

June 1, 2011

Nuclear and Industrial Safety Agency

Seismic Damage Information (the 156th Release)
(As of 12:00 June 1, 2011)

Nuclear and Industrial Safety Agency (NISA) confirmed the current situation of Onagawa NPS, Tohoku Electric Power Co. Inc.; Fukushima Dai-ichi and Fukushima Dai-ni NPSs, Tokyo Electric Power Co. Inc. (TEPCO); Tokai Dai-ni NPS, Japan Atomic Power Co. Inc. as follows:

Major updates are as follows.

1. Nuclear Power Stations (NPSs)

● Fukushima Dai-ichi NPS

- The rate of water injection to the RPV of Unit 1 was changed from about 6m³/h to about 5m³/h. (20:30 May 31)
- A leakage test was conducted on the primary system of the alternative cooling system for the Spent Fuel Pool of Unit 2. (11:40 May 31)
Full-fledged operation of the system was started. (17:21 May 31)
- A preliminary survey using a remote-controlled robot was carried out inside the reactor building of Unit 3. (Around 09:00 till around 16:00 May 31)
- Full-scale implementation of spraying an anti-scattering agent to prevent the spread of radioactive materials was carried out by workers in an area of about 8,750m² around the tennis court, the parking lot for the Seismic Isolated Building, and near the Main Gate. (From 09:00 till 13:00 May 31)
- Removal of rubble (an amount equivalent to 6 containers) was carried out using remote-controlled heavy machinery. (From 09:00 till 16:00 May 31)
- Oil leakage was confirmed on the surface of the sea near the Curtain Wall of the Intake Canal of Units 5 and 6, in the dedicated port of Fukushima Dai-ichi NPS. (Around 08:00 May 31) Oil absorbing mats and oil fences were placed near the Seawall. (Around 14:00 and 16:50 May 31)
- A big impact sound was confirmed at the site where remote-controlled

heavy machinery was being used to remove rubble, outside the south side of the reactor building of Unit 4. (Around 14:30 May 31) Later, it was confirmed that the impact sound was made when the oxygen tank broke under the rubble.

<Situation of Injuries, etc.>

Around 13:30 May 31, one subcontractor employee injured his right index finger while laying cables at the Radioactive Waste Treatment Facilities. After administering an IV drip injection at the medical office of the NPS as a precautionary measure, he was taken to J-Village on a service car at 14:26. Thereafter he was taken from J-Village to the Fukushima Accident Hospital by ambulance at 15:35. There was no contamination on his body.

<Temporary Access to Restricted Areas>

Vehicles were retrieved from the following cities, towns and villages.

Minamisoma City (on June 1)

Kawauchi Village (on June 1)

For more information: NISA English Home Page

<http://www.nisa.meti.go.jp/english/index.html>

June 2, 2011

Nuclear and Industrial Safety Agency

Seismic Damage Information (the 157th Release)
(As of 15:30 June 2, 2011)

Nuclear and Industrial Safety Agency (NISA) confirmed the current situation of Onagawa NPS, Tohoku Electric Power Co. Inc.; Fukushima Dai-ichi and Fukushima Dai-ni NPSs, Tokyo Electric Power Co. Inc. (TEPCO); Tokai Dai-ni NPS, Japan Atomic Power Co. Inc. as follows:

Major updates are as follows.

