 1,000 workers around Fukushima plant exposed to radiation above 1 millisievert

http://mainichi.jp/english/english/newsselect/news/20151026p2a00m0na014000c.html

Nearly 40 percent of roughly 3,000 police officers, firefighters and members of the Self-Defense Forces (SDF) who helped rescue residents near the Fukushima No. 1 Nuclear Power Plant after the outbreak of the nuclear disaster in March 2011 were exposed to at least as much radiation in about 20 days as the yearly limit for ordinary citizens (1 millisievert), a government survey has found.
The cumulative limit for police officers, firefighters and SDF members working during an emergency is 100 millisieverts, and external radiation exposure of all workers fell under this level. The same upper exposure limit as ordinary citizens is applied to bus drivers and local government workers who joined police officers at the scene to guide evacuees, however -- and the latest survey results may influence future measures to protect workers.
While radiation exposure levels among people working on the grounds of the Fukushima No. 1 plant operated by Tokyo Electric Power Co. have been released in the past, the latest survey results mark the first time that radiation doses for those working around the plant have come to light.

The government decided to hold a working group meeting on Oct. 26 to consider how to lower radiation exposure among local government employees in the future by using the results of its survey.
The survey covered about 2,800 members of the Self-Defense Forces who worked within a 20-kilometer radius of the Fukushima No. 1 plant between March 12, 2011 -- the day after the outbreak of the disaster -- and March 31 of that year, along with roughly 170 police officers and firefighters. Their tasks included guiding evacuees, performing search and rescue operations, and transporting injured people. Since all of them were wearing full-body radiation suits and masks, their internal radiation exposure was presumed to be zero in the survey. Data was collected from individual dosimeters measuring external exposure.
The survey found that 62 percent of Self-Defense Force members received a dose of less than 1 millisievert of radiation, while the remaining 38 percent registered levels upwards of 1 millisievert. The highest figure was 10.8 millisieverts.
Among police officers and firefighters, 12 percent were exposed to a dose of 1 millisievert or more, while the maximum dose was 2.2 millisieverts. Overall, 36 percent received a dose of 1 millisievert or more.

December 24, 2015

More and more foreigners in decontamination jobs

Record 790,000 foreigners work in Japan, many tackling risky jobs

http://ajw.asahi.com/article/behind_news/social_affairs/AJ201512240039

Japan is increasingly depending on foreign workers to meet a shortfall in the domestic working population, but many of the jobs are menial or ones that nobody else wants.
Official figures show that a record 790,000 foreign nationals are now working in Japan, but the Japan Civil Liberties Union estimates there are more than 1 million.
According to the labor ministry, the number of working foreigners has increased by about 300,000 over a six-year period.
Many of them are doing jobs that most Japanese shun, such as decontamination work in Fukushima Prefecture stemming from the 2011 disaster at the Fukushima No. 1 nuclear power plant. Childcare, nursing care and caring for seniors, as well as work on construction sites, provide employment for many foreign nationals.
A 41-year-old Bolivian of Japanese descent spent the summer doing decontamination work in Iitate, Fukushima Prefecture. His main task was cutting grass along main roads.
He received 16,000 yen ($133) for an eight-hour shift.
The man came to Japan when he was 23 to find work and said the pay he received for the decontamination work was the highest he had seen in his 18 years in Japan.
Even though his wife was opposed, the man submitted an application for the decontamination work.
There were 10 people in his group, and four, including himself, were foreigners.
An executive with the worker dispatch company that recruits workers for the decontamination work said foreigners are used because of **a "lack of (Japanese) workers**."

Earlier this year, the company for the first time sent six foreigners to do decontamination work.
Previously, those in charge on site had cringed at using foreigners, citing concerns about possible accidents or other problems. However, from this year, no such restrictions on foreigners have been put in place.
An official with a major construction company said, "**With the Tokyo Olympics approaching, there will be an even greater shortage of workers, so there will likely be an increase in the number of foreigners doing decontamination work."**
While the Japanese-Bolivian man thought he was receiving good wages, the Environment Ministry had suggested to companies a wage standard of 25,000 yen a day for the work he was doing.
Moreover, there are unscrupulous companies that are not upfront about paying their workers.
The man at first did not receive about 289,000 yen that was due him for a month's work in August and September.
When he asked the worker dispatch company that hired him, the man was told, "A different construction company will pay you."
The man contacted the three other foreigners who had all worked with him and he learned they had not been paid as well.
The man was only told in November by the construction company that he would be paid after he consulted with a labor union.
Even with all those problems, the man said, "I want to do decontamination work again. I used to work at a car parts factory, but I was not treated like a human being there. It was different at the decontamination work site."
The 790,000 figure for foreign workers comes from statistics for 2014 compiled by the labor ministry.
However, because not all companies report on their foreign workers, the labor ministry number may only cover about 70 percent of the actual figure, according to Akira Hatate of the Japan Civil Liberties Union who is knowledgeable about issues related to foreign workers.
Hatate said that at least 1 million foreigners were already working in Japan.
With one estimate projecting a decrease of the Japanese working population by at least 20 million over the next 30 years, foreign workers will undoubtedly play an increasingly important role in the future.

December 28, 2015

Nuclear gypsies risking their lives to clean up Fukushima

Cole Mellino
The Fukushima nuclear disaster happened more than four years ago and yet Japan is still reeling from the impacts and spending billions of dollars to clean up what photographers and filmmakers who've entered the so-called "no go zone" have described as a "post-apocalyptic wasteland."
More than 100,000 people remain displaced from the disaster, and the Japanese government is still working to decontaminate the area, which it estimates will cost $50 billion. The people on the frontlines of

that cleanup are known by some as the “nuclear gypsies,” who are exposing themselves to dangerous amounts of radiation as they attempt to remove the nuclear waste.
Watch the “nuclear gypsies” risk their lives in this video from Seeker Stories**:**

The Nuclear Gypsies Risking Their Lives In Fukushima

https://www.youtube.com/watch?v=_Ng20Yl4j5Q

January 5, 2016

Underage workers to clean up Fukushima?

Labor shortage sucks underage workers into Fukushima nuclear cleanup

http://mainichi.jp/english/articles/20160105/p2a/00m/0na/016000c

It was the spring of 2015, and a 37-year-old construction company owner in Fukushima Prefecture got a call on his phone from an unknown number.
"Can you use me again?" the person on the other end said, the voice tugging at the man's memory. Ah, that's right. It was a young man who'd worked for him about two years before, doing decontamination work near the Fukushima No. 1 nuclear plant. The problem was, the worker had only been 17 at the time.
It was July 2013 when the man was arrested on suspicion of violating the Labor Standards Act, which states that it is illegal to assign dangerous work to anyone under the age of 18. Cleaning up a nuclear disaster zone certainly qualified. The then 17-year-old was one of four underage workers -- all aged 16 or 17 -- in the man's cleanup team, eventually bringing the police to his door.
At the time, the man was working for a construction firm owned by his foster father, leading decontamination teams in the field. He looked at his roster of workers, but saw no problems with the ages that went along with the names. The birthdays listed put all the workers safely above 18; they'd been falsified on the orders of the man's foster father. The man himself did not know this, and so was not indicted. His foster father, however, was arrested and found guilty of labor standards violations.
The formerly under-age worker on the phone, now 20, showed no signs he was upset over the events of 2013. The man told the youth that, if he was willing to work hard, he'd give him a shot at the man's firm, founded after the arrests about two years before.
The cleanup effort began in earnest in summer 2012, a little more than a year after the March 2011 triple-meltdown at the nuclear plant. Virtually the entire construction sector in Fukushima Prefecture became involved in the work, starting with major construction firms who actually took the work orders and then fed them into a vast trickle-down pyramid of subcontractors. The man's foster father's firm was one such subcontractor, taking work that had already been subcontracted three or four times already -- a practice that does not officially exist. With these hand-me-down contracts in hand, the foster father's firm recruited workers.
The 37-year-old man planned out the jobs and also spent a lot of time on-site, even in high radiation areas. His dosimeter beeped so relentlessly that it became just another background noise, and he began to ignore

it. He regularly took his mask off outside to drink, and walked into the vehicle serving as a break room -- an area that is supposed to be hermetically sealed from the outside air -- without changing out of his protective suit.

The man thought that some members of his team -- the four boys under 18 -- looked a little too young, and though he had doubts about the birthdays listed on the worker roster, he didn't investigate further. If the firm was found employing under-age workers, it would have to report the violation to the contractor above it, which could impact future orders. The man kept his suspicions to himself.

His July 2013 arrest apparently came after one of the boys submitted a complaint to authorities. At the time, the national government was offering regular nuclear cleanup workers per diem wages of between 21,700 yen and 25,000 yen. Once a work order had trickled down from the primary contractor through the layers of subcontractors, however, the workers actually on the ground never saw the full amount. The men in the 37-year-old's cleanup team were being paid less than a third the official wage. It seems the boy who reported the man had grown frustrated with his paycheck.

All the men on the team applied freely for the job. From his detention center cell, the man's foster father wrote him a letter saying, "We have to be very thorough when it comes to (worker) ages. I've learned a lot from this." The man also came to the realization that, as adults, they had to act responsibly.

Across Fukushima Prefecture, some 30,000 people go to work at decontamination sites every day. The companies, always short of workers, as well as the workers themselves have for the most part become numb to the dangers of radiation. Most of the underage workers at the man's foster father's firm said they wanted to stay on even after their employer's arrest. The Japanese Constitution urges caution on youth labor, but the reality on the ground is a far cry from the constitutional ideal.

Child and youth labor has a storied history in Japan. In the Meiji period, groups of child laborers in match and textile factories included kids under the age of 10. From 1911 on, the law was slowly updated to ban employment of children under 12, though loopholes for apprentice nursemaids and other jobs remained. The student mobilization of World War II saw children return to factories in large numbers, churning out weapons and ammunition for the war effort.

All this led to a ban on child exploitation being included in the postwar Constitution, while the minimum employment age was raised to 15 in the 1947 labor standards law, which also forbade dangerous work for anyone under 18.

The 37-year-old man himself joined the workforce as a teenager. His mother died when he was in the first grade, and he never knew his father. After his mother's death, his grandmother took him in and raised him, but she, too, passed away when he was 16. He dropped out of high school after just two months and became a construction worker. Looking around at other people his age spending their time enjoying themselves, he decided that the only way to win in life was with money and qualifications, and he threw himself into work.

In April last year, the man started his own company with seven employees. Among them was the young man who had called him. The 20-year-old, saying he wanted a high salary, went to work in the still evacuated town of Namie. The man told him the radiation was high in Namie, but his young employee said he didn't care. If the youngster was so keen, the man thought, he'd give him the work he wanted, as well as a monthly salary topping 300,000 yen. It was the most he could pay for a young worker.

The man's 17-year-old son quit a vocational school and also went into construction, working at a different firm than his father's. The boy isn't involved in the decontamination, but his company has been subcontracted to do many nuclear cleanup jobs, which worries his father. In the dying days of 2015, the man called up his son and told him he should become a painter. It didn't cost much to get into and he could start his own business relatively quickly. His son said he'd think about it.

February 18, 2016

Joint research center on radiation in Hiroshima

Research center to use atomic-bomb studies to rebuild Fukushima communities

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201602180036

By YOHEI IZUMIDA/ Staff Writer

Universities in Fukushima Prefecture and the atomic-bombed cities of Hiroshima and Nagasaki will deepen collaboration on radiation exposure studies and expand a research network to help rebuilding efforts around the stricken Fukushima nuclear plant.

Hiroshima University, Nagasaki University and Fukushima Medical University will establish a joint research center in Hiroshima in the 2016 academic year, which starts in April.

The education minister approved plans for the center last month, and the facility will be operated on government funds.

Hiroshima University and Nagasaki University both have core facilities that have conducted decades-long studies on radiation. The two schools have dispatched researchers to the Fukushima Medical University since April 2011 for studies on the health effects of the triple meltdown at the Fukushima No. 1 nuclear plant in March that year.

The three universities are expected to build research networks and expand cooperation at the new center.

"**The study of low-level radiation exposure is growing urgent,**" Mitsuo Ochi, president of Hiroshima University, said Feb. 17, when the university presidents signed the agreement to set up the center.

"We would like to fulfill our mission to contribute to Fukushima's rebuilding efforts based on the results of basic research conducted by our university."

The center will solicit research themes from across Japan in 10 areas, including assessments of the impact of low-level radiation doses on patients, development of methods to diagnose internal radiation exposure in patients, treatments of patients, and radiation protective agents.

Scientists who respond to the center's request are expected to work together with researchers of the three universities.

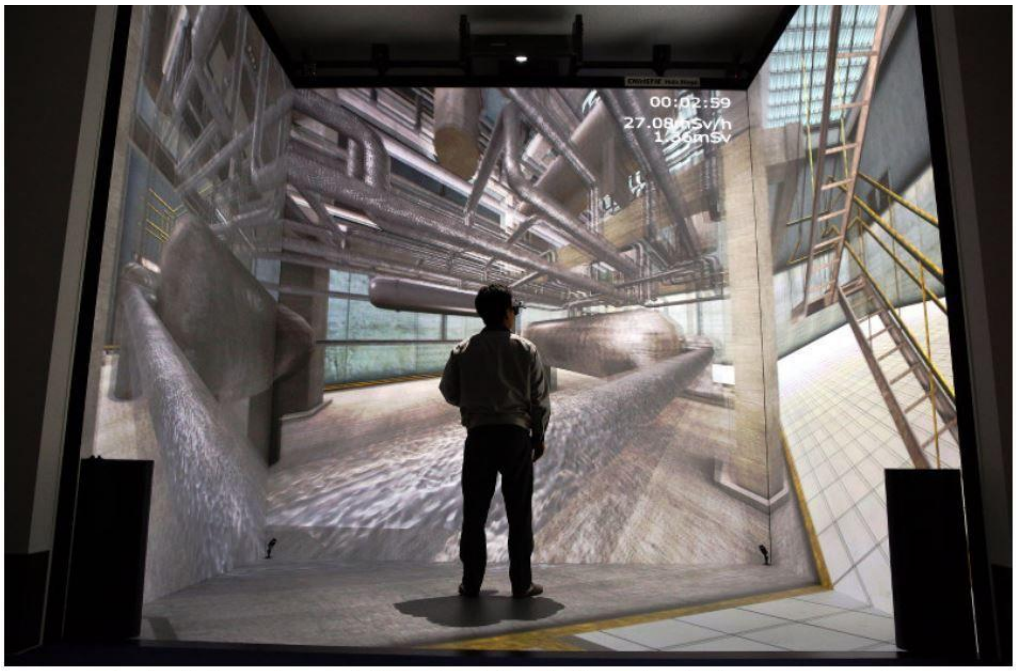
The research center is also expected to cooperate with the Fukushima prefectural government on a program that assesses possible correlations between diseases and radiation doses.

In addition, it plans to offer advice on training people who are tasked to provide health care to those exposed to radiation.

The project also envisages providing assistance for workers who are exposed to radiation levels beyond expectations during the decommissioning of the Fukushima No. 1 nuclear power plant.

February 21, 2016

Virtual reality to train nuclear workers



A virtual reality image of a reactor building at the stricken Fukushima nuclear plant is seen at Japan Atomic Energy Agency's Naraha Remote Technology Development Center in Naraha, Fukushima Prefecture. (Mainichi)

Nuclear plant workers to begin training in virtual reality reactor building in April

http://mainichi.jp/english/articles/20160221/p2a/00m/0na/002000c

NARAHA, Fukushima -- A virtual reality representation of the nuclear reactor buildings at the stricken Fukushima No. 1 Nuclear Power Plant is set to begin operation in April, for use in devising decommissioning plans and for plant workers to practice what they'll be doing once they're inside the actual reactor buildings.

Set up at the Naraha Remote Technology Development Center of the Japan Atomic Energy Agency (JAEA) in the Fukushima Prefecture town of Naraha, the system includes a 3.6-meter-high screen onto which the interior of a reactor building is projected. Specially made glasses allow the user to see the scene -- recreated based on the original design plans and data collected by robots sent inside the buildings by plant operator Tokyo Electric Power Co. -- in 3D. Users can experience walking up and down stairs and see dimly lit pipes throughout the building. Radiation levels and time spent "inside" are indicated at the top of the screen so that users can keep track of how much radiation they've been virtually "exposed" to.

"If plant workers train in this virtual reality environment before they actually go into the reactor buildings, we anticipate that their work inside the plant will go a lot more smoothly," a representative for the center said.
The decommissioning process for the nuclear plant is expected to take 30 to 40 years.

February 24, 2016

Convenience store at Fukushima plant

Lawson to open store at crippled Fukushima No. 1 nuclear plant

http://www.japantimes.co.jp/news/2016/02/24/business/lawson-open-store-crippled-fukushima-no-1-nuclear-plant/#.Vs1eLuaDmos

Kyodo
Lawson Inc. will open a convenience store at the Fukushima No. 1 nuclear complex where decommissioning work is underway following the 2011 tsunami-triggered disaster there, sources said Tuesday.
From March 1, the store will be open from early morning to the evening, selling groceries typically found in regular convenience stores, but not alcoholic beverages and food items such as fried food, which needs to be cooked in store, they said.
The decision comes after the plant's operator, Tokyo Electric Power Co., asked major convenience store operators to open a store on the plant's premises as part of measures to improve working conditions for people involved in decommissioning and other work there.
The Lawson store will be set up in the rest house built last year near the plant's front gate.

February 25, 2016

Protective gear not so necessary any more?

Less protective gear at Fukushima Daiichi

http://www3.nhk.or.jp/nhkworld/en/news/20160225_02/

Progress with decontamination work at the crippled Fukushima Daiichi nuclear plant means a uniform change of sorts for some of its workers. The plant's operator will let them work on decommissioning the facility without wearing protective gear in areas of low radiation.

The earthquake and tsunami almost 5 years ago devastated the plant in northeastern Japan.
Tokyo Electric Power Company has required workers decommissioning the facility to wear protective gear and 2 pairs of gloves. This can hinder movement and prevent precision work from being performed.

NHK has learned that TEPCO officials will widen the area where work can be done without protective gear starting next month.

The source close to the company told NHK that the decision came after they found out that they managed to lower the radiation level of the area.

Radiation decreased after TEPCO removed contaminated soil and put down pavement at the plant.

March 2, 2016

Ichiefu

Manga artist and ex-Fukushima No. 1 worker portrays life, progress at troubled plant

http://www.japantimes.co.jp/news/2016/03/02/national/manga-artist-ex-fukushima-no-1-worker-portrays-life-progress-troubled-plant/#.VtdNl-aDlLN

by Satoshi Iizuka
Kyodo

A manga artist who has been involved in decommissioning work at the disaster-hit Fukushima No. 1 nuclear plant has highlighted the need for effective deployment of skilled workers in parts of the premises that still have high radiation levels.
Kazuto Tatsuta, 51, also said in a recent interview that he feels progress has been made since the Tokyo Electric Power Co. complex suffered triple meltdowns after the March 11, 2011 quake and tsunami disaster in an operation that will take decades.
"It is not hard to collect a large number of ordinary workers, but lower wages resulting from multilayered (subcontractors) is a problem that could, in severely bad cases, have an impact on their motivation," Tatsuta said, noting that about 7,000 people work at the plant every day.
Tatsuta, who uses a pen name for fear of being prevented from working at the plant again, commuted to the complex intermittently between June 2012 and November 2014 to engage in such work as managing rest stations for other workers, plumbing within the reactor 3 building and taking care of robots operating within the units.
His manga stories "Ichiefu" ("1F"), published by Kodansha Ltd., portray the ordinary lives and attitudes of workers at the complex. For example, they were irritated by itchy noses as a result of wearing full face masks and were more afraid of the heat in summer than of radiation.

Ichiefu is an abbreviation for the Fukushima No. 1 nuclear plant commonly used among local people and those related to the industry.
Tatsuta, who has frequently changed jobs since graduating from university, said work at the Fukushima plant is by no means lucrative. “Initially, I didn’t aim to work in 1F. After seeking a job in disaster-hit areas including Miyagi or Iwate, I just found one at the nuclear plant.”
But he said, “The construction company I worked for was a sixth subcontractor (of Tepco) and the salary was no different from that for ordinary work. My dream of making a lot of money in a short period was (dashed).”
His pay started at ¥8,000 (about $70) a day working in the rest houses, and rose to ¥20,000 per day for work within the reactor buildings.
His three-volume book series depicts workers from all across Japan having to bear their own living costs in uncomfortable lodgings before work is officially allocated, or not receiving any pay when accidents or other problems cause operations at the plant to be abruptly suspended.
Tatsuta also noted the need for experts, in addition to ordinary workers. “In order to get experts who have experience and skills relating to nuclear plants to work as long as possible, the management of radiation is crucial,” he said. “The longer these workers are exposed to radiation, the shorter they are able to stay in higher dose places.”
Measures against radiation, including decontamination of such areas and the setting up of protective barriers around them, are essential, he said.
Ahead of the fifth anniversary of the nuclear crisis, many media outlets were allowed to enter the premises to report on the current situation at the plant.
“A big development is that workers are able to move around (wide ares of the) premises without full face masks,” said Tatsuta, having seen photos in a newspaper. Currently, people can work with masks that cover only half their face in about 90 percent of the premises, except for areas around the stricken reactors.
The media tend to report that reconstruction of the disaster-hit area is still only halfway done. But Tatsuta called on readers to focus on the things that are progressing, albeit little by little.
Within the Fukushima complex, the completion of a frozen underground wall to prevent radioactive water from accumulating further and the piling up of around 1,000 tanks to store processed contaminated water are indications of the significant progress made since Tatsuta left 1F, he said, though admitting there was still considerable work to be done.
“Ichiefu” features ordinary middle-aged men who take naps while waiting for their colleagues to finish their jobs, chat cheerfully with their co-workers or play pachinko in their free time.
“Some people viewed us as heroes, saying ‘Thank you very much on behalf of Japan and the world.’ Others felt very sorry for us, saying ‘You were treated like slaves in dangerous working conditions.’ But I want to say that neither of these views is correct. I’d like readers to understand that to some extent.
“As one of those workers, I wanted to describe the gap between what the public thought and what I saw inside. ‘Ichiefu’ is . . . like my diary, but I am pleased if it has resulted in showing the workers’ real lives.”
Tatsuta, who describes himself as a cartoonist who doesn’t sell well, was careful not to indicate his own political views on the government’s nuclear policies for fear that this would make his work seem biased.
“I neither agree nor disagree with the restart of nuclear plants, although I am frequently asked that question,” he said.
Having made its debut in a weekly magazine in October 2013, some 350,000 copies of “Ichiefu” have now been printed in Japan. It has also hit the shelves in Taiwan, with French, Spanish, German and Italian versions being published soon.

Tatsuta now calls Fukushima his “second hometown” as a result of the connections he made while living and working there, and said, “I hope to work there for the rest of my life, if possible.”
But he has had no chance to work at the complex since December 2014, and sometimes suspects that because Tepco or one of its subcontractors has discovered his identity as the author of the manga series, he is unable to return there.
“It can’t be helped. I have been prepared for that from the beginning,” he said. “But once I became involved (in 1F), I began looking forward and I am closely observing how it will be cleaned up. It can’t turn any worse from now.”
Tatsuta is currently working on a manga story for an upcoming book on the decommissioning of the Fukushima plant co-authored by Hiroshi Kainuma, a Fukushima-born sociologist.

March 7, 2016

32,000 Fukushima workers exposed to more than 5mS

32,000 workers at Fukushima No. 1 got high radiation dose, Tepco data show

http://www.japantimes.co.jp/news/2016/03/07/national/science-health/32000-fukushima-no-1-workers-got-high-radiation-dose-tepco-data-show/#.Vt2YDuaDmot

JIJI
A total of 32,760 workers at the Fukushima No. 1 nuclear plant had an annual radiation dose exceeding 5 millisieverts as of the end of January, according to an analysis of Tokyo Electric Power Co. data.
A reading of 5 millisieverts is one of the thresholds of whether nuclear plant workers suffering from leukemia can be eligible for compensation benefits for work-related injuries and illnesses.
Of those workers, 174 had a cumulative radiation dose of more than 100 millisieverts, a level considered to raise the risk of dying after developing cancer by 0.5 percent. Most of the exposure appears to have stemmed from work just after the start of the crisis on March 11, 2011.
The highest reading was 678.8 millisieverts.
Overall, a total of 46,490 workers were exposed to radiation, with the average at 12.7 millisieverts.
The number of workers with an annual dose of over 5 millisieverts increased 34 percent from fiscal 2013 to 6,600 in fiscal 2014, when workloads grew to address the increase in radiation-tainted water at the plant. The number was at 4,223 in the first 10 months of fiscal 2015, which ends this month, on track to mark an annual decline.
A labor standards supervision office in Fukushima Prefecture last October accepted a claim for workers compensation by a man who developed leukemia after working at the plant, the first recognition of cancer linked to work after the meltdowns as a work-related illness. Similar compensation claims have been rejected in three cases so far, according to the labor ministry.
The average radiation dose was higher among Tepco workers at the plant than among workers from subcontractors in fiscal 2010 and 2011. Starting in fiscal 2012, the reading was higher among subcontractor workers than among Tepco workers.

The average dose for subcontractor workers was 1.7 times the level of Tepco workers in fiscal 2013, 2.3 times in fiscal 2014 and 2.5 times in fiscal 2015 as of the end of January.
A separate analysis of data from the Nuclear Regulation Authority showed that the average radiation dose of workers at 15 nuclear power plants across the country, excluding the Fukushima No. 1 and No. 2 plants, fell to 0.22 millisievert in fiscal 2014, when none of the plants was in operation, down 78 percent from 0.99 millisievert in fiscal 2010.

But who is going to do the work?

