

DEFENSE NUCLEAR FACILITIES SAFETY BOARD
Public Hearing

June 20, 2019
12:00 PM – 4:00 PM

625 Indiana Avenue NW; Washington, DC

	TO	FROM	QUESTION
1.	Roscetti	Hamilton	Describe the nature and purpose of the material that is on the drum in the picture from the WIPP event in Exhibit 1.
2.	Wyka	Roberson	Provide the guidance given to NNSA generator sites following the safety alert issued by EM.
3.	Chung	Connery	Provide the report by EM headquarters regarding safety culture at Fluor Idaho and the methodology used to create it.
4.	Wyka	Roberson	What actions has NNSA taken in response to GSTR reports noting insufficient specificity in procurement controls for chemical absorbents that may come in contact with waste? This was noted in GSTR reports for several DOE sites, including Livermore, Los Alamos, Savannah River, Oak Ridge, and Idaho.

Please provide responses to these Questions for the Record, any supplements to or clarifications to testimony, and any additional written testimony to the DNFSB by July 20, 2019, when the record for this hearing will be closed. Please direct the requested information to:

Casey Blaine
Acting General Counsel
Executive Secretary for the Hearing
Defense Nuclear Facilities Safety Board

RESPONSES TO QUESTIONS FOR THE RECORD

June 20, 2019 Public Hearing Question for the Record for Christopher Roscetti

Question: Describe the nature and purpose of the material that is on the drum in the picture from the WIPP event in Exhibit 1.

Answer: Exhibit 1 showed a picture of waste drums at WIPP, after the 2014 radiological release event. The material on top of the drums is mostly magnesium oxide but also likely contains material from the ruptured drum. It is difficult to distinguish from the picture what is magnesium oxide and what is material from the drum; however, the majority of “dust” in the picture is from the magnesium oxide. The Department of Energy (DOE) places sacks of magnesium oxide on top of some of the stacks of waste drums it emplaces in WIPP. DOE typically groups seven 55 gallon drums together in an assembly, and DOE places up to three such assemblies in a stack. DOE uses other configurations for other waste containers.

In the 2019 Compliance Recertification Application (CRA) for WIPP, Appendix MgO, the DOE describes the purpose of the magnesium oxide as follows:

The U.S. Department of Energy (DOE) is emplacing magnesium oxide (MgO) in the Waste Isolation Pilot Plant (WIPP) repository to provide an engineered barrier that decreases the solubilities of the actinide (An) elements in transuranic (TRU) waste in any brine present in the postclosure repository by consuming all the carbon dioxide (CO₂) that would be produced by microbial activity should all the cellulosic, plastic and rubber (CPR) materials in the repository be consumed.

Reference: U.S. Department of Energy, “Title 40 CFR 191 Subparts B and C Compliance Recertification Application 2019 for the Waste Isolation Pilot Plant”, Appendix Mg-O-2019, “Magnesium Oxide as an Engineered Barrier”. Available at <https://wipp.energy.gov/library/CRA/CRA%202019/CRA-2019%20Appendix%20MgO%20Final.pdf>

Further details can be found in the CRA and the references cited therein.

June 20, 2019 Public Hearing Question for the Record for Ted Wyka

Question: Provide the guidance given to NNSA generator sites following the safety alert issued by EM.

In response, DOE provided the following email:

From: [Wyka, Ted](#)
To: [Nelson-Jean, Nicole](#); [Allison, Jeffrey M](#); [Beausoleil, Geoffrey L](#); [Robbins, Teresa M](#); [Eckroade, William A](#); [Lawrence, Steven](#); [Bowman, David](#); [Goodrum, Steve](#); [Pugh, Gabriel](#); [Verhaagen, Richard](#); [Harrell, Jeffrey](#); [Duvall, Michael](#); [Rodrik, Peter](#); [Parenti, Janis](#)
Cc: [McConnell, James](#); [Al-Daouk, Ahmad M.](#); [Sheely, Ken](#); [Siqg, Daniel](#); [Hewitt, Kathryn A. \(CONTR\)](#); [Fremont, Douglas](#); [Trujillo, Anna Marie](#); [Roberson, Jeffry](#); [Diamond, Bruce](#)
Subject: Safety Alert on Over-Pressurized Radioactive Waste Drum Event at the Idaho Cleanup Project
Attachments: [FM MEMO - Safety Alert on Over-Pressurized Radioactive Waste Drum Event.pdf](#)

