

Research Note

## Study on Washing of Fly Ash Generated in Thermal Treatment Facilities for Radioactively Contaminated Incineration Residue

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● **Summary** ● Since March 2020, thermal melting treatment has been applied to the incineration residue generated in the temporary incinerators in Special Decontamination Area, which is contaminated with radioactive cesium emitted during the Fukushima Daiichi Nuclear Power Station accident. The primary product of the thermal treatment is molten slag, which is relatively low radioactive and is planned to be reused. However, the by-product is fly ash which is highly radioactive and various studies are being conducted how to treat the fly ash. A common method is volume reduction by further concentrating radioactive cesium in the fly ash; for example, eluting radioactive cesium into water by ash washing, selectively adsorbing the cesium into adsorbent and stabilizing the used adsorbent with stabilizer. The stabilized adsorbent will be finally buried at a disposal site. Basic research to develop this method is currently ongoing. In this study, we carried out basic tests of washing treatment using the fly ash generated at one of the two volume reduction facilities. The major components of the fly ash were sodium chloride and potassium chloride and about 75% of the fly ash was found to be soluble in water. And the potential was shown that around 99% of radioactive cesium was eluted and that the radioactivity of washed residue was lower than 8,000 Bq/kg.

**Key Words:** radioactive cesium, thermal treatment, fly ash, washing, elution

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