Countermeasures against the contaminated water leakages at the TEPCO’s Fukushima Daiichi Nuclear Power Station

Highly-contaminated ground water was detected from the sea-side soil of the Fukushima Daiichi NPS Unit1-4. Following the fact that the contaminated water leaks to the sea, drastic countermeasures will be taken in several phases in addition to the immediate countermeasures.

### Three general principles when taking countermeasures against contaminated water
1. Eliminating the source of the contamination
2. Keeping water away from the contamination source
3. Avoiding leakage of the contaminated water

### Current Situation of the ground water
The amount of the ground water flowing into the area around unit 1-4 of the Fukushima Daiichi Nuclear Power Station is approx. 1000 tons per day. Approx. 400 tons out of this ground water flows into the reactor buildings. The rest of the ground water is approx. 600 tons and the part of this runs through the contamination source inside the trench and then flows into the sea.

### Immediate Countermeasures

1. Removing water containing high amount of radio-active materials from the trench (underground space where the pipes and electronic cables are set) (Starting from mid-August)【Eliminating】
2. Improving the soil by sodium silicate (liquid glass), paving the land surface with asphalt, pumping out the underground water (this pumping out process starts this week)【Keeping water away】【Avoiding leakage】
3. Pumping out ground-water from the mountain-side (By-passing ground water)【Keeping water away】

### Drastic Countermeasures (Coming 1-2years)

1. Pumping out the ground water from the sub-drains【Keeping water away】
2. Installation of impermeable walls in the sea【Avoiding leakage】
3. Installation of land-side impermeable walls adopting the frozen soil method【Keeping water away】【Avoiding leakage】

### Overview of the countermeasures being or to be taken
- **Ground water observation hole**
- **Sub-drain**
- **Ground water by-pass**
- **Installation of land-side impermeable walls adopting the frozen soil method**

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