### Status of countermeasures for restoring from the accident at Fukushima Daiichi Unit 1 through 4. As of June 29th, 2011. (Estimated by JAIF)

<table>
<thead>
<tr>
<th>Unit 1</th>
<th>Unit 2</th>
<th>Unit 3</th>
<th>Unit 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of plant</td>
<td>Nuclear Power Plant</td>
<td>Nuclear Power Plant</td>
<td>Nuclear Power Plant</td>
</tr>
<tr>
<td>Plant status when hit by the earthquake</td>
<td>Operational</td>
<td>Operational</td>
<td>Operational</td>
</tr>
<tr>
<td>No. of spent fuels stored in the reactor</td>
<td>984</td>
<td>622</td>
<td>614</td>
</tr>
<tr>
<td>No. of spent fuels stored in the RPV</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### Plant parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPV structural integrity</td>
<td>Damage and leakage suspected</td>
</tr>
<tr>
<td>Cooling by minimum injection rate</td>
<td>Injection function recovered</td>
</tr>
<tr>
<td>Transfer of radioactive waste water</td>
<td>Injection function recovered</td>
</tr>
<tr>
<td>Fuel integrity in SFP</td>
<td>Injection function recovered</td>
</tr>
</tbody>
</table>

### Goal of STEP 1 (April through June)

- **Reliability improvement in injection operation**
  - Injection function recovered
  - Injection function recovered

- **Circulation with Hx**
  - Planned
  - Planned (Construction to be started in late June)

### Goal of STEP 2 (July through August)

- **Well cooling (well water cooling)**
  - Injection function recovered
  - Injection function recovered

### Increase and accumulation of radioactively contaminated water

- High level radioactive wastewater is accumulating in the R/B, T/B and RW/B of each unit.
  - Current status of the plant and the progress of countermeasures taken.
  - Accumulated water
    - Unit 1: 4,630 m³
    - Unit 2: 3,900 m³
    - Unit 3: 6,000 m³
    - Unit 4: 6,500 m³

### Summary

- TEPCO is examining some 3,700 workers who have worked at the plant since March 11th for exposure to radiation. Of that number, 3,514 main gate workers are being examined.
- GB: 8 workers, 250mSv-: 9 workers
- Groundwater contamination: 250 mSv: 8 workers, 250mSv-: 9 workers
- Amount of doses that the 2 workers who received most are 643mSv and 678mSv.
- GB: 250 mSv: 8 workers, 250mSv-: 9 workers

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http://www.gengikyo.jp/english/shaokai/special_4.html

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**Environmental effect in the vicinity of the station**

- Radiation exposure of the workers:
  - 324 received radiation doses above 100 mSv:
  - 107 workers, 200-300 mSv:
  - 8 workers, 300-500 mSv:
  - 9 workers
  - Amount of doses that the 2 workers who received most are 643 mSv and 678 mSv.

**The allowable emergency limit for radiation doses:** 250 mSv/day
1. TEPCO's analysis [announced on 5/15, 23]
2. TEPCO judged that most spent fuels were not damaged in the Unit 2 and 4 SFPs based on the detailed analysis of the radioactive materials in the pool water. [5/31]
3. Rough estimate by TEPCO [announced on 5/31]

**Significance judged by JAIF**
- Low
- High
- Severe (Need immediate action)

**Progress of countermeasures**
- Completed
- Under construction
- To be done (including studying and manufacturing)

**Abbreviations**
- SFP: Spent Fuel Storage Pool
- EDG: Emergency Diesel Generator
- RPV: Reactor Pressure Vessel
- PCV: Primary Containment Vessel
- R/B: Reactor Building
- T/B: Turbine Building
- RW/B: Radioactive Waste Disposal Building
- RHR: Residual Heat Removal system
- CST: Condensate water Storage Tank
- Hx: Heat exchanger
- NPS: Nuclear power station

**Source**
- TEPCO: Press Release, Press Conference
- NISA: News Release, Press conference
- TEPCO: Press Release, Press Conference

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- Low
- High
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**Progress of countermeasures**
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