## Plant Status of Fukushima Daiichi Nuclear Power Station

### <Draining Water on Underground Floor of Turbine Building (T/B)>

Status of highly concentrated accumulated radioactive water treatment facility and storage tank facility [Treatment Facility]

·14:36 on January 4, 2012: We restarted the 2<sup>nd</sup> cesium adsorption facility. At 14:48, we reached the regular flow rate.

15:22 on January 11, 2012: We actuated Cesium adsorption apparatus. At 15:30 the flow rate reached steady state.

#### [Storage Facility]

· June 8, 2011 ~: Large tanks to store and keep treated or contaminated water have been transferred and installed sequentially.

Accumulated water in vertical shafts of trenches and at basement level of building

| Unit   | Draining water source Place transferred   | Status   |  |  |  |
|--------|---|--|--|--|--|
|        | <ul> <li>Unit 2T/B Central Radioactive Waste Treatment Facility<br/>[Process Main Building]</li> </ul>  | <ul> <li>8:17 on January 10 – 15:21 on January</li> <li>11 Implementation of Transfer</li> </ul> |  |  |  |
| Unit 2 | <ul> <li>Unit 2 T/B Central Radioactive Waste Treatment Facility<br/>[Process Main Building] Miscellaneous Solid Waste Volume<br/>Reduction Treatment Building(High Temperature Incinerator<br/>Building)]</li> </ul> | <sup>•</sup> From 15:45 on January 11<br>Transferring <sup>*</sup>                               |  |  |  |
| Unit 3 | · Unit 3T/B Central Radioactive Waste Treatment Facility<br>[Process Main Building, Miscellaneous Solid Waste Volume<br>Reduction Treatment Building(High Temperature Incinerator<br>Building)]                       | · From 15:39 on January 11   |  |  |  |
| Unit 6 | ·Unit 6T/B Temporary tanks  | ·1/11 No transfer  |  |  |  |

| Transferring destination | Water level at transferring destination (as of 7:00 am on January 11)                                  |
|--------------------------|--|
| Process Main Building    | O.P.+3,974mm (cumulative elevation of water level:5,191mm), elevated 502mm from 7:00 am on January 10  |
|                          | O.P.+3,109mm (cumulative elevation of water level:3,835mm), decreased 661mm from 7:00 am on January 10 |

\* From 9:47 to 15:32 on January 11, we transfer accumulated water from On-site Bunker Building to Central Radioactive Waste Treatment Facility [Process Main Building].

Water level of the vertical shaft of the trench, T/B and R/B(As of January 11 at 7:00)

|        | Vertical Shaft of Trench      | T/B   | R/B   |
|--------|-------------------------------|---|---|
| Unit 1 | O.P. <+ 850 mm                | O.P.+ 3,133 mm  | O.P.+ 4,224 mm  |
|        | (No change since 7:00 on      | (18 mm increase since 7:00 on                             | (4 mm decrease since 7:00 on                              |
|        | January 10)                   | January 10)   | January 10)   |
| Unit 2 | O.P.+ 3,065 mm                | O.P.+ 3,047 mm  | O.P.+ 3,207 mm  |
|        | (92 mm decrease since 7:00 on | (83 mm decrease since 7:00 on                             | (79 mm decrease since 7:00 on                             |
|        | January 10)                   | January 10)   | January 10)   |
| Unit 3 | O.P.+ 3,164 mm                | O.P.+ 3,123 mm  | O.P.+ 3,394 mm  |
|        | (13 mm increase since 7:00 on | (39 mm increase since 7:00 on                             | (31 mm increase since 7:00 on                             |
|        | January 10)                   | January 10)   | January 10)   |
| Unit 4 | -                             | O.P.+ 3,107 mm<br>(No change since 7:00 on January<br>10) | O.P.+ 3,122 mm<br>(No change since 7:00 on<br>January 10) |

# <Monitoring of Radioactive Materials>

## Nuclide Analysis of Seawater (Reference)

| Place of sampling                                     | Date of    | Time of  | Ratio of density limit (times) |        | (times) |
|---|------------|----------|--------------------------------|--------|---------|
| Flace of sampling                                     | sampling   | sampling | I-131                          | Cs-134 | Cs-137  |
| Around 30 m north from discharge channel of 5-6U, 1F  | January 10 | 8:45     | ND                             | 0.05   | 0.05    |
| Around 330 m south from discharge channel of 1-4U, 1F | January 10 | 8:25     | ND                             | 0.01   | 0.02    |
| Around discharge channel of 3-4U, 2F                  | January 10 | 8:20     | ND                             | 0.02   | ND      |

Others: Samples from one point at the coast(sampled on January 10) and 5 points at offshore of Fukushima Prefecture (sampled on January 9, 2012) and also 6 points at offshore of Miyagi prefecture (sampled on January 4) showed ND for all three major nuclides (lodine-131, Cs-134,137).