5 years after disaster, reactor decommissioning faces troubling shortage of workers

http://mainichi.jp/english/articles/20160307/p2a/00m/0na/020000c

A total of 21 companies involved with the decommissioning of reactors at the Fukushima No. 1 Nuclear Power Plant -- half of the firms that responded to a survey conducted by the Mainichi Shimbun -- revealed that they are facing concerns due to an insufficient number of employees for the work.
The risk of radiation exposure from the decommissioning work means that the companies are having trouble attracting young people, with the ongoing aging of the population pointing toward a possible hollowing-out with respect to the technical abilities of the workforce in this regard. This could mean that the problem of securing workers will become an ongoing problem that would result in a delay of reactor decommissioning -- which could in turn hinder local reconstruction efforts.
At the administrative building located at the nuclear plant's point of entrance and exit, workers are routinely met with a greeting of "Please be safe" as they come and go in order to encourage them to fulfill their tasks without any incidents occurring.
While the plant was known immediately after the nuclear accident as a disaster zone, now -- five years later -- a sense of calm has been restored. The radiation exposure risks and the aging of employees, however, have meant that problems continue to plague the workplace environment.
The survey was sent to a total of 246 companies connected to the reactor decommissioning work, including prime contractors, as well as additional firms whose names were included in construction work-related approval and licensing documents that were submitted to Fukushima Prefecture and other local government offices. Responses were received from 42 companies, or around 20 percent of the total number contacted.
Asked whether they had a sufficient number of employees, 21 firms responded either "No, we have an insufficient number of employees," or "Basically speaking, we have an insufficient number of employees" -- a figure eclipsing the 20 firms that responded, "We have a sufficient number of employees," or "Basically speaking, we have a sufficient number of employees."
Asked to name the reasons for the insufficiency (with multiple responses allowed), the answer with the highest number of responses was "Numerous employees are leaving the company due to retirement, and young people are not coming (to take their place)," at 10 firms. The second- and third-highest answers, respectively, were "it's difficult to pass down the (required) technical skills," at seven firms; and "the number of aspiring employees is decreasing due to the high radiation levels," at six firms.
"Although people respond when we announce job openings, they do not have the necessary qualifications -- such as being able to hoist and lower suspended loads," commented the 52-year-old president of a

construction firm in the Fukushima prefectural city of Iwaki that is contracted by the nuclear plant for reactor decommissioning-related work.
The firm in question is mostly contracted for on-site work where radiation levels are high. When the government-set figures of 50 millisieverts per year and 100 millisieverts per every five years are exceeded, on-site work is not permitted -- and the company must therefore compensate by hiring extra employees.
Because qualified individuals are not available, however, the firm contracts with another company -- resulting in a situation whereby its labor insufficiency is filled by hiring the other firm's employees as its own. This practice, which is known as fake subcontracting, runs the risk of infringing the Worker Dispatch Law and other regulations.
"We are aware that this is illegal," the company president notes, "but everyone still does it."
According to a worker survey conducted by the Tokyo Electric Power Co. (TEPCO), which operates the Fukushima No. 1 Nuclear Power Plant, some 20 percent of all workers at the plant had been hired via fake subcontracting. And while TEPCO asks its business affiliates to comply with the law, it does not appear that this is a situation that is set to improve.
"With reactor decommissioning set to be entering its most crucial stage, the national government should be taking the initiative to put measures in place that are aimed at securing workers for this purpose," points out Kazumitsu Nawata, a professor of econometrics at the University of Tokyo who is well-versed in the situation facing the nuclear plant workers.
In assessing the future prospects for the reactor decommissioning work, which is likely to go on for several decades, a matter exists beyond that of securing new laborers that is an additional cause for concern: the problem of workers' exposure to radiation.
The estimated average monthly radiation exposure of workers was 32 millisieverts immediately following the nuclear accident, and has presently decreased to 0.44 millisieverts. No longer is there a need to wear full-face masks, which made breathing difficult.
Between the disaster and January 2016, however, the number of workers whose yearly radiation exposure level was greater than 5 millisieverts -- a figure that the Ministry of Health, Labor and Welfare utilizes as a criteria when determining the recognition of workers' compensation in cases of leukemia -- was around 20,000 among the total of 42,000 workers.
When irradiated fuel from the spent nuclear fuel pools begins to be transported, moreover, there is a possibility that the dosage in this regard will increase even further.
A 23-year-old male worker from the city of Iwaki who was responsible for removing radioactively-contaminated vehicles that had been left on the premises of the nuclear plant said that he was surprised when the figures on his dosimeter began increasing immediately.
"I do not know what effects (this work) will have upon my body in 30 years," he commented. "I do not want to do work involving high doses (of radiation)."
Also troubling are the effects of the withdrawal of seasoned workers from the field. According to TEPCO, veteran employees in their 50s or older comprise 45 percent of all total workers. With reactor decommissioning work -- including the collection of melted nuclear fuel -- expected to enter its main phase in 2021, it is possible that the continuing loss of experienced workers will lead to a situation characterized by a reduction in both human resources and technology.
"I will never again return to 1F (the Fukushima No. 1 Nuclear Power Plant)," asserted Yuji Takagi, 53, a former nuclear plant worker from the city of Iwaki.
Takagi, a veteran employee since the time prior to the nuclear disaster whose work included helping to measure the number of neutrons directly underneath the nuclear reactors, explained that with the sudden

increase in the number of tank and other construction projects taking place following the accident, there was also a rising number of employees who were inexperienced with working at nuclear power plants. As a result, Takagi felt like there was a mismatch wherein he was unable to utilize his job experience. "If you do not understand the inner structure of nuclear plants, there will be problems with reactor decommissioning," he commented, adding, "Know-how is indispensable."
The system is comprised of a pyramid-like structure, whereby TEPCO and major general contractors -- which serve as the original contractors at its peak -- contract out work to the other companies that are fanned out beneath them. With work consequently compartmentalized, then, it accordingly becomes increasingly difficult to utilize employees' expertise.
"The structure of subcontracting results in decreasing profits for lower-level companies, who are additionally burdened with taking up the slack (of companies further up on the pyramid)," commented Professor Nawata. "A mechanism is necessary to improve this treatment."
Also involved with the reactor decommissioning work are numerous local residents of Fukushima Prefecture who are themselves victims of the disaster.
A 51-year-old worker from Futaba County who is responsible for analyzing contaminated water at TEPCO-owned facilities on the premises of the plant commented, "My work plays only a small part, but analysis of the contaminated water is an indispensable part of the reactor decommissioning process." The worker added, "I am happy to be of service to Fukushima Prefecture, as well as to the next generation."
The feared scarcity of workers, then, has also resulted in a situation of dependence upon Fukushima workers to fill this employment need that exists within the reactor decommissioning sector.

March 10, 2016

Such confusion (cooling or not cooling?)

TEPCO: Accident info was not shared among workers

http://www3.nhk.or.jp/nhkworld/en/news/20160310_38/

A survey by the operator of the damaged Fukushima nuclear plant shows that information on a cooling system at one of the reactors was not shared by plant workers at the time of the 2011 accident.

Meltdowns took place at 3 of the plant's reactors, starting with the No.1 unit. The complete loss of power at that reactor stopped all of its cooling systems.

Surveys in the year after the accident by the government, Diet, and Tokyo Electric Power Company showed that staff at the reactor did not know whether an emergency cooling system was functioning after an indicator lamp went off following the loss of power.

Different findings were obtained in a survey carried out last year by TEPCO.

One worker said he himself stopped the cooling system just before the loss of power. Another said he thought the system had not been functioning, because pressure inside the reactor was rising after the power went out.

The manager on duty at the time said he had no memory of being informed that the complete loss of power had shut down the system.

Just before the loss of power, the system was turned on and off to cool the reactor in stages.

TEPCO officials say reactor staff may have failed to share important information on the status of the cooling system amid confusion over the loss of power.

A later analysis shows that the meltdown started at the No.1 reactor in the evening of March 11th, the day of the accident.

But members of a task force set up that day believed that the cooling system was working until midnight. They included then plant chief Masao Yoshida.

The 2015 findings suggest that the delay in sharing the correct information may have affected the response to the accident.

March 11, 2016

"Decontamination troops" without a name

Fukushima 'decontamination troops' often exploited, shunned

In this Feb. 24, 2016 photo, workers clean radioactive soils and plants at a private house's garden in Minamisoma, Fukushima Prefecture, northeastern Japan. (AP Photo/Shizuo Kambayashi)

MINAMISOMA, Japan (AP) -- The ashes of half a dozen unidentified laborers ended up at a Buddhist temple in this town just north of the crippled Fukushima nuclear plant. Some of the dead men had no papers, others left no emergency contacts. Their names could not be confirmed and no family members had been tracked down to claim their remains.

They were simply labeled "decontamination troops" -- unknown soldiers in Japan's massive cleanup campaign to make Fukushima livable again five years after radiation poisoned the fertile countryside.

The men were among the 26,000 workers -- many in their 50s and 60s from the margins of society with no special skills or close family ties -- tasked with removing the contaminated topsoil and stuffing it into tens of thousands of black bags lining the fields and roads. They wipe off roofs, clean out gutters and chop down trees in a seemingly endless routine.

Coming from across Japan to do a dirty, risky and undesirable job, the workers make up the very bottom of the nation's murky, caste-like subcontractor system long criticized for labor violations. Vulnerable to exploitation and shunned by local residents, they typically work on three-to-six-month contracts with little or no benefits, living in makeshift company barracks. And the government is not even making sure that their radiation levels are individually tested.

"They're cleaning up radiation in Fukushima, doing sometimes unsafe work, and yet they can't be proud of what they do or even considered legitimate workers," said Mitsuo Nakamura, a former day laborer who now heads a citizens' group supporting decontamination laborers. "They are exploited by the vested interests that have grown in the massive project."

Residents of still partly deserted towns such as Minamisoma, where 8,000 laborers are based, worry that neighborhoods have turned into workers' ghettos with deteriorating safety. Police data shows arrests among laborers since 2011 have climbed steadily from just one to 210 last year, including a dozen yakuza, or gangsters, police official Katsuhiko Ishida told a prefectural assembly. Residents are spooked by rumors

that some laborers sport tattoos linked with yakuza, and by reports that a suspect in serial killings arrested in Osaka last year had worked in the area.

"Their massive presence has simply intimidated residents," said Mayor Katsunobu Sakurai. "Frankly, the residents need their help but don't want any trouble."

Most of the men work for small subcontractors that are many layers beneath the few giants at the top of the construction food chain. Major projects such as this one are divided up among contractors, which then subcontract jobs to smaller outfits, some of which have dubious records.

The Ministry of Health, Labor and Welfare examined more than 300 companies doing Fukushima decontamination work and found that nearly 70 committed violations in the first half of last year, including underpayment of wages and overtime and failure to do compulsory radiation checks. Those companies were randomly chosen among thousands believed to be working in the area.

"Violations are so widespread in this multilayer subcontract system. It's like a whack-a-mole situation," said Mitsuaki Karino, a city assemblyman in Iwaki, a Fukushima city where his civil group has helped workers with complaints about employers.

Karino said workers are sometimes charged for meals or housing they were told would be free, he said, and if they lose jobs or contracts aren't renewed, some go homeless.

"It's a serious concern, particularly for workers who don't have families or lost ties with them," he said.

Government officials say they see no other way than to depend on the contracting system to clean up the radiated zone, a project whose ballooning cost is now estimated at 5 trillion yen ($44 billion).

"That's how the construction industry has long operated. In order to accomplish decontamination, we need to rely on the practice," said Tadashi Mouri, a health and labor ministry official in charge of nuclear workers' health. He said the ministry has instructed top contractors to improve oversight of subcontractors.

Several arrests have been made in recent months over alleged labor violations.

A complaint filed by a worker with labor officials led to the October arrest of a construction company president who had allegedly dispatched workers to Fukushima under misleading circumstances. The investigation found that the worker had been offered pay of 17,000 yen ($150) per day, but after middlemen took a cut he was getting only 8,000 yen ($70).

In another case, a supervisor and a crane operator were arrested in July for alleged illegal dumping of radiated plant debris in Minamisoma. Five companies heading the project were suspended for six weeks.

Most workers keep their mouths shut for fear of losing their jobs. One laborer in a gray jacket and baggy pants, carrying cans of beer on his way home, said he was instructed never to talk to reporters.

A 62-year-old seasonal worker, Munenori Kagaya, said he had trouble finding jobs after he and his fellow workers fought for and won unpaid daily "danger" allowance of 10,000 yen ($88) for work in Tamura city in 2012.

Officials keep close tabs on journalists. Minutes after chatting with some workers in Minamisoma, Associated Press journalists received a call from a city official warning them not to talk to decontamination crews.

Beyond the work's arduous nature, the men also face radiation exposure risks. Inhaling radioactive particles could trigger lung cancer, said Junji Kato, a doctor who provides health checks for some workers.

Although most laborers working in residential areas use protective gear properly, others in remote areas are not monitored closely, according to workers and Nakamura, the leader of the radiation workers support group. Many are not given compulsory training or education about dealing with radiation, he said.

Though group leaders' radiation exposure levels are regularly checked, decontamination workers' individual levels have not been systematically recorded. The government introduced a system in 2013 but

only for a fee, and many lower subcontractor workers are likely not covered. Even non-alarmist experts say that workers doses must be kept individually for their own records as well as for studies of low-dose radiation impact.
Mouri, the government official, said decontamination workers' average annual dose fell to 0.7 millisievert last year, a fraction of the 20-millisievert annual limit for those working at the nuclear plant, and is not a concern.
Though no radiation-induced illness has been detected, workers have developed diabetes, cerebral and respiratory problems, often long untreated due to lack of money, awareness and social ties, local hospital intern Toyoaki Sawano said in a medical magazine last month.
Having trouble making ends meet, a growing number of laborers are seeking welfare assistance, local authorities say. The officials worry that they may end up staying on, like construction laborers did in Osaka and Tokyo after the 1960s building boom, forming Japan's poorest ghettos.
Police and volunteers have started neighborhood patrols amid concerns about safety. Some big construction companies have taken steps to address concerns. Hazama Ando Corp. imposed an 11 p.m. curfew on workers.
Residents say they avoid convenience stores in the evenings, when many laborers stop by after work to buy snacks, bento boxes or beer on their way home. Some of them used to discard their contaminated gloves and masks in garbage bins there, triggering complaints from the neighborhood and prompting the government to launch a "manner" campaign in December.
At a convenience store in Minamisoma on a recent evening, workers came in waves, waiting quietly in line to pay for food and other items.
"The workers face heartless rumors as if they are all reckless outlaws. They are the same human beings. Like anywhere, there are good guys and bad guys," said Nakamura, the support group leader.
One resident grateful for the workers is Hideaki Kinoshita, a Buddhist monk who keeps the unidentified laborers' ashes at his temple, in wooden boxes and wrapped in white cloth.
"We owe a lot to those who clean this town, doing the work that locals don't even want to," he said.
Minamisoma city official Tomoyuki Ohwada said the worker population should decline next year, when intensive decontamination efforts are scheduled to end. But Kinoshita believes many will still be needed, given the amount of work left to do.
"There is no end to this job," Kinoshita said. "Five years from now, the workers will still be around. And more unclaimed ashes may end up here."

March 24, 2016

Fraudulent claims for compensation

TEPCO employee faces prosecution over alleged nuke accident compensation fraud

http://mainichi.jp/english/articles/20160324/p2a/00m/0na/011000c

Police sent papers on a Tokyo Electric Power Co. (TEPCO) employee to the Tokyo District Public Prosecutors Office on March 23 for alleged fraud after advising members of a nonprofit organization in a fake compensation scheme after the Fukushima No. 1 Nuclear Power Plant disaster, it has been learned.

- 【Related】TEPCO insider helped cook up false nuke crisis compensation claims: ex-NPO exec

The employee, a man in his 40s, was referred to prosecutors by the third division of the National Police Agency organized crime policy unit for his connection to the fraud. According to individuals connected with the investigation, his role involved instructing two former senior executives of the NPO in how to submit false compensation claims to TEPCO on the basis of revenue being lost due to the nuclear accident.
According to the allegations, the TEPCO employee worked together with the two employees of the Nakano, Tokyo-based NPO -- the "Higashinihon Daishinsai Genshiryoku Saigaito Hisaisha Shien Kyokai" (support association for victims of the Great East Japan Earthquake and nuclear disaster) -- between December 2011 and January 2012 to submit the fraudulent claims on behalf of a civil engineering and construction firm in Fukushima Prefecture, for which the NPO was acting as an agent.
A total of between 10 and 20 million yen in compensation fees was consequently received from TEPCO, among which the employee pocketed more than 4 million yen.
When questioned by the police agency's organized crime unit officials regarding the case, the suspect admitted that he had received the funds from the NPO officials. He said, however, "I did not believe that I was involved in making fraudulent claims."
Meanwhile, an official with the TEPCO public relations department said, "We understand that prosecutors are continuing to investigate (this case), and we are declining to comment upon it -- including with respect to whether or not the company is aware of the individual in question."
The two NPO affiliates were arrested by the police unit in August 2014 for their alleged role in the scheme. Kazuaki Shindo, 44, is presently undergoing court proceedings for fraud in conjunction with the case, while Hiroshi Murata, 57, received a nine-year prison sentence for the same crime, which he is presently appealing.
During a court hearing conducted at the Tokyo District Court in January last year, Shindo testified that 5 percent of the fraudulently-received compensation funds had been paid to the TEPCO employee "for the information provided and the quality of the instructions."
According to TEPCO, companies seeking compensation must prove that their revenue fluctuated before and after the nuclear disaster by submitting tax returns -- or financial statements showing account settlements of income and expenditures -- in addition to other documents specified by TEPCO. Either original or copied versions of the documents are accepted.
With respect to the incident in question, the materials submitted by the NPO included copies of tax returns that had been falsified in order to inflate pre-disaster profits. TEPCO, not realizing the fraudulent nature of the materials, approved the compensation requests.
An official connected to the investigation commented, "**Copies of documents are easier to falsify than originals, which is one explanation for the submission of the bogus claims."**
Police officials in both Osaka and Fukushima prefectures have detected additional fraudulent claims following the nuclear disaster.
"Such incidents are likely being enabled by an insufficient system for screening (such claims)," commented one investigator. "TEPCO bears a portion of the responsibility."

April 1, 2016

Fukushima manga series

Manga convey realities of living in Tohoku disaster areas

http://www.asahi.com/ajw/articles/AJ201604010061.html

"Ichiefu Fukushima Daiichi Genshiryoku Hatsudensho Rodoki" (1F; Records of labor at Fukushima No. 1 nuclear power plant) (Provided by Kodansha Ltd.)

By EIICHI MIYASHIRO/ Senior Staff Writer

Although words of praise poured in for Kazuto Tatsuta's manga about the Fukushima nuclear disaster, some comments said he was a spy for Tokyo Electric Power Co.

The artist, who went to great lengths to show the true situation around TEPCO's Fukushima No. 1 nuclear plant, scoffed at the notion.
"As for nuclear power generation, I have never taken stances of 'promotion,' 'opposition' or 'neutral.' I just wanted to convey the changes of the place (at the nuclear plant) in real time," he said.
His manga series, "Ichiefu Fukushima Daiichi Genshiryoku Hatsudensho Rodoki" (1F; Records of labor at Fukushima No. 1 nuclear power plant), was one of several that started after the triple disaster struck five years ago.
Some of them initially offered messages of encouragement to the disaster victims. But they gradually changed to depict the realities of the situation in the northeastern Tohoku region and the disaster victims' extraordinary experiences.
Tatsuta's series, carried in the weekly magazine Morning, was based around the sites of demolition work at the nuclear plant.
He was working at a company of an acquaintance near Tokyo when the Great East Japan Earthquake struck on March 11, 2011. Tatsuta looked for a job in areas affected by the disaster, and ended up working at a rest station of the nuclear plant as an employee of the sixth-layer subcontractor in June 2012.
In 2013, Tatsuta started "Ichiefu" to show the daily lives of workers at the plant.
His work drew much attention and acclaim. But some said the artist was underestimating the dangers of nuclear power generation. The series ended in October 2015.
Yoko Hano depicted the daily post-disaster lives of a different group--senior high school students in Fukushima Prefecture.
She started the serialized manga "Hajimari no Haru" (Spring as a beginning) because she also wanted to convey the truth. The comic is currently carried under the title of "Happy End?" in the Monthly Afternoon magazine.
Hano, who is from Nishigo in Fukushima Prefecture, now lives in Shirakawa, also in the prefecture.
"From the time immediately after the outbreak of the disaster, I saw false information from the media that was slipshod in confirming facts," she said. "A person in my neighborhood was cornered by the situation caused by the disaster and committed suicide. I thought that unless accurate information is offered, our local communities will be destroyed."
The protagonists in her manga learn about agriculture. They vow to reconstruct their hometowns and start taking action despite being shaken by nuclear accident.
"Here (in Fukushima Prefecture), there are many themes I should tackle throughout my life. I think that people who are making a living with jobs related to expression and speech should migrate to Fukushima," Hano said.
In the serialized manga "Gogai! Iwate Chaguchagu Shinbunsha" (Extra edition! Iwate Chaguchagu newspaper company), the protagonist is a female reporter with a local newspaper in Iwate Prefecture.
Its creator, Aruto Asuka, who lives in Ichinoseki in the prefecture, began to carry the manga in the comic magazine Be Love, published twice a month, in 2009. Initially, it focused on the people, seasonal traditions and industries of the prefecture.
Then, the Great East Japan Earthquake and tsunami struck in 2011.
The manga now features the reality of the prefecture that was hit hard by the disaster.
Ichinoseki, an inland area, escaped serious damage. However, "that produced big conflicted feelings in my mind," Asuka recalled.
In a special edition titled "Sanriku no Umi" (Sea of Sanriku), which was carried in the third volume of the book version of the manga, the protagonist visits the coastal district of Koishihama in Ofunato, Iwate Prefecture, for news coverage, and meets a young fisherman and his wife again.

The wife is pregnant but hesitant to give birth because of her feelings for a relative who lost her child and other family members in the disaster.
“I also have feelings of guilt about the fact that I am alive without suffering from any damage,” Asuka said. “I will not forget the various feelings of people (in the affected areas).”

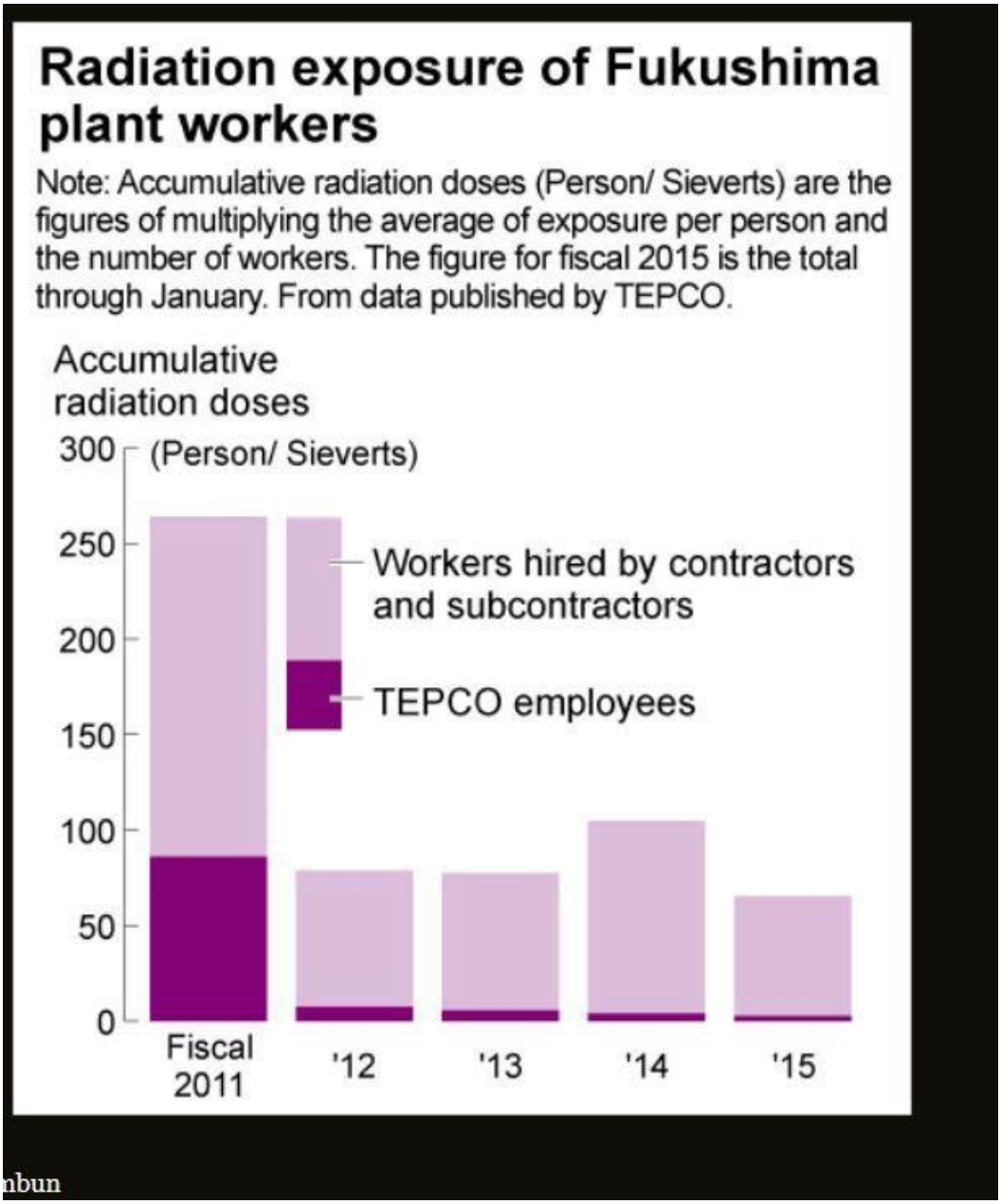
April 5, 2016

Braving constant radiation

Braving danger and radiation for chance to earn 11,000 yen a day

http://www.asahi.com/ajw/articles/AJ201604050034.html

By SAWAAKI HIKITA/ Staff Writer



Editor's note: An army of workers, 6,000 or so, battles daily on the front line of the stricken Fukushima No. 1 nuclear power plant to get the site ready for the decades-long process of decommissioning the reactors.
An overwhelming majority of the men are hired by subcontractors and endure low pay, fragile job security and hazardous working conditions. Radiation exposure is a constant risk.
This three-part series is intended to shed light on conditions at the plant and how the people working there feel about their jobs.
***
It is winter and still dark when the man awakes at 3:30 a.m. to start his working day. He begins by putting on five layers of clothing under his protective gear, and dons two pairs of gloves and socks, the insides of which are stuffed with disposable hand warmers.
But even then, the 36-year-old native of Iwaki, Fukushima Prefecture, is cold.

Thirty minutes later, a cutting breeze blows from the ocean as the man climbs into a car ordered by his employer to take him to the J-Village facility, where the workers board buses to transport them to the crippled Fukushima No. 1 nuclear power plant 20 kilometers away. The man's job is to lay pipes containing contaminated water at the complex. He works for a fourth-tier subcontractor with Tokyo Electric Power Co., operator of the plant.

Five years after the triple meltdown, the plant premises are much tidier than in the immediate aftermath of the disaster. Today, the ground is covered with steel sheets.

However, the steel frames of the reactor buildings still stand exposed because the concrete walls were blown out in hydrogen explosions triggered by the overheating of reactor cores.

Inevitably, jobs near the reactor buildings pose radiation risks.

“The closer you get to the reactor buildings, the higher the radiation readings,” the man said. He is required to carry a dosimeter whenever he is on-site.

Each time the man’s dose climbs by 0.16 millisievert, an alarm sounds. If the alarm goes off three times in a single shift, he must stop what he is doing, no matter what work remains to be done.

With a full-face mask and protective gear, working in summer months can be more grueling--and even life-threatening.

He packs ice cubes under his clothes to keep cool, but they melt within 30 minutes.

One summer day, he saw a middle-aged man lying on the floor of a lounge where the workers congregate during their break.

The man had collapsed after the end of his shift. Although the individual was airlifted to a hospital by helicopter, he apparently died of heatstroke.

When the magnitude-9.0 Great East Japan Earthquake struck, the Iwaki man was working inside the No. 1 reactor building. The power went out and in the darkness he heard a loud crashing noise, as if a piece of equipment had suddenly ground to a halt.

He fled the building as fast as he could.

Fissures dotted the concrete surface of the ground and shards of glass were everywhere.

The man took refuge in a structure in the compound known as the “company building.”

A roll call was taken to check that everybody was safe, and then he and his colleagues were dismissed in the evening.

The Iwaki man did not recall seeing the effects of the tsunami on his way home, which he reached at 8 p.m. By that time, he was running a fever and itched all over his body, probably the result of a stressful and nerve-racking day.

A hydrogen explosion rocked the No. 1 reactor building the following day, March 12.

Several days later, the man and his family evacuated to Nagoya, where he has relatives.

But around May, the president of the company he had worked for called and asked him to consider returning to the plant.

After giving the matter some thought, the Iwaki man accepted. His daughter had just turned 1 year old. He had a family to raise. Leaving his family behind, the man returned to Fukushima for a job that pays 11,000 yen ($97) a day.

ANOTHER MAN'S STORY

A 44-year-old man from Nagano Prefecture landed a short-term position at the plant in 2012 after scouring job ads online.

“I wanted to help contain the spread of radioactive contamination,” said the man, who previously worked in a local car dealership.
Shortly after replying to the ad, he was contacted by a subcontractor.
“We have a job to measure workers' radiation levels,” the man was told. “It does not entail exposure to high levels of radiation.”
Relieved, the man headed to Iwaki and signed a one-year contract with a company that called itself a fourth-tier subcontractor.
But when he attended a briefing held by a first-tier subcontractor several days later, he learned that the initial job description was far different from what he had just been told.
“As you know, you will be working in an area where radiation levels are high. That's because the mixers for contaminated water are there,” the official said. “You will be able to stay in the area for five to 10 minutes, no longer.”
The official added that the men would not be involved in replacing the mixers themselves as that is done by veteran workers.
What he and the others were required to do was lay rubber mats on the floor to lower those workers' radiation exposure to enable them to stay longer.
He was also told that workers have to carry breathing apparatus on their backs.
The Nagano man, upset by what he had just learned about the job, protested to the president of the fourth-tier subcontractor afterward.
“It would be impossible for me to continue with this job as long as for a year if I had such a high level of radiation dose,” he said. “This is not what I signed up for.”
The president tried to appease him.
“Even if you had a reading of 1 millisievert a day, it would halve in a week,” the president said. “If you quit at this stage, the company’s reputation would be jeopardized.”
As it happened, the assignment involving high radiation risks was canceled at the last minute.
Instead, the workers were required to clear the glass shards in the compound.
During a break on the first day of his job, in June 2012, he struck up a conversation with a regular employee of a first-tier subcontractor.
“Would you allow your son to work in a job that gives out several millisieverts of exposure a day?” he asked the middle-aged man.
The employee replied: “It will not be a problem legally, but I would not (send my son to do that kind of work).”
On his way back to his lodgings, the president of the fourth-tier subcontractor called him. He was told to stop by at the office of a third-tier subcontractor.
When he showed up, he was met by someone he didn't know.
“What you said at the work site gave us problems,” the stranger said. “You do not need to come to work anymore.”
After arguing with the official, the man returned to Nagano Prefecture three days later.
Later, he noticed his bank account had been credited to the tune of 24,000 yen, reflecting what was left over from several days of wages after accommodation costs had been deducted.
The man said he still has no idea at what point the original assignment to measure radiation doses was switched to one that was, without question, dangerous.

