Fukushima Daiichi Nuclear Power Station: the result of the Pu analysis on radioactive materials in the air over reactor buildings

- 1. Sampled in: Fukushima Daiichi Nuclear Power Station
- 2. Analyzed by: Japan Chemical Analysis Center or JCAC
- 3. Result of Measurement:

(Unit: mBq/ m³)

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Place of Sampling	Types of Samples	Date of sampli	Pu-238	Pu-239,Pu-240
Unit 1: Upper part of reactor	Volatile	10/3	N.D. [<2.7 × 10 ⁻¹]	N.D. [$<2.7 \times 10^{-1}$]
building (eastern part over the reactor)	Particulate		N.D. [<2.7 × 10 ⁻¹]	N.D. [<2.8 × 10 ⁻¹]
Unit 1: Upper part of reactor	Volatile		N.D. [$<1.6 \times 10^{0}$]	N.D. [$<1.7 \times 10^{0}$]
building (around machine hatch opening 4th floor)	Particulate	10/25	N.D. [<1.4 × 10 ⁰]	N.D. [<1.5 × 10 ⁰]
Unit 2: Upper part of reactor	Volatile	10/13	N.D. $[<7.9 \times 10^{-1}]$	N.D. $[<7.7 \times 10^{-1}]$
building (center of blow-out panel (northward))	Particulate		N.D. [<1.1 × 10 ⁰]	N.D. [<1.1 × 10 ⁰]
Unit 3: Upper part of reactor	Volatile	10/11	N.D. [$<3.3 \times 10^{0}$]	N.D. [$< 3.4 \times 10^{0}$]
building (over reactor on (western side (downward): 1 st time)	Particulate		$(2.8 \pm 0.31) \times 10^{1}$	$(1.4 \pm 0.21) \times 10^{1}$
Unit 3: Upper part of reactor	Volatile		N.D. [$<2.9 \times 10^{0}$]	N.D. [$< 3.0 \times 10^{0}$]
building (around machine hatch opening 4th floor: 2 nd time)	Particulate	10/12	N.D. [<3.5 × 10 ⁰]	N.D. [<3.5 × 10 ⁰]

Numbers in [] means detection limit.

^{*:} Density limit by the announcement of Reactor Regulation (the density limit in the air that radiation workers breathe in the section 4 of the appendix 2) Pu-238 7×10^2 mBq/m³ , Pu-239 7×10^2 mBq/m³ , Pu-240 7×10^2 mBq/m³

4. Evaluation

The densities of Pu-238, Pu-239 and Pu-240 detected in this sampling are below the density limit for the air that radiation workers breathe that the announcement of Reactor Regulation provides.

End

<u>Fukushima Daiichi Nuclear Power Station: the result of</u> the Sr analysis on radioactive materials in the air over reactor buildings

- 1. Sampled in: Fukushima Daiichi Nuclear Power Station
- 2. Analyzed by: Japan Chemical Analysis Center or JCAC
- 3. Result of Measurement:

(Unit: mBq/ m³)

Place of Sampling	Types of Samples	Date of sampling	Sr-89	Sr-90
Unit 1: Upper part of reactor	Volatile	Sampling	N.D.	$(1.0 \pm 0.11) \times 10^2$
building (western part of reactor)	Particulate	10/3	$(1.8 \pm 0.10) \times 10^3$	$(2.9 \pm 0.05) \times 10^3$
Unit 1: Upper part of reactor	Volatile		N.D.	$(3.4 \pm 0.46) \times 10^2$
building (around machine hatch opening 4th floor)	Particulate	10/12	$(2.4 \pm 0.25) \times 10^3$	$(5.0 \pm 0.16) \times 10^3$
Unit 2: Upper part of reactor	Volatile	10/13	N.D.	$(5.2 \pm 0.14) \times 10^{1}$
building (center of blow-out panel (westward))	Particulate		$(2.1 \pm 0.51) \times 10^2$	$(3.6 \pm 0.32) \times 10^2$
Unit 3 Upper part of reactor	Volatile	10/11	N.D.	N.D.
building (over reactor on western side (side): 1 st time)	Particulate		$(1.8 \pm 0.28) \times 10^3$	$(2.5 \pm 0.17) \times 10^3$
Unit 3 Upper part of reactor	Volatile		N.D.	N.D.
building (around machine hatch opening 3 rd floor: 1 st time)	Particulate	10/12	N.D.	$(6.6 \pm 0.89) \times 10^2$

^{*:} Density limit by the announcement of Reactor Regulation (the density limit in the air that radiation workers breathe in the section 4 of the appendix 2) $Sr-89 + 4 \times 10^6 \text{ mBg/m}^3$, $Sr-90 + 3 \times 10^5 \text{ mBg/m}^3$

4. Evaluation:

The densities of Sr-89 and 90 detected in this sampling are below the density limit for the air that radiation workers breathe that the announcement of Reactor Regulation provides.