FOMs/DFOMs - attached is a EM Safety Alert regarding the April 2018 over-pressurized radioactive waste drum event at the Idaho Cleanup Project (ARP V event). It includes required and recommended actions to prevent occurrence of a similar event at other DOE Environmental Management sites and facilities. The focus of the Safety Alert is radioactive or mixed waste streams and waste drums with uncertain or unknown waste contents that could pose pyrophoric or reactive conditions. A forthcoming Operational Experience Level 2 (OE-2) document is also expected out soon. Additional information on the cause analysis for the ARP V drum event can be found at : https://idahocleanupproject.com/Content/documents/Community/8283498_RPT-1659.pdf; as well as a related DNFSB letter at: <https://www.dnfsb.gov/sites/default/files/document/17631/Idaho%20Waste%20Drums%20with%20Elevated%20Methane%20Concentrations%20%5B2019-100-011%5D.pdf>. This will also be the subject of an upcoming DNFSB Public Hearing on June 20th.

The purpose this email is to alert NNSA sites to this issue, to gauge the potential for occurrence of this type of event, and to consider steps to prevent such an occurrence.

Sites do not need to provide a written response on the following actions, but they should, as applicable, complete these actions as soon as practicable so that results can be discussed with NNSA Headquarters during the next TRU program review (October 2019):

1. Ensure review of ARP V causal analysis report and incorporate lessons-learned into appropriate site procedures and processes;
2. Review of DOE-STD-5506 accident scenarios to the site waste repackaging activities;
3. Assess training of personnel responsible for approving waste for processing and treatment to ensure they are sufficiently qualified for such treatment option;
4. Review and update as necessary waste operator training materials to ensure modules address the identification of changing waste conditions (i.e., pyrophoric materials, oxidizing metals, and other challenging waste profiles);
5. Evaluate existing processes for treating waste with uncertain pedigree to ensure effective controls are in place to safely handle, treat, package, and store the waste pending transport and disposal;
6. Review procedures for current and future drums with packaged waste to ensure effective controls are in place to prevent or mitigate deflagrations, reactive materials for waste handling and treatment, and to ensure conservatism on timeframe of potential reactions and initiation of secondary reactions;
7. Review of radiological response procedures for appropriate entry requirements for areas with potential airborne transuranic hazards; and,
8. Promote continuous improvement in site safety culture.

Thanks,

Ted

Theodore A. Wyka
Principal Deputy Associate Administrator
for Safety, Infrastructure, and Operations (NA-50)
NNSA Cognizant Secretarial Officer for Safety
National Nuclear Security Administration
W: (202) 586-2371
C: (240) 449-6313

June 20, 2019 Public Hearing Question for the Record for Dae Chung

Question: Provide the report by EM headquarters regarding safety culture at Fluor Idaho and the methodology used to create it.

Answer: DOE provided materials responsive to the Board's request that are not available for public release.

June 20, 2019 Public Hearing Question for the Record for Ted Wyka

Question: What actions has NNSA taken in response to GSTR reports noting insufficient specificity in procurement controls for chemical absorbents that may come in contact with waste? This was noted in GSTR reports for several DOE sites, including Livermore, Los Alamos, Savannah River, Oak Ridge, and Idaho.

NNSA Response:

- NA-53, Office of Enterprise Stewardship, reviewed the LANL (original and