April 6, 2016

Fukushima Daiichi still looms large in local people's life

Despite all the misery, nuclear facility vital part of people's lives

http://www.asahi.com/ajw/articles/AJ201604060001.html

By SAWAAKI HIKITA/ Staff Writer

Editor's note: This is the second installment of a three-part series on conditions that contract workers face at the crippled Fukushima No. 1 nuclear power plant.

* * *

For those living in coastal areas of Fukushima Prefecture, the Fukushima No. 1 nuclear power plant is a bit like the proverbial elephant in the living room, in that it looms large in their lives.

Although the plant unleashed untold havoc five years ago, many people find it unsettling to badmouth the site to which they have owed their economic well-being--even after the disaster.

Tokyo Electric Power Co.'s sprawling nuclear complex provided them with coveted employment that made the difference between making do and doing without in an otherwise depressed local economy.

One local resident, a onetime fisherman, summed up the thoughts of people in the area by saying: "You cannot deny having a sense of gratitude if you have lived in this coastal region. It is not a question of like or dislike."

Born in a community close to the crash of waves, the man aspired from an early age to become a fisherman.

He loved the sea so much that he even stopped attending high school for several months to work on a boat trawling for Pacific saury.

He eventually quit high school to make his living by fishing full-time.

Local fishermen can be away from home for months at a time, traveling to distant parts of the globe and danger. The longest time the man had been away was 10 months.

He recalled fishing for squid off Argentina shortly after the Falkland War ended in 1982 and witnessing a ship coming under fire and sinking because the vessel had intruded into the country's territorial waters.

He began a stint at the Fukushima plant in around 1972, about a year after the plant opened. Although he was a full-time fisherman, the man sought to supplement his income when it was off-season for fishing.

As prices for fish continued to stagnate, he eventually quit fishing altogether in 1989 to become a full-time worker at the Fukushima plant.

Ever since, his life revolved around his work at the site--until the disaster triggered by the Great East Japan Earthquake and tsunami on March 11, 2011.

After a break of a couple of months in the aftermath of the triple meltdown, the man returned to the plant to work on ventilation equipment at a reactor building.

He was hired by a construction company based near the crippled facility.

Back in the 1970s, the man recalled that subcontractors were lax about the handling of radioactive materials.

"Workers did not follow the set rules as strictly as today," he said.

They occasionally disposed of pipes and other radioactive waste generated at reactor buildings manually, although they were expected to use a machine for the task.
His responsibility also involved checking pipes for cracks.
To detect a flaw in piping, it was a standard procedure then, as it is now, to conduct a liquid penetrant test.
Workers paint pipes with a red solution and wipe them after a while.
The penetrant remains inside the damaged parts. Workers then coat the pipes with "developing fluid," which is a mixture of highly volatile liquid such as thinner and some sort of white powder.
Red stains left in the flawed sections emerge in the process so that workers can identify parts that need to be repaired.
However, they would skip making needed repairs when they feared they would not be able to meet the deadline for the work they had been assigned to do.
"We deliberately did not paint red penetrant to the parts that we knew were damaged," he recalled.
The man said his crew had no choice.
"The contractor told us to make out a report for all the mistakes we made, but we knew we would be better off not doing so because we would be certainly slapped with a penalty for the errors we would have reported," he said. "As long as the nature of relations between a contractor and a subcontractor remained that of a higher and lower rung of a pyramid, attempts to cover up oversight were bound to continue."
When the magnitude-9.0 earthquake struck, the man was in the basement of a reactor building.
An inspection was under way at the time to check whether the replacement of parts he had just finished was done properly.
The man heard metallic clanks from a floor above as if two huge objects had collided with each other.
He was desperate to flee right away, but could not. The stairs were shaking so violently that he was unable to climb them. The man was only able to climb ladders and reach safety after the vibrations had subsided.
Ensuing tsunami swept into the compound, but did not reach the office where he took refuge.
He managed to return home that night.
Later, he learned that the last people to leave the plant were engineers who handled valves.
These were the men who knew exactly which direction water will flow when a particular pipe valve was opened.
"All of us hired by a contractor and subcontractors remained on-site after the other workers had left," a valve engineer told him.
The man returned to work at the plant around May 2011.
The company initially stated that the men would not have to work at the plant. But one day, the president of the company summoned them to a canteen and apologetically told them they had to.
"It is far from my intention to accept work at the Fukushima No. 1 nuclear plant, but I would be out of a job if we refused," he said. "I am sorry to have to say this, but I registered you as reserve workers for the plant."
The president said executives of a contractor had assembled the presidents of subcontractors to ask them to secure manpower for the plant.
One of the presidents demanded an extra allowance for the radiation risks in return.
"The current terms and conditions are unacceptable," the president said. "We request you provide more hazard pay."
Then one of the executives of the contractor declared: "We will not partner with a subcontractor that puts money first."
Some subcontractors went along with the contractor, including the man's company, while others refused.
When he was a full-time fisherman, the man and his peers were opposed to the plant.

“We believed that warm, discharged water from the plant would cause a change in the ecosystem in waters nearby,” he said.
Still, it was the nuclear power plant that provided him with a job to make a living over nearly four decades.
“Subcontractors have heavily relied on work at the plant as a source of their revenues before and even after the accident,” he said. “Thanks to the contracts with the plant, some companies grew into larger ones and others succeeded in improving their technological skills."

April 7, 2016

Cheated all the way

Cheated every step of the way: a raw deal from subcontractors

http://www.asahi.com/ajw/articles/AJ201604070003.html

By SAWAAKI HIKITA/ Staff Writer

Two types of monthly paychecks a man in Iwaki, Fukushima Prefecture, received. The payslip issued by a waterworks company in January 2015, right, stated the company paid him 236,828 yen. A cleaning company's hand-written pay details mention the sum of 204,328 yen. Parts of the images were modified for privacy reasons. (Sawaaki Hikita)

Editor's note: This is the last installment of a three-part series on conditions that contract workers face at the crippled Fukushima No. 1 nuclear power plant.

It's a dirty job, but somebody's gotta do it.

And that sums up what contract workers are facing, having signed up for jobs to clean up the wrecked Fukushima No. 1 nuclear power plant.

These men are positioned near the bottom of a pyramid of a multilayered hiring system, and get shunted off to dangerous work on the ground--often without due compensation.

One man who quit working at the plant last October was simply fed up with being shortchanged, especially as the work he did was potentially hazardous to his health.

“My pay was doubly skimmed off,” said the 27-year-old, who is from Iwaki in the prefecture.

The man's case seems to be anything but exceptional because of a hiring system at the plant in which layers of subcontractors often skim off their shares as they assign work to companies below them.

The man signed on with a cleaning company in late 2012 to do decontamination work in Naraha, a stricken town near the plant. There was no written contract for his employment, just a verbal arrangement.

Then in March 2014, the cleaning company referred him to a "better-paying job" at the plant and asked him to sign a contract with a local waterworks company for the assignment.

His written contract with the waterworks company stated that his daily wage would be 15,500 yen ($137).

But the cleaning company, from which the man received his pay for work performed on behalf of the waterworks firm, told him that he would actually get 2,500 yen less than promised. It cited “miscellaneous expenses.”

“Our company cannot continue to operate without funds,” said an official with the cleaning company by way of explaining the discrepancy.

The cleaning company took possession of the man's bank passbook and seal, and withdrew all the money the waterworks company paid into his bank account.

The cleaning company handed him a monthly salary in cash that was calculated on the basis of 13,000 yen per day.

He was also given two payslips: one stating a salary based on a daily wage of 15,500 yen and the other for 13,000 yen.

After working at the plant for 18 months or so, the man learned that he was being gypped more than he had realized. What the waterworks company actually paid to the cleaning company as his monthly salary was computed on the basis of a daily wage of 20,000 yen.

When he confronted the cleaning company, an official was evasive.

“It was a referral fee,” the official said of the gap. “We will raise your salary.”

Growing distrustful, the man quit the cleaning company in October.

In an interview with The Asahi Shimbun, a female representative at the cleaning company said it had never engaged in fraudulent activities.

“It is true that we kept his bank passbook,” she said. “We did it to withdraw money on his behalf since he could not go to the bank on pay day due to work.”

Plant operator Tokyo Electric Power Co. announced it was doubling hazard pay to 20,000 yen a day in November 2013 to help bolster morale among workers and secure manpower.

The problem is that TEPCO pays the contractors directly, so whether the money actually trickles down to subcontractors--and contract workers they employ--is a separate issue.

In the case of the Iwaki man, his payslip prepared by the waterworks company showed 7,000 yen in hazard pay out of the daily wage of 15,500 yen.
The hand-written slip created by the cleaning company, however, did not have an entry for danger allowance.
Still, the man was involved in work that carried radiation risks, and, in his opinion, with less than adequate protection.
His job at the plant was to install fire hydrants. Radiation readings on the dosimeters that workers were required to carry climbed as his work progressed because the water pipes for hydrants are extended toward the reactor buildings.
Although technicians working near the reactor buildings donned lead vests to shield themselves from radiation, the man had to make do with only protective suits.
On one occasion, his dosimeter started beeping loudly as he approached a reactor building. “Flee!” his boss shouted.
“My work was dangerous,” said the man. “I find it totally unacceptable that my pay was comparable to the money paid for a cleanup assignment.”
Tsuguo Hirota, a lawyer from Fukushima Prefecture who has been involved in lawsuits over back pay of hazard and other allowances for contract workers, said the multitiered hiring system at the plant is at the heart of the problem.
“If the system to repeatedly outsource work to subcontractors were not altered, the practice of skimming off (workers' salaries) would still be continuing,” he said.
In one case, he said a leading construction company paid a daily wage of 43,000 yen per employee. But all a worker at a third-tier subcontractor ended up with was 11,500 yen.
On the other hand, the skimming of salaries is no longer a widespread practice in the cleanup operation commissioned by the Environment Ministry, although it was the case in the immediate aftermath of the 2011 triple meltdown.
When the ministry places an order with a contractor, its deal includes a clause requiring that designated hazard pay must be paid to workers hired by subcontractors.
But no similar arrangements have been made at the Fukushima No. 1 nuclear power plant.
Other problems inherent in a multilayered hiring system center on ultimate responsibility for ensuring the safety of contract workers at the plant and tracking their accumulative radiation exposure over a long period.
When the Iwaki man worked at the plant, he received instructions from the waterworks company, a third-tier subcontractor, on how to perform his tasks. But a second-tier subcontractor and the cleaning company also told him how to do his job, which could have been unlawful.
According to a TEPCO survey last autumn, 14.2 percent of respondents, or 465 workers, said the company that pays their wages is different from the one that gives direction on how to do the job.
Takeshi Katsura, a staff member of the Fukushima nuclear power plant workers’ consultation center, a private group in Iwaki, urged subcontractors to have a greater sense of responsibility for their workers.
“Even five years after the accident, some are working on a mere verbal arrangement,” he said. “A company that concluded a contract with workers should responsibly oversee their wages, safety, social security programs and other work-related matters.”

April 28, 2016

Improvement in the number of workers injured

Number of injured workers halved at Fukushima

http://www3.nhk.or.jp/nhkworld/en/news/20160428_29/

The operator of the damaged Fukushima Daiichi nuclear plant says the number of workers who were injured or died at the plant during the last fiscal year decreased by about half from the figure for the year earlier.

Tokyo Electric Power Company says 25 people were injured and one died during the year through the end of March.

The fatality took place in August. The worker died while cleaning the tank on a vehicle.

At least 60 percent of those injured were inexperienced people who had worked at the plant less than a year.

TEPCO says that in most of the cases, the workers had light injuries and they did not take time off from work.

49 workers were injured in fiscal 2014. The number was up on a doubling of the daily workforce to about 7,000 associated with increasing construction at the plant.

TEPCO says communication between workers has improved as the number of areas where they do not need to wear protective masks increased.

The company also attributes the lower number of injuries to its efforts to implement safety measures thoroughly.

TEPCO has set up a training facility for inexperienced workers as part of its effort to prevent accidents.

May 23, 2016

New Govt counselling service for nuclear workers

Govt. to assist Fukushima Daiichi workers' health

http://www3.nhk.or.jp/nhkworld/en/news/20160523_06/

Japan's government will open a health counseling service for the growing number of workers engaged in decommissioning the Fukushima Daiichi nuclear plant.

The health ministry says about 6,000 people are doing the long-term work of clearing the contamination and closing down the crippled plant. That number has doubled in the past 2 years.

Health care management for workers is a key issue due to radiation concerns. Risk of heat stroke or other health consequences as temperatures rise in the summer are other implications.

The ministry will set up a free consultation desk near the plant in early July. It will send physicians and health counselors knowledgeable about radiation.

The operator and its contractors are basically responsible for worker health checks. But the ministry expects the new service to offer another channel to meet the needs of workers with health problems.

An ongoing disaster

The Fukushima nuclear disaster is ongoing

by Andrew R. Marks, Op-Ed, Journal of Clinical Investigation, May 23, 2016
http://www.jci.org/articles/view/88434#B2

Abstract
The 5th anniversary of the Fukushima disaster and the 30th anniversary of the Chernobyl disaster, the two most catastrophic nuclear accidents in history, both occurred recently. Images of Chernobyl are replete with the international sign of radioactive contamination (a circle with three broad spokes radiating outward in a yellow sign). In contrast, ongoing decontamination efforts at Fukushima lack international warnings about radioactivity. Decontamination workers at Fukushima appear to be poorly protected against radiation. It is almost as if the effort is to make the Fukushima problem disappear. A more useful response would be to openly acknowledge the monumental problems inherent in managing a nuclear plant disaster. Lessons from Chernobyl are the best predictors of what the Fukushima region of Japan is coping with in terms of health and environmental problems following a nuclear catastrophe.
Five years after a tsunami caused the Fukushima nuclear accident in Japan, cleanup of radioactive contamination is ongoing and a formerly vibrant farming region lays largely fallow. A recent visit to northeast Japan revealed wholly unexpected aspects of the impact of the meltdown of three nuclear reactors. The area devastated by the nuclear accident is easily accessed by a two-hour train ride from Tokyo to the city of Fukushima. It is then possible to rent a car and drive to within 18 kM of the reactors, which are still in meltdown.
On the train, digital banners in Japanese and English encourage passengers to visit the beautiful cherry trees in the Fukushima district. In the rental car agency, glossy pamphlets exclaim the beauty of the region and feature the brilliant pink blossoms. On a recent April afternoon, the cherry blossoms were indeed

spectacular. The roads deep into the region affected by the radioactive plume that engulfed the area in March of 2011 are clearly marked and readily accessible in a car rented at the Fukushima rail station. My Japanese-speaking colleague translated the rental agency's map as indicating an "area not to return to," which we carefully avoided.

Following route 114 traveling east toward the coast, progressively larger piles of large black plastic bags filled with dirt appeared on the roadside. At first, there were piles of several hundred such bags, each approximately five feet wide by five feet in height, methodically stacked one upon the other. Of note, similar bags appear to be used elsewhere in Japan to hold debris at construction and yard cleaning sites. Each bag was numbered with a white marker.

Approaching the eastern coast of Japan, the piles of bags on the roadside were more frequent and larger and larger and larger. As route 114 progresses toward the exclusion zone indicated on the car rental agency's map, the piles of plastic bags filled with dirt reach unimaginable dimensions. Numbered in the many thousands, they eventually fill entire valleys that recede off into the horizon. In some instances, the piles of black plastic bags are covered with blue tarps with pipes inserted into their tops, presumably to provide ventilation.

Roadside radiation monitoring stations are placed near now abandoned homes, many of which are still decorated with plantings of flowers and the blossoming cherry trees that are found in the yards of most homes in this region. The readings on the radiation monitors ranged from 0.2115 to 1.115 microsieverts per hour, a measure of the relative risks imparted to biological tissues by ionizing radiation. One microsievert per hour is equivalent to four airport security screenings per hour and is almost twice the annual limit for occupational whole-body radiation dose limits established by the nuclear regulatory commission. One sievert total exposure causes a 5.5% risk of cancer (1).

To understand the health risks associated with ongoing radiation contamination and cleanup in the Fukushima region, the best comparator is Chernobyl. Two of the most important public health issues related to both the Chernobyl and the Fukushima disasters are thyroid cancers and posttraumatic stress disorder (PTSD). Assessing the effects of these nuclear accidents on the risk of thyroid cancer is confounded by the fact that the mere collection of data required to make the diagnosis (e.g., thyroid scans and ultrasounds) necessitates extranormal surveillance. Thus, true control populations are not available. Nevertheless, there have been reports of increased rates of thyroid cancer following the Chernobyl nuclear accident (2), and extrapolation from that incident to Fukushima is reasonable but as-yet unproven. The incidence of PTSD is understandably quite high following nuclear accidents (3). There are no controlled experimental data available to assess the ongoing risks of chronic low-level radiation now present throughout the Fukushima region. Thus, it is imperative that epidemiological data are collected as thoroughly as possible to provide insight concerning the risks of long-term low-level environmental radiation. Similarly, it is imperative that data are collected concerning the spread of radioactivity from the nuclear plant disaster via water (e.g., streams running through the region should be sampled regularly) and via animals (in particular birds should be banded and monitored to determine how they may be vectors for spreading radioactivity in seeds and other forms throughout Japan).

Just outside the town of Iitate, brilliant pink flags, which are the same color used for the advertisements designed to attract tourists to view the cherry blossoms in the region, flap in the breeze, announcing (only in Japanese) "radioactivity removal." At one particularly large site near the town of Iitate, a constant stream of large trucks with entirely open containers was streaming into an excavation site located at a large mountain of brown dirt. Huge shovels were digging dirt and placing it onto conveyer belts pouring the dirt into the open trucks, which were leaving the site heading south. The men and women handling this contaminated dirt were wearing outfits similar to construction workers observed in other regions of

Japan, including helmets, masks, gloves, and overalls (Figure 1). Over an approximately 5-hour period of driving through the region, the only police observed were at the turn around marking the edge of the restricted zone. No military presence was observed. On several occasions, workers were seen handling the plastic bags of radioactively contaminated dirt without gloves.
[See also http://ccnr.org/Decontamination_Fuk_2014.pdf]

During the entire afternoon of driving through the region not a single sign warning of the potential dangers of radioactive contamination was observed in any language other than Japanese. There was no security at most of the contaminated sites, and thousands of plastic bags of contaminated dirt were piled high in areas without any supervision or even a fence to prevent access from the public roadway. Birds flew all through the area, presumably transporting radioactive seeds and leaving contaminated droppings throughout Japan.
It is estimated that over 100,000 individuals have been displaced from their homes due to the reactor meltdown (4). Some have been relocated to far away cities, including Tokyo. During my visit, a group of five elderly women arrived on the same train as we did and were escorted onto a waiting bus to be driven to see the cherry blossoms decorating the village they used to live in. Other displaced former residents of now unlivable villages are perhaps less fortunate and have been relocated to one of the numerous "temporary" dwellings dotting the region indicated by convenient roadside signs. Many of these were immediately adjacent to radioactivity detectors indicating levels of at least 1 microsievert per hour.
Ironically, during my visit to Fukushima on April 14, 2016, an earthquake rocked the Kumamoto region of Japan, ultimately causing at least 42 deaths and displacing thousands. This region contains the only working nuclear reactor remaining in Japan. Too far away to be felt in Fukushima, it was nevertheless a harsh reminder of the continued risk for further damage to the reactors already in meltdown.
The continued high level of radioactivity removal efforts in the Fukushima region (entire hill sides have been denuded of surface soil) indicate that the Japanese government knows the health threat caused by the contamination remains. The lack of security, the failure to provide any of the internationally accepted protective warnings against radioactivity contamination (e.g., the universal three-armed black and yellow sign warning of radioactivity), and the absence of any warning signs for non-Japanese-speaking individuals, despite the active advertising campaign to attract tourists to view the cherry blossoms on this beautiful region of Japan, is disturbing. The possibility that individuals could access enormous amounts of radioactively contaminated dirt and transport it to a sensitive area in Japan or elsewhere is frightening.

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Reference information:*J Clin Invest*. doi:10.1172/JCI88434.

6. [No authors listed]. The 2007 Recommendations of the International Commission on Radiological Protection. ICRP publication 103. *Ann ICRP*. 2007;37(2–4):1–332.

7. Tuttle RM, Vaisman F, Tronko MD. Clinical presentation and clinical outcomes in Chernobyl-related paediatric thyroid cancers: what do we know now? What can we expect in the future? *Clin Oncol (R Coll Radiol)*. 2011;23(4):268–275.
8. Ben-Ezra M, et al. From Hiroshima to Fukushima: PTSD symptoms and radiation stigma across regions in Japan. *J Psychiatr Res*. 2015;60:185–186.
9. Yamashita S, Radiation Medical Science Center for the Fukushima Health Management Survey. Comprehensive health risk management after the Fukushima nuclear power plant accident. *Clin Oncol (R Coll Radiol)*. 2016;28(4):255–262.

July 4, 2016

Health service for decommissioning workers

Health advisory desk set up for Fukushima workers

http://www3.nhk.or.jp/nhkworld/en/news/20160704_16/

Japan's health ministry will soon start providing health consultation services for workers engaged in decommissioning the Fukushima Daiichi nuclear power plant.

Consultation desks are to be set up at the plant and at a work administration facility called J-Village. This is the first time the ministry will be offering such services.

Health problems tend to increase among plant workers in summer. Heat stroke is one of the main risks while some see chronic diseases aggravated.

The health desk will launch at the end of this week. It will be open regularly on Fridays to give advice on health, radiation concerns and lifestyle improvement.

A ministry official says the government decided to offer its own advisory service in addition to the health services provided by Tokyo Electric Power Company in order to beef up workers' health management.

July 13, 2016

Checking on nuclear workers

NRA seeks background checks on nuclear workers to prevent terror attacks

http://mainichi.jp/english/articles/20160713/p2a/00m/0na/013000c

The Nuclear Regulation Authority (NRA) has unveiled a draft of regulations calling for the introduction of background checks on nuclear power plant workers to prevent terrorists from sneaking into such facilities under the guise of workers.
Under the rules, the NRA would require nuclear plant operators to check workers' records of overseas travel, their history of drug use and their criminal records, among other matters through certificates and interviews if needed.
The NRA is aiming to enforce the regulations in late August after hearing public opinion on the rules from July 14 to Aug. 12. If introduced, they will be the first such rules in Japan.
Currently, workers can enter the premises of atomic power stations if their identities are confirmed through their driver's licenses or other identification cards.
The new regulations would apply to nuclear plant workers who regularly enter central control rooms and other protected areas, which require constant monitoring. Nuclear plant operators would be required to check such workers' records of overseas trips as well as whether they have used drugs, have criminal records and are linked to crime syndicates or organizations feared to launch terrorist attacks, based on their voluntary notifications. If necessary, nuclear plant operators would require employees to submit relevant certificates, interview workers and conduct aptitude tests on them.
Most major countries that have nuclear power plants have a system of background checks on workers, but Japan has not introduced such a system to protect personal information on nuclear plant workers.
In January 2011, just two months before the Fukushima meltdowns, the International Atomic Energy Agency recommended Japan introduce a system to conduct background checks on nuclear plant workers.

August 2, 2016

A heavy burden for workers

Tepco’s hazmat suit guideline decreases burden on workers during summer heat

http://www.japantimes.co.jp/news/2016/08/02/national/tepcos-hazmat-suit-guideline-decreases-burden-workers-summer-heat/#.V6BCxKJdeos

Journalists in hazmat suits are briefed on the work process at the Fukushima No. 1 nuclear power plant in the town of Okuma, Fukushima Prefecture, in June 2014. | KYODO

Kyodo

Tokyo Electric Power Company Holdings Inc., operator of the crippled Fukushima No. 1 power plant, has been revising guidelines for when workers need to wear full masks with hazmat suits or less-bulky outfits to improve their working conditions during the scorching summer.

While a full-body outfit limits radiation exposure, hazmat suits and full masks have been a heavy burden for workers because they restrict movement and make it difficult to breathe, prompting Tepco to revise the guidelines on their usage.

In March, Tepco changed the guidelines, dividing the premises into three areas.

In the area where radiation levels remain high, including inside reactor buildings 1, 2 and 3, workers will need to wear a full mask and disposable hazmat suit with a raincoat-like outer layer.

Workers meanwhile will need to wear full or half masks with hazmat suits in areas where radiation levels are lower, such as near tanks filled with radiation-tainted water. In the remaining area, the majority of which has low levels of radiation, workers only need to use disposable masks and their usual work outfits, Tepco said.

According to the utility, out of about 5,000 to 6,000 workers on the premises, about 47 percent were required to wear a full mask in June, down from about 66 percent in January, before the guidelines were changed.

Those who are required to wear a half mask increased to 48 percent from 28 percent in the same period, it said.

Before the guidelines were revised, about 8,000 disposable hazmat suits were used per day, but the number declined to about 4,000.

Even as hazmat suit requirements have halved, radiation exposure cases have remained unchanged at an average of two a day, Tepco said, adding that the risk of radiation exposure has not increased.
Tepco said it will offer summer outfits at the beginning of this month to lessen the chance of workers succumbing to heatstroke.
In July, the health ministry opened a health care office at J-Village near the Fukushima No. 1 power plant so that its workers can seek free health consultations from doctors who are versed in radiation exposure.
"During the summer period, the health of workers tends to worsen due to heatstrokes as well as other illnesses, so we need to step up measures to resolve the situation," said a heath ministry official.

August 19, 2016

Fukushima worker's leukemia linked to job

Fukushima worker with cancer granted compensation

http://www3.nhk.or.jp/nhkworld/en/news/20160819_25/

Japan's labor ministry has certified that a former worker at the Fukushima Daiichi nuclear plant is eligible for compensation for developing leukemia.

The man in his 50s had worked at the plant for nearly 4 years since April 2011, soon after the compound suffered a meltdown.

The ministry says the man was in charge of mechanical repairs at the plant. It says he developed leukemia in January last year, and applied for workers' compensation.

Ministry officials say the man's radiation exposure has reached 54.4 millisieverts, and that they found no other plausible causes except his work.

He is the 2nd person to be awarded compensation in connection with the accident, following a case last October involving another man with leukemia.

In all, 14 nuclear plant workers in Japan have been granted compensation for work-related cancer.

About 47,000 people have worked at the Fukushima plant in the 5 years since the accident.

August 20, 2016

Man's leukemia deemed result of his work at Fukushima plant

http://www.asahi.com/ajw/articles/AJ201608200036.html

The labor ministry said a man who developed leukemia by helping in clean-up efforts at the crippled Fukushima No. 1 nuclear power plant is entitled to work-related compensation.
It marks the second such case since the 2011 nuclear disaster.
The Ministry of Health, Labor and Welfare recognized that the cancer was due to exposure to radiation at the facility and said the government will cover his medical expenses.
The ministry said Aug. 19 that the man, who is in his 50s, was involved in removing debris and repairing machinery that handled radioactive water at the plant between April 2011, a month after the triple meltdown triggered by the earthquake and tsunami disaster, and January 2015.
His accumulative radiation exposure was 54.4 millisieverts.
The man worked for a contractor with Tokyo Electric Power Co., the operator of the nuclear complex.
He was diagnosed with leukemia in January 2015, and filed application for worker's accident compensation at the Fukushima Labor Standards Inspection Office, a regional branch of the ministry.
Under the ministry's guidelines, eligibility for work-related compensation in such cases is granted if leukemia is diagnosed after the person worked for more than a year in an assignment which resulted in an annual dose of more than 5 millisieverts.
The ministry's decision to grant compensation in this case came after a panel of experts offered their opinions on the matter.
The ministry is scrutinizing the cases of five other former workers at the plant who have applied for compensation.
Compensation in such cases was first granted last October after a man in his early 40s was diagnosed with leukemia in January 2014. He was exposed to 16 millisieverts of radiation while he worked at the plant between 2012 and 2013.
Applications for the work-related compensation as a result of the Fukushima disaster are expected to increase in coming years, experts say.
According to TEPCO, those who had annual does of more than 5 millisieverts of radiation during fiscal 2015 numbered 4,952.