1. Nuclear Power Stations (NPSs)

● Fukushima Dai-ichi NPS

- The rate of water injection to the RPV of Unit 3 was changed from about 13.5m³/h to about 12.5m³/h (10:19 May 31) and then from about 12.5m³/h to about 11.5m³/h. (10:10 June 1)
- Fresh water (about 40t) was injected into the Spent Fuel Pool of Unit 3 via the Fuel Pool Cooling and Clean-up Line. (From 14:34 till 15:54 June 1) (About 0.14m³ of hydrazine was also injected from 14:41 till 15:26)
- The transfer of accumulated water from the basement of the turbine building of Unit 6 to a temporary tank was started. (14:00 June 2)
- Full-scale implementation of spraying an anti-scattering agent to prevent the spread of radioactive materials was carried out by workers in an area of about 8,750m² near the main gate, the observation deck, the South Seawall, and around the Solid Waste Storage. (From 09:00 till 13:00 June 1)
- Full-scale implementation of spraying an anti-scattering agent to prevent the spread of radioactive materials was carried out using a Water Spray Vehicle with Bending Arm (an overhead spraying truck) in an area of about 2,200m² on the roof and the exterior wall of the reactor building of Unit 2. (From 11:00 till 13:30 June 1)
- Removal of rubble (an amount equivalent to 12 containers) was carried out using remote-controlled heavy machinery. (From 09:00 till 16:00 June 1)

<Situation of Resident Evacuation>

- As of May 31, the number of people who have already evacuated or have definite places to evacuate (including voluntary evacuation) is 4,750 people (of 6,177 target residents, about 77%) in Iitate Village and 1,240 people (of 1,252 target residents, about 99%) in Kawamata Village. NISA will give continuous assistance for the towns and villages in order to carry out the deliberate evacuation smoothly for the remaining residents.

<Temporary Access to Restricted Areas>

- On June 2, vehicles were retrieved from Tamura City, Okuma Town, Futaba Town, Namie Town and Katsurao Village.

<Instructions Regarding Foods and Drinks>

- Lifting of the suspension of shipment and the restriction of intake.
- Non-head type leafy vegetables (spinach, *komatsuna*, etc.) produced in the Kenchu District* of Nakadori, Fukushima Prefecture.
*Koriyama City, Sukagawa City, Tamura City (excluding the area within a 20km radius from the Fukushima Dai-ichi NPS), Kagami-ishi Town, Ishikawa Town, Asakawa Town, Furudono Town, Miharu Town, Ono Town, Tenei Village, Tamakawa Village, Hirata Village
- Lifting of the suspension of shipment
 - Spinach produced in Kita-ibaraki City and Takahagi City of Ibaraki Prefecture

For more information: NISA English Home Page
<http://www.nisa.meti.go.jp/english/index.html>

June 3, 2011

Nuclear and Industrial Safety Agency

Seismic Damage Information (the 158th Release)
(As of 12:00 June 3, 2011)

Nuclear and Industrial Safety Agency (NISA) confirmed the current situation of Onagawa NPS, Tohoku Electric Power Co. Inc.; Fukushima Dai-ichi and Fukushima Dai-ni NPSs, Tokyo Electric Power Co. Inc. (TEPCO); Tokai Dai-ni NPS, Japan Atomic Power Co. Inc. as follows:

Major updates are as follows.

1. Nuclear Power Stations (NPSs)

- Fukushima Dai-ichi NPS
 - The transfer of the water from the condenser to the condensate storage tank was started in order to prepare for the transfer of the accumulated water from the basement of the turbine building of Unit 3 to the condenser. (12:50 June 2)
 - Full-scale implementation of spraying an anti-scattering agent to prevent the spread of radioactive materials was carried out by workers in an area of about 8,525m² near the main gate, the observation deck, the South Seawall, and around the Solid Waste Storage. (From 09:00 till 13:00 June 2)
 - Full-scale implementation of spraying an anti-scattering agent to prevent the spread of radioactive materials was carried out using a Water Spray Vehicle with Bending Arm (an overhead spraying truck) in an area of about 7,200m² on the roof and the exterior wall of the reactor building of Unit 2. (From 11:00 till 14:00 June 2)
 - Removal of rubble (an amount equivalent to 11 containers) was carried out using remote-controlled heavy machinery. (From 09:00 till 16:00 June 2)

<Instructions Regarding Foods and Drinks>

- Additional items subject to the suspension of shipment
 - Japanese apricots (*ume*) produced in Fukushima City, Date City and Koori Town of Fukushima Prefecture

