

Evaluation of the Impact of a Steel Beam Falling into Unit 3 Spent Fuel Pool at Fukushima Daiichi Nuclear Power Station on the Surrounding Environment

During debris removal from the upper part of Unit 3 Reactor Building, a steel beam slipped and fell into the spent fuel pool. We have evaluated the impact of this incident on the surrounding environment based on the data below.

1. Atmosphere dose rate around the spent fuel pool

A dosimeter was hung from a crane at about 2m above the spent fuel pool surface (About 3.5m from west and about 4.5m from south on September 22) to measure the atmosphere dose rate in the upper part of the Reactor Building. As a result, no significant change was found comparing before and after the incident.

(Unit: mSv/h)

Date	Before debris removal		After debris removal (or during break)		Remarks
	Time of sampling	Atmosphere dose rate	Time of sampling	Atmosphere dose rate	
9/17	13:17	31.2	16:00	110.0	
9/18	10:09	100.0	15:34	17.8	
9/19	10:04	27.7	15:20	21.0	
9/20	10:24	110.0	13:51	35.5	Started to remove debris exposed to pool water
9/21	9:28	173.0	14:14	94.0	
9/22	9:52	36.1	11:24	24.6*	Measured near the location where the steel beam fell into
			11:33	49.6	
			12:00	53.7	
			12:22	27.7*	Measured near the location where the steel beam fell into
			12:30	39.6	
			13:00	34.0	
			13:30	35.0	
			14:00	30.1	
			14:30	33.7	
			15:00	36.1	
			15:30	38.8	

2. Sampling results of the spent fuel pool water

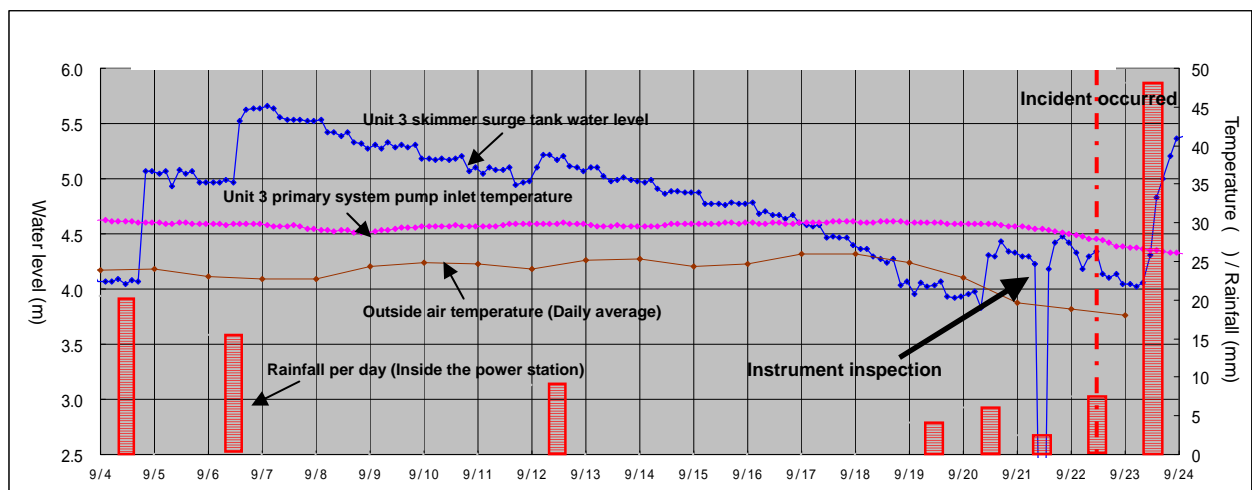
The spent fuel pool water was sampled near the outlet of the spent fuel pool alternative cooling primary system for radioactivity density analysis. As a result, no significant change was found before and after the incident.

(Unit: Bq/cm³)

Day and time of sampling	All radiation	Cs-134	Cs-137	I-131	Remarks
9/21 15:20	6.4×10^3	2.4×10^3	4.0×10^3	ND	Mobile RO suspended
9/22 13:00	5.7×10^3	2.2×10^3	3.6×10^3	ND	Mobile RO in operation
9/23 10:30	6.7×10^3	2.5×10^3	4.2×10^3	ND	Mobile RO suspended
9/24 10:15	6.3×10^3	2.4×10^3	3.9×10^3	ND	Mobile RO suspended

3. Skimmer surge tank water level

Upon check the skimmer surge tank water level, no significant change was found due to the steel beam falling into the pool.