September 7, 2016

Nuke workers & anti-terrorism

Japan to start background checks of nuclear workers in anti-terrorism effort

http://www.japantimes.co.jp/news/2016/09/07/national/japan-start-background-checks-nuclear-workers-anti-terrorism-effort/#.V8_1WzVdeos

Kyodo

The nation's nuclear watchdog decided Wednesday to require background checks for workers at nuclear power plants and other facilities as part of its anti-terrorism measures.
Following recommendations from the International Atomic Energy Agency, the Nuclear Regulation Authority will introduce the measure in late September.
Still, actual implementation is expected to begin next year or later due to necessary regulation changes needed in regards to handling nuclear materials.
It is also unclear how the new measure will be effective in improving security as the operators will conduct the background checks based on information provided by the workers rather than in cooperation with police or other law enforcement authorities.
The regulation will cover employees and subcontractors who enter restricted areas where nuclear materials are kept and those who have access to important information at such facilities.
Under the system, operators will make the workers submit a copy of their resident registry and a written oath stating they have no association with terrorist organizations or crime syndicates. Employees will also be asked where they have traveled overseas, whether they have committed any crimes in the past and whether they have a history of drug addiction.
While such background checks are the norm in other countries' nuclear industries, Japan had fallen behind due to privacy concerns.
Nuclear plants and facilities in the United States and Europe conduct such background checks in cooperation with the authorities, who check applicants' criminal records.
Workers at nuclear power plants include employees of utility firms, plant manufacturers and construction firms.
At Tokyo Electric Power Company Holdings Inc.'s Kashiwazaki-Kariwa nuclear plant in Niigata Prefecture, for example, 6,700 people were working there as of August even though its seven reactors are shuttered.

Background checks for nuclear workers

http://www3.nhk.or.jp/nhkworld/en/news/20160907_28/

The operators of nuclear power plants in Japan are to start background checks on facility workers next year as part of terrorism prevention efforts.

The Nuclear Regulation Authority decided to introduce the security regulation at a meeting on Wednesday.

The new regulation will cover workers who enter critical areas or who have access to information on nuclear material. Power companies will ask them to declare their medical history, including alcohol and drug addiction, as well as any criminal record or links to terrorist groups. The workers will self-report such information or submit documents to prove their declarations.

The utilities will be allowed to share the written declarations.
Japan is said to be the only major country without such a security system. The International Atomic Energy Agency called for countries to introduce background checks on workers at nuclear facilities after the 2001 terrorist attacks in the United States.

At Wednesday's meeting, an official of the NRA said the new guidelines would benefit the public despite privacy concerns.

A major challenge will be how to make the system effective. Some of the general population called for a stricter framework to allow statements on criminal records to be cross-checked by administrative offices.

October 20, 2016

Overtime & death for a nuclear worker in his 40s

Death of utility worker confirmed work-related

http://www3.nhk.or.jp/nhkworld/en/news/20161020_29/

Japanese labor authorities have officially linked the death of an employee of a nuclear power plant operator to his excessive work hours.

The male employee of Kansai Electric Power Company in his 40s killed himself in April at a Tokyo hotel while on a business trip.

A regional labor standards inspection office on Thursday recognized his death as work-related and eligible for compensation.

His workload began to increase this year as he was in charge of applying for approval from the Nuclear Regulation Authority to extend operations of old reactors at his company's Takahama plant in Fukui Prefecture.

The facility's number 1 and 2 reactors are more than 40 years old.

Regulations introduced after the 2011 Fukushima nuclear accident ban extended operation of reactors beyond 40 years unless their safety measures meet new criteria.

Sources say the man had worked well over 100 hours of overtime a month since January.

His overtime work totaled at least 200 hours in February and 150 hours over 19 days in April right before his death.

His role included negotiating with the secretariat of the nuclear authority and doing paperwork to complete procedures for approval by a deadline in July.

October 25, 2016

False certificates and untrained workers

Untrained staff did radioactive cleanup work in Fukushima

http://www.asahi.com/ajw/articles/AJ201610250053.html

18 list

Certificates of training in radioactive decontamination work were issued by a company in Nihonmatsu, Fukushima Prefecture, to workers who had received no such training. (Masakazu Honda)

NIHONMATSU, Fukushima Prefecture--A company has admitted to not giving the required special training to workers before dispatching them to carry out decontamination work in radiation-hit Fukushima city.

A subcontractor called "Zerutech Tohoku" issued at least 100 bogus certificates to its workers showing they had completed the training, when, in fact, they had done nothing, according to the Fukushima Labor Standards Inspection Office.

The office had warned the subcontractor, which is based in Nihonmatsu and decontaminates parts of nearby Fukushima city, which was affected by the 2011 nuclear disaster, that it should give special training to workers to prepare them for the task.

The Ministry of Health, Labor and Welfare requires decontamination operators be given at least 5.5 hours of special training to each individual in accordance with the Industrial Safety and Health Law.

The training includes a lecture on potential health hazards and how to operate decontamination equipment as their job involves handling soil polluted by radioactive materials.

The 52-year-old representative of the company admitted wrongdoing in an interview with The Asahi Shimbun.

“We had to hire a large number of workers over a short period of time since we received a contract involving a vast swath of land,” he said of the false certificates, of which between 100 and 150 have been discovered.

In addition, the company, a fourth-tier subcontractor, issued seven other kinds of certificates needed to operate an aerial vehicle or chain saw, which were required to land the cleanup contract.
For issuing false certificates, offenders could be imprisoned for up to six months or fined 500,000 yen ($4,800).
But the law has been criticized for having numerous loopholes.
One is that there is not test of workers' knowledge after they have received the training.
The operators are also not required to register the certificates with municipal authorities.
And it is not specified what qualifications are required for the person who conducts the training.
The Labor Standards office, a regional arm of the health ministry, has been inspecting the company for breaches of the law and regulations on decontamination work since Oct. 19.
The Zerutech Tohoku representative founded the company in March last year.
(This article was written by Masakazu Honda and Yuki Chai.)

November 1, 2016

Compensation for depression?

TEPCO employee says he has depression due to overwork, seeks compensation

http://mainichi.jp/english/articles/20161101/p2a/00m/0na/017000c

A 35-year-old employee handling compensation claims relating to the Fukushima nuclear disaster for Tokyo Electric Power Co. (TEPCO) has filed an application with the Tokyo Central Labor Standards Inspection Office seeking workers' compensation for depression.

- 【Related】Ex-TEPCO executives set to plead not guilty over Fukushima nuclear accident

Tadafumi Ichii filed the application on Oct. 31, arguing that he started suffering from depression as a result of being forced to work long hours illegally. According to his application and other information, in September 2011 -- six months after the outbreak of the nuclear crisis -- Ichii transferred to a division tasked with handling complaints from businesses that were not satisfied with the amounts of compensation they were offered for declining sales. In February 2013, he took over the role of giving advice to about 450 TEPCO employees on whether or not to pay damages.
The man clocked 89 hours overtime in March 2013, but he stated, "My overtime working hours, if combined with unpaid overtime and take-home work, stood at 169 hours (in March)." On the morning of June 20, 2013, he could not get out of bed, and failed to show up for work that day. He then transferred to TEPCO's branch office in Tachikawa, western Tokyo, on July 1, 2013. He frequently started being absent from the office or leaving early, suffering symptoms such as vomiting in the office's toilet. He was diagnosed on Sept. 3, 2013, as having tendency toward depression and he took a leave of absence from the following day. He was officially diagnosed with depression in April 2014.
The man received a notice from TEPCO in October this year stating that he would be dismissed on Nov. 5 when his recuperation period was due to expire. TEPCO demanded that Ichii submit documents including

a doctor's medical certificate, if he intended to return to work. Ichii says he still suffers symptoms such as insomnia. His doctor, therefore, has judged that he requires further medical treatment, he says.
"I worked hard until I was worn out," Ichii said at a news conference.
An official with the public relations department at Tokyo Electric Power Company Holdings Inc. commented, "We understand that the labor standards inspection office concerned decides on individual claims for workers' compensation. We decline to answer questions regarding individual cases."
According to TEPCO, work to pay compensation to local residents whose livelihoods were lost and companies whose sales dropped due to the nuclear accident started in April 2011 and is ongoing.
As of Oct. 28, there were about 2,691,000 applications and about 6.479 trillion yen had been paid for a total of about 2,515,000 applications that TEPCO had finished screening.

TEPCO has posted its latest statistics on the exposure dose received by workers at the Fukushima Daiichi plant:

Workers' exposure

http://www.tepco.co.jp/en/press/corp-com/release/betu16_e/images/160630e0101.pdf

The previous figures (up to May 2016) are online here (site of the Ministry of Health, Labour and Welfare : http://www.mhlw.go.jp/english/topics/2011eq/workers/irpw/ede_160531.pdf

November 18, 2016

Man with (recognised) work-related cancer to sue TEPCO

Cancer patient compensated for Fukushima work to sue TEPCO

http://www.asahi.com/ajw/articles/AJ201611180052.html

A 42-year-old man diagnosed with leukemia after working at the crippled Fukushima No. 1 nuclear plant plans to sue Tokyo Electric Power Co., saying the utility failed to take adequate precautions against radiation exposure.
He will also sue Kyushu Electric Power Co., operator of the Genkai nuclear plant in Saga Prefecture where he had also worked, in the lawsuit expected to be filed at the Tokyo District Court on Nov. 22.
The man, who is from Kita-Kyushu in Fukuoka Prefecture, will demand about 59 million yen ($541,000) in total compensation from the two utilities.
“TEPCO and Kyushu Electric, as the managers of the facilities, are responsible for the health of workers there, but they failed to take adequate measures to protect them from radiation exposure,” said one of the lawyers representing him.
“The man was forced to undergo unnecessary radiation exposure because of the utilities’ slipshod on-site radiation management, and as a result had to face danger to his life and fear of death,” the lawyer said.

The lawyers group said the man has a strong case, citing a ruling by labor authorities in October 2015 that recognized a correlation between his leukemia and his work in response to the 2011 Fukushima nuclear disaster.
It was the first time cancer was ruled work-related among people who developed the disease after working at the stricken Fukushima No. 1 nuclear plant.
The planned lawsuit will be the first legal action against TEPCO brought by an individual whose work-related compensation claim has already been granted.
Between October 2011 and December 2013, the man worked at the Fukushima No. 1 nuclear plant to set up a cover on the damaged No. 4 reactor building and perform other tasks.
The man also did regular maintenance jobs at the Genkai plant.
His accumulative radiation exposure at the two plants came to about 20 millisieverts.
He was diagnosed with acute myelocytic leukemia in January 2014.

Brazilian Govt worried about Fukushima jobs

Brazilian gov't calls for restraint on ads seeking foreign workers for Fukushima jobs

http://mainichi.jp/english/articles/20161118/p2a/00m/0na/007000c

The Brazilian Embassy in Japan and Consulate-General in Tokyo have asked media outlets serving foreigners of Japanese ancestry to refrain from easily advertising jobs with a risk of exposure to radiation from the Fukushima nuclear disaster.

- 【Related】Foreigners hired at Fukushima nuke plant under suspected illegal contracts

The finding follows news that seven people including Brazilians of Japanese descent were involved in decommissioning work at Tokyo Electric Power Co.'s crippled Fukushima No. 1 Nuclear Power Plant. Brazil wants its citizens to know the risks of working in such areas.
Sources told the Mainichi Shimbun that between March 2014 and May that year, several people, mostly Brazilians of Japanese ancestry, were involved in constructing tanks to hold contaminated water at the Fukushima No. 1 plant without receiving sufficient advance instruction on protecting themselves against radiation. Suspicions have arisen that they were hired though illegal contracts that obscured who was responsible for their safety.
The Brazilian Embassy took exception to a job ad published in a free Portuguese-language paper for Brazilians living in Japan in the spring of 2012, the year after the outbreak of the nuclear disaster. The job was to process debris within a 20-kilometer radius of the Fukushima plant. It paid 30,000 yen a day.
Work for foreigners of Japanese ancestry has been declining since the economic downturn following the collapse of Lehman Brothers in 2008, and about 100 people applied within three days of the ad being carried.
At the same time, protests about the ad rose among some Brazilians of Japanese descent, and so the Brazilian Embassy in Japan asked the publisher of the free newspaper to refrain from carrying such ads.
The temp staffing agency in Osaka that ordered the ad said it refrained from employing people before the issue caused a stir, and has not sought to employ foreign workers since.

In the spring of 2015, the Brazilian Consulate-General in Tokyo took note of occasional ads in other free newspapers and put up a notice on its website asking advertisers to refrain from seeking people to work in areas around the Fukushima No. 1 plant where workers' health is put at risk.
Consul General Marco Farani told the Mainichi, "Due to the problem of radiation, I think it would be better for them not to work there, but we can't stop people who want to. Rather than looking at the good wages, it's important to properly learn about the health risks of radiation before working there. I would like the media to think about that point before publishing job ads." He said he didn't know that Brazilians of Japanese ancestry had been involved in nuclear plant decommissioning work.
Musashi University professor Angelo Ishi, a third-generation Japanese-Brazilian who is familiar with labor issues involving Brazilians of Japanese ancestry, is among those who protested against the ads.
"I took a serious view of the fact that they carried them without thinking deeply about the effects of radiation on people's health," he explained.
Regarding the suspicions of disguised contracts, he said, "It's not enough to say it was all right in the end because there was no radiation exposure or any accidents. It is necessary to make people understand the risks, providing information in advance that can also be understood by foreigners."

November 22, 2016

Former Fukushima worker with cancer sues TEPCO

http://www3.nhk.or.jp/nhkworld/en/news/20161122_42/

A former worker at the Fukushima Daiichi nuclear plant has sued the operator, Tokyo Electric Power Company, saying he developed cancer because of unnecessary exposure to radiation.

The 42-year-old man is seeking around 59 million yen, or 530,000 dollars, in compensation.

He has also filed a lawsuit against Kyushu Electric Power Company, the operator of the Genkai nuclear plant.

The man says he was involved in setting up covers over reactor buildings at Fukushima, and pipework at Genkai between October 2011 and December 2013.
He says he developed leukemia in January 2014.

He was exposed to a total of 19.8 millisieverts of radiation from his work at the plants.

The man says he sometimes had to work without a device for measuring radiation levels or a protective lead vest. He says the operators failed to provide essential safety precautions.

The man was granted compensation by the government for work-related cancer in October last year. His damages were the first awarded to a plant worker over the 2011 nuclear accident.

The man told reporters that nuclear plant workers are not an expendable workforce.

The utilities say they will handle the matter appropriately after they learn the details of the filing.

"Disguised contracts" for Fukushima workers

465 suspected of working illegally at Fukushima nuke plant in 2015

http://mainichi.jp/english/articles/20161122/p2a/00m/0na/012000c

A total of 465 workers at the disaster-stricken Fukushima No. 1 nuclear plant may have been employed under "disguised contracts," according to the results of a 2015 Tokyo Electric Power Co. (TEPCO) questionnaire.

- 【Related】Foreigners hired at Fukushima nuke plant under suspected illegal contracts
- 【Fukushima & Nuclear Power】

Under a "disguised contract," people are given work without official employment or are made to work under the instruction of parties other than those who place the original orders, obscuring the party responsible for their safety. The revelation comes after the Mainichi Shimbun reported that seven foreign nationals worked at the plant in 2014 under suspected illegal contracts. TEPCO had subsequently concluded that it had identified no problems over the issue based on its questionnaires.

The utility recognized that 118 of the 465 workers -- whose employers TEPCO says it could identify and whom it checked with by way of the original contractors -- were "all in appropriate employment statuses." In response to the TEPCO announcement, however, a former Japanese worker at the plant testified to the Mainichi that he "couldn't write about the truth" in those surveys. Furthermore, at least one subcontractor related to work at the plant has admitted to the existence of disguised contract work.

The Employment Security Act and other regulations ban "disguised contract work" in which workers receive instructions from companies other than those they have employment or business contracts with as it obscures the party responsible for safety management. The seven foreign nationals -- mostly Japanese-Brazilians -- who worked at the Fukushima No. 1 nuclear plant in 2014 received work instructions from a subcontractor, but they were in fact sole proprietors with business contracts.

TEPCO started handing out surveys in fiscal 2011 to all non-regular workers engaged in the decommissioning of reactors at the plant in a bid to improve their work environment. The utility has released the results of the past surveys on its website.

A questionnaire conducted between August and October last year, whose results were recently released, received responses from 86.4 percent of all workers at the Fukushima No. 1 plant, or 6,527 individuals, most of whom are believed to be Japanese. Among them, 465 workers (14.2 percent) of 3,268 workers (excluding supervisors and managers) answered that "the company that gives me work instructions and the one that pays me are different." Of them, TEPCO asked the original contractors to conduct a survey on 118 workers and concluded that their employment statuses were appropriate based on their reports.

A former male Japanese worker for a second-tier subcontractor that undertook work to build storage tanks for radiation contaminated water at the plant between 2014 and 2015 revealed to the Mainichi that when he responded to a TEPCO survey, he enclosed his answer sheet in an envelope and handed it over to

a first-tier subcontractor without sealing it. The answer sheets submitted by workers were ultimately collected by the original contractor before being submitted to TEPCO.
"Although the surveys were anonymous, they could tell who wrote the answers by the handwriting. I couldn't write about working under harsh conditions, in which many people collapsed due to heatstroke. The way the surveys are conducted now wouldn't lead to uncovering the realities at the job sites," he said.
The president of a construction company in Fukushima Prefecture that undertakes decommissioning work at the Fukushima No. 1 plant told the Mainichi in February that the company was making workers dispatched by another firm work at the plant by disguising them as its own regular employees. "I'm aware it constitutes disguised contract work, which is illegal. But it's a common practice."
Meanwhile, TEPCO's public relations section, when asked whether its questionnaires can uncover the realities of work conditions for those engaged in decommissioning work at the plant, said, "We see no problems with them."

November 23, 2016

Cancer-victim worker sues TEPCO

Ex-Fukushima nuclear plant worker with leukemia sues TEPCO, Kyushu Electric

http://mainichi.jp/english/articles/20161123/p2a/00m/0na/015000c

A former nuclear plant worker, left, speaks at a news conference at the press club in the Tokyo High Court building in Tokyo's Kasumigaseki district, on Nov. 22, 2016. (Mainichi)
A former worker at the crippled Fukushima No. 1 nuclear plant filed suit against plant operator Tokyo Electric Power Co. (TEPCO) as well as Kyushu Electric Power Co. at the Tokyo District Court on Nov. 22 demanding 59 million yen in compensation.
The 42-year-old plaintiff had been granted work-related compensation after he developed leukemia following his time at the stricken nuclear station.
The man from Kitakyushu, Fukuoka Prefecture is demanding compensation including consolation money under the Nuclear Damage Compensation Law, citing the high likelihood that his leukemia was caused by radiation exposure at work. It is the first lawsuit of its kind filed by a nuclear plant worker who was granted work-related compensation in the wake of the outbreak of the Fukushima nuclear disaster.
According to the complaint, the man was a welder for a construction firm when he worked at TEPCO's Fukushima No. 2 nuclear plant and Kyushu Electric's Genkai nuclear plant in Saga Prefecture from Oct. 2011 to March 2012. He then spent about six months from October 2012 constructing scaffolding as part of work to remove spent nuclear fuel from the Fukushima No. 1 plant's No. 4 reactor building. He worked on the premises of the Fukushima nuclear complex until December 2013, and was exposed to 15.68 millisieverts of radiation. All in all, his cumulative radiation exposure was 19.78 millisieverts, including that at other nuclear facilities.

After being diagnosed with acute myeloid leukemia in January 2014, he applied for worker's accident compensation. A health ministry panel subsequently determined that his leukemia met the conditions for worker's compensation, including the fact that the illness had developed more than a year after his first exposure to radiation, and that his annual radiation exposure was at least 5 millisieverts. The expert panel judged it reasonable to assume that his illness stemmed from work dealing with radiation. In October 2015, the Labor Standards Inspection Office certified the man for worker's compensation benefits. He is not physically fit to work, according to sources.
The Nuclear Damage Compensation Law stipulates that there is no limit for nuclear damage compensation liability amounts (no-fault liability), and that the nuclear plant operator must pay the compensation.
There has apparently been no judicial precedent involving a former nuclear plant worker since the outbreak of the Fukushima disaster, although there have been cases in which nuclear disaster victims and companies won lawsuits and received compensation.
TEPCO commented, "We will properly deal with it," while Kyushu Electric stated, "We will go through the content of the suit and respond properly."
After filing the suit, the former worker expressed distrust of TEPCO, telling reporters at a news conference, "We workers are not pawns." When newspapers reported in October 2015 that the man was granted worker's compensation for leukemia, TEPCO released a statement saying, "We are not in a position to comment on a worker from a subcontractor." The former worker said of TEPCO's response, "They didn't apologize in the slightest. I was filled with shock and anger."
It was seven months after the outbreak of the nuclear disaster that the man decided to work at nuclear power plants "for the sake of Fukushima." Brushing aside family opposition, the man started working as a welder for a subcontractor. He said that at times he had to do his job without a protective lead vest because there were not enough of them.
At the news conference, the man's lawyer Yuichi Kaido said, "We want to pave the way for systematic reform by clarifying TEPCO's responsibility." The former nuclear plant worker said, "There are still employees working amid high levels of radiation in Fukushima today. I hope I'll be able to give encouragement to those who may develop cancer in the future."
As of the end of March 2016, 46,974 people had worked at the Fukushima No. 1 nuclear plant since the outbreak of the disaster. About 90 percent of them were not TEPCO employees, though they have played a key role in the plant's decommissioning process.
According to the health ministry, 11 people have applied for worker's accident compensation after developing cancer. Two people have been granted benefits, while five other cases are still under consideration.

December 1, 2016

Doused in radioactive coolant

Tsuruga nuke plant workers doused with radioactive coolant water

http://www.japantimes.co.jp/news/2016/12/01/national/science-health/10-tsuruga-nuke-plant-workers-doused-radioactive-coolant-water-operator-rules-exposure/#.WD_zFn2Dmos

JIJI, Kyodo
FUKUI – Japan Atomic Power Co. has revealed that 10 workers were doused in radioactive coolant water during maintenance work in an auxiliary building for reactor 2 at the Tsuruga nuclear power plant in Fukui Prefecture.
The 10 employees were not exposed to radiation, the company said on Wednesday.
Up to 160 liters of room-temperature coolant water containing 272,000 becquerels of radioactive substances was spilled — about one-tenth of the level that must be reported to the government, Japan Atomic Power said, adding that the amount of the hazardous materials was "not small."
Water from a pipe sprayed into a tank room on the second basement floor of the auxiliary building around 10:50 a.m. Wednesday, when a worker loosened a bolt on a valve from a pipe attached to a coolant storage tank, according to Japan Atomic Power.
Of the 15 workers from a subcontracting company who were in the room, four were soaked from head to toe, while six were partially soaked. The water splashed directly onto the faces of some of the workers, according to Japan Atomic Power.
When the water poured in, the workers, wearing jumpsuits, helmets, gloves and goggles, were trying to drain the pipe to allow the valve to be checked and to exchange a rubber part in a tank that temporarily stores coolant water while operations at the plant are halted.
Japan Atomic Power said there was more water in the pipe than had been anticipated.
In November last year, Japan Atomic Power applied to the Nuclear Regulation Authority for safety checks on the Tsuruga reactor. An NRA screening is required before the nuclear reactor is reactivated.

December 17, 2016

Tepco worker's cancer recognised as work-related

Tepco worker's thyroid cancer is recognized as work-related

http://www.japantimes.co.jp/news/2016/12/17/national/tepco-workers-thyroid-cancer-recognized-work-related/#.WFXGg32DlLM

JIJI
Japanese labor authorities have recognized the thyroid cancer of a man who worked at Tepco's stricken Fukushima No. 1 nuclear plant as a work-related, it was learned Friday.
It is the first time that thyroid cancer has been recognized as a work-related illness caused by radiation from the plant after it was damaged in the March 2011 earthquake and tsunami.
This is the third case labor authorities have linked to radiation exposure for workers at the Fukushima plant. The two previous cases involved leukemia.
At a meeting Friday, a Health, Labor and Welfare Ministry panel of experts presented for the first time criteria for recognizing thyroid cancer as a work-related disease from radiation, including doses of 100 millisieverts or more and a period of five years or more between exposure to radiation and the development of cancer.

Based on the criteria, a labor standards office in Fukushima Prefecture concluded that the cancer of the employee, who is in his 40s, was caused by radiation from the plant.
The man joined Tokyo Electric Power Company Holdings Inc. in 1992 and worked at several nuclear power plants for over 20 years.
After checking reactor instruments and carrying out other duties at the Fukushima No. 1 plant from March 2011 to April 2012, he was diagnosed with thyroid cancer in April 2014. His cumulative radiation dose after the accident stood at 139.12 millisieverts.
According to the International Commission on Radiological Protection, lifetime cancer mortality rises by about 0.5 percent for those exposed to a dose of 100 millisieverts.

Thyroid cancer compensation for Fukushima plant worker

http://www.asahi.com/ajw/articles/AJ201612170027.html

By YURI OIWA/ Staff Writer
A man who developed thyroid gland cancer after working at the stricken Fukushima No. 1 nuclear plant has for the first time won the right to work-related compensation.
While the case ranks as the third time a worker at the Fukushima plant has been recognized as eligible for work-related compensation because of cancer caused by radiation exposure, it is the first instance involving thyroid gland cancer.
The Ministry of Health, Labor and Welfare announced its decision Dec. 16.
The man in his 40s, an employee of plant operator Tokyo Electric Power Co., worked at the Fukushima plant after the triple meltdown triggered by the 2011 Great East Japan Earthquake and tsunami. He was diagnosed with thyroid gland cancer in April 2014.
The man worked at various nuclear plants, including the Fukushima facility, between 1992 and 2012. He was mainly involved in operating and overseeing reactor operations.
After the March 2011 nuclear accident, the man was in the plant complex when hydrogen explosions rocked the No. 1 and No. 3 reactor buildings. His duties included confirming water and pressure meter levels as well as providing fuel to water pumps.
The amount of his accumulated whole body radiation exposure was 150 millisieverts, with about 140 millisieverts resulting from the period after the nuclear accident. Of that amount, about 40 millisieverts was through internal exposure caused by inhaling or other ways of absorbing radioactive materials.
Along with recognizing the first work-related compensation involving thyroid gland cancer, the labor ministry also released for the first time its overall position on dealing with compensation issues for workers who were at the Fukushima plant after the accident.
The ministry said it would recognize compensation for workers whose accumulated whole body dose exceeded 100 millisieverts and for whom at least five years have passed since the start of work involving radiation exposure and the diagnosis of cancer.
Ministry officials said the dose level was not a strict standard but one yardstick for recognizing compensation.
According to a study by TEPCO and a U.N. scientific committee looking into the effects of radiation, 174 people who worked at the plant had accumulated whole body doses exceeding 100 millisieverts as of this past March.

There is also an estimate that more than 2,000 workers have radiation doses exceeding 100 millisieverts just in their thyroid gland.

Plant worker's thyroid cancer certified as linked to nuclear disaster

http://mainichi.jp/english/articles/20161217/p2g/00m/0dm/025000c

TOKYO (Kyodo) -- A worker exposed to radiation when disaster struck the Fukushima nuclear plant has been found to have developed thyroid cancer caused by an industrial accident, the labor ministry said Friday.
The employee of Tokyo Electric Power Company Holdings Inc., the operator of the Fukushima Daiichi nuclear power plant, is the third person determined to be entitled to benefits due to illness caused by exposure to radiation released when three reactors melted down in the days after a massive earthquake and ensuing tsunami in March 2011.
The man is the first to be certified for developing thyroid cancer because of the nuclear disaster. The first two persons suffer from leukemia.
The man in his 40s was an operator of the Nos. 3 and 4 reactors at the nuclear plant.
The man had engaged in work involving radiation for 20 years, and worked at the Fukushima plant between March 2011 and April 2012, according to the Health, Labor and Welfare Ministry.
Over those 20 years, he was exposed to a total of 149.6 millisieverts of radiation -- but most of that, or 139.12 millisieverts, in the wake of the 2011 disaster.
He was diagnosed with thyroid cancer in April 2014.

