<Reference>

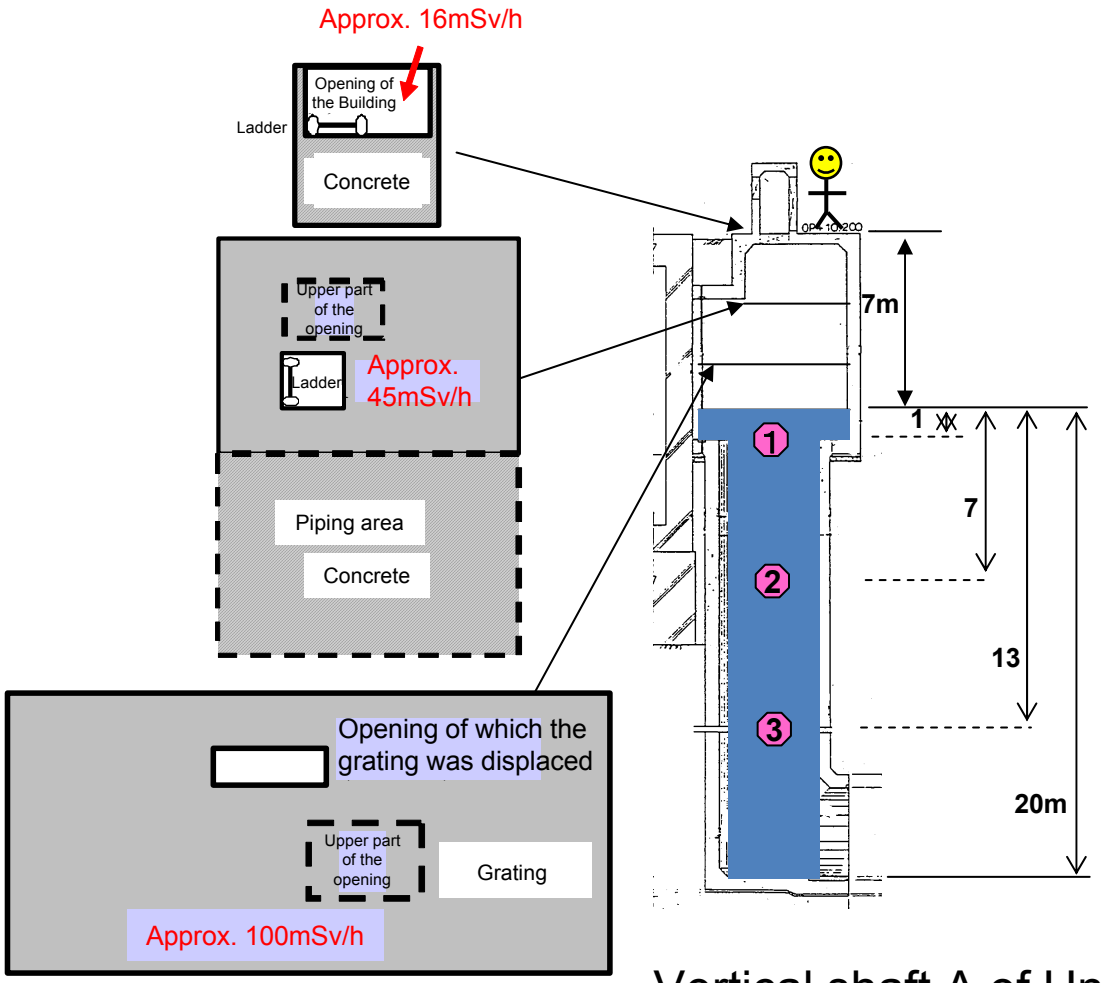
Sampling Survey Results of Unit 3 Trench Vertical Shaft A at Fukushima Daiichi Nuclear Power Station

July 11, 2013

Tokyo Electric Power Company

東京電力 TEPCO

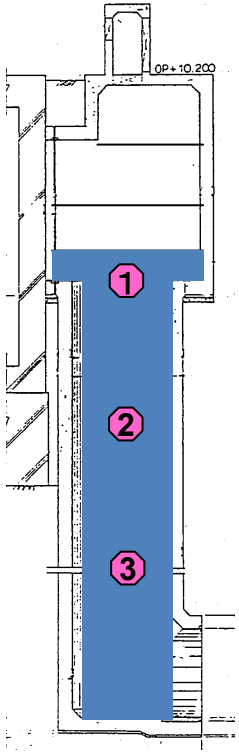
Sampling Survey Method of Unit 3 Vertical Shaft A



Vertical shaft A of Unit 3

- Investigated on July 10, 2013
- Analyzed on July 11, 2013
- Water was sampled by a vacuum water sampler
- Sampled at 3 points categorized by water depth
  (Water depth: Approx. 1, 7, 13m)
- Radiation exposure dose
  =0.49mSv/person

Sampling Survey Results



■Analysis results of the main γ nuclides

Location (water depth)	Saline (ppm)	Cs134 (Bq/cm³)	Cs137 (Bq/cm³)	Remarks
① (1m)	11,000	5.0×10^4	1.0×10^5	I-131 and Co-60 was both ND (<From 10^2)
② (7m)	7,500	3.4×10^4	6.9×10^4	Same as above
③ (13m)	7,000	3.1×10^4	6.2×10^4	Same as above

Vertical shaft A of Unit 3

Condition of the Seawater Piping Trench at Units 1-4

- Contaminated water at Unit 2 and 3 is flowing into the trench. We will consider measures to prevent the inflow immediately.
- Water level of the Turbine Building (T/B) is changing according to that of the trench vertical shaft as well as the densities at Unit 2.
- There are some time lag of water level change between the Turbine Building (T/B) and the vertical shaft at Unit 3.
  (It is estimated to be the way of connection between the Turbine Building (T/B) and the vertical shaft is different at Unit 2 and Unit 3.)

	Density of contaminated water (Cs137)		Ambient dose	Bottom location of the trench	Remarks
	T/B	Trench			
Unit 1	From 10^4 Bq/cm^3	From 10^1 Bq/cm^3	-	OP-12M	Note 1
Unit 2	From 10^4 Bq/cm^3	From 10^4 Bq/cm^3	Approx. 10mSv/h	OP-12M	Note 2
Unit 3	From 10^4 Bq/cm^3	From 10^5 Bq/cm^3	Approx. 100mSv/h	OP-17M	Note 3
Unit 4	From 10^4 Bq/cm^3	From 10^2 Bq/cm^3	Approx. 1mSv/h	OP-1M	Note 4

Note 1: The trench is connected to the ground surface of T/B at Unit 1. Therefore, there is no inflow of contaminated water into the seawater trench.
Note 2: Densities of contaminated water of T/B is equivalent to that of the trench at Unit 2 (sampled from the vertical shaft at T/B side).
Note 3: Ambient dose inside the trench (vertical shaft at T/B side) is high at Unit 3.→Highly contaminated water was diluted slightly which was measured at this time.
Note 4: The trench is located in T/B side, and is erected vertically from the underground floor to the ground surface at Unit 4. Therefore, there is no inflow of contaminated water into the seawater trench.

(Reference) Overview of the Seawater Piping Trench at Unit 3 and 4

Referred from the Mid-and-long-Term Roadmap announced on June 27.