

**For Immediate Release**  
**Date: December 13, 2022**



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## **Historic Drone Mission Delivers Data for Calcine Retrieval at Idaho Site**

**IDAHO FALLS, Idaho** – A Department of Energy Office of Environmental Management (EM) project at the Idaho National Laboratory Site successfully obtained important mapping and radiological data in what is believed to be the world’s first piloted drone mission inside a high-level radioactive waste storage vault.

Calcine Retrieval Project (CRP) engineers with EM contractor Idaho Environmental Coalition (IEC) successfully flew two missions inside a calcine bin set at the Idaho Nuclear Technology and Engineering Center (INTEC) to provide the most detailed map of its interior since it was constructed in the early 1960s. Engineers were pleased with the results because the data will help the CRP advance its mission.

“Getting this data was crucial to the project safely moving forward,” said CRP engineer Kevin Young. “The mission was a huge success.”

The CRP is developing equipment to retrieve and transfer 220 cubic meters of granulated high-level radioactive waste called calcine from one bin set to another. The emptied bin set would then be closed under federal regulations. Ultimately, all 4,400 cubic meters of calcine from six bin sets must be retrieved, packaged and ready for shipment out of Idaho by 2035 in compliance with the 1995 Idaho Settlement Agreement.

Calcine is a dried byproduct of liquid waste generated during historic spent nuclear fuel reprocessing runs at INTEC until 1992. Heat was used to evaporate the liquid, leaving a granular material resembling dried laundry detergent. It was then transferred by compressed air into six concrete bin sets that resemble silos in later designs.

During the vault entries, the pilot flew the drone in a planned flight pattern near the four bins that make up the set to get the most accurate representation possible. In the second mission, engineers used the drone to get radiation measurements inside the concrete vault.

The three-dimensional data obtained by the drone’s equipment will allow CRP engineers to accurately plan where to position retrieval equipment as it enters the four cylindrical bins that house calcine.

“There were months of preparation for these flights,” said Young. “This effort was only made possible by several organizations and individuals who operated as a strategic team to complete this mission.”

*The Idaho Environmental Coalition (IEC), led by Jacobs and North Wind Portage, manages the Idaho Cleanup Project at the U.S. Department of Energy’s (DOE’s) Idaho National Laboratory (INL) Site, located 45 miles west of Idaho Falls. The 10-year, \$6.4 billion project, funded through DOE’s Office of Environmental Management, focuses on safely dispositioning transuranic waste, managing spent nuclear fuel, treating radioactive liquid waste, removing legacy structures, and closing facilities that have completed their missions. IEC is committed to protecting its employees, the public, and environment while meeting all existing and future milestones necessary to further the INL’s mission.*

For more information visit the Idaho Cleanup Project on the Web at <https://idahoenvironmental.com/>

Video Link

[https://www.youtube.com/watch?v=Es\\_NIPH\\_s7U](https://www.youtube.com/watch?v=Es_NIPH_s7U)

Suggestion Caption

*The Calcine Retrieval Project team conducts drone piloting operations from a temporary shelter at the Idaho National Laboratory Site.*