December 22, 2016

The daily bus ride

For 6,000, the daily bus ride takes them to Fukushima plant

http://www.asahi.com/ajw/articles/AJ201612220008.html

By AYA NAGATANI/ Staff Writer
NARAHA, Fukushima Prefecture--Despite the predawn hour, few people are sleeping on a bus that steadily makes its way north on National Route 6.
Some passengers are planning for the work ahead. One is looking forward to chatting with his colleagues. And a few wonder if today will be the day when their annual radiation doses reach the safety limit.
Every day, buses like this take 6,000 workers to the Fukushima No. 1 nuclear power plant. And every day, the same buses take the exhausted and mostly sleeping workers back to their base at the Japan Football Village (J-Village) in Naraha.

Although the Fukushima plant is still decades away from being decommissioned, without this daily routine of the workers who toil amid an invisible danger, the situation at the site would be much more difficult.

407 DAILY BUS RIDES

One of them, the 49-year-old leader of a group of metal workers from Iwaki, Fukushima Prefecture, has been working at nuclear plants, including the Kashiwazaki-Kariwa power station in Niigata Prefecture, for nearly 20 years.

He was at the Fukushima No. 1 nuclear plant when the Great East Japan Earthquake and tsunami triggered the triple meltdown there in March 2011.

"Nobody can get close to the area where the melted nuclear fuel remains due to high radiation doses," the man said. "Even if we could approach the area, we would have no way out if something happens. The situation is harsh."

Those metal workers install tanks for the contaminated water that keeps accumulating at the plant.

Although there are plenty of empty seats, the young workers sit in front and the older workers take the back seats.

Thousands of workers are staying at temporary dormitories set up in J-Village, a soccer training complex.

Tokyo Electric Power Company Holdings Inc., operator of the nuclear plant, hired a local bus company to transport the workers to the plant because securing parking areas near the site has been difficult since the 2011 disaster.

The company provides 407 services a day to and from the plant. Each trip takes about 30 minutes.

The first shuttle bus departs from J-Village at 3:30 a.m., while the last bus leaves the Fukushima plant at 9:45 p.m.

In mid-November amid torrential rain, one bus picked up a man taking shelter under the eaves of a bus stop.

He said he is in charge of managing data related to radiation doses of fittings and other equipment at the plant.

"We have many different types of work here," the man proudly said.

Also on the way to the nuclear plant, a 53-year-old employee of a security company was thinking about personnel distribution.

Like other workers there, security guards must be replaced when their annual radiation doses reach a certain level set by the government.

He said he has difficulties making ends meet with a limited number of guards who have knowledge about radiation.

Suddenly, the man's cellphone rings, and the caller orders the deployment of additional security guards to the plant.

A 52-year-old TEPCO employee was on the way to the nearby Fukushima No. 2 nuclear power plant to provide a safety training program for workers, many of whom are victims of the triple disaster.

"I want to convey to workers how precious their lives are and how important safety is in a way that doesn't make me sound hypocritical," the employee said.

The triple meltdown has been called a "man-made disaster" caused by the failure of both TEPCO's management and the government's regulatory authorities.

The TEPCO employee will use props, such as a ladder, and pretend to be a worker to explain dangerous cases at the No. 1 plant.

PREMIUM SEATS

On the trip back to J-Village, a different atmosphere exists on the bus.

Although dazzling sunlight shines through the windows and stunning views of the ocean are available, most of the workers are fast asleep in their wrinkled uniforms.

"Few people stay awake. I don't even switch on the radio. They must be tired after their work," said Nobuyuki Kimura, 52, who has driven the shuttle bus for one-and-a-half years.

In Kimura's bus that departed the plant at 2:30 p.m., all 50 seats and some of the auxiliary seats were filled. The few passengers who stayed awake remained quiet.

By early evening, fewer workers boarded the bus at the plant.

Window seats at the back of the bus are desirable on all rides because they have an enough room for the seats to recline, allowing passengers to cross their legs.

A 21-year-old worker from Iwaki went for a window seat at the back after standing at the front of a line waiting for the bus.

"I can relax sitting here. This is the premium seat," said the man who collects waste materials, such as boots and socks, at the site.

Although he works in protective gear in an area with high radiation levels, he said he has never thought about quitting his job.

He said he became fed up with school as a junior high school student, and did not bother going to senior high school.

At the age of 18, he joined his current company, and his first assignment was at the Fukushima No. 1 plant.

"I became acquaintances with more and more people. It's fun to speak with people at work," he said.

Through his work at the nuclear plant, his weight has dropped from 115 kilograms to 93 kg.

Thirty to 40 years are needed to decommission the Fukushima No. 1 plant, according to the mid- and-long-term roadmap compiled by the government and TEPCO.

To reduce the groundwater flowing into the buildings housing the No. 1 to No. 4 reactors, TEPCO installed coolant pipes this year to create an underground frozen soil wall to divert the water into the ocean.

TEPCO announced in October that the ice wall on the sea side was nearly frozen, but groundwater is believed to be seeping through it.

The utility plans to start removing spent fuel from the No. 3 reactor building in fiscal 2017. It also has plans to begin the daunting task of removing the melted fuel from the No. 1 to No. 3 reactor containment vessels in 2021.

However, extremely high radiation levels have prevented workers from approaching and understanding the condition of the melted fuel. The removal method has yet to be decided.

The estimated cost of work for decommissioning and dealing with the contaminated water has ballooned to 8 trillion yen ($68.1 billion).

February 2, 2017

Former Fukushima worker sues TEPCO

Ex-worker during Fukushima disaster sues Tepco, Kyushu Electric over leukemia

http://www.japantimes.co.jp/news/2017/02/02/national/crime-legal/ex-worker-fukushima-disaster-sues-tepco-kyushu-electric-leukemia/#.WJMn2_KDmos

Kyodo

A former worker who developed leukemia after combating the 2011 Fukushima nuclear crisis demanded ¥59 million (around $524,000) in damages from two utilities Thursday at his first trial hearing at the Tokyo District Court.

The 42-year-old man from Fukuoka Prefecture is the first person to be recognized by labor authorities as having an illness linked to workplace radiation exposure since the triple core meltdown at the Fukushima No. 1 nuclear power plant.

The man-made disaster was triggered by the huge earthquake and tsunami on March 11, 2011.

"I worked there because of my ardent desire to help bring the disaster under control but I was treated as if I was a mere expendable laborer," the plaintiff said.

"I want Tokyo Electric to thoroughly face up to its responsibility," he said.

The defendants, Tokyo Electric Power Company Holdings Inc., which runs Fukushima No. 1, and Kyushu Electric Power Co., whose Genkai nuclear plant also employed the plaintiff, asked the court to reject the claim, questioning the connection between his radiation exposure and leukemia.

The man was engaged in welding operations at the Fukushima Nos. 1 and 2 plants and the Genkai complex in Saga Prefecture from October 2011 to December 2013. His exposure in operations subcontracted by the utilities consisted of at least 19.8 millisieverts, according to his written complaint.

The man was diagnosed with acute myeloid leukemia in January 2014 and later went into depression. Both ailments are recognized as work-related illnesses by the Health, Labor and Welfare Ministry.

He said he has been unable to go back to work and is therefore seeking compensation from the utilities.

February 24, 2017

No decommissioning work for foreigners

TEPCO won't let foreign trainees do nuclear decommissioning work

https://mainichi.jp/english/articles/20170224/p2a/00m/0na/003000c

Tokyo Electric Power Co. (TEPCO) announced on Feb. 23 that it will check the resident status of any foreign workers involved in decommissioning work at its Fukushima No. 1 Nuclear Power Plant and prevent anyone who is found to be a "Technical Intern Training Program" trainee from doing such work.

According to TEPCO, approximately 40 foreigners are currently working at the troubled nuclear plant in Fukushima Prefecture. To date, the company has checked all the passports of its foreign workers, but going forward, TEPCO plans to verify their IDs by checking the residence cards of such workers as well.

With regard to foreign trainees under the government-backed program whose aim is to transfer Japan's technology back to developing countries, a TEPCO executive said, "We have introduced restrictions in order to create an appropriate working environment," following consultation with the Ministry of Economy, Trade and Industry.
Speaking on the matter, a former subcontractor explained that there were no cases of foreign trainees working at the Fukushima nuclear plant in the past.
TEPCO's new policy will become effective from April 1.

February 27, 2017

Constant battle against radiation

Workers examine the inside of the No. 2 reactor containment vessel at the Fukushima No. 1 Nuclear Power Plant on Jan. 30, 2017. (Photo courtesy of Tokyo Electric Power Co.)

Proud workers at Fukushima No. 1 nuke plant risk deadly radiation danger

http://mainichi.jp/english/articles/20170227/p2a/00m/0na/007000c

Tokyo Electric Power Co. (TEPCO) has failed to grasp the entire picture of melted fuel possibly accumulating inside the container vessel of the No. 2 reactor at the Fukushima No. 1 Nuclear Power Plant. The radiation levels inside the vessel are extremely high, to the extent a human could be killed in less than a minute, and even a robot designed to conduct a probe inside went down quickly.

- 【Related】Fukushima nuclear plant still plagued by tainted water 6 years after meltdowns
- 【Related】In Photos: Inside the Fukushima No. 1 nuclear power plant
- 【Related】2 more nuclear reactors effectively clear regulator's safety review

The Mainichi Shimbun visited the disaster-stricken plant late last year ahead of the sixth anniversary of the nuclear meltdowns at the facility in March.
On the early morning of Dec. 24, 2016, a group of 26 workers assembled at a building housing the No. 2 reactor when it was still dark outside. The workers were from heavy machinery giant IHI Corp. and other companies engaged in disaster recovery work. On top of their protective Tyvek suits, they were wearing special protective ponchos. They also had four-layer gloves on, with plastic tape wrapped around their wrists. The outfit made them sweat though it was the middle of winter.
In order for TEPCO to move ahead with decommissioning work on the No. 1 through No. 3 reactors at the plant, the utility needs to find out how much melted nuclear fuel lies inside the facilities, and where, in the aftermath of the meltdown of 1,496 fuel rods. The 26 workers were tasked with drilling a hole measuring 11.5 centimeters in diameter in the No. 2 reactor's container vessel to open the way for the probe robot, using a remotely controlled machine.
Ryosuke Ishida, 28, an employee of a related company in Hokkaido, was in charge of removing the machinery that was used in the drilling work. In order to ward off the severely high radiation, he was wearing a lead jacket weighing 10 kilograms on top of his already tightly sealed protective gear. Each worker was allowed only five minutes for their task to keep their radiation exposure doses to no more than 3 millisieverts a day. The dosimeters they were carrying with them were set to beep when the radiation level reached 1.5 to 2 millisieverts, with an additional alarm set to go off when radiation doses hit every one-fifth of those levels.
Ishida's dosimeter beeped just under a minute after he stepped inside the No. 2 reactor building. "Is it beeping already?" he thought to himself. The radiation levels vary greatly depending on where one stands inside the facility. Although Ishida had got a firm grasp on where the hot spots were during pre-training, he found himself "inadvertently standing on highly radioactive spots as I was focused on work."
While trying to calm himself down, Ishida sped up his manual work. Alas, a machine component for turning a bolt fell off and rolled on the floor. "Damn, I'm running out of time," he thought. His full face mask went all white as he sweated physically and emotionally, blocking his view. By the time he finished picking up the fallen component and wrapped up his work, he was sweating all over his body.
"It's a battle against radiation at the site," Ishida recalled. He added, though, "Because nobody else wants to do the job, I find it all the more worthwhile and take pride in it." (By Mirai Nagira, Science & Environment News Department)

Robots like humans "still feeling around the dark"

Robots' limitations exposed in search for melted nuclear fuel in Fukushima

http://mainichi.jp/english/articles/20170227/p2a/00m/0na/016000c

OKUMA, Fukushima -- In an attempt to minimize the risk to humans during the search for melted nuclear fuel at the Fukushima No. 1 Nuclear Power Plant, robots have also been deployed to help out with the task.

- 【Related】Search for melted nuclear fuel at Fukushima plant's No. 2 reactor faces obstacles
- 【Related】Proud workers at Fukushima No. 1 nuke plant risk deadly radiation danger
- 【Related】Editorial: Time to transform Japan's nuclear plant inspection system

However, the robots have also encountered some problems. For instance, a Toshiba Corp. robot that was sent in to clear away deposited material inside the containment vessel of the No. 2 reactor failed to clear away much material, and within approximately two hours, its camera had broken.

According to Takahiro Kimoto of plant operator Tokyo Electric Power Co. (TEPCO), "The radiation inside the containment vessel was so intense that the images transmitted back from a camera attached to the robot were pitch black." This was somewhat disappointing for the team working at the No. 2 reactor because by losing their robotic "eye" inside the containment vessel, they were unable to make the progress they were hoping for.

On Feb. 16, a "scorpion robot" was sent into the containment vessel. The intention of the mission was to locate melted nuclear fuel. However, deposited materials inside the vessel meant that the robot became stuck and was unable to move any further.

In the end, images from directly underneath the nuclear reactor were obtained not from the robot, but by "human means," on Jan. 30. By using a pipe and a camera, the team was able to confirm the presence of holes in the platform. They also discovered brown and black deposited material, which appeared to be melted nuclear fuel. Therefore, some might say that "human methods" are more effective than robots in a mission of this nature.

According to TEPCO, "This was the first probe of its kind in the world. We were able to collect sufficient data." However, critics would argue that six years have passed since the outbreak of the Fukushima nuclear disaster in 2011, and yet the exact situation regarding melted nuclear fuel at the site is still unclear.

Looking ahead, further difficulties are anticipated at both the No. 1 and No. 3 reactors, where in the past, there have been hydrogen explosions. This is mainly because there are several meters of contaminated water underneath the containment vessels, and the radiation levels are stronger than at the No. 2 reactor. There are plans to insert a robot inside the No. 1 reactor in March, but a date has not yet been set for the No. 3 reactor. Satoshi Okada of the nuclear power plant maker Hitachi-GE Nuclear Energy, which oversees the search at the No. 1 reactor, states, "In order to deal with the problem of melted nuclear fuel, we must first ascertain exactly how and where the melted fuel has been scattered inside the reactors."

In summer 2017, TEPCO and the government will look into ways of withdrawing the melted nuclear fuel from the site, with the aim of commencing extraction work in 2021 -- exactly 10 years after the initial disaster.

The Three Mile Island Disaster in the U.S. in 1979 will provide some kind of reference for TEPCO and the government, because in that particular case, the removal of melted nuclear fuel started 11 years after the initial accident. However, the situation at Fukushima appears to be more complicated than at Three Mile Island, because in the case of the latter accident, melted nuclear fuel was retained within pressure containers. Conversely, in the case of Fukushima, some of the material has seeped through the pressure containers.

With regard to the government and TEPCO's decommissioning work, Nuclear Regulation Authority Chairman Shunichi Tanaka states, "It is still early to talk in such an optimistic way. At the moment, we are still feeling around in the dark."

Time will tell as to whether the current plan for removing melted nuclear fuel from the No. 1 power plant is a realistic possibility or just a pipe dream.

Search for melted nuclear fuel at Fukushima plant's No. 2 reactor faces obstacles

http://mainichi.jp/english/articles/20170227/p2a/00m/0na/011000c

Although nearly six years have passed since the nuclear disaster at the Fukushima No. 1 Nuclear Power Plant in 2011, the search for the melted nuclear fuel inside the plant continues.

- 【Related】Proud workers at Fukushima No. 1 nuke plant risk deadly radiation danger

The operators of the plant, Tokyo Electric Power Co. (TEPCO), deployed over 800 workers inside the No. 2 reactor at the No. 1 plant between December 2016 and February 2017 -- but so far, they have been unable to identify the location of the melted nuclear fuel.

TEPCO also plans to conduct studies inside the No. 1 and No. 3 reactors, but they are surely headed for a rough road as the search for the melted nuclear fuel continues to be extremely difficult. It is likely that struggles in that search will have a negative effect on the government and TEPCO's target of completing the Fukushima decommissioning work between 2041 and 2051.

Apart from humans, robots have also been involved in the search. In the case of the No. 2 reactor for example, robots have been used in the following way.

The mission to get a good look inside the No. 2 reactor containment vessel had four steps; first, workers would drill a hole measuring 11.5 centimeters in diameter into the containment vessel wall, allowing robots to enter the vessel; then workers would insert a pipe with a camera into the hole so that the situation inside the vessel could be observed; a cleaning robot would then be sent inside the vessel to clear away any sediment in the way for the next robot; and finally a self-propelled, scorpion-shaped robot would travel to the area directly below the nuclear reactor, in search of the melted fuel. However, a number of unexpected problems emerged along the way.

Heavy machinery giant IHI Corp.'s Keizo Imahori, 38, who oversaw the mechanical boring of the containment vessel in December 2016, explains that, "A number of unexpected dents were found on the floor of the nuclear reactor building." This was a surprising discovery for Imahori and his team. The presence of the dents meant that it would be difficult for machines to get sufficiently close to the necessary areas to drill a hole, which in turn has a detrimental effect on the entire search for melted nuclear fuel.

As an emergency measure, 1-meter by 1-meter iron sheets were used to cover the dents, but workers involved in laying the sheets were exposed to extra radiation because of this additional work.

In addition to the dents, the No. 1 to No. 3 reactors at the Fukushima plant, which first started operating in the 1970s, had many parts that have undergone repair work not reflected in their original construction plans. It was impossible to check such changes in the structure beforehand due to high levels of radiation.

There was another problem -- the machines could not be attached to the side of the containment vessel, which meant workers were unable to carry out drilling work. This was caused by the containment vessel's paint peeling away. The problem was solved after workers peeled off the paint by hand, but this also caused them to be exposed to more radiation.

The hole-boring process at the No. 2 reactor took approximately 20 days to complete -- during which, workers involved in the project were exposed to approximately 4.5 millisieverts of radiation on average. Based on national guidelines, many companies involved in decommissioning work set the annual upper

radiation dose at 20 millisieverts for their workers. Therefore, workers can only be involved in this project up to five times before their level of radiation exposure exceeds the limit. However, as Imahori points out, "We have no way of knowing the situation unless we actually go in there."
Nevertheless, in order to ensure that highly-skilled professionals with expert knowledge in nuclear power plants continue to be involved in the search for the melted nuclear fuel, it is necessary to use robots as much as possible to reduce the amount of radiation to which humans are exposed.
At the same time, with the Fukushima No. 1 Nuclear Power Plant being somewhat like a "burning house," manpower is also required to make effective progress with the search. Yasuo Hirose, of IHI Corp., states, "If we completely rely on robots for the decommissioning work, they will not be able to deal with any unexpected problems. The decommissioning process is likely to be a very long task." (Mirai Nagira, Science & Environment News Department)

April 2, 2017

Having to battle TEPCO and leukemia

After Fukushima, battling TEPCO and leukemia

http://www.japantimes.co.jp/news/2017/04/02/national/fukushima-battling-tepco-leukemia/#.WOEvMmekKos

Welder felt he had a duty to help at the No. 1 plant after 3/11. Now, in court, he is taking on the utility he says betrayed him

by Rob Gilhooly
Special To The Japan Times
Eight-year-old Kenji hands his mother a tissue, which she uses to dry her eyes beneath thick-rimmed spectacles, her free hand giving her son's closely cropped jet-black hair a gentle stroke. Michiko Ikeda has cried before, deeply, achingly, she admits, during a darker time when she faced the very real prospect of having to raise Kenji and his two siblings alone.
Then, Masaru, her husband of 15 years, had been diagnosed with leukemia following stints working at the stricken Fukushima No. 1 nuclear power plant and the neighboring Fukushima No. 2 facility, starting in the fall of 2011.
"Even when he first said it was leukemia I thought it must be a mistake," Michiko says as the afternoon sun streams through the window of the front room of her home in western Japan. "When the hospital confirmed it, my mind went blank. I couldn't stop crying, wherever I went. The only image I had in my head was that my husband was going to die."
The road to Fukushima for Masaru Ikeda began to unfold the day after the March 2011 disasters, when images from the tsunami-devastated Tohoku coast flooded the TV and internet. Among them was footage of bodies being laid out in a makeshift morgue, the feet and legs sticking out from beneath mud-encrusted blankets clearly belonging to children.

“It was overwhelming and I couldn’t help wondering how I’d feel if it was my kids lying there,” says Masaru, 42, who, after 10 months of cancer treatment, was discharged from his hospital cleanroom, the cancer having been found to be one step short of incurable. “I knew I had to to do something to help.”
Shortly after, his boss at the construction company where he worked told him about a Fukushima contractor who was looking for labor to assist with the ongoing battle to bring the devastated nuclear facility under control. Even though he had never set foot in a nuclear power plant before, Ikeda’s 15 years of experience as a welder would be invaluable.
“He asked if any of us were prepared to go up there, but nobody wanted to take the risk,” he says, adding that he, too, had initially hesitated. “I talked with colleagues and they said, ‘The workers at “1F” are like kamikaze pilots.’ … I still wanted to go, not for the sake of the country, but for the people of Tohoku.”
His family and friends objected vehemently. His father told him bluntly that if he went, he’d end up getting leukemia.
“He didn’t say ‘cancer,’ or another illness, but ‘leukemia,’ possibly because of what happened after Hiroshima,” Ikeda says, referring to the leukemia that was the earliest delayed effect of radiation exposure seen among A-bomb survivors. “I told him there was no way that would happen.”
Ikeda’s work at the plant was as varied as it was hazardous. At one point he helped construct a facility to dispose of workers’ TyVek suits, the ubiquitous white hooded jumpsuits that after exposure to radiation were discarded onto mountainous piles inside the plant’s evacuation zone.
Later he was involved in the construction of a temporary elevator at shattered reactor 3 and a 50-meter-tall heavy-duty steel structure to surround reactor 4 and support a huge overhead crane that was needed to remove the smoldering fuel assemblies in the fuel pool. These had been exposed to the elements following an explosion that blew away the reactor roof and the original crane.
“I was shocked when I first got there and saw the sheer volume of abandoned equipment and vehicles — including fire department and military trucks that had become irreversibly contaminated.”
He was also surprised by the makeup of the on-site workers — a curious mixture of day laborers and the homeless — not to mention the pitiful shortage of suitable clothing and masks to protect them from radiation, he says.
“Later, when a lot of fuss was made about radioactivity, that kind of gear and PDMs (pocket dosimeters, which monitor radiation) became more commonplace, but before that it was basically regular work clothes and surgical masks,” he says. “During work at reactor 4 the levels were so high we were supposed to wear lead vests, but there were not enough to go round so some of us had to do without.”
Nonetheless, the high radiation levels meant that work close to the reactors rarely lasted more than an hour per day and on occasion was terminated after just 10 minutes.
In late 2013, Ikeda returned home for rest and recuperation following a dispute with a subcontracting firm that was refusing to honor the daily ¥6,000 hazard allowance promised to workers — considerably less than the ¥19,000 pledged by Tokyo Electric Power Co. (Tepco) president Naomi Hirose a month earlier.
It was about this time that he started to feel unwell. He couldn’t shake off a dry cough and found himself tiring far more easily than usual. Twice he scraped the side of his car without even realizing it.
In early 2014 a local doctor diagnosed him with a cold, making the news of a far more life-threatening illness during a company-sanctioned periodic health check a week later all the harder to swallow.
Results from a subsequent spinal tap revealed that 80 percent of the white blood cells in his bone marrow were abnormal. The doctor told him if he had waited a couple more weeks, treatment would not have been an option.

Nevertheless, it was still touch and go, and fearing he might not have much longer to live, Ikeda ignored the doctor's recommendation for immediate hospitalization, instead returning home to spend time with his children, who were then only 5, 7 and 9.

"It was only after I saw them through the glass of the cleanroom for the first time that I realized what a painful ordeal I had put them through," says Ikeda. "I don't regret going to Fukushima … but I do regret the distress I caused my family."

Despite his father's pre-Fukushima dispatch prophecy, Ikeda had yet to contemplate the possibility that his illness may be tied to the plant. The seed of that idea was planted by a surprising source — an official at Kajima Corp., a company he praises despite it being implicated in a kickback scandal that led some workers who had received little or no hazard compensation to take legal action.

For the time being, however, he felt fortunate and relieved. The health and labor ministry had recognized the illness as workplace-related, though it stopped short of stating it was directly tied to the 19.8 millisieverts of radioactivity he had been exposed to while working at nuclear plants.

Under health ministry guidelines, workers who are exposed to 5 mSv of radiation in a year can apply for compensation insurance payments. Ikeda did so successfully, meaning the government would help cover Ikeda's medical costs and loss of income.

Shortly after, he was contacted by a friend still employed at the plant, who told him of a memo attached to a worker survey undertaken by plant operator Tepco.

"The memo told workers not to worry about the decision to recognize the connection between my leukemia and radiation — that it was bogus," Ikeda recalls. "It was as though Tepco was trying to erase the recognition of my work-related illness, which by law was its responsibility."

Until then Ikeda insists he had "no intention" of suing Tepco, but its attitude made him "feel sick to the bone."

"I started to wonder what kind of people they are," says Ikeda, who since his transfusions has suffered various ailments linked to the peripheral blood stem cell transplant he received for his acute myeloid leukemia (AML). "This is a company that for months denied the reactor meltdowns, and that caused the explosions by refusing to inject seawater (to cool the reactors) on the grounds it would render the reactors unusable. Then they turn a blind eye to a worker who helped clean up their mess. To them I was just another expendable laborer."

Incensed, Ikeda started legal proceedings against Tokyo Electric Power Co. Holdings Inc., accusing the now-nationalized utility of failing to take adequate precautions against radiation exposure. His first hearing, where he filed for ¥59 million damages against both Tepco and Kyushu Electric Power Co., at whose Genkai plant he had also worked, commenced at the Tokyo District Court on Feb. 2.

A Tepco spokesperson denied the claims, saying the utility has endeavored "to manage all radiation exposure of workers," adding there has been "no medical connection found (between radiation exposure and leukemia) … even from third-party or any other medical experts."

A health ministry official stopped short of corroborating that view, saying it had awarded Ikeda compensation even though the "causal link between his exposure to radiation and his illness is unclear."

Researchers worldwide are divided about the relation between radiation and leukemia and, indeed, some other cancers. Imperial College London cancer expert Geraldine Thomas, who is openly pro-nuclear, says there is in fact a connection, though leukemia and other cancers can also result from several factors.

"AML … does have an association with radiation exposure. However, it also has an association with smoking, exposure to benzene (one of the contaminants in cigarette smoke), etc.," says Thomas, who runs the Chernobyl Tissue Bank, which analyzes samples of tissue from people exposed to radiation after the Chernobyl nuclear disaster. "The problem with … these cases is that it is easy to blame radiation exposure,

but almost impossible to prove or disprove, as there are no biomarkers that can be used to distinguish between different etiologies."

The total dose Ikeda received was "very low," Thomas adds, leading her to suspect that exposure to cigarette smoke is more likely to be a higher risk factor. Ikeda says he only started smoking after a doctor had recommended it to counter the stress resulting from the sometimes debilitating side-effects of his treatment.

While scientists such as Thomas show caution in their assessment of low exposure doses, Hisako Sakiyama, a medical doctor and former senior researcher at Japan's National Institute of Radiological Sciences, is among those who insist that even lower doses can cause irreparable DNA damage known as "double strand breaks." Such doses are therefore "capable of inducing cancer," she says, "because the energy of radiation is stronger than that of the chemical bonds of DNA."

Thomas counters that this alone is not enough to prove nuclear plants are the root of the problem because "double strand breaks are not uniquely caused by radiation."

Ikeda's lawyer, Yuichi Kaido, concedes that it's scientifically problematic to prove his client's leukemia is tied to radiation, even though Ikeda's illness has been officially declared as being linked to his work. "More importantly, he has been exposed to a level of radiation clearly exceeding the standard set by the government, and incidences of leukemia (among the general public) are extremely low," he says, referring to the leukemia incidence rate in Japan of 6.3 per 100,000 people, or 1.4 percent of 805,236 cancers diagnosed in 2010. "In this case, I think it has been proven that the probable cause (radiation) is clearly far beyond the 51 percent probability normally required in these kinds of civil cases."

