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INL Site to Study Cleanup Project for Completion Ahead of Schedule

IDAHO FALLS, Idaho – A successful cleanup project at the Idaho National Laboratory (INL) Site is being studied to determine if it has met its objectives several years earlier than projected.

For the study, the Department of Energy Environmental Management Program and cleanup contractor Fluor Idaho will suspend operations of three vapor vacuum extraction and treatment units within a 97-acre landfill that accepted radioactive and hazardous wastes from 1952 to 1970.

The three units have used high-pressure vacuums to draw solvent vapors from the landfill, known as the Subsurface Disposal Area (SDA), and destroy them using a technology that resembles automobile catalytic converters.

Since 1996, the units have removed and destroyed about 258,000 pounds of solvent vapors from the ground. Removing these vapors is important to protect the Snake River Plain Aquifer, which lies 585 feet below the landfill.

Based on sampling over the last few years, program engineers believe that the bulk of solvent vapors have been removed from the SDA. A separate project — called the Accelerated Retrieval Project — has removed tens of thousands of barrels and boxes containing solidified solvents and radionuclides from the SDA since 2005.

The solvents, which consist primarily of carbon tetrachloride, were used as degreasers during weapons development at the former Rocky Flats Plant near Denver. Solvents were generally solidified with a clay-like material prior to being shipped to the INL Site for disposal. As barrels and boxes that were buried deteriorated, the solvents escaped into the adjacent soil as vapors.

“Early on, the vapor vacuum extraction units removed 10,000 to 30,000 pounds of solvent vapors each year,” said Rich Abitz, acting director of the Fluor Idaho environmental restoration program. “The units now are removing less than 2,000 pounds each year because most of the source term has been excavated and removed by the Accelerated Retrieval Project.”

Once the vapor vacuum extraction and treatment units are turned off, scientists and engineers will sample nearby wells weekly until the solvent vapors stay at the same concentration. After the concentration is steady, quarterly sampling and analysis will continue for a year. Based on the quarterly results, a decision will be made whether to turn the units back on or leave them off permanently.

“The vapor vacuum extraction project has been extremely successful and beneficial,” said Abitz. “If the quarterly data results indicate we can end the project earlier than anticipated, it will be a huge win for the Idaho Cleanup Project because we can direct resources to other cleanup projects onsite.”

Fluor Idaho, LLC is a wholly owned subsidiary of Fluor Corporation with subcontractor partners CH2M, North Wind Inc., Portage, and Waste Control Specialists. Fluor Idaho manages the

Idaho Cleanup Project Core contract at the Department of Energy's Idaho National Laboratory Site located 45 miles west of Idaho Falls. The 5-year, $1.4 billion project, funded through the U.S. Department of Energy's Office of Environmental Management, focuses on safely remediating the Idaho National Laboratory site including dispositioning transuranic waste, managing spent nuclear fuel, and treating high-level radioactive waste.

For more information visit the Idaho Cleanup Project on the Web at https://fluor-idaho.com

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Suggested Caption

One of three vapor vacuum extraction and treatment units at the Radioactive Waste Management Complex at the Idaho National Laboratory Site. The Department of Energy Environmental Management Program and cleanup contractor Fluor Idaho have initiated a study to determine if the three units achieved remediation goals earlier than projected.