# Steam-like Gas Found Near the Central Part of the Fifth Floor (Equipment Storage Pool Side) of Unit 3 Reactor Building at Fukushima Daiichi Nuclear Power Station

<Reference>
July 18, 2013
Tokyo Electric Power Company

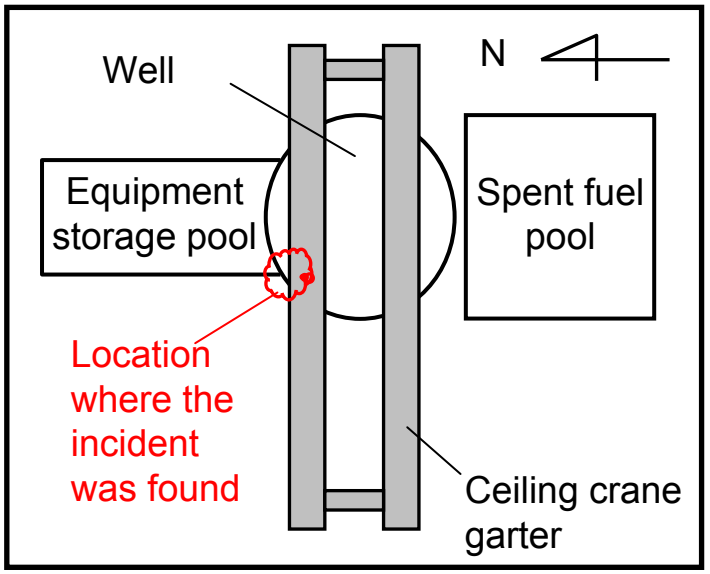
**[Condition]**

■At around 8:20 AM on July 18, 2013, an associated company worker, investigating the site using a camera ahead of debris removal work, encountered a steam-like gas wafting through the air near the central part of the fifth floor (equipment storage pool side) of Unit 3.

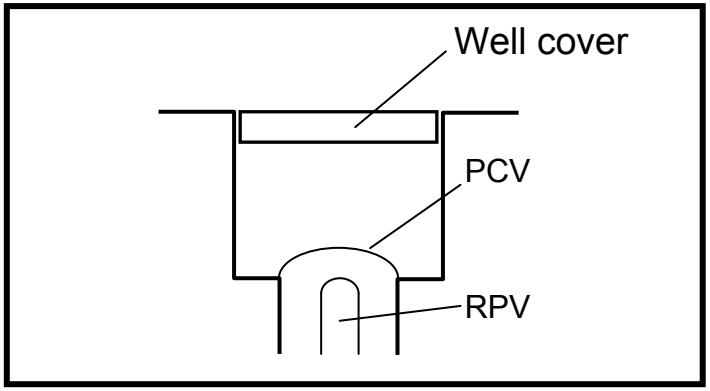
■The plant status is as follows, and subcritical state is found to be maintained at 9:20 AM.

- Reactor water injection, cooling of the spent fuel pool:
  Continuing stably
- Monitoring post readings, continuous dust monitor amounts:
  No significant change was found
- Temperature of RPV/PCV:
  No significant change was found
- Noble gas monitor:
  No significant change was found
- Nitrogen injection of PCV:
  No significant change was found