To assess Ikeda's case, painstaking investigations into his medical and employment background were undertaken. Ikeda himself said he had often noticed what he believes were public security officials in black vehicles who he alleges would park near his home and tail him wherever he went, presumably checking on his lifestyle habits and the types of people with whom he kept company.

The outcome of the official investigation was that no other factors, such as viruses or other illnesses, could have caused his leukemia, according to Kaido.

Until now, there have been only two other known lawsuits like Ikeda's. One of those — involving plumber Mitsuaki Nagao, who had been diagnosed with a type of bone marrow cancer after being exposed to 70 mSv of radiation at nuclear power plants including Fukushima No. 1 — was rejected by the Tokyo High Court in 2009, by which time Nagao had died. Kaido says that ruling could prove to be a "huge hindrance" in gaining justice for the likes of Ikeda.

"The big difference between then and now is the massive accident at Fukushima, where it is unthinkable that no health hazard resulted," Kaido says, adding that in a wider social context, it is unconscionable that the utility that caused such environmental destruction and has since paid trillions of yen already in compensation to atone for the disaster, should fail to recompense a man who fell sick after helping Tepco overcome the dire situation at Fukushima No. 1.

"Some people in Fukushima who were unable to return to their homes (because of high radiation levels) were paid hundreds of billions of yen, while my client hasn't received a penny. That's preposterous. Tepco has washed its hands of its social responsibility."

Although initially reluctant to take action, Ikeda hopes that his legal suit will encourage others to come forward, even though since 1976, when the compensation regulations were introduced, only 13 workers have been officially recognized as having suffered illnesses related to workplace radiation exposure. Ikeda became No. 14, and the first since the meltdowns in Fukushima (see table).

"I have heard that there are probably many more, but you never hear about them because settlements are reached" to keep them hushed up, says Ikeda, adding that accusations on various internet forums that

people like him are nothing more than greedy opportunists had distressed him greatly. “I wouldn’t have taken this action if Tepco had shown some degree of remorse.”

Ikeda’s wife, Michiko, who works in an elderly care facility, says the most difficult time for her was during those long months of treatment, when her husband shed all his hair and over 20 kg in weight. He began to look pale and gaunt and didn’t have the energy to talk for more than five minutes when she visited, even though she remembers him chatting at length with a fellow cancer patient in the cleanroom — a patient who died three days later.

She also remembers the various memory-making trips, to Hokkaido and Okinawa, among others — trips they hoped would remain with their children throughout their lives. Just in case.

“Nobody can say when (the leukemia) will return, and while I worry about that, there’s nothing I can do,” she says. “That’s fate. I still can’t help wishing he had never gone (to Fukushima), but also feel bitter that Tepco didn’t try to prevent this from happening.”

*The family asked that their real names and location not be used. This article is based on a chapter from Rob Gilhooly’s book “Yoshida’s Dilemma: One Man’s Struggle to Avert Nuclear Catastrophe: Fukushima — March 2011,” published last month by Inknbeans Press (*www.yoshidas-dilemma.com*).*

Nuclear plant workers’ illnesses officially recognized by the health ministry as being workplace-related (between 1976 and June 2014 — a total of 13 workers):

Leukemia

(recognized limit: over 5 millisieverts/year)

Accumulated doses (mSv) of workers in six cases:

1) 129.8
2) 74.9
3) 72.1
4) 50.0
5) 40.0
6) 5.2

Malignant lymphoma

(recognized limit: over 25 mSv)

1) 175.2
2) 173.6
3) 138.5
4) 99.8
5) 78.9

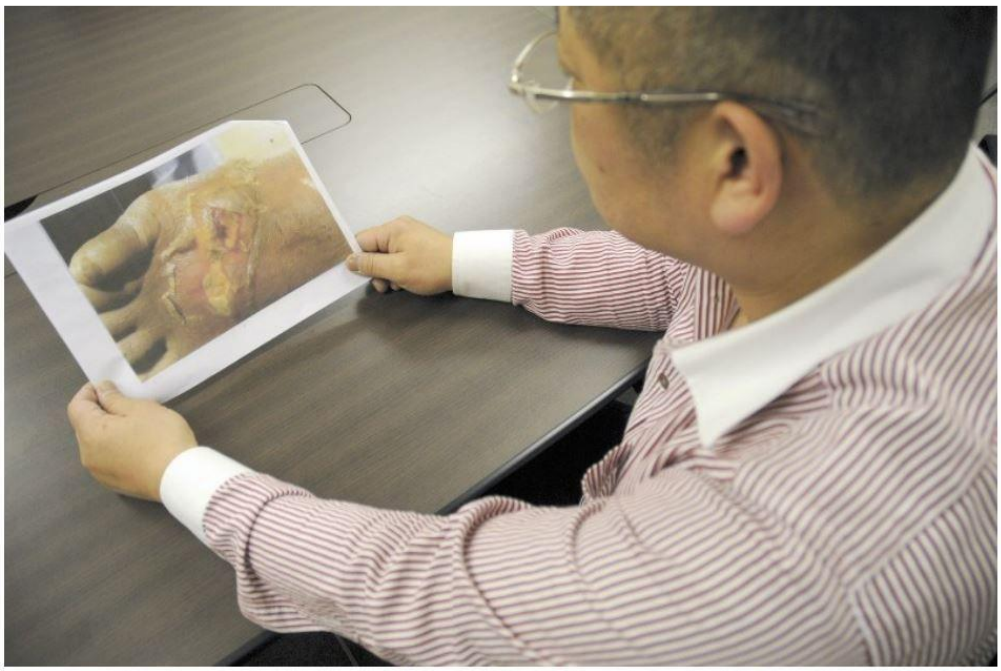
Multiple myeloma

(recognized limit: over 50 mSv)

1) 70.0
2) 65.0

April 19, 2017

Wounded decommissioning worker sues contractor



In this April 3, 2017 photo, the man filing for compensation examines a picture of the injury he received while decontaminating areas affected by the Fukushima No. 1 Nuclear Power Plant disaster. (Mainichi)

Injured Fukushima cleanup worker sues contractor in place of bankrupt former employer

https://mainichi.jp/english/articles/20170419/p2a/00m/0na/015000c

A 49-year-old man injured while decontaminating the area around the Fukushima No. 1 Nuclear Power Plant decided to file a lawsuit in Yokohama against a construction company in Ehime Prefecture that contracted the Tokyo-based company which hired him, as his original employer went bankrupt.
In an attempt to meet the demand for decontamination workers, many small companies joined recovery efforts in Fukushima Prefecture, only to withdraw after a short time, causing trouble for those who were injured on the job. The man filing the lawsuit is one such case complicated by the situation as he was forced to file his lawsuit not against the company that hired him, but the one that had contracted that company.
The man is requesting compensation for lost earnings and mental suffering after an accident in December 2014, when part of an iron truck bed fell and broke his right leg while he was working on decontamination efforts in the town of Tomioka, Fukushima Prefecture, according to his legal representative.
After the accident occurred, the secondary company which had hired him filed an application for worker's injury compensation to a local labor standards inspection office, which falsely claimed that the accident happened in a warehouse far from the actual site of the incident. The Tomioka Labor Standards Inspection Office in Fukushima Prefecture sent the report to prosecutors in 2016 under suspicion that the company and the onsite supervisor violated the Industrial Safety and Health Act. The Iwaki Summary Court in the prefecture ordered the company to pay 100,000 yen in fines. The construction firm is suspected of filing

the false report out of fear that the accident at the decontamination work site would discourage major construction companies from commissioning work from the firm.
The injured man tried to file for compensation from the company directly over the accident and for the difficulty in finding work afterwards due to aftereffects of the injuries, as well as the psychological strain the filing of the false report caused him. However, the company that had contracted the man filed for bankruptcy in June 2015. With no company to file his case against, the man decided to level his lawsuit requesting roughly 18 million yen in compensation against the Ehime construction company instead, claiming that because the contractor company had also supervised the workers, it was also responsible for their safety. The company refused to comment in response to an inquiry by the Mainichi Shimbun as the case is still in litigation.
Efforts by the Ministry of the Environment to decontaminate Fukushima's evacuation zones, excluding those designated difficult to return to zones, were completed in March 2017. However, according to an advocacy and support group for decontamination and power plant workers, there are many cases where the names of workers actually on site were not included in the original contractor's documents relating to the decontamination work and they were not enrolled in social insurance programs. This created an unstable work environment for those workers leading recovery efforts.

June 9, 2017

3 hours in contaminated room

Workers stayed in contaminated room for 3 hours

https://www3.nhk.or.jp/nhkworld/en/news/20170609_15/

The operator of a nuclear research facility north of Tokyo says the 5 workers who were accidentally exposed to radioactive substances had spent 3 hours in the contaminated room.

The workers were inspecting fuel storage containers at the facility of the Japan Atomic Energy Agency in Ibaraki Prefecture on Tuesday when the incident occurred.

Four of them suffered internal radiation exposure when a bag of powdered radioactive substances, including plutonium, ripped and the contents spilled out. One of the 4 was found to have 22,000 becquerels of plutonium 239 in his lungs.

The agency officials said on Friday that a tent was set up outside the room after the accident to prevent radiation from spreading.

They said the workers remained in the room for about 3 hours until the tent was ready.

The officials said they swiftly began preparations to evacuate the workers after instructing them to stay as far away as possible from the ripped bag.

The agency plans to investigate whether the evacuation procedures affected radiation exposure.

5 nuclear center workers stayed in contaminated room for 3 hours

http://www.asahi.com/ajw/articles/AJ201706090025.html

The type of filter-attached mask worn by the workers to cover the mouth and nose (Provided by the Japan Atomic Energy Agency)

The five workers who were exposed to radiation at a nuclear energy research center in Ibaraki Prefecture on June 6 remained in the contaminated room for about three hours, it has been disclosed.
The workers stayed in the room until measures were taken to prevent radioactive substances, including plutonium, from leaking outside.
The three-hour stay could have led to the worst internal radiation exposure case in Japan's history, in which 22,000 becquerels of plutonium were detected in the lungs of one of the workers.
According to the Nuclear Regulation Authority and the Japan Atomic Energy Agency, the accident, in which radioactive substances leaked from a container, occurred in an analysis room of a fuel research building of the JAEA's Oarai Research and Development Center in Oarai, Ibaraki Prefecture, at around 11:15 a.m. on June 6.
Those substances could have leaked out of the room if the workers had left through a door, so they asked colleagues outside to take measures to prevent such a leak.
The colleagues set up a closed space outside the door in which they could check the workers' bodies and decontaminate them.
The space was completed at around 2:30 p.m., which meant that the five workers stayed in the room for about three hours after the accident occurred.
The workers were wearing masks attached with filters to cover their mouths and noses, but they apparently inhaled radioactive substances through the gaps during the three hours in the room.

Numbers of the Day: 22,000 becquerels

https://www3.nhk.or.jp/nhkworld/nhknewsline/numbersoftheday/2017060702/

The level of radioactivity detected in the lungs of one of five people accidentally exposed to radioactive material at a nuclear research facility in Ibaraki prefecture

June 12, 2017

No plutonium in workers' lungs

Plutonium not found in workers' lungs

https://www3.nhk.or.jp/nhkworld/en/news/20170612_24/

An institute in Japan treating 5 workers exposed to radioactive substances says it has not detected plutonium in any of their lungs.

An earlier report in another facility said one of them showed a high level of contamination in the lungs.

The accident took place last week at a research facility of the Japan Atomic Energy Agency in Ibaraki Prefecture, north of Tokyo.

The agency said it measured as much as 22,000 becquerels of plutonium-239 in the lungs of one of the workers after powdered radioactive materials scattered in a room.

The workers were sent to the National Institute of Radiological Sciences.

Officials at the institute told reporters on Monday that they had conducted up to 4 examinations of the lungs of the 5 workers. No plutonium was detected.

They also said they detected another radioactive substance called Americium. But they did not disclose how much of the substance was found or from how many of the workers. They pointed out that Americium can be created after plutonium undergoes nuclear fission.

They noted that there has so far been no impact on the workers' health from the exposure.

Officials at the Japan Atomic Energy Agency also held a news conference. They said they may have overestimated internal exposure levels, as they detected plutonium on the workers' skin in the examinations.

June 16, 2017

Workers blamed for accident

Workers irradiated at nuclear R&D center ignored safety checklist item: JAEA

https://mainichi.jp/english/articles/20170616/p2a/00m/0na/012000c

In this photo provided by the JAEA, the stainless steel radioactive material container involved in the June 6, 2017 accident is seen soon after the plastic bags inside burst, exposing five workers to powdered plutonium and uranium oxides, at the Oarai Research & Development Center in Oarai, Ibaraki Prefecture.

In this photo provided by the JAEA, the stainless steel radioactive material container involved in the June 6, 2017 accident is seen soon after the plastic bags inside burst, exposing five workers to powdered plutonium and uranium oxides, at the Oarai Research & Development Center in Oarai, Ibaraki Prefecture. Workers exposed to radioactive materials at a Japan Atomic Energy Agency (JAEA) facility in Ibaraki Prefecture ignored a safety checklist item on whether the containers "could be ruptured," the agency revealed on June 15.

- 【Related】Ibaraki nuclear facility where radioactive leak occurred was slack on safety
- 【Related】4 workers suffer internal radiation exposure to plutonium
- 【Related】Ibaraki nuclear research facility under scrutiny after accident; gas suspected in rupture

Five workers at the JAEA's Oarai Research & Development Center in Oarai, Ibaraki Prefecture, were exposed to uranium oxide and plutonium oxide powder when the bags holding the materials burst open during a June 6 inspection. The materials were kept in a polyethylene container double-wrapped in plastic bags, all in a stainless steel vessel.

According to the JAEA, the "regular safety checklist" was put together soon before the accident and listed 30 items for inspecting radioactive materials held at its nuclear R&D centers. One of those items called on workers to determine if there was a risk of fire, or were fears of "an explosion, a rupture, or scattering" of the powdered materials.

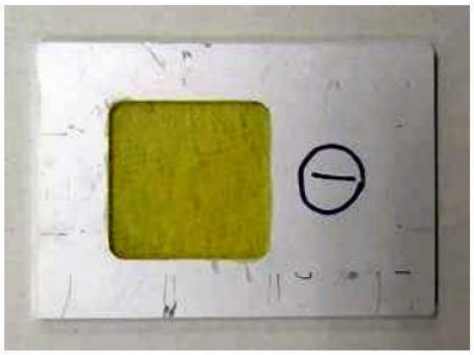
However, the workers at the Oarai facility apparently decided that the checks regarding the risk of "rupture" were "not applicable" because the materials had been double-wrapped in plastic bags, and they only checked the containers' exteriors.

The agency on June 15 also released footage of the radioactive materials container taken by one of the workers just after the accident. The image shows the plastic bags protruding from the top of the stainless steel vessel. The JAEA is scheduled to submit an accident report to the Nuclear Regulation Authority on June 19.

The accident occurred when one of the workers unsealed the stainless steel outer vessel, which had not been opened for 26 years. A JAEA spokesperson told reporters at a June 15 news conference that the workers' failure to consider the risk of rupture was "inappropriate."

June 23, 2017

Explanation?



A prepared test sample that is the same type as what the JAEA used to use in experiments. Plutonium powder was set in the center of an aluminum sheet using epoxy resin. The resin piece was removed from the sheet and placed in a polyethylene container. (Provided by the Japan Atomic Energy Agency)

Resin stuck on plutonium could be to blame for Ibaraki accident

http://www.asahi.com/ajw/articles/AJ201706230052.html

Gas produced when radiation caused an adhesive to decompose is believed to have led to the leak of a container holding plutonium that contaminated five workers, the Japan Atomic Energy Agency (JAEA) has announced.

The five workers at JAEA's Oarai Research and Development Center in Oarai, Ibaraki Prefecture, were accidentally exposed to radioactive plutonium on June 6 when they were handling 26-year-old radioactive waste stored at the facility.

The tightly sealed polyethylene container wrapped in plastic bags contained radioactive substances including plutonium powder set in epoxy resin, JAEA staff said at a June 22 meeting with the special investigation team from the science and technology ministry set up to determine the cause of the accident.

JAEA said it is now investigating further the possibility that radiation may have decomposed the epoxy resin to produce gas that seeped out of the container and caused its plastic coverings to tear and contaminate the workers.

The agency found out about the resin by interviewing employees who were involved in experiments using radioactive substances and disposal of used test samples in 1991, when the container that caused the accident was first sealed.

According to the JAEA report, researchers at the facility conducted experiments to analyze the atomic structure of plutonium using X-rays in 1991. To do that, plutonium powder was mounted on a sheet of aluminum using the epoxy resin as adhesive.

After experiments, the piece of resin was removed from the aluminum sheet and placed in the polyethylene container. Then, it was wrapped in the plastic bags and placed in a stainless steel storage container.

JAEA did not inspect the state of the contents of the stainless steel container for the next 26 years.

The agency plans to submit a detailed report on the cause of the accident to the Nuclear Regulation Authority (NRA) and other parties as early as late July.

July 21, 2017

Workers' contamination (Ibaraki)

Gas may have ruptured bag at nuclear facility

https://www3.nhk.or.jp/nhkworld/en/news/20170721_01/
NHK has learned the operator of a nuclear research facility northeast of Tokyo believes a bag containing nuclear fuel materials ruptured last month due to a buildup of gas in it.

The rupture occurred on June 6th at the facility run by the Japan Atomic Energy Agency in Ibaraki Prefecture. Five workers were exposed to plutonium and other radioactive materials.

In the bag was a plastic container that stored nuclear fuel materials. The materials were held together by an adhesive agent to make it easier to use in experiments.

A report compiled by the agency says gas is believed to have been generated when radioactive rays disintegrated the adhesive agent, the polyethylene container, and the molecules of water in the bag.

The agency plans to submit a report to the Nuclear Regulation Authority as early as Friday. It will also conduct further analyses to determine the amount of the adhesive agent and the condition of the nuclear fuel materials when they were inside the container.

August 2, 2017

Ibaraki accident rated as level 2

Japan rates severity of June nuclear exposure accident as level 2

https://mainichi.jp/english/articles/20170802/p2g/00m/0dm/059000c#cxrecs_s

TOKYO (Kyodo) -- The Nuclear Regulation Authority said Wednesday that it assessed the severity of a nuclear exposure accident in June in eastern Japan provisionally as level 2 on the zero-to-seven international scale.
The June 6 accident at the Japan Atomic Energy Agency's Oarai Research and Development Center in Ibaraki Prefecture, east of Tokyo, left five workers internally exposed to radiation although no harmful consequences were detected for the surrounding environment.
Level 2 on the International Nuclear and Radiological Event Scale is a stage defined as an "incident." The Fukushima nuclear accident, triggered by the huge earthquake and tsunami in March 2011, was rated at the maximum level 7, on a par with the 1986 Chernobyl disaster.

When one of the five workers, a male in his 50s, opened a container in a storage room at the facility, a plastic bag inside it with plutonium and uranium powder samples ruptured.
The worker continued the check even when the plastic bag swelled, resulting in the inhalation of radioactive substances. Tests have found a small amount of radioactive materials -- plutonium and americium -- in the urine of the five workers, confirming they suffered internal radiation exposure.
It was estimated one of the workers will be internally exposed to a radiation dose from 100 to 200 millisieverts in total over 50 years, a level that could slightly increase the risk of cancer.
NRA Chairman Shunichi Tanaka urged the JAEA to take measures to prevent further accidents, saying it is "responsible for ensuring the safety of workers."
Japan previously assessed as level 2 a critical-state accident at the No. 1 reactor of Hokuriku Electric Power Co.'s Shika nuclear plant in 1999. The utility hid the accident, which occurred while the unit's operation was suspended for regular checkups, until 2007.
Tokyo also rated as level 2 a 1991 accident at the No. 2 reactor in the Mihama plant run by Kansai Electric Power Co., in which one of a steam generator's tubes snapped, activating the emergency core-cooling system for the first time in the country.

Oarai nuclear accident rated as Level 2

https://www3.nhk.or.jp/nhkworld/en/news/20170802_22/

Japanese nuclear regulators have provisionally assessed an accident at a research facility north of Tokyo as Level 2 on an international scale.

In June, 5 workers at the Oarai Research and Development Center of the Japan Atomic Energy Agency were exposed to radioactive substances when a bag containing them burst open.

The agency reported to the Nuclear Regulation Authority that the highest possible level of exposure would be 100 to 200 millisieverts over a 50-year period.

The authority made the announcement on Wednesday.

Level 2 accident is third from the bottom on the 8-level nuclear and radiological event scale.

The last Level 2 accident in Japan was at Onagawa No.2 reactor in Miyagi Prefecture, where the tsunami triggered by the March 2011 earthquake flooded the reactor building basement and caused key pieces of equipment to stop operating.

The accident at Fukushima Daiichi nuclear plant caused by the same tsunami was rated far higher, at Level 7.

The sodium leak at the Monju fast-breeder reactor in 1995 was assessed as Level One.

September 8 2017

Worker exposed to radiation

Fukushima worker exposed to small amount of radiation, Tepco says

https://www.japantimes.co.jp/news/2017/09/08/national/fukushima-worker-exposed-small-amount-radiation-tepco-says/#.WbOVqMZpyos

Reuters

A worker dismantling tanks at the wrecked Fukushima No. 1 nuclear plant was found to have been exposed to a small amount of radiation during a routine safety check on Friday, plant operator Tokyo Electric said.
Radiation was detected in the nasal cavities of the worker, an unidentified man in his 30s, a spokesman for Tokyo Electric Power Company Holdings Inc. said on Friday. The company estimated the amount of radiation at up to 0.010 millisieverts — less than a typical 0.05-millisievert chest X-ray — and said it did not pose an immediate health risk.
Reported radiation exposure incidents have been rare during work to clean up the plant, which was devastated by a magnitude-9 earthquake and tsunami on March 11, 2011, that left nearly 16,000 people confirmed dead and more than 2,000 officially unaccounted for.
The Tepco spokesman said the last Fukushima No. 1 radiation exposure incident in official records was for a worker who was exposed to at least 2 millisieverts in January 2012.
See also : http://www.asahi.com/ajw/articles/AJ201709080046.html

September 27, 2017

3 members of gang arrested for providing nuclear workers illicitly

3 nabbed over alleged illicit job mediation for Fukushima cleanup workers

https://mainichi.jp/english/articles/20170927/p2a/00m/0na/015000c

Police on Sept. 27 arrested three people, including a high-ranking member of a gang affiliated with the Yamaguchi-gumi crime syndicate, on suspicion of illicitly introducing workers to other businesses to engage in Fukushima decontamination work.
The three suspects, including a gang member in his 40s, were arrested on suspicion of violating the Employment Security Act by mediating in paid work without permission. Police believe that the service charges the suspects received were being used to fund gang activities.

Investigators said that the three are suspected of having introduced decontamination workers to other businesses since 2014 and charging introduction fees, despite lacking permission from the Minister of Health, Labor and Welfare that is required by law.
A consulting company based in Tokyo's Nerima Ward that was effectively run by the suspects' gang dispatched workers to decontamination zones through other businesses. The workers reportedly engaged in decontamination work in Fukushima Prefecture.
In January 2013, Yamagata Prefectural Police arrested a high-ranking member of a gang affiliated with the Sumiyoshi-kai crime syndicate on suspicion of violating the worker dispatch law in connection with the dispatch of workers engaging in Fukushima-related decontamination work.

November 8, 2017

Aomori: Cesium traces from previous leak?

Cesium traces found at Aomori nuke site believed from 2010 container leak

https://www.japantimes.co.jp/news/2017/11/08/national/cesium-traces-found-aomori-nuke-site-believed-2010-container-leak/#.WgLyOXaDOot

Kyodo

AOMORI – Small amounts of radioactive cesium were detected on a glove of a worker at a nuclear facility in Aomori Prefecture last month, Japan Nuclear Fuel Ltd. said Thursday.
However, as the worker was not himself exposed to any radiation and none was recorded outside the building, it is believed the cesium was the result of a previous leak.
The company suspects the cesium leaked from a container of high-level radioactive liquid waste in July 2010 at the spent nuclear fuel reprocessing plant, which has yet to start operations. In the previous incident, a facility worker was exposed to radiation.
According to a report submitted to the Nuclear Regulation Authority, a trace of cesium was detected on Oct. 27 on the glove of the worker, who was working on the second floor of the building.
Japan Nuclear Fuel said it found radioactive contamination at three spots on the same floor, adding the spots had since been cleaned up.
The authority instructed the company to conduct a probe into the latest incident, saying it is obvious that it failed to conduct sufficient decontamination work when the 2010 incident occurred.
Japan Nuclear Fuel said it is highly possible that remnants of radioactive materials from the previous incident were floating in the air and became attached to the glove.
Nuclear power facility operators in the country have come under criticism in recent years for lacking safety awareness and improper management of radioactive materials.
In June, five workers suffered internal radiation exposure after a plastic bag exploded and scattered radioactive materials during an inspection of a container of fuel materials at Japan Atomic Energy Agency's research facility in Ibaraki Prefecture.

December 14, 2017

Third case of work-related (post-Fukushima) leukemia

TEPCO employee wins workers' compensation for leukemia

http://www.asahi.com/ajw/articles/AJ201712140025.html

By YOICHI YONETANI/ Staff Writer

A Tokyo Electric Power Co. employee who developed leukemia after battling the Fukushima nuclear disaster was awarded workers' compensation, the fourth responder whose cancer has been recognized as work-related, the labor ministry said.

The employee, who is in his 40s, worked at the now-stricken Fukushima No. 1 nuclear power plant from April 1994 to February 2016.

After the Great East Japan Earthquake and tsunami battered the nuclear plant on March 11, 2011, the employee was engaged in emergency operations to send water to cool the reactor containment vessels and assess the extent of damage. He continued in this emergency role until December 2011, the ministry said Dec. 13.

During his entire time at the plant, his overall radiation dose totaled 99 millisieverts. However, 96 millisieverts were logged after the crisis unfolded.

After he developed leukemia in February 2016, the employee applied for workers' compensation for his condition at the Tomioka Labor Standards Inspection Office in Fukushima Prefecture.

Four people, including the TEPCO employee, who were mobilized to deal with the nuclear crisis have been awarded workers' compensation for cancer. Three of the cases were for leukemia.

According to the Ministry of Health, Labor and Welfare, 16 workers have applied for workers' compensation for cancer, saying their exposure to radiation during the emergency operation at the Fukushima No. 1 plant caused their disease.

Five workers had their applications denied, while two withdrew their claims.

Labor authorities are scrutinizing the remaining five cases.

Workers at nuclear facilities who develop leukemia are eligible for compensation under the following conditions: the disease is diagnosed more than a year after the first exposure to radiation; their annual radiation doses exceed 5 millisieverts; and other factors that could contribute to the onset of the disease can be ruled out.

The conditions were set in 1976.

TEPCO estimates that 10,553 workers had annual doses of more than 5 millisieverts in fiscal 2011, which ended in March 2012.

The number of such workers has been steadily declining, but there were still 2,860 workers in that category in fiscal 2016, according to TEPCO.

Experts say more workers will likely apply for workers' compensation for illnesses developed in the line of duty at the crippled plant.

Gov't certifies Fukushima TEPCO employee's leukemia as work-related illness

https://mainichi.jp/english/articles/20171214/p2a/00m/0na/001000c

The leukemia that developed in a Tokyo Electric Power Co. (TEPCO) employee in his 40s working on the aftermath of the damaged Fukushima No. 1 Nuclear Power Plant was certified as a work-related illness by the Ministry of Health, Labor and Welfare on Dec. 13, it has been learned.

- 【Related】Many children diagnosed with thyroid cancer after 3.11 disasters, families still worried
- 【Related】TEPCO unveils results of underwater footage taken inside Fukushima plant

According to the ministry, the man was in charge of ensuring the safety of the reactors at the Fukushima plant since April 1994. After the reactor meltdowns in March 2011, he donned protective clothing and a mask and also led the effort to cool the overheating reactors with water. He developed leukemia in February last year and is currently receiving treatment.
Over the roughly 19 years that he worked at the nuclear facility, he was exposed to some 99 millisieverts of radiation. Of that, approximately 96 millisieverts occurred after the accident. As the radiation exposure levels exceeded the ministry's baseline of 5 millisieverts per year multiplied by years of employment, his cancer was certified as being linked to his work at the nuclear power station.
This marks the third case of receiving work-related illness certification for developing leukemia in the aftermath of the nuclear disaster.

