



N3B-Los Alamos
 1200 Trinity Drive, Suite 150
 Los Alamos, New Mexico 87544
 (505) 257-7690



Environmental Management
 Los Alamos Field Office
 P.O. Box 1663, MS M984
 Los Alamos, New Mexico 87545
 (505) 257-7950/FAX (505) 606-2132

Date: September 3, 2020
Refer To: N3B-2020-0304

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

Subject: Energy Solutions Waste Shipment Root Cause Analysis Results and Path Forward

Dear Mr. Pierard:

The U.S. Department of Energy (DOE) Environmental Management Los Alamos Field Office (EM-LA) and Newport News Nuclear BWXT-Los Alamos, LLC (N3B) are providing this letter to summarize the completed and planned corrective actions in response to the notification received from Energy Solutions that identified Resource Conservation and Recovery Act (RCRA) constituents detected in oil/antifreeze/hydraulic fluid-containing drums shipped from EM-LA/N3B as low-level radioactive waste.

EM-LA and N3B notified the New Mexico Environment Department (NMED) of the potential discrepancies on June 1, 2020, with a follow-up notification on June 25, 2020, to discuss the 14 individual drum sampling results. Of the 14 drums, 8 were identified to have detections of tetrachloroethylene, selenium, and/or benzene above RCRA regulatory limits. N3B subsequently initiated a root cause analysis to identify causes and corrective actions to prevent reoccurrence. The main root causes presented to NMED on August 6, 2020, included inadequate employee ownership of the waste management process, a lack of controls used during the acceptable knowledge process, and gaps in the process details provided by the waste generator to the waste management group.

The immediate corrective actions in response to the Energy Solutions notification included a fact finding, an extent-of-condition review for similar waste streams, clarification of roles and responsibilities regarding the shipping program ownership to ensure proper accountability, a shipping pause, and reviews of all applicable procedures. More recently, N3B completed a physical walkdown at Technical Area 54, Area L. The walkdown entailed comparisons between the physical inventory and the waste database inventory. The waste characterization information was then validated for each container at Area L.

By the end of August, two standing orders will be issued to

1. formalize the use of a waste traveler, a mechanism ensuring a structured means for communicating waste-related information from the waste generator to Waste Disposal Services.
2. provide N3B characterization personnel a decision tree to aid future characterizations/determinations regarding fluids drained from equipment.

As requested by NMED, the draft decision-tree process is presented below. This process was designed to ensure all appropriate historical process knowledge is taken into account and includes guidance on when samples should be collected to enable full characterization of the material/waste. This standing order will remain in effect until issuance of a new standard operating procedure by Waste Management Programs.

Draft Decision-Tree:

1. Waste Evaluation
 - a. Determine if material meets recycling criteria, including radioassay as needed. Also, take into consideration historical process knowledge related to the material. Note: Coordinate with Radiation Protection for free-release of material.
 - i. If yes (material meets recycling criteria), proceed with arranging for recycling of the material and exit this decision tree.
 - ii. If no (deemed a waste), then proceed to step 1.b.
 - b. Perform RCRA metals, polychlorinated biphenyls, volatile organics, and semivolatile organics analyses.
 - c. Were the waste fluids under 100% control by waste generator from first use, including the equipment in question?
 - i. If Yes, then Waste Technical Support can use process knowledge in addition to the analytical results from step 1.b for waste characterization.
 - ii. If No, or other unknown characteristics are associated with the waste, then perform appropriate analysis in addition to those specified in step 1.b.
2. Waste Technical Services independently verifies the waste has an active off-site profile associated with it.
3. Waste Programs provides peer reviews for recycling determinations and waste characterizations.

Planned corrective actions resulting from the root-cause analysis discussed with NMED are presented below.