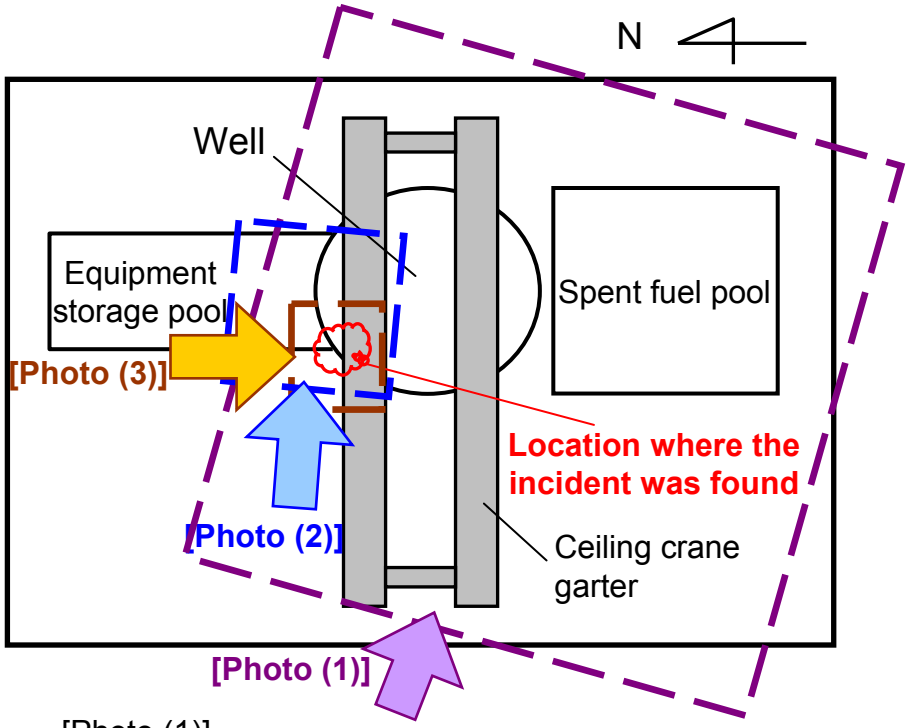
Afterwards, the plant was confirmed to be the status above at 1:00 PM and 4:00 PM, and subcritical state is found to be maintained at 1:15 PM and 4:15 PM.




[View of Unit 3 Reactor Building from above]




[Cross-section image around Unit 3 well]




[Photo (2)]


[Photo (1)]

[Photo (3)]

# [Reference] Dust Sampling Locations at the Opening of Unit 3 Reactor Building

Locations of regular sampling (once a month)
(following 2 locations)
(Most recent data was obtained on July 4)

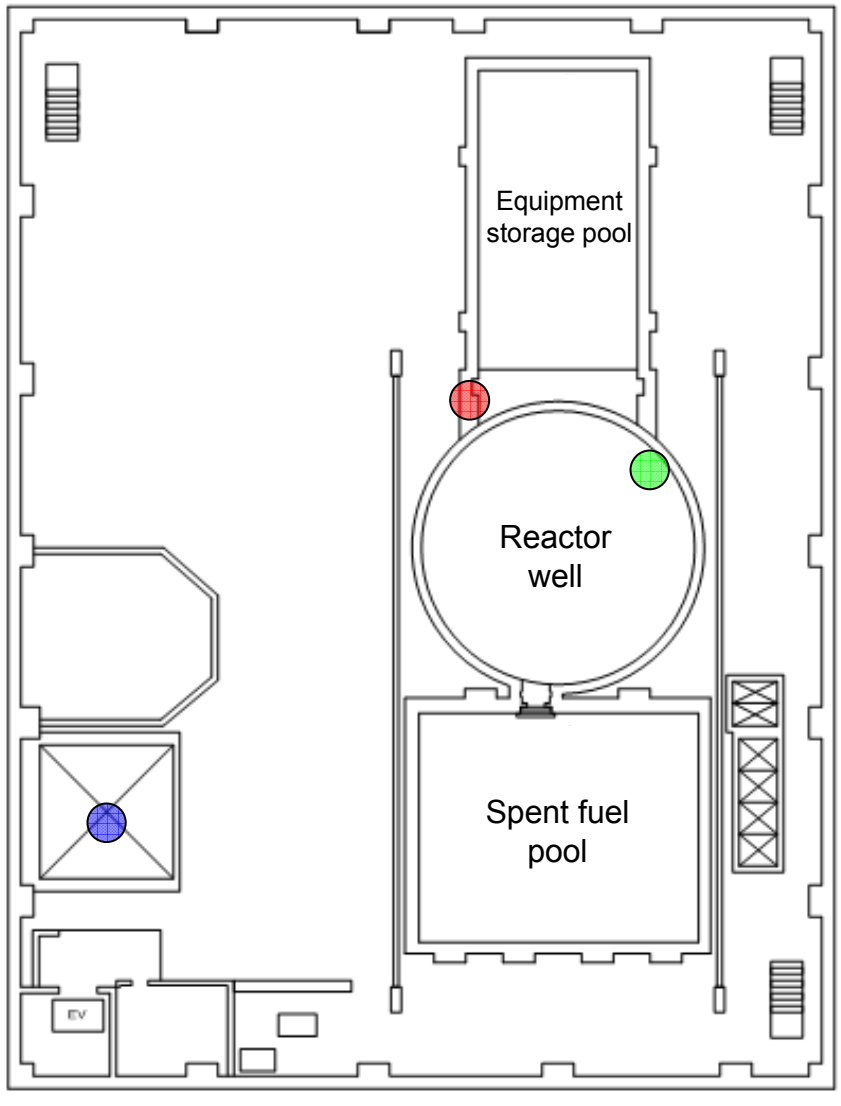
- Northeast side of a space above the reactor
- Around the third floor of equipment hatch opening