February 17, 2018

Fukushima workers don't find it so romantic

Media reports de-romanticize the cleanup work on the Fukushima nuclear power plant

https://www.japantimes.co.jp/news/2018/02/17/national/media-national/media-reports-de-romanticize-cleanup-work-fukushima-nuclear-power-plant/#.WomJyHwiGos

by Philip Brasor
Contributing Writer

Most of the reliable reporting about the clean-up of the Fukushima No. 1 nuclear power plant since it suffered three meltdowns in March 2011 has been from on-site workers. Even when articles appear in major media outlets about the situation at the crippled reactor, it's usually presented through the anonymous or pseudonymous firsthand experiences of the men on the front lines.

Some have become famous. The public would not know much about the situation without Kazuto Tatsuta's manga series, "Ichiefu" (or "1F" — shorthand for "Fukushima No. 1"), the writings of former letter carrier and cleanup worker Minoru Ikeda, or the books and tweets of a man known as "Happy" who has been working as an employee at the plant.

Because these individuals directly address what they and their colleagues have gone through on a daily basis, the work they do has been de-romanticized. It's not as heroic as initial foreign media reports made it out to be. If anything, it's tedious and uncomplicated.

Workers are concerned about those matters that all blue-collar laborers worry about — pay and benefits — which isn't to suggest they don't think about the possible health risks of radiation exposure. Last October, Ikeda talked to the comedy duo-cum-nuclear power reporters Oshidori Mako & Ken on the web channel Jiyu-na Radio about potential false reports on radiation levels around Fukushima, although also touching on health issues that have not been reported by the mainstream media. His main point was that serious illnesses may not manifest themselves until years after workers quit the site and thus no longer qualify for worker's compensation. In other words, the workers understand the risk. They just want to be fairly compensated for it.

In that regard, one of the most common gripes from on-site reporters is the "hazard compensation" (*kiken teate*) workers are supposed to receive. Recently, Tokyo Electric Power Company Holdings Inc. (Tepco), which is both responsible for the accident and in charge of the cleanup, announced a reduction in outlay associated with the hazard compensation, which is paid as a supplement to wages. This compensation can add as much as ¥20,000 a day to a worker's pay, but now that Tepco says radiation levels have dropped, they will no longer provide the compensation, or, at least, not as much as they have been paying.

A special report in the Jan. 22 Tokyo Shimbun attempted to explain how this change will affect workers and the work itself. In March 2016, Tepco divided the work area into three zones: red, for high radiation levels; yellow, for some radioactivity; and green, for areas that had no appreciable radioactivity. Workers interviewed by Tokyo Shimbun say they've never liked this system because they feel it "has no meaning." Rubble from the red zone is routinely transferred to the green zone, where heavy machinery kicks up a lot of dust, so there's no physical delineation between zones when it comes to radiation levels. On the ground, this reality is addressed by subcontractors who make their employees in the green zone — which constitutes 95 percent of the work site — wear extra protective gear, even though Tepco doesn't require it.

But the workers' main gripe about the zone system is that most of them ended up being paid less and, as on-site workers have often explained, they weren't getting paid as much as people thought they were.

Contractors advertise high wages to attract workers, but then subtract things like room and board, utility fees, clothing and equipment. And it's been known for years that the hazard compensation was more or less a racket gamed by the contractors standing between Tepco, which distributes the compensation, and the workers, who are supposed to be the beneficiaries. There can be up to six layers of contractors between Tepco and a worker, and each layer may take a cut of the compensation. In 2014, four workers sued Tepco for ¥62 million, saying they worked at the site but received none of the promised hazard compensation.

That situation still seems to be in play, according to Tokyo Shimbun. Several subcontractors told the newspaper they receive the compensation for their workers not from Tepco directly but from the contractor that hired them, and in most cases the compensation has been reduced, sometimes by more than half. One subcontractor said that a company above them actually apologized for the paucity of the compensation they were handing down because their "revenues had decreased." The man known as Happy told Tokyo Shimbun that Tepco is ordering less work at the site, which means existing subcontractors may cut wages in order to compete for these dwindling jobs. Some contractors have even invested in the robots that are used to inspect the reactor, because they want the work to continue without interruption.

It was common practice to rotate out workers toiling in the highly radioactive areas regularly and quickly and then re-assign them to low-radiation areas. After some time they may have been rotated back into the high-radiation area, where pay is more. The man known as Happy says this sort of system now seems to be on the way out, and that makes sense if radiation is actually decreasing. However, he's afraid that if there is another emergency that requires a sudden influx of workers, they won't be available.

Tepco is obviously thinking of its bottom line, and the man known as Happy thinks the work should be managed by the government, which is contributing tax money to the cleanup. However, it seems only the Japan Communist Party is reading the dispatches from the plant. Last May, Japanese Communist Party lawmaker Taku Yamazoe questioned Tepco President Naomi Hirose about the hazard compensation in the Diet, and why the structure of payments to workers wasn't clear.

Hirose said that while his company intends that the money goes to workers, he cannot say for sure that is the case because of the circumstances surrounding Tepco's relationships with contractors. With work on the wane, it seems unlikely that those workers will see any of the money that's owed to them, retroactively or otherwise.

March 6, 2018

Only 35% of workers checked

Only 35% of Fukushima Daiichi workers tested

https://www3.nhk.or.jp/nhkworld/en/news/20180306_21/

NHK has learned that only 35 percent of workers who responded to the March 2011 nuclear accident at Fukushima Daiichi plant have been checked for long-term effects of radiation.

A Japanese government-affiliated research organization began conducting the radiation-exposure screenings 4 years ago. Some 20,000 workers who entered the plant within 9 months of the accident are to undergo life-long monitoring that includes blood tests and thyroid exams.

During the nuclear crisis, many plant workers were exposed to radiation beyond the government limit of 100 millisieverts. The government then temporarily raised the limit to 250 millisieverts so that work could continue.

The Radiation Effects Research Foundation aims to conduct regular screenings on at least 80 percent of those workers. But it says that as of January this year, it has only been able to check about 7,000 people.

Of the workers who remain untested, 35 percent have ignored calls to take a screening, 17 percent have refused to comply, and 8.5 percent cannot be reached.

Several non-participants have told NHK they cannot take days off from work, or that there are too few clinics where they can be tested.

Some were skeptical about the screenings, saying they doubt a checkup would help keep them healthy.

Tomotaka Sobue, a professor at Osaka University, was a member of a government panel that assessed the screening program.

He says the government has a responsibility to confirm whether people who took part in emergency work are facing any health risks.

He says efforts must be made to inform workers about the program, and to make it easier for them to take the tests.

March 7, 2018

"Forced" decontamination

Vietnamese trainee alleges he was misled into taking part in Fukushima decontamination work

https://www.japantimes.co.jp/news/2018/03/07/national/vietnamese-trainee-alleges-misled-taking-part-fukushima-decontamination-work/#.WqETSnwiGos

by Magdalena Osumi
Staff Writer

The Justice Ministry is investigating a case involving a Vietnamese man brought to Japan under the government's foreign trainee program who alleges he was duped into taking part in cleanup work in areas devastated by the 2011 nuclear disaster, authorities said Wednesday.

The ministry confirmed by telephone that the officials have been looking into the case of the 24-year-old man who worked for an Iwate Prefecture-based construction firm. The company wasn't available for comment as of Wednesday.

On Tuesday, the Nikkei daily reported the firm has denied claims that it violated labor laws. In the report, the firm asserted instead that the man, who requested anonymity through the union, was assigned the same duties as his Japanese coworkers, which didn't pose any threat to workers' health.

But according to the Tokyo-based Zentoitsu Workers Union, which represents the man, he was supposed to conduct dismantling and public engineering work, but was instead assigned with cleanup work in contaminated areas in Fukushima Prefecture, exposing him to radiation.

The group's Secretary-General Shiro Sasaki, who is well-versed on trainee issues and familiar with the case, said the 24-year-old came to Japan in September 2015 after signing a contract with the firm.

He was then sent to Koriyama in Fukushima Prefecture more than a dozen times to decontaminate the city's residential areas between October 2015 and March 2016.

Afterwards, he was engaged in dismantling buildings in an exclusion zone in the Fukushima town of Kawamata before the authorities lifted restrictions on the evacuation zone due to high levels of radiation.

The man claims he was not informed he would be cleaning up areas contaminated after the Fukushima nuclear disaster.

"(The man's claims) suggest that he might have been deceived and brought to Japan to conduct cleanup work," Sasaki said.

Sasaki said the man's employer might have abused the Labor Contract Act, Labor Standard Act and Industrial Safety and Health Act.

Sasaki said the union is assisting in the ongoing negotiations between the Vietnamese man and the construction firm and are seeking compensation worth the amount he would have been paid if he had completed the rest of his three-year contract.

According to Sasaki, the man was receiving a monthly wage of about ¥140,000, while Japanese workers conducting similar cleanup work earn nearly three times as much.

The government-backed Technical Intern Trainee Program was designed to support foreign nationals in their acquisition of technical skills but in reality has been exploited to make up for the shortage of unskilled laborers in Japan.

"(Technical trainees) shouldn't be forced to conduct such work … which may pose a threat to one's health; it's undeniable that radiation may be hazardous," Sasaki said.

The Vietnamese quit the company last November out of concern for his health after it ignored his requests to have the situation explained.

The Japan Times was able to access records showing the man had been exposed to radiation while working in Kawamata. According to the labor union, the employer hid this information from him.

Sasaki said the employer also denied the man allowances given to those working under hazardous conditions.

"Above all, decontamination work is very dangerous and requires the trainee's consent," said Shoichi Ibuski, a lawyer versed on labor issues, who supports foreign trainees and interns. "It's not the type of work you engage someone in who is not aware of accompanying risks. It's more of a humanitarian rather than a legal issue."

Ibuski stressed the Vietnamese man's case shows flaws in the system, which is aimed at helping foreign nationals from developing countries gain skills they could use back home.
Companies accepting foreign workers under the trainee system are required to submit a detailed plan of their training to a Justice Ministry body tasked with overseeing the program. Ibuski speculated the trainee's employer might have kept the scope of the man's duties hidden when submitting the documents to the government.
Asked to comment on the Vietnamese man's case, an official said the ministry was verifying the information it had obtained, including claims the trainee's duties differed from work described in the contract.
The official said there was a possibility the employer had violated labor laws and if the abuse is proven, the ministry would consider penalties. The law, under which violation of the trainees' rights is subject for punishment, went into effect last November.
The official explained that labor laws do not forbid employment of foreign nationals at decontamination work sites and in theory employers accepting foreign technical trainees may have them conduct cleanup work at contaminated sites. But the official said that a vocational training program needs to be aligned with the objective of the training system.
"It's hard to imagine that a trainee could use decontamination work experience in his or her home country," he said, indicating that such a program would likely not be authorized by the government.

March 15, 2018

Vietnamese trainee assigned decontamination work

Foreign technical trainee reveals he was tasked with Fukushima cleanup work

https://mainichi.jp/english/articles/20180315/p2a/00m/0na/003000c

A 24-year-old Vietnamese technical trainee was assigned radioactive decontamination work in Fukushima after coming to Japan, he testified at a press conference in Tokyo on March 14.

- 【Related】TEPCO won't let foreign trainees do nuclear decommissioning work

This marks the first public case of a foreign technical trainee working on cleanup relating to the Tokyo Electric Power Co. Fukushima No. 1 Nuclear Power Plant disaster, according to the trainee's supporters.
The foreign trainee system aims to bring foreign workers from developing countries to Japan to learn technical skills, and a representative from the Ministry of Justice's Immigration Bureau and others voiced concerns on March 14 that assigning a technical trainee to the cleanup zone is at odds with the purpose of the program and is not approved.
The Vietnamese national came to Japan in September 2015 and worked on decontamination in the Fukushima Prefectural city of Koriyama from October 2015 to March 2016. Under the contract made through the program with a construction firm in Iwate Prefecture, he was set to learn about construction equipment, dismantling of structures and civil engineering. However, "There was no explanation about

the decontamination before I arrived in Japan. There was also no education concerning exposure to radiation (as required by the government)," he said.
He also worked from September to December 2016 in what was a disaster evacuation zone in Kawamata, Fukushima Prefecture, at a building demolition site directly managed by the Japanese government, but only received one-third of the special per diem of 6,600 yen for working in the area that he was owed in addition to his daily wage.
"If I would have known that I would be doing dangerous work, I wouldn't have come. I'm worried about the effects on my health," the man said. "I want to work in Japan doing jobs that are covered by my contract."
When contacted by the Mainichi Shimbun, a representative from the construction firm to which he was dispatched stated, "We had him doing the same work as our Japanese employees, and we told him of the possibility of doing decontamination work during his interview in Vietnam. Before entering the site, he was educated along with other laborers. There was no interpreter present, but we told him to ask if there was anything he didn't understand."

March 17, 2018

No more decontamination work by foreign trainees

Gov't to ban use of foreign trainees for radioactive decontamination work

https://mainichi.jp/english/articles/20180317/p2a/00m/0na/004000c

The government adopted a written statement banning the use of foreign technical trainees in radioactive decontamination work at a Cabinet meeting on March 16.

- 【Related】Foreign technical trainee reveals he was tasked with Fukushima cleanup work

The move follows the discovery that a male Vietnamese trainee was assigned radioactive cleanup work relating to the Fukushima No. 1 Nuclear Power Plant disaster, without a sufficient explanation beforehand of the type of work involved.
A Vietnamese technical trainee tells of his experience working on decontamination projects in Fukushima Prefecture, in Tokyo's Chiyoda Ward, on March 14, 2018. (Mainichi)
At a news conference after the Cabinet meeting, Justice Minister Yoko Kamikawa said an investigation would be carried out to check if there have been any other similar cases.
The Justice Ministry and the Ministry of Health, Labor and Welfare point out that trainees are not normally employed in decontamination projects overseas. They add that measures to limit radiation exposure are necessary, and that such work environments are not conducive to acquiring new skills.
The government plans to require companies that take on trainees in the future to submit pledges stating that they will not make trainees perform decontamination work.
The statement on the ban was adopted in response to a question from Constitutional Democratic Party of Japan lawmaker Seiji Osaka.

March 18, 2018

Govt. bans decontamination work by foreign interns

https://www3.nhk.or.jp/nhkworld/en/news/20180316_16/

The Japanese government has decided to ban companies from using foreign trainees to carry out decontamination work in areas affected by the 2011 accident at the Fukushima Daiichi nuclear plant.

The decision comes after a Vietnamese man complained that he was asked to remove contaminated soil in Fukushima Prefecture. He told a news conference that he would never have come to Japan if he had known that he would be doing this kind of work. He also expressed concern about the possible impact on his health.

The man came to Japan under a government-backed technical internship program that allows foreigners to acquire skills and knowhow.

The ministries in charge of the program say that decontamination is not suitable work for interns.

They say they will make it mandatory for companies to submit a pledge that trainees will not be asked to do this kind of task.

A group that supports foreign interns says there have been similar cases.

The ministries will warn companies if other cases are discovered and may consider revoking their permission to hire foreign interns.

April 7, 2018

Pay-skimming for Vietnamese cleanup workers

Contractor skimmed pay of Vietnamese trainees doing Fukushima cleanup work

https://mainichi.jp/english/articles/20180407/p2a/00m/0na/015000c

TOKYO -- A construction firm siphoned off the danger allowances of Vietnamese technical trainees it sent to do cleanup work in the Fukushima nuclear disaster area, the Environment Ministry announced on April 6.

The firm, which assigned the technical trainees to radioactive decontamination and home demolition work, used false wage records in explaining that the allowances had been paid. The Ministry of Health, Labor and Welfare is investigating the firm for suspected violations of the Labor Standards Act.
The foreign trainee system is intended to bring foreign workers from developing countries to Japan to learn technical skills.
The Environment Ministry has confirmed that the construction firm skimmed off the trainees' danger allowances in 2016 and 2017, when they worked at a demolition site in Kawamata, Fukushima Prefecture. One of the trainees spoke about the pay-skimming at a news conference on March 14 this year. However, the construction firm had given Environment Ministry investigators the falsified wage records, and Environment Minister Masaharu Nakagawa stated on March 27 that the danger allowances had been paid.
(Japanese original by Kazuhiro Igarashi, Science & Environment News Department)

April 18, 2018

More Vietnamese trainees involved in decontamination work

3 Vietnamese trainees newly found to have taken part in Fukushima cleanup work

https://mainichi.jp/english/articles/20180418/p2a/00m/0na/020000c

Three more Vietnamese technical intern trainees were sent by a contractor to carry out decontamination work at the Fukushima nuclear disaster area, it was learned from sources including a support organization.

- 【Related】Contractors siphoned 1.6 million yen off pay of Vietnamese trainees sent to Fukushima
- 【Related】Contractor skimmed pay of Vietnamese trainees doing Fukushima cleanup work

The number of foreign trainees known to have taken part in the decontamination work now totals four. The Organization for Technical Intern Training under the jurisdictions of the Ministry of Justice and the Ministry of Health, Labor and Welfare is investigating the facts behind the incidents and there is a possibility that the number will rise.
According to the Zentouitsu Workers Union based in Tokyo, the trainees in the latest incident are all males and aged 24 to 34. They came to Japan in July 2015 and joined the contractor in the city of Koriyama, Fukushima Prefecture, to make molds and reinforce metal bars.
Instead, the trio worked on decontaminating roads and other areas in Koriyama and the city of Motomiya, Fukushima Prefecture, from April 2016 to March 2018.
A supervisory organization for the contractor reportedly explained to the union that Koriyama and Motomiya were areas free of radiation exposure.
(Japanese original by Naoki Sugi, Maebashi Bureau)

May 1, 2018

Foreign trainees at Fukushima Daiichi

Six foreign trainees worked at Fukushima nuclear plant despite ban

https://www.japantimes.co.jp/news/2018/05/01/national/social-issues/six-foreign-trainees-worked-fukushima-nuclear-plant-despite-ban/#.WuiqAn8uCos

Kyodo
Six people enrolled in a foreign trainee program participated in construction work at the disaster-stricken Fukushima No. 1 nuclear plant, despite the plant operator's ban on program participants working at the complex, officials said Tuesday.
The case is the latest in a string of inappropriate practices involving foreign trainees under the government's Technical Intern Training Program, often criticized as a cover to import cheap labor.
Tokyo Electric Power Company Holdings Inc. had said in February last year that it would not permit foreign trainees to work at the plant, which was crippled by the 2011 quake and tsunami disaster, even though workers in some parts of the plant are not required to wear protective gear or dosimeters.
The six people were hired by one of Tepco's subcontractors. "We deviated from our independent rules on employment. We will make our subcontractors thoroughly check the terms of their contracts," a Tepco official said.
According to the utility, the foreign trainees took part in groundwork at the plant starting in November last year outside the areas where protective measures against radiation are needed. The trainees had not received any training on how to protect themselves from radiation.
The foreign trainee program was introduced in 1993 with the aim of transferring skills to developing countries. But the scheme — which is applicable to agriculture and manufacturing, among other sectors — has drawn criticism as a number of harsh and exploitative cases have been reported.
As of the end of 2017, Japan had received a total of about 270,000 foreigners under the training program. By nationality, Vietnamese accounted for the largest proportion of the total, followed by Chinese and Filipinos.
Earlier in the year, several Vietnamese trainees hired by construction companies in Koriyama, Fukushima Prefecture, and Morioka, Iwate Prefecture, were found to have engaged in radioactive contamination cleanup work in Fukushima.
The Justice Ministry was conducting a probe into the companies hiring trainees, saying that decontamination work does not fit the purpose of the trainee program.

Despite ban, foreign trainees working at crippled Fukushima nuclear plant

https://mainichi.jp/english/articles/20180501/p2a/00m/0na/002000c
FUKUSHIMA -- At least four foreign technical intern trainees are working at the construction site on the premises of the crippled Fukushima No. 1 Nuclear Power Plant despite the policy of its operator, Tokyo Electric Power Co. (TEPCO), that bans the employment of such trainees there, the Mainichi has learned.

- 【Related】3 Vietnamese trainees newly found to have taken part in Fukushima cleanup work
- 【Related】Contractors siphoned 1.6 million yen off pay of Vietnamese trainees sent to Fukushima

- 【Related】Contractor skimmed pay of Vietnamese trainees doing Fukushima cleanup work

TEPCO has acknowledged to the Mainichi that the foreigners are indeed at work at the plant in Fukushima Prefecture. The plant has been shut down due to the core meltdown accidents at some of its nuclear reactors after the March 2011 earthquake and tsunami devastated northeastern Japan.
A TEPCO official said that the practice of letting the trainees work does not match the intentions of the Technical Intern Training System. "We will demand our contractors to thoroughly check the residency status (of their foreign workers). We will do our own checks too," the official said.
The Mainichi investigation has found that the four Vietnamese and other trainees are in their 20s or 30s and two of them just arrived in Japan last year and thus speak little Japanese. Two more foreign construction workers operate inside the grounds of the Fukushima plant.
The six workers, employed by a Tokyo-based subcontractor of a major construction company, are involved in laying the foundations of a new facility designed to burn rubble or trees with potential radioactive contamination. The work began in November last year.
According to TEPCO, the area the six workers are assigned to is outside the radiation controlled area where protection from radiation is necessary. Although they are inside the premises of the nuclear power plant, they did not receive training on how to protect themselves from radiation, and there is no need to control their radiation exposure, the company said.
The six workers are made to wear dosimeters but told the Mainichi that they were not aware of the amount of radiation they have received.
The Technical Intern Training System is designed to transfer technology to developing countries, but Vietnam does not have nuclear power plants where workers could be exposed to radiation. The Vietnamese government ended a plan to construct a nuclear power plant in 2016 due to a shortage of funds and out of consideration of public opposition following the nuclear disaster at the TEPCO plant in 2011.
TEPCO officials told a news conference in February 2017 that the company wanted to protect the working environment with its own control measures as the training system was designed for the trainees to acquire knowledge and experience in Japan and pass that on to people at home.
A TEPCO official told the Mainichi that the company does not accept technical intern trainees to work at locations even outside the radiation controlled areas, adding that the company intends to strengthen the contractual management of its contractors.
The president of the construction company that hires the six foreigners said that he was told by the main contractor to refrain from using foreign workers as much as possible. "But our industry cannot carry on without foreigners any longer," he said.
According to the Ministry of Land, Infrastructure, Transport and Tourism, some 55,000 foreigners were reported to have worked in the construction sector in 2017, more than four times the number recorded five years earlier. Out of the 2017 total, some 37,000 were technical intern trainees.

Are foreign trainees indispensable?

Foreign workers vital for Japanese contractor in cleanup at Fukushima nuke plant

https://mainichi.jp/english/articles/20180501/p2a/00m/0na/004000c

FUKUSHIMA -- Foreign technical intern trainees have been employed in what is said to be a 40-year-long decommissioning operation underway at the Fukushima No. 1 Nuclear Power Plant operated by Tokyo Electric Power Co. (TEPCO) in the wake of devastating core meltdowns in 2011. While they are not supposed to be there under TEPCO policy, they are still considered indispensable by their employer, commissioned by TEPCO.

- 【Related】Despite ban, foreign trainees working at crippled Fukushima nuclear plant
- 【Related】3 Vietnamese trainees newly found to have taken part in Fukushima cleanup work
- 【Related】Gov't to ban use of foreign trainees for radioactive decontamination work

The homelands of the interns include Vietnam, a country that abandoned plans to import a nuclear reactor from Japan two years ago. As trainees, they are supposed to "transfer" their experiences in Japan to their compatriots back home. But in the case of Vietnam, there is no chance of using such know-how in the non-nuclear country. What is going through the minds of the trainees as they engage in this work?

"Hosha-kei, hosha-kei, hosha-kei," one foreign worker repeated when the Mainichi Shimbun asked six workers from Vietnam and elsewhere about their job at the plant in February. It was not clear whether he meant radiation, radioactivity or a dosimeter.

"The job is easy and many Japanese workers are with us. I think (safety) is OK," said another foreign worker who had the best command of the Japanese language in the group. The location they started working last fall is outside the radiation controlled areas and everyone there is in ordinary workers' outfits.

The president of the Tokyo-based company that employs the six has nothing but praise for them. "People say they are so good at their work. I depend on them very much." The six workers make up two-thirds of the company's workforce, which also includes three Japanese nationals.

When the company was founded some 30 years ago it employed over 20 Japanese workers in their 20s, but now foreigners are vital for its operations. Says the president: "Japanese youngsters quit easily but foreigners stick with us because they borrow heavily to come to Japan and cannot go home at least for three years," a requirement for technical intern trainees.

The six each borrowed between 1.2 million and 1.5 million yen to pay for their trip to Japan and other expenses. Four of them are paying back the debt as they work. They all share a one-story, three-room wooden apartment near the plant that includes a small dining room and a kitchen.

When one male foreign worker who barely spoke Japanese was asked why he came to Japan, he replied in Japanese, "Okane" (money).

The workers have not told their families they are working at the nuclear plant. "My family would worry and tell me to come home," one man said in broken Japanese.

(Japanese original by Shunsuke Sekiya, Chiba Bureau)

August 17, 2018

UN calls for protection of clean-up workers

UN experts concerned about risks for workers on Fukushima cleanup

https://mainichi.jp/english/articles/20180817/p2g/00m/0dm/032000c

GENEVA (Kyodo) -- Three United Nations human rights experts criticized the Japanese government Thursday for allegedly exploiting and putting at risk the lives of "tens of thousands" of people engaged in cleaning up operations at and around the crippled Fukushima nuclear plant.

- 【Related】Tepco halts sale of folders with Fukushima nuclear plant pictures
- 【Related】Wildfire rages in highly radioactive Fukushima mountain forest
- 【Related】Fukushima population falls by 110,000 after nuclear disaster

In a joint statement, the experts expressed their deep concerns "about possible exploitation by deception regarding the risks of exposure to radiation, possible coercion into accepting hazardous working conditions because of economic hardships, and the adequacy of training and protective measures."
"Workers hired to decontaminate Fukushima reportedly include migrant workers, asylum seekers and people who are homeless," the experts said, adding they were "equally concerned about the impact that exposure to radiation may have on their physical and mental health."
The press release called on the Japanese government to urgently "protect tens of thousands of workers who are reportedly being exploited and exposed to toxic nuclear radiation in efforts to clean up the damaged Fukushima Daiichi Nuclear Power Station."
The statement was issued by Baskut Tuncak, special rapporteur on the disposal of hazardous substances and waste, Urmila Bhoola, special rapporteur on contemporary forms of slavery, and Dainius Puras, special rapporteur on physical and mental health.
In Tokyo, an official of the Health, Labor and Welfare Ministry called the statement "regrettable," saying it was based on one-sided information and stressed that the Japanese government has been sincerely dealing with the matter.
"We properly handled problematic cases in the past and do not regard it as a situation which requires any urgent response," the official said.
The Foreign Ministry also expressed disappointment, saying the statement unnecessarily sparks worries and confusion.
"It's regrettable as the statement based on one-sided allegations that could exacerbate the suffering of people in the disaster-hit areas," the ministry said.
There have been cases of payments not being distributed to subcontracted laborers and of workers not being allowed to take necessary health checkups.
Some foreign trainees under the government's Technical Intern Training Program have also engaged in cleanup operations without the nature of the work being properly explained.
Tuncak is expected to present a report to the U.N. Human Rights Council next month aimed at strengthening the protection of workers exposed to toxic substances.

U.N.: Japan must act to protect Fukushima clean-up workers

http://www.asahi.com/ajw/articles/AJ201808170014.html

REUTERS

Japan must act urgently to protect tens of thousands of workers laboring to clean up the damaged Fukushima No. 1 nuclear power plant from reported exploitation and exposure to radiation, U.N. human rights experts said on Thursday.
Tokyo Electric Power Co. Holdings (TEPCO), which owns the nuclear power plant that was struck by a tsunami in 2011 that set off meltdowns, has been widely criticized for its treatment of workers and its handling of the cleanup, which is expected to take decades.
A Reuters investigation in 2013 found widespread labor abuses, including workers who said their pay was skimmed and spoke of scant scrutiny of working conditions. TEPCO said at the time it was taking steps to limit worker abuses.
Three U.N. experts, who report to the U.N. Human Rights Council, said in a statement released in Geneva that exposure to radiation remained a major hazard for workers trying to clean up the plant, and workers were in danger of exploitation.
"Workers hired to decontaminate Fukushima reportedly include migrant workers, asylum seekers and people who are homeless," said the three: Baskut Tuncak, an expert on hazardous substances; Dainius Puras, an expert on health; and Urmila Bhoola, an expert on contemporary slavery.
"We are deeply concerned about possible exploitation regarding the risks of exposure to radiation, possible coercion into accepting hazardous working conditions because of economic hardships, and the adequacy of training and protective measures," they said.
A spokesman for TEPCO and a foreign ministry official said they were unable to immediately comment on the statement.
The U.N. rights experts have been engaged in a dialogue with the Japanese government since last year, they said, with the government accepting to "follow up" on some recommendations.

Japan upset by UN human rights experts' call

Japan: U.N. call to protect nuclear clean-up workers is ‘regrettable’

http://www.asahi.com/ajw/articles/AJ201808170029.html

REUTERS
Japan on Friday described as "extremely regrettable" a call by U.N. human rights experts for greater protection of workers cleaning up its damaged Fukushima No. 1 nuclear power plant, and said it had notified U.N. officials of its reaction.
Tokyo Electric Power Co. Holdings (TEPCO), the utility that owns the plant hit by a tsunami in 2011 that set off meltdowns, has been widely criticized for its treatment of workers and its handling of the cleanup, which is expected to take decades.
In a statement on Thursday, the U.N. experts urged Japan to act urgently to protect tens of thousands of the workers from reported exploitation and radiation exposure, citing fears over possible coercion and adequate training and protective steps.

Japan is conducting reliable management of radiation levels for Fukushima workers, however, and had already informed the office of the United Nations High Commissioner for Human Rights of this, along with data, the Foreign Ministry said on Friday.
"The fact that this statement was issued despite this is extremely regrettable, and this was conveyed to the OHCHR in Geneva on Thursday," it added.
The U.N. rights experts had said they were engaged in a dialogue with Japan since last year, with the government accepting to "follow up" on some recommendations.
A Reuters investigation in 2013 had found widespread labor abuses, including workers who said their pay was skimmed and spoke of scant scrutiny of working conditions. TEPCO said at the time it was taking steps to limit worker abuse.

August 18, 2018

The danger of heatstroke for Fukushima workers

Leaving no stone unturned in heatstroke battle at nuclear plant

http://www.asahi.com/ajw/articles/AJ201808180033.html

By HIROSHI ISHIZUKA/ Staff Writer
OKUMA, Fukushima Prefecture--How to avert a heatstroke is more pressing than usual in Japan this summer as the archipelago bakes in a record heat wave.
It's not just sun-worshipers, children, the elderly and the infirm who should worry.
Spare a thought for the 5,000 or so workers who toil at the crippled Fukushima No. 1 nuclear power plant to get it ready for decommissioning.
They have to work outside in protective gear, with limited access to water and other resources.
At 5 a.m. on Aug. 6, a manager reminded a 20-strong group from IHI Plant Construction Co., which was contracted by Tokyo Electric Power Co., of the importance of adhering strictly to work rules.
“Please limit your efforts to shifts of less than 90 minutes,” the manager told the assembled workers in a lounge at the plant as he checked the complexion of each individual to gauge their health condition.
The workers are installing storage tanks for radioactive water that is accumulating at the plant.
They are not permitted to take food and beverages with them because of the risk of internal radiation exposure if the perishables are contaminated while they are working.
Water stations have been set up, but workers generally don't bother to quench their thirst as it means they have to change out of their work gear to reach the sites.
During the morning meeting, the manager also checked each worker’s alcohol level and made sure that everybody had water from oral rehydration solution. After that, workers put a cold insulator in their vests and headed to the work site.
The Fukushima plant complex has about 900 tanks set up. IHI Plant Construction installed about 20 percent of them.

The workers' primary responsibility in recent weeks is to inspect the condition of covers put in place to stop rainwater from accumulating around the tanks.
The workers are spared from the scorching sun as they work under cover, but coping with 90 to 95 percent humidity is a formidable challenge.
Junichi Ono, the head of the IHI Plant Construction's task force assigned to the plant, said his company has tried to take every precaution against heatstroke.
"We need to pay attention because we work in a humid environment," he said. "If a worker falls sick, we will lose valuable time taking that person to the doctor."
According to TEPCO, 23 workers suffered heatstroke in the summer of 2011, shortly after the nuclear crisis unfolded at the plant.
Learning a lesson from that, workers were later instructed to start their tasks early in the morning and not work outdoors in principle between 2 p.m. and 5 p.m. in July and August, the hottest part of the day.
The "summer time" schedule appears to be paying off.
In fiscal 2014, the number of workers afflicted with heatstroke at the plant stood at 15.
It dropped to four in fiscal 2016, but went back up to six in fiscal 2017 despite it being a relatively cool summer that year.
Although this year's heat wave is unprecedented, only four workers have suffered heatstroke at the plant this summer.
The Japan Meteorological Agency forecast blistering summer heat in the coming week after a respite this weekend.

September 5, 2018

Confirmed: Death of Fukushima nuclear worker linked to job exposure

Fukushima nuclear plant worker died from radiation exposure on the job: ministry

https://mainichi.jp/english/articles/20180905/p2a/00m/0na/004000c

TOKYO -- The death from lung cancer of a male worker at the crippled Fukushima No. 1 Nuclear Power Plant operated by Tokyo Electric Power Co. (TEPCO) in the northeastern prefecture of Fukushima has been confirmed as work-related, the Ministry of Health, Labor and Welfare announced on Sept. 4.

- 【Related】Gov't, TEPCO plan to dump treated water in sea angers Fukushima fishermen
- 【Related】Gov't decides against increasing compensation fund for nuclear disaster
- 【Related】TEPCO eyes 1st contact with fuel debris in damaged nuke reactor from Oct.

The announcement marks the government's first recognition of a fatality linked to radiation exposure at the facility since a triple core meltdown occurred there in March 2011.
The ministry ruled in favor of granting workman's compensation on Aug. 31. According to the ministry, the man had worked mainly at the Fukushima No. 1 nuclear plant and other atomic power stations

nationwide over a period of about 28 years and three months between June 1980 and September 2015. He was exposed to a total radiation dose of approximately 195 millisieverts.
After the March 2011 disaster triggered by the massive Great East Japan Earthquake and tsunami, the worker, who was in his 50s, was exposed to roughly 34 millisieverts of radiation by December 2011. In September 2015, his exposure reached around 74 millisieverts. He was in charge of measuring radiation on the premises of the Fukushima No. 1 plant, and he is said to have worn a full-face mask and protective suit while working, according to the ministry.
The man was diagnosed with lung cancer in February 2016. The timing of his death was withheld in accordance with his bereaved family's wishes, ministry officials explained.
For the death by lung cancer of a worker at a nuclear power plant to be recognized as work-related under current guidelines, the individual must be exposed to 100 millisieverts or more of radiation and the development of the disease must happen five years or more after the exposure.
The ministry made the latest recognition based on opinions of a panel of experts specializing in radiology and other disciplines.
A public relations official of TEPCO Holdings Inc. commented, "We would like to continue to secure the safety of power plants and improve the work environment."
(Japanese original by Shunsuke Kamiashi, City News Department)

December 13, 2018

Thyroid cancer recognised as work-related

Tepco-linked firm employee's thyroid cancer caused by work after Fukushima nuclear plant meltdown, labor ministry admits

https://www.japantimes.co.jp/news/2018/12/13/national/tepco-linked-firm-employees-thyroid-cancer-caused-work-fukushima-nuclear-plant-meltdown-labor-ministry-admits/#.XBJRPmlCeos

JIJI
The labor ministry said Wednesday that the thyroid cancer of a male worker, exposed to radiation after the triple meltdown at the Fukushima No. 1 plant, has been recognized as a work-related disease.

Following the decision by a labor ministry panel of experts, the labor standards inspection office of Hitachi, Ibaraki Prefecture, reached the conclusion on Monday.

The man in his 50s became **the sixth person to be granted a workers' accident compensation insurance payment over cancer** caused by the March 2011 nuclear disaster at the plant operated by Tokyo Electric Power Co. Holdings Inc. He is the second person to be compensated due to thyroid cancer.

According to the ministry, the man, an employee of a Tepco-related company, was taking part in post-accident emergency work at the Fukushima plant that included a power recovery operation. He had worked at several nuclear plants for some 11 years since November 1993.

Of his cumulative radiation dose of about 108 millisieverts, he received 100 millisieverts after the meltdown.

The man applied for the insurance payment in August 2017, two months after he was diagnosed with cancer.

A total of 16 workers have requested such payments due to cancer they say was caused by the nuclear accident. Five have had their requests turned down while another five cases are still pending.

UN Conference

March 14, 2015

Sendai conference

U.N. forum brainstorms new framework for disaster risk reduction

http://www.japantimes.co.jp/news/2015/03/14/national/u-n-forum-brainstorms-new-framework-for-disaster-risk-reduction/#.VQRS0eF1Cos

Kyodo
SENDAI – Amid growing concern that climate change may bring more natural calamities, the international community highlighted the need to boost measures and investment on disaster risk reduction at a U.N. conference that began Saturday in Sendai.
More than 5,000 participants, including government leaders and high-level officials from around the world, were expected to attend the five-day meeting in Tohoku, which was severely damaged by the March 11, 2011, earthquake and tsunami, and ensuing nuclear crisis, three days after Japan marked the fourth anniversary of the unprecedented calamity.
During the once-in-a-decade U.N. World Conference on Disaster Risk Reduction, delegations from over 160 countries are slated to adopt a new action plan aimed at mitigating the impact of disasters to replace the Hyogo Framework for Action that covered the past 10 years.
"Climate change is intensifying the risks for hundreds of millions of people, particularly in small island developing states and coastal areas. … Disaster risk reduction is a front-line defense against the impacts of climate change. It is a smart investment for business and a wise investment in saving lives," U.N. Secretary-General Ban Ki-moon told the opening session.
According to a report by the U.N. Office for Disaster Risk Reduction, global economic losses caused by disasters including quakes, tsunami, cyclones and flooding are estimated at between $250 billion and $300 billion on average each year.
This figure is projected to increase to as much as $314 billion in the future, highlighting the need for more disaster-related measures and investment.
"We can watch that number grow as more people suffer. Or we can dramatically lower that figure and use the savings to invest in development," Ban said.
Prime Minister Shinzo Abe announced that Japan will offer $4 billion in aid for global efforts to enhance disaster management over four years through 2018, including support for building infrastructure in developing countries.
"Our nation, which has accumulated knowledge and technologies of disaster prevention as we experienced many natural hazards, has promoted cooperation with international society to reduce the number of disaster victims," Abe said in a speech delivered at a plenary session of the conference.
"It is important that we place disaster prevention as our highest priority in the post-2015 Millennium Development Goals agenda as well as the new framework on climate change," Abe said.
The U.N. conference is also seen as an important opportunity to highlight the mainstreaming of disaster risk reduction and to prod many countries to prioritize addressing such risk to ensure sustainable economic growth, especially in developing economies, given that about 90 percent of victims around the world are from such countries.

Around 1.2 million people were killed and 2.9 billion affected by disasters between 2000 and 2012, with the economic damage totaling an estimated $1.7 trillion during the period, according to the United Nations.
The new action plan to be adopted in Sendai is expected to set numerical targets for the first time to reduce the number of victims and economic losses so progress in international efforts against natural hazards can be assessed, conference officials said.
A total of seven targets will likely be laid out, including for reducing disaster damage to infrastructure, raising the number of countries with anti-disaster strategies and enhancing financial aid for developing economies.
On the sidelines of the plenary meetings, ministerial round tables will be held comprising more than 30 working sessions as well as high-level dialogue sessions covering a wide range of disaster issues.
Approximately 350 symposiums and seminars organized by international nongovernmental bodies and other entities will also take place during the conference.

U.N. forum calls for more investment to reduce disaster risks

http://mainichi.jp/english/english/newsselect/news/20150314p2g00m0dm036000c.html

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March 15, 2015

4 billion yen: Japanese aid towards disaster control

Japan offers $4 bil. aid to global disaster-control efforts

http://mainichi.jp/english/english/newsselect/news/20150315p2a00m0na007000c.html

SENDAI (Kyodo) -- Prime Minister Shinzo Abe said Saturday Japan will offer $4 billion in aid for global efforts to enhance disaster management over four years through 2018, including support for building infrastructure in developing countries.
Delivering a speech at a U.N. conference on disaster risk reduction, which began in Sendai, a northeastern Japanese city affected by the March 2011 earthquake and tsunami, Abe also announced Tokyo's plans to help train a total of 40,000 experts across the globe on disaster prevention as well as reconstruction from natural calamities.
"Disaster risk reduction is the most important challenge for both developed and developing countries," Abe said. "For developing countries in particular, where 90 percent of disaster victims are concentrated, disaster risk reduction is a great challenge with a view toward sustainable development and adaptation to climate change."
The five-day conference is partly aimed at showcasing Japan's initiative to foster international cooperation in disaster reduction as a quake-prone country that has learned a lot from past disasters,

including the 2011 catastrophe that also triggered meltdowns at the Fukushima Daiichi nuclear power plant.
Japan is specifically planning to send experts around the world to give advice and other help in introducing relevant legislation and drawing up plans for disaster prevention, and offer technological support on disaster prediction.
"Japan will contribute to the international community with our knowledge and technology," Abe said, promising to "further advance our cooperation for disaster risk reduction."
The Japanese government says international cooperation in preventing disasters would also help the world adapt to the fallouts of climate change, such as rising temperatures, the retreat of glaciers and sea-level rises. It aims to offer strong support especially for countries seen vulnerable to the impact of climate change.
Delegates from over 160 countries are gathering in Sendai for the third U.N. Disaster Risk Reduction conference through Wednesday.

March 16, 2015

UN conference and access for disabled

U.N. disaster risk reduction conference in Sendai praised over accessibility for disabled

http://mainichi.jp/english/english/newsselect/news/20150316p2a00m0na006000c.html

SENDAI -- The Third U.N. World Conference on Disaster Risk Reduction being held here has been praised over its accessibility for the disabled, earning acclaim from one U.N. official that it is the most barrier-free conference yet.
The event is also the first one to address together the themes of disaster-reduction and the disabled at its working groups. As a message to the world, a new action policy planned to be adopted on March 18 is expected to include the importance of disabled people participating in local disaster-reduction planning.
At the main site of the conference, on request from attendees both international sign language speakers and Japanese sign language speakers took part. At the main meetings of the conference, the contents of speeches were displayed on monitors, and among the vehicles ferrying attendees to the conference site were buses designed to accommodate wheelchairs.
Sonnia Margarita Villacres, 61, vice president of the World Federation of the Deafblind, was lent a device that displays the conference documents as braille. She said with a smile that she had visited many countries, but Japan had made the best barrier free preparations for an event.
Another conference participant, Steffen Helbing, 44, who has hearing and limb disabilities and is a member of a German nongovernmental organization, borrowed a device that displays text of comments at the conference's meetings. He said it was great that the opportunity to acquire a large amount of information is guaranteed for people with disabilities.

These barrier-free initiatives were done on the suggestion of the Nippon Foundation. The idea was spurred by the fact that the disabled had a high death rate in the Great East Japan Earthquake. According to Cabinet Office documents, in Minamisanriku, Miyagi Prefecture, where 4.5 percent of the population died in the disaster, the death ratio for the disabled was almost three times higher, at 13 percent, or 125 people.
The Nippon Foundation's team leader Katsuhiro Motoyama, who works on support for the disabled, said, "It is important to have the view that disabled persons should be considered important supporters in disaster risk reduction from the stage of disaster drills and countermeasure consideration. I look forward to the same type of efforts being made around the world."

March 17, 2015

What about nursing homes in case of emergency?

Head of Fukushima nursing home suggests waiting before evacuation

http://mainichi.jp/english/english/newsselect/news/20150317p2a00m0na010000c.html

SENDAI -- Nursing home users shouldn't necessarily be evacuated right after a nuclear disaster, the head of facility near the Fukushima No. 1 Nuclear Power Plant told participants at a U.N. conference here on March 17.
"There is an option to not evacuate, but to hunker down instead," Ken Takagi, 49, the head of a nursing home in the Fukushima Prefecture town of Naraha told participants in a discussion forum at the U.N. World Conference on Disaster Risk Reduction.
Operations of Takagi's nursing home were suspended as a result of the nuclear disaster. He says that some of the residents he accompanied as they evacuated from location to location fell ill.
Early on the morning of March 12, 2011, a day after the Great East Japan Earthquake that triggered the Fukushima nuclear crisis, Takagi's nursing home was notified by the town government that the town was being evacuated. Together with eight employees and 11 facility users who hadn't been able to return to their homes the previous night, Takagi evacuated. The group piled into four vehicles and left the facility. Their first destination was an elementary school gymnasium in Iwaki, Fukushima Prefecture. The inside was cold because the doors had been left open. Some of the nursing home users suffered from delusion, acting as if they were back in their own homes.
Thinking the situation was untenable, Takagi had the group leave on March 13 and enter a nursing home in the city, but due to food shortages, the group had to leave again on the morning of March 15. In the early morning hours of March 16, the group arrived at a facility in Chiba Prefecture that a friend of Takagi had managed to arrange for them. When Takagi weighed himself then, he found he had lost six kilograms. Since then, Takagi has fretted over whether he made the right decisions. The mere act of putting bedridden and ailing elderly people into a vehicle can be dangerous.
Another nursing home, "Iitate Home," in Iitate, Fukushima Prefecture, did not evacuate. According to Takagi, nursing homes that moved their users from location to location tended to see higher death rates

among users the year after the disaster. Iitate Home's death rate, however, was almost the same as it had been before the disaster. Takagi recommends that nursing homes store enough food, water and fuel to last around a week in an emergency.
Almost all of the town of Naraha lies within a 20-kilometer radius of the Fukushima plant, an area preparing for the lifting of evacuation orders. Residents are allowed to enter the area and stay during the daytime, but staying overnight is forbidden in principle.
"The radiation at Iitate Home was 0.2 to 0.3 microsieverts per hour at around the time of the disaster," Takagi says. "For a disaster of the scale (of the Fukushima disaster), I think the best way to protect (facility users') lives is to block off exposure from radiation outside the facility and keep the users there until a safe evacuation route is secured, then move them quickly."
Takagi encouraged participants to come and see people's positive outlook in Fukushima Prefecture. He feels that his acquaintances have drifted away from the prefecture.
"Please come to Fukushima to learn our lessons," he said to the forum discussion audience.

Tour of Fukushima Daiichi organised for foreign officials

Participants in U.N. forum interested in cost of decommissioning Fukushima plant

http://mainichi.jp/english/english/newsselect/news/20150317p2a00m0na015000c.html

FUKUSHIMA -- The Fukushima Prefectural Government and the Resources and Energy Agency of the Ministry of Economy, Trade and Industry led foreign government officials on a tour of the crippled Fukushima No. 1 Nuclear Power Plant on March 16 as part of the U.N. World Conference on Disaster Risk Reduction in Sendai.
Seven people, including government officials from the United States, Brazil and two other countries took part in the tour. A Mainichi Shimbun reporter accompanied them as they observed scenes -- including work to decommission the nuclear reactors -- from inside a bus. The participants appeared to have a great interest in what was happening to the nuclear facility as they posed numerous questions to organizers of the tour, including an official of Tokyo Electric Power Plant (TEPCO), who served as their tour guides.
The tour was planned by officials who wanted participants to observe the progress being made in efforts to decommission the nuclear plant. After being briefed on how TEPCO has responded to the nuclear disaster, the participants headed to the crippled nuclear power station by bus. When entering the "difficult-to-return zone" in the Fukushima Prefecture town of Okuma, they intently gazed at the street, which showed no sign of life.
In about 30 minutes, the participants arrived at the entrance of the nuclear power plant, where they put on masks and radiation dosimeters. The bus then took them past tanks containing contaminated water to the No. 4 reactor at the plant.
The airborne radiation dose detected by equipment carried by a TEPCO official started rising gradually from 20 microsieverts per hour. When the group approached the No. 4 reactor, the dose rose to the day's high of 50 microsieverts per hour. The participants visited the No. 5 and 6 reactors, which had avoided hydrogen explosions, as well as a building housing equipment that removes radioactive substances from contaminated water. They also observed workers engaged in decommissioning the plant.

After the tour, the participants asked a number of questions about the cost of decommissioning the nuclear plant, the number of workers there and measures being taken to manage workers' radiation exposure.
A 33-year-old risk management consultant from France, who said he had joined the tour because he wanted to know how the Japanese government and TEPCO had been responding to the nuclear disaster, said he came to understand that problems were being resolved toward decommissioning the crippled nuclear power station. A 57-year-old Austrian government official, on the other hand, said he was having various thoughts about the nuclear plant, including whether there were sufficient funds to decommission it. He also said he was wondering why Japan was trying to reactivate idled nuclear reactors in the country even though people were able to live without nuclear reactors in operation.
Personal dosimeters showed that the participants were exposed to radiation ranging from zero microsieverts per hour to 10 microsieverts per hour.

March 18, 2015

"10 Lessons" booklet distributed to UN Conference

FOUR YEARS AFTER: NGOs introduce '10 Lessons from Fukushima' booklet at U.N. disaster conference

http://ajw.asahi.com/article/0311disaster/fukushima/AJ201503180061

The booklet "10 Lessons from Fukushima" and translated versions line an exhibition space in Sendai on March 16. (Shunsuke Kimura)

By SHUNSUKE KIMURA/ Staff Writer
SENDAI--A booklet focusing on the plight of residents of crisis-hit Fukushima Prefecture and advising communities on preparing for nuclear disasters was distributed here at a United Nations conference that concluded on March 18.
The 70-page "10 Lessons from Fukushima" was assembled by the Japan NGO Center for International Cooperation (JANIC), Peace Boat and other nongovernmental organizations to spread the message of challenges facing individuals affected by the nuclear disaster at the Fukushima No. 1 nuclear power plant.
Available in Japanese, English, Chinese and Korean, "10 Lessons from Fukushima" was introduced at the March 14-18 U.N. World Conference on Disaster Risk Reduction in Sendai.
"We must share the knowledge and experiences of Fukushima," Masaaki Ohashi, JANIC chairman, said at a news conference. "We want the residents of nations that will be building nuclear reactors to be familiar with the contents of this booklet."
A French version of the booklet is currently being developed, and translations in more languages are also in the pipeline.
Lessons in the booklet include during an emergency, the basic premise must be for people to flee areas threatened with imminent danger; people affected by disasters have the right to a comprehensive health examination and disclosure of information; to ensure the safety of local agricultural, fisheries and forest products, such goods must be carefully checked for contamination with the cooperation of residents; the understanding made that complete decontamination is not possible; and the determination made how heavily taxpayers should bear compensation costs.
The lessons are driven home with descriptions of events that occurred as a result of the nuclear crisis caused by the March 2011 Great East Japan Earthquake and tsunami.
"At the time of the accident, most locals were likely unaware of terms such as 'sievert,' " Ohashi said.
The U.N conference was scheduled to be concluded on March 18 after adopting a new framework on disaster risk reduction for post-2015, updating the Hyogo Framework for Action ratified 10 years ago.
"10 Lessons from Fukushima" was distributed to participants of the conference at an exhibition space on disaster management and reconstruction efforts.
The booklet can be downloaded online at (http://fukushimalessons.jp/en.html).

March 19, 2015

UN framework goals "far from ambitious"

Critics blast U.N. disaster risk framework as insufficient

http://www.japantimes.co.jp/news/2015/03/19/national/politics-diplomacy/critics-blast-u-n-disaster-risk-framework-insufficient/#.VQqyfuF1Cos

by Kayo Mimizuka
Kyodo

SENDAI – The U.N. conference that wrapped up early Thursday in Sendai was the highest-level international meeting on disaster risk reduction ever, but the resulting set of seven goals to combat disasters are far from ambitious, critics say.

The new action plan, adopted overnight Wednesday following prolonged negotiations, was initially expected to include specific numbers or percentages on reducing deaths and economic losses, and boosting financial aid for developing countries.

But the post-2015 Sendai framework only said national governments will aim to "substantially" reduce such losses in the next 15 years compared with the 10 years through 2015. Earlier proposals made by host Japan and others on percentage goals were rejected by Western countries, including the United States, delegation sources said.

A Japanese official said participants from developed countries were generally very careful about what they would commit to, as decisions in Sendai would likely affect the direction of global negotiations on development and climate change later this year.

"It is just not possible to hammer out something perfect . . . but we came up with something that everybody can swallow," the official said, referring to the framework.

The start of the Sendai conference on Saturday coincided with Cyclone Pam, which tore through the Southern Pacific archipelago of Vanuatu and neighboring islands. Participants in various sessions underscored calls for pre-emptive investment against disasters amid increased threats from climate change.

Activists and experts hailed the adoption of the seven new goals that were not included in the previous action plan worked out in 2005.

But they were disappointed that the governments "diluted the targets at the expenses of the poor and vulnerable communities" in the framework, according to their statement.

"There needs to be more specific numerical targets if we really were to address disasters," said Masaaki Ohashi, chairman of the Japan NGO Center for International Cooperation.

The outcome shows that "none of the nations wanted to be held accountable" for the framework's level of attainment, he added.

Hannington Alatoa, president of the Vanuatu Red Cross Society, said a lack of unity between developed and less-developed economies during the negotiations shows a "grim picture of the future."

The world needs to recognize the "reality and make a difference in terms of commitment and having a positive impact . . . especially on the developing nations," he said.

A drastic reduction of disaster-related losses, as pledged in the framework, may prove to be difficult without a stronger commitment. At least that is what a new study by risk modeling software provider Air Worldwide shows. It indicates that the present attitude suggests there is little prospect of reducing economic losses from the current levels of $240 billion per year.

Milan Simic, the company's senior vice president, said: "The study tells us that it is next to impossible to reduce existing levels of economic losses, but that they provide a baseline and a context for improving on key areas of development over the lifetime of the new framework."

Gist of action plan for disaster risk reduction

The U.N. World Conference on Disaster Risk Reduction in Sendai has issued an action plan urging countries to:

- Substantially reduce global disaster mortality and the number of affected people worldwide, both by 2030.
- Reduce direct disaster-related economic losses in terms of gross domestic product by 2030.
- Substantially reduce disaster damage to critical infrastructure.
- Significantly increase the number of countries with national and local disaster risk reduction strategies by 2020.
- Boost access to multi-hazard early warning systems by 2030.
- Greatly enhance international cooperation to developing countries through adequate support.
- Address climate change as one of the drivers of disaster risk.

Éditions de Fukushima

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Collectif, ***Rapport officiel de la Commission d'enquête indépendante sur l'accident nucléaire de Fukushima***, traduit de l'anglais, Editions de Fukushima, 2012

CLAUSSEN (Angelika), ROSEN (Alex), ***Vivre 5 ans avec Fukushima. Résumé des effets sanitaires de la catastrophe nucléaire***, traduit de l'anglais par Odile GIRARD, mise en page Georges MAGNIER, Editions de Fukushima, 2016

Pectine Nonuke, ***Pectine Actualités 2018 : revue de presse d'informations sur le nucléaire, à Fukushima et ailleurs***, Éditions de Fukushima, 2019

Pectine Nonuke, ***Pectine Actualités 2017 : revue de presse d'informations sur le nucléaire, à Fukushima et ailleurs***, Éditions de Fukushima, 2020

Collectif, ***Les conséquences médicales et écologiques de l'accident nucléaire de Fukushima***, Actes du symposium de New York des 11 et 12 mars 2013, Éditions de Fukushima, 2021

MAGNIER (Georges), ***Vivre après Fukushima***, Éditions de Fukushima, 2022

Pectine Nonuke, ***Pectine Actualités 2016 : revue de presse d'informations sur le nucléaire, à Fukushima et ailleurs***, Éditions de Fukushima, 2022

GIRARD (Odile), ***Daiichi Nuclear Plant, 2012-2014***, Collection Fukushima-is-still-news, vol. 1, Éditions de Fukushima, 2022

GIRARD (Odile), ***Daiichi Nuclear Plant, 2015-2019***, Collection Fukushima-is-still-news, vol. 2, Éditions de Fukushima, 2022

GIRARD (Odile), ***Radioactive Fallout And Waste, No.4 Fuel Removal, Nuclear Workers, and UN Conference***, Collection Fukushima-is-still-news, vol. 3, Éditions de Fukushima, 2022


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