- Tea produced in Ibaraki Prefecture, Kanuma City and Otawara City of Tochigi Prefecture, Noda City, Narita City, Yagai City, Tomisato City, Sammu City and Oami-Shirasato Town of Chiba Prefecture, Minami-Ashigara City, Odawara City, Aikawa Town, Manazuru Town, Yugawara Town and Kiyokawa Village of Kanagawa Prefecture

For more information: NISA English Home Page
<http://www.nisa.meti.go.jp/english/index.html>

June 4, 2011

Nuclear and Industrial Safety Agency

Seismic Damage Information (the 159th Release)
(As of 15:30 June 4, 2011)

Nuclear and Industrial Safety Agency (NISA) confirmed the current situation of Onagawa NPS, Tohoku Electric Power Co. Inc.; Fukushima Dai-ichi and Fukushima Dai-ni NPSs, Tokyo Electric Power Co. Inc. (TEPCO); Tokai Dai-ni NPS, Japan Atomic Power Co. Inc. as follows:

Major updates are as follows.

1. Nuclear Power Stations (NPSs)

● Fukushima Dai-ichi NPS

- The situation inside the reactor building of Unit 1 was confirmed using an unmanned robot. (From around 15:00 till around 17:00 June 3)
- Injection of coolant water was temporarily suspended due to work to change the routes of the water supply lines for injecting water into the reactors. (From 09:57 till 13:56 June 4 for Unit 1. Water injection to the reactor was conducted using a fire extinguishing pump from 10:02 till 13:43.) (From 13:49 till 14:09 June 3 for Unit 2) (From 13:16 till 13:32 June 3 for Unit 3)
- The accumulated water (accumulated water from which high radiation dose was measured above the surface) in the trench of the turbine building of Unit 2 was transferred to the Condenser Hotwell in the turbine building. (From 18:39 June 3 till 12:28 June 4)
- Fresh water (about 210t) was sprayed over the Spent Fuel Pool of Unit 4 using a concrete pump truck (58m class). (From 14:35 till 21:15 June 3) (About 1m³ of hydrazine was also injected from 14:44 till 18:58)
- Spraying of fresh water over the Spent Fuel Pool of Unit 4 was started using a concrete pump truck (58m class). (14:23 June 4)
- Full-scale implementation of spraying an anti-scattering agent to prevent the spread of radioactive materials was carried out by workers in an area of about 8,750m² near around the Solid Waste

Storage, the Observation Deck and the South Seawall. (From 09:00 till 13:00 June 3)

- Full-scale implementation of spraying an anti-scattering agent to prevent the spread of radioactive materials was carried out using a Water Spray Vehicle with Bending Arm (an overhead spraying truck) in an area of about 4,800m² on the roof and the exterior wall of the turbine building of Unit 3. (From 10:30 till 15:00 June 3)
- Removal of rubble (an amount equivalent to 7 containers) was carried out using remote-controlled heavy machinery. (From 09:00 till 16:00 June 3)

For more information: NISA English Home Page
<http://www.nisa.meti.go.jp/english/index.html>

June 8, 2011

Nuclear and Industrial Safety Agency

Seismic Damage Information (the 163rd Release)
(As of 12:00 June 8, 2011)

Nuclear and Industrial Safety Agency (NISA) confirmed the current situation of Onagawa NPS, Tohoku Electric Power Co. Inc.; Fukushima Dai-ichi and Fukushima Dai-ni NPSs, Tokyo Electric Power Co. Inc. (TEPCO); Tokai Dai-ni NPS, Japan Atomic Power Co. Inc. as follows:

Major updates are as follows.