1. Revise the current waste characterization process to improve robustness of decision-making and resulting documentation—planned completion by September 25, 2020
2. Look for gaps to close in the following:
 - Training for all personnel involved in waste generation and disposition—planned completion by September 18, 2020
 - Waste characterization process, including proper use of process knowledge to increase process awareness—planned completion by September 4, 2020
 - Communication and roles and responsibilities between generators and waste management group. This includes evaluating and revising existing documents/procedures and generation of new guidance documents, if necessary—planned completion by October 31, 2020

The goal of implementing these corrective actions is to strengthen the organization and ensure accurate waste characterization going forward. The root-cause analysis process will include a review of the corrective actions to evaluate their effectiveness. N3B/EM-LA will inform NMED of the evaluation results when they are completed, approximately 6 months after implementation.

If you have questions, please contact Emily Day (505) 695-4243 (emily.day@em-la.doe.gov) or Lee Bishop at (505) 257-7902 (lee.bishop@em.doe.gov).

Sincerely,



Joseph Murdock
Program Manager
Environment, Safety and Health
N3B-Los Alamos

Sincerely,

M Lee Bishop

Digitally signed by M Lee
Bishop
Date: 2020.09.02 15:58:39
-06'00'

M. Lee Bishop, Director
Office of Quality and Regulatory Compliance
Environmental Management
Los Alamos Field Office

cc (letter emailed):

Siona Briley, NMED-HWB
Neelam Dhawan, NMED-HWB
Janine Kraemer, NMED-HWB
M. Lee Bishop, EM-LA
Arturo Duran, EM-LA
Stephen Hoffman, EM-LA
Kirk. D. Lachman, EM-LA
David Nickless, EM-LA
Cheryl Rodriguez, EM-LA
Ben Underwood, EM-LA

William Alexander, N3B
Carol Anderson, N3B
Emily Day, N3B
Mary Erwin, N3B
Thomas Harrison, N3B
Debby Holgerson, N3B
Jeff Holland, N3B
Kim Lebak, N3B
Joseph Legare, N3B
Dana Lindsay, N3B
Pamela Maestas, N3B
Nancy McAllister, N3B
Jason Moore, N3B
Glenn Morgan, N3B
Ovide Morin, N3B
Joseph Murdock, N3B
Joseph Noll, N3B
Gerald O'Leary III, N3B
Frank Tarantello, N3B
Tashia Vigil, N3B
emla.docs@em.doe.gov
n3brecords@em-la.doe.gov

Pamela T. Maestas

From: Martinez, Cynthia, NMENV <cynthia.martinez1@state.nm.us>
Sent: Tuesday, September 8, 2020 11:43 AM
To: Pamela T. Maestas
Subject: RE: Submittal to NMED on 9/3/2020 of Energy Solutions Shpmt Root Cause Analysis and Path Frwd

Received.

From: Pamela T. Maestas <pamela.maestas@em-la.doe.gov>
Sent: Thursday, September 3, 2020 8:39 AM
To: Pierard, Kevin, NMENV <Kevin.Pierard@state.nm.us>
Cc: Dhawan, Neelam, NMENV <neelam.dhawan@state.nm.us>; Emily M. Day <Emily.Day@em-la.doe.gov>; Regulatory Documentation <RegDocs@EM-LA.DOE.GOV>; Martinez, Cynthia, NMENV <cynthia.martinez1@state.nm.us>; cheryl.rodriquez@em.doe.gov
Subject: [EXT] Submittal to NMED on 9/3/2020 of Energy Solutions Shpmt Root Cause Analysis and Path Frwd

Mr. Pierard,

Attached for submittal is a pdf of the following:

- Energy Solutions Waste Shipment Root Cause Analysis Results and Path Forward (N3B-2020-0304, letter)

Please acknowledge receipt of this submittal by responding to this email.

Let me know if you have any questions.

Thank you.

Pamela T. Maestas

Regulatory Documentation Manager

Newport News Nuclear BWXT-Los Alamos, LLC

c. 505-927-7882

regdocs@em-la.doe.gov



1200 Trinity Drive, Suite 150
Los Alamos, NM 87544