

12. Technology Enabling Reuse of Cesium Contaminated Soil - VR for Transport Management and Verification Testing of Crushing and Sorting Process -

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Processes related to the intermediate storage of contaminated soil have been underway in Fukushima Prefecture since 2017. As part of a framework to remove contaminated soil from Fukushima within 30 years, the need has emerged for transportation technologies that will assure safety and security when transporting soil contaminated with radioactive cesium and other substances; for technologies enabling the sustained treatment of large quantities of contaminated soil; and for technologies removing combustibles for long-term landfill storage. To marshal the technologies required to deal with these challenges, evaluations have assessed the development of a transportation management tool to enhance driver training, methods for improving contaminated soil with high water content, and methods for efficiently separating organic combustibles. Tests and trial runs of materials created using VR (virtual reality), expected to be highly appealing to drivers and others, have been developed as transportation management tools. Evaluations to date include laboratory testing for selecting materials to rapidly improve removed soil and verification testing of methods for unloading and crushing large sandbags of soil using to-scale equipment, as well as testing using soil samples to verify soil improvement effectiveness and the ability to separate simulated combustibles. These tests strengthen our understanding of applicability to the intermediate storage of contaminated soil.

Key words: intermediate soil storage facilities, VR, crushing and sorting processing, soil modifiers, verification testing