1. Nuclear Power Stations (NPSs)

● Fukushima Dai-ichi NPS

- In order to add a second pump to the Residual Heat Removal Seawater System (RHRS) of Unit 5, the Residual Heat Removal System (RHR) pump and the RHRS pump were stopped. (08:46, 09:05 June 8) The first RHRS pump was activated (at 11:32 on the same day) and the second RHRS pump was activated (at 11:52 on the same day). The RHR pump was activated (at 12:35 on the same day).
- Full-scale implementation of spraying an anti-scattering agent to prevent the spread of radioactive materials was carried out by workers in an area of about 8,750m² at the Observation Deck, on the north side of the Large Size Equipment Inspection Building, around the Main Gate, and on the south side of the Training Building. (From 09:00 till 13:00 June 7)
- Removal of rubble (an amount equivalent to 10 containers) was carried out using remote-controlled heavy machinery. (From 09:00 till 16:00 June 7)

2. Actions Taken by NISA

(June 7)

- The Ministry of Economy, Trade and Industry (METI) directed each electric utility company, etc. to implement the following items as measures to be carried out immediately amongst those against severe accidents in other NPSs, considering the 2011 accident at Fukushima

Dai-ichi NPS of TEPCO:

- secure the working environment in the Main Control Room,
- secure the means of communication inside the NPS premises in case of emergency,
- secure supplies and equipment such as high-level radiation protective gear, and develop a system for radiation dose management,
- establish measures to prevent hydrogen explosion, and
- deploy heavy machinery for removing rubble.

(June 7)

- On May 16, NISA received reports from General Electric Utilities and other organizations concerned (excluding Fukushima Dai-ichi and Dai-ni NPS) about measures to ensure the reliability of external power supplies to the NPSs and reprocessing facilities, which were made out under a written direction by NISA dated April 15. As a result of evaluating these reports, NISA directed these utilities and organizations to evaluate the impact of a possible collapse or damage that may cause the loss of functions in electric facilities such as switchyards considering the result of analysis on seismic observation records from Fukushima Dai-ichi NPS of TEPCO. The utilities and organizations were also directed to report the implementation status of establishing measures based on these evaluation results.

(June 8)

- METI instructed TEPCO to report the following items related to the improvement of working environment inside the reactor building of Unit 2, Fukushima Dai-ichi NPS, pursuant to Article 67, paragraph 1 of the Nuclear Regulation Act:
 - (1) the result of evaluation on the content of the work, the work plan, and the necessity of the work related to the ventilation of the reactor building of Unit 2, Fukushima Dai-ichi NPS, taking into account the availability of any alternative means,
 - (2) the result of the environmental impact assessment on the surrounding area of the NPS including the amount of discharge and the estimated diffusion of radioactive materials in connection to works for ventilation of the reactor building of Unit 2, Fukushima Dai-ichi NPS,

- (3) the monitoring method to adequately assess the environmental impact of radioactive materials discharged on the surrounding area of the NPS, in case the work described in (2) is implemented, and
- (4) the method of managing radiation exposure of workers who would conduct works, etc. after ventilating the reactor building of Unit 2, Fukushima Dai-ichi NPS.

<Temporary Access to Restricted Areas>

On June 8, residents were allowed temporary access into Minamisoma City, Tomioka Town and Naraha Town.

For more information: NISA English Home Page
<http://www.nisa.meti.go.jp/english/index.html>

June 7, 2011

Nuclear and Industrial Safety Agency

Seismic Damage Information (the 162nd Release)
(As of 08:00 June 7, 2011)

Nuclear and Industrial Safety Agency (NISA) confirmed the current situation of Onagawa NPS, Tohoku Electric Power Co. Inc.; Fukushima Dai-ichi and Fukushima Dai-ni NPSs, Tokyo Electric Power Co. Inc. (TEPCO); Tokai Dai-ni NPS, Japan Atomic Power Co. Inc. as follows:

Major updates are as follows.

