## Reinforcement to prevent scattering liquid containing radioactive materials | Reference 5.1



Results of survey on trenches and pits there is a risk of outflow from

### 1. Survey policy

Seeing that the water containing radioactive materials flew into the ocean through the trench for power cables at Unit 2 on April 2, 2011, we have studied (A) heights of the bottoms of trenches for power cables and sea water pipes, and directions of water flow, (B) locations of connection points of trenches for power cables and for sea water pipes, and (C) locations of connections to other Units, and have conducted works to cut or close the flow route upstream.

However, while we had difficulty in conducting works because of debris, due to the rise of water level in the vertical shaft of Unit 3, on May 11, 2011, we observed the water in the power cable pit flew out through the penetration created on the concrete wall of the screen pump room.

Therefore, as an additional measure, we decided to block downstream of the flow route such as pits on the sea side as well. We decided to conduct a survey to identify pits where there is a risk that the radioactive water flows out into the screen area from, for example, a pit next to a screen pump room and there is a penetration in the wall in between, and conduct countermeasure works.

Also, to make sure not to prevent leakage of radioactive water, we decided to inspect pits connected to trenches which stretch from turbine buildings to the yard on the ocean side and conduct countermeasure works.

#### 2. Method of survey

The outline of our survey is as follows;

•	Period of survey:	From May 13 to 15, 2011		
•	Place of survey :	Yard on the ocean side		
•	Number of surveys:	85 points (when the survey was conducted		
		7 points out of 85 were already (being)		
		blocked.)		
•	Examiner:	Staff of TEPCO and its affiliates		
•	Content of field survey:	Type and depth of pits, with or without		
•	Content of desk top survey:	Review of drawings such as buried object control maps		
		•		

3. Results of survey

Near the intake screening pump room of Units 1 to 4, we identified 10 pits there is a risk of outflow of radioactive water from such as a pit next to a screen pump room and there is a penetration in the wall in between. We completed all the works to block them before May 19, 2011.

Trenches for sea water pipes, for power supply to the intake, and for heavy oil supply are the ones which connect turbine buildings radioactive water is accumulated and the yard on the ocean side. But we also confirmed that only trenches for sea water pipes are connected below the water level of accumulated water in turbine buildings and thus the ones accumulated water might run off to the yard through. We confirmed that trenches for sea water pipes are connected to the trenches for power supply to the intake in the yard on the ocean side, which are further connected to various trenches and other facilities. As a result of the survey, we confirmed that 32 pits were connected to those pits and other facilities. 5 out of them are already closed, and we are planning to finish blocking all of remaining 27 pits by the end of June.

END



## Legend (as of May 19)

	Deadline	Done		Planned	
Pits radioactive water might flow into the screen area from	End of May	×	10	-	-
Pits connected to trenches stretching from turbine buildings to the ocean side area	End of June	×	5	×	27

# Image of countermeasures near intake screen pump rooms at Units 1 to 4

Total: 42 places