## <Cooling of Spent Fuel Pools > (As of January 10 at 11:00)

| Unit   | Cooling type               | Status of cooling | Temperature of water in Pool |
|--------|----------------------------|-------------------|------------------------------|
| Unit 1 | Circulating Cooling System | Under operation   | 13.0                         |
| Unit 2 | Circulating Cooling System | Under operation   | 13.3                         |
| Unit 3 | Circulating Cooling System | Under operation   | 14.2                         |
| Unit 4 | Circulating Cooling System | Under operation   | 21                           |

[Unit 4] · From November 29, 2011, we actuated ion exchange apparatus in order to desalinate water in spent fuel pool.

| Unit   | Status of water injection   | Feed-water nozzle<br>Temp. | Reactor<br>pressure vessel<br>Bottom temp. | Pressure of primary containment vessel |
|--------|---|----------------------------|--|--|
| Unit 1 | Injecting freshwater<br>(Feed Water System: Approx.4.6 m <sup>3</sup> /h,<br>Core Spray System: Approx.1.7 m <sup>3</sup> /h) | 25.3                       | 25.8                                       | 106.0 kPaabs                           |
| Unit 2 | Injecting freshwater<br>(Feed Water System: Approx.2.8 m <sup>3</sup> /h,<br>Core Spray System: Approx.7.1 m <sup>3</sup> /h) | 48.1                       | 50.4                                       | 110 kPaabs                             |
| Unit 3 | Injecting freshwater<br>(Feed Water System: Approx.1.0 m <sup>3</sup> /h,<br>Core Spray System: Approx.8.0 m <sup>3</sup> /h) | 46.3                       | 55.4                                       | 101.6 kPaabs                           |

<u>< Water Injection to Pressure Containment Vessels > (As of January 11 at 11:00)</u>

[Unit 2] ·10:10 on January 10:With preparing the investigation inside the Reactor Containment Vessel of Unit 2, in order to decrease pressure inside PCV, we adjusted Nitrogen injection to PCV from approx. 13 m<sup>3</sup>/h to approx. 10 m<sup>3</sup>/h. There are no change on exhaust amount from gas control system of PCV.

- [Unit 3] ·10:18 on January 11: We adjusted water injection from the reactor feed water system from approx 1.9 m<sup>3</sup>/h to 1.0 m<sup>3</sup>/h, and water injection from the core spray system from approx. 7.0 m<sup>3</sup>/h to 8.0 m<sup>3</sup>/h to replacement of the cooling system piping arrangement for the trial run of cooling system piping in Turbine Building.
- [Unit 4] [Unit 5] [Unit 6] · No major change

## <Others>

16:20

- October 7, 2011 ~: Continuously implementing water spray using water after purifying accumulated water of Unit 5 and Unit 6 to prevent spontaneous fire of trimmed trees and diffusion of dust.
- •14:22 on January 9, 2012: At the Spent Sludge Storage Facility (\*) of Fukushima Daiichi Nuclear Power Station (1F), a partner company's worker who had been engaged in concrete placement work reported his physical disorder. He was carried to the emergency medical room of 1F's Unit 5/6 and received medical treatment. Because he was in cardiopulmonary arrest, he was carried from 1F to Iwaki Kyouritsu Hospital at 3:25 pm. For reference, no radioactive materials were found to be attached to the worker's body.
- 13:00 on January 11, 2012: Chief contractor reported to us that the worker's death was confirmed by the doctor at 17:02 on January 9.

\* Spent Sludge Storage Facility: The facility to store radioactive waste (spent sludge), which is produced during the process of accumulated water treatment, on a temporary basis.

- · 10:40 12:10 on January 11, 2012: We implemented sampling of the gas in the Gas control system of Unit 2 Reactor Containment Vessel.
- 14:39 on January 11,2012: In order to prevent from degradation of the facilities for keeping stable state of cold shut down inside the reactor buildings and improving high humidity environment inside the building, we activated the ventilating and air conditioning system of Unit 5\*.
  - We activated the ventilating and air conditioning system of Unit 6\*.
    - \* Exhausting air of this air conditioning system was implemented through the high performance particle filter at the air intake side and exhaust side.
- January 11, 2012: As finding accumulated water including radioactive materials (December 18,2011) at the trench between Process Main Building of Central Radioactive Waste Treatment Facility and Miscellaneous Solid Waste Volume Reduction Treatment Building(High Temperature Incinerator Building), we started inspection of the other trenches in the site.