1. Nuclear Power Stations (NPSs)

● Fukushima Dai-ichi NPS

- Fresh water (about 90t) was sprayed over the Spent Fuel Pool of Unit 4 using a concrete pump truck (58m class). (From 15:56 till 18:35 June 6) (About 0.2m³ of hydrazine was also injected from 16:15 till 17:45)
- Full-scale implementation of spraying an anti-scattering agent to prevent the spread of radioactive materials was carried out by workers in an area of about 8,750m² around the east side of the Welfare Building, the east side of the Training Building, the mountain side of the Common Pool, the Observation Deck, and the South Seawall. (From 09:00 till 13:00 June 6)
- Removal of rubble (an amount equivalent to 4 containers) was carried out using remote-controlled heavy machinery. (From 09:00 till 16:00 June 6)
- Rubble with high radiation dose (950mSv/h) identified on the west side of the reactor building of Unit 3 was collected. (10:20 June 6)

2. Actions Taken by NISA

(June 6)

NISA directed TEPCO in a document dated May 16 to conduct an evaluation of the impact on the safety of the reactor facilities, based on the analysis results of the records obtained before and after the occurrence of the Tohoku District-Off the Pacific Coast Earthquake. NISA analyzed and evaluated the condition of the reactor cores of Units 1 to 3 related to the

accident at Fukushima Dai-ichi NPS, based on the report about the assessment results which NISA received from TEPCO on May 23 .

<Situation of Injuries, etc.>

At around 19:10 June 6, one worker from a subcontractor slipped and hit his left chest and injured his left rib at the Incineration Workshop Building of the Radioactive Waste Treatment Facilities. After receiving a medical check-up and treatment at the medical office of the NPS, he was transported to J-Village at 20:10. He was taken to Iwaki Kyouritsu Hospital by ambulance at around 21:22. There was no contamination on his body.

<Temporary Access to Restricted Areas>

On June 7, residents were allowed temporary access into Minamisoma City, Tomioka Town and Naraha Town.

<Instructions Regarding Foods and Drinks>

- Additional items for restriction of shipment
 - Japanese apricots (*ume*) produced in Soma City and Minamisoma City, Fukushima Prefecture
 - Seema (*yamame*) (excluding farm-raised seema) caught in Akimotoko Lake, Hibarako Lake and Onogawako Lake in Fukushima Prefecture, as well as the rivers that flow into these lakes, Nagasegawa River (limited to the area above the confluence point with Sukawa River) and Abukumagawa River (including subsidiary streams).

For more information: NISA English Home Page
<http://www.nisa.meti.go.jp/english/index.html>

June 6, 2011

Nuclear and Industrial Safety Agency

Seismic Damage Information (the 161st Release)
(As of 12:00 June 6, 2011)

Nuclear and Industrial Safety Agency (NISA) confirmed the current situation of Onagawa NPS, Tohoku Electric Power Co. Inc.; Fukushima Dai-ichi and Fukushima Dai-ni NPSs, Tokyo Electric Power Co. Inc. (TEPCO); Tokai Dai-ni NPS, Japan Atomic Power Co. Inc. as follows:

Major updates are as follows.

1. Nuclear Power Stations (NPSs)

● Fukushima Dai-ichi NPS

- Fresh water (about 60t) was injected into the Spent Fuel Pool of Unit 3 via the Fuel Pool Cooling and Clean-up Line. (From 13:08 till 15:14 June 5) (About 0.12m³ of hydrazine was also injected from 13:14 till 14:16)
- The transfer of the accumulated water from inside the turbine building of Unit 3 to the condenser was started. (18:26 June 5)
- Full-scale implementation of spraying an anti-scattering agent to prevent the spread of radioactive materials was carried out by workers in an area of about 8,750m² around the south east side of the welfare Building, the Observation Deck, the South Seawall and the mountain side of the Common Pool. (From 09:00 till 13:00 June 5)
- Removal of rubble (an amount equivalent to 2 containers) was carried out using remote-controlled heavy machinery. (From 09:00 till 16:00 June 5)

2. Actions Taken by NISA

(June 4)

NISA received a report from TEPCO about the result of their examination on changing the water storage level due to increasing an amount of water with high concentration of radioactive materials that will be transferred to the Process Main Building of Fukushima Dai-ichi NPS. By changing the amount of water to be transferred,

the area within the Process Main Building to which contaminated water can be transferred is to be expanded from an area limited to the 2nd basement level to the bottom of the penetrated area on the 1st basement level. NISA reevaluated the items that would be affected by this change among those evaluated before such as anti-leakage measures, anti-exposure measures. As a result, NISA determined that the change would not pose a problem.