  ⇒ On July 18, dust sampling was performed once at the northeast side of a space above the reactor
- Location where the steam-like gas was found

  ⇒ On July 18, dust sampling was performed twice at this location

- For a half year, Cesium 137 has varied between 1 x $10^{-3}$ Bq/cm$^3$ and 1 x $10^{-5}$ Bq/cm$^3$, Cesium 134 has varied between 5 x $10^{-4}$ Bq/cm$^3$ and 1 x $10^{-5}$Bq/cm$^3$. The results obtained this time (sampled on July 18) were between these ranges and there were data slightly over the detection limits.

<Reference: Recent dust sampling result (sampled on July 4)>
Northeast side of a space above the reactor:
Maximum
Cesium 134: ND
Cesium 137: 3.6E-05Bq/cm$^3$
Around the third floor of equipment hatch opening:
Maximum
Cesium 134: 1.1E-05Bq/cm$^3$
Cesium 137: 2.9E-05Bq/cm$^3$




Fifth floor of Unit 3 Reactor Building

# [Reference] Plant Condition of Unit 3

## Parameters related to the plant

| | | As of 11:00 AM on July 18 | As of 11:00 AM on July 17 |
|---|---|---|---|
| Reactor water injection amount | Feed water system | 1.9m$^3$/h | 2.0m$^3$/h |
| | Core spray system | 3.5m$^3$/h | 3.5m$^3$/h |
| Temperature of the spent fuel pool | | 24.4℃ | 25.2℃ |
| Temperature of the bottom part of RPV | | 40.1℃ | 40.1℃ |
| Pressure of PCV | | 0.23kPag | 0.23kPag |
| Nitrogen injection amount of RPV | | 16.12Nm$^3$/h | 16.12Nm$^3$/h |
| PCV gas control system (xenon 135) | | ND (<3.3E-1) | ND (<3.3E-1) |

## Continuous dust monitor amount

[Bq/cm$^3$]

| | Main gate | Welfare Building | Unit 5,6 | Main Anti-earthquake Building |
|---|---|---|---|---|
| July 17 6:00PM | 1.0E-06 | 1.0E-06 | 1.0E-06 | 1.5E-06 |
| July 18 6:00AM | 1.0E-06 | 1.5E-06 | 1.0E-06 | 2.8E-06 |
| July 18 9:00AM | 1.0E-06 | 1.0E-06 | 1.0E-06 | 2.2E-06 |
| July 18 4:00PM | 1.0E-06 | 1.0E-06 | 1.0E-06 | 9.0E-07 |

# [Reference] Transition of monitoring post readings (8:00 AM – 2:00 PM on July 18)