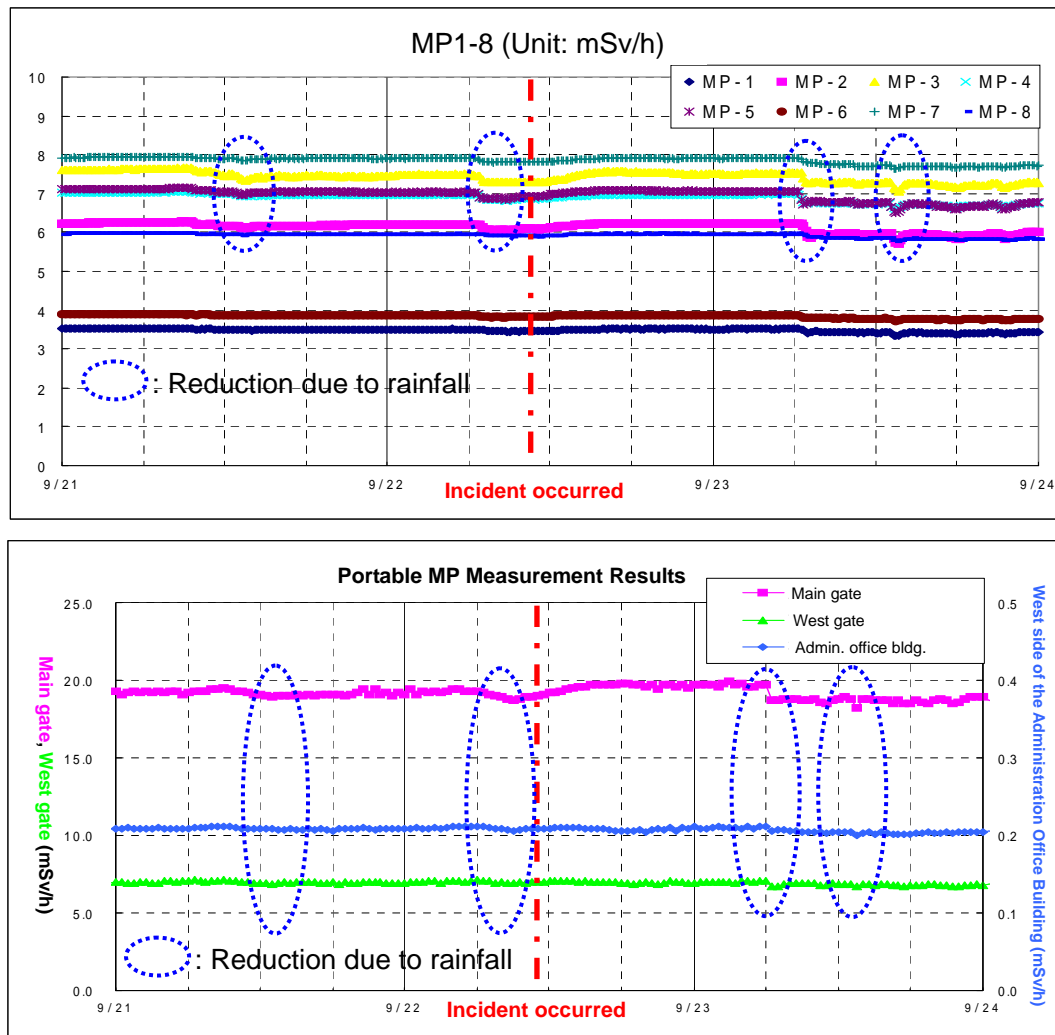


*1 Skimmer surge tank water level is subject to change as it is calculated based on the pump inlet pressure and flow rate.

*2 Rainfall per day represents the total of 10-minute rainfall data.

4. Monitoring post

Upon checking the radiation dose rates measured by monitoring posts and portable monitoring posts, no significant change was found before and after the incident.



5. Spent fuel pool water level investigated by a remotely controlled camera

Upon investigating the spent fuel pool water surface, etc. using a remotely controlled camera attached on the crawler crane, no significant change was found before and after the incident.

6. Consideration

Based on the data 1-5 above, it can be concluded that the incident has no impact on the surrounding environment as there was no significant change before and after the incident.

End