



Los Alamos National Laboratory
P.O. Box 1663, MS 969
Los Alamos, NM 87545
505-667-2211

Environmental Protection and Compliance Division

Symbol: EPC-DO-25-245
Date: September 4, 2025
LA-UR-25-28928

Mr. JohnDavid Nance, Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313

Subject: 15-Day Notification of Newly Detected Constituents in Vapor Monitoring Well, Technical Area 63, Transuranic Waste Facility

Dear Mr. Nance:

This letter provides the New Mexico Environment Department-Hazardous Waste Bureau (NMED-HWB) notification of detection of new constituents in soil vapor laboratory analytical results from a vapor monitoring well at the Los Alamos National Laboratory (LANL), Technical Area 63 (TA-63), Transuranic Waste Facility (TWF) operated by Triad National Security, LLC (Triad) on behalf of the U.S. Department of Energy, National Nuclear Security Administration, Los Alamos Field Office. The LANL Hazardous Waste Facility Permit (EPA ID# NM0890010515) (Permit), Part 3, Section 3.14.3 requires written notification within fifteen days after review of analytical data when sample results indicate "detection of a contaminant in a vapor monitoring well if that contaminant has not previously been detected in the well." Sampling for the calendar year 2025 quarter three occurred July 30, 2025 and sample analytical results were received August 25, 2025.

A sample collected from the vapor monitoring well VMW-4 (63-2012), 60-foot port shows the presence of ethylbenzene, 1,4-dioxane, and styrene for the first time since vapor sampling began at the start of TWF operations in 2017. Soil vapor monitoring well VMW-4 lies across Puye Road, north of the permitted unit and closer to the TA-50 Material Disposal Area C Solid Waste Management Unit 50-009. The well contains two sampling ports at 25- and 60-foot depths below ground surface.

Ethylbenzene and styrene appear on the list of constituents of concern in Permit Part 3, Table 3.14.3.3, *Current Soil Gas Screening Levels for Selected VOCs*. The soil gas screening level for ethylbenzene is 5.40E+05 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and that for styrene is 5.08E+07 $\mu\text{g}/\text{m}^3$. The Permit Tables do not list 1,4-dioxane; therefore, no soil gas screening level is available for comparison.

Laboratory analysis of the VMW-4 60-foot port sample detected ethylbenzene at an estimated concentration of 28 $\mu\text{g}/\text{m}^3$. This concentration is below the analytical report detection limit of 36 $\mu\text{g}/\text{m}^3$ but above the method detection limit of 8.2 $\mu\text{g}/\text{m}^3$. Ethylbenzene has not been detected previously in any vapor monitoring wells.

Styrene was detected at 47 $\mu\text{g}/\text{m}^3$. The method detection limit is 11 $\mu\text{g}/\text{m}^3$ and the report detection limit is 35 $\mu\text{g}/\text{m}^3$. This marks the first detection of styrene in the vapor monitoring well.

1,4-dioxane was detected at 31 µg/m³. The method detection limit is 9.4 µg/m³ and the report detection limit is 120 µg/m³; therefore, the result is considered estimated. This is also the first detection of 1,4-dioxane in the vapor monitoring well.

All samples collected during this field campaign show no known issues with quality. Triad will continue to sample and track the presence of ethylbenzene, styrene, and 1, 4-dioxane in the subsurface through continued vapor monitoring and reporting.

The next monitoring report is due to the NMED-HWB no later than September 28, 2025. The information presented in this notification will be included in the full report.

The enclosure provides permit-required information listed in Permit, Part 3, Section 3.14.3. Table 1 provides the sample date, well designation, well location, any known issues with sample quality, and the reporting category. Table 2 provides the analytical data and a comparison to the soil gas screening level, if available.

If you have any questions or comments concerning this notification, please contact Naveen Chennubhotla, Triad, at (505) 629-7401, or by email at naveenc@lanl.gov.

Sincerely,

STEVEN STORY Digitally signed by STEVEN
STORY (Affiliate)
Date: 2025.09.04 11:07:54
-06'00'
(Affiliate)

Steven L. Story
Division Leader
Environmental Protection and Compliance
Triad National Security, LLC

SS:klv

Enclosure: 15-Day Notification of Newly Detected Constituents in Vapor Monitoring Well, Technical Area 63, Transuranic Waste Facility

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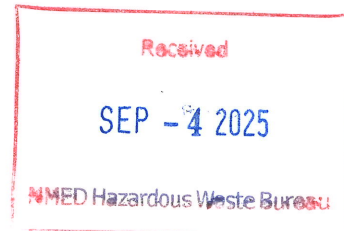
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ENCLOSURE

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U.S. Department of Energy,
National Nuclear Security Administration Los Alamos Field Office, and
Triad National Security, LLC

Table 1. Additional Constituents Detected in TA-63 Transuranic Waste Facility Soil Vapor Monitoring Well

Date of Sampling Event	July 30, 2025
Well Designation	VMW-4 (63-2012), 60-foot port
Location of Well	Los Alamos National Laboratory, Technical Area 63 Transuranic Waste Facility Structure Number 63-2012 Northing: 1768331.9528 Easting: 1626817.1176
Known Issues with Sample Quality	None
Reporting Data Category for LANL Hazardous Waste Facility Permit Part 3, Section 3.14.3	Additional compound that was not previously detected in the soil vapor monitoring well.

Table 2. Soil Vapor Monitoring Well Analytical Data

Well ID	Sample ID	Port Depth (feet)	Constituent	Listing in Permit Table	Result (µg/m³)	Data Qualifier	Report Detection Limit (µg/m³)	Soil Gas Screening Level (µg/m³)	Percent of SGSL (%)
63-2012	TWF63-25-370669	60	Dioxane[1,4-]	N/A	31	J	120	N/A	N/A
63-2012	TWF63-25-370669	60	Ethylbenzene	Ethylbenzene	28	J	36	5.40E+05	<0.1
63-2012	TWF63-25-370669	60	Styrene	Styrene	47	NQ	35	5.08E+07	<0.1

EPA Data Qualifier “J” indicates the constituent is present but estimated. “NQ” indicates that no validation qualifier flag is associated with the result.