<Temporary Access to Restricted Areas>

June 6 – Temporary access was allowed to residents in Tomioka Town, Futaba Town, Okuma Town and Naraha Town.

For more information: NISA English Home Page
<http://www.nisa.meti.go.jp/english/index.html>

June 5, 2011

Nuclear and Industrial Safety Agency

Seismic Damage Information (the 160th Release)
(As of 15:30 June 5, 2011)

Nuclear and Industrial Safety Agency (NISA) confirmed the current situation of Onagawa NPS, Tohoku Electric Power Co. Inc.; Fukushima Dai-ichi and Fukushima Dai-ni NPSs, Tokyo Electric Power Co. Inc. (TEPCO); Tokai Dai-ni NPS, Japan Atomic Power Co. Inc. as follows:

Major updates are as follows.

1. Nuclear Power Stations (NPSs)

● Fukushima Dai-ichi NPS

- Fresh water (about 15t) was injected into the Spent Fuel Pool of Unit 1 via the Fuel Pool Cooling and Clean-up Line. (From 10:16 till 10:48 June 5)
- The transfer of the accumulated water (accumulated water with high radiation dose) in the trench of the turbine building of Unit 2 to the Radioactive Waste Treatment Facilities (the Main Processing Building) was started.(18:39 June 4)
- In order to prepare for the transfer of the accumulated water from the basement floor of the turbine building of Unit 3 to the Condenser, water in the Condenser was transferred to the Condensate Storage Tank. (From 12:50 Jun 2 till 21:56 June 4)
- Fresh water was injected into the Spent Fuel Pool of Unit 3 via the Fuel Pool Cooling and Clean-up Line. (From 13:08 June 5) (Hydrazine was also injected from 13:14 till 14:16)
- Fresh water (about 180t) was sprayed over the Spent Fuel Pool of Unit 4 using a concrete pump truck (58m class). (From 14:23 till 19:45 June 4) (About 0.4m³ of hydrazine was also injected from 14:51 till 18:41)
- Full-scale implementation of spraying an anti-scattering agent to prevent the spread of radioactive materials was carried out by workers in an area of about 10,500m² on the west-side of the shallow draft quay, the observation deck, the South Seawall, and on the

mountain-side of the common pool. (From 9:00 till 13:00 June 4)

- Full-scale implementation of spraying an anti-scattering agent to prevent the spread of radioactive materials was carried out using a Water Spray Vehicle with Bending Arm (an overhead spraying truck) in an area of about 7,200m² on the roof and the exterior wall of the turbine building of Unit 4. (From 10:00 till 12:00 June 4)
- Removal of rubble (an amount equivalent to 8 containers) was carried out using remote-controlled heavy machinery. (From 09:00 till 16:00 June 4)

< Temporary Access into Restricted Areas >

Temporary access was allowed as follows:

June 4, to Namie- Town and Okuma- Town

< Situation of Injuries, etc. >

Around 10:00 and 10:15 Jun 5, 2 workers who were laying electric cables in a pump system got sick and were transported to J-Village. Thereafter one worker was taken to the Iwaki City Kyouritsu Hospital by ambulance and doctor helicopter. The other worker was taken to the Fukushima Rosai Hospital. It was confirmed they were free from radioactive contamination.

For more information: NISA English Home Page
<http://www.nisa.meti.go.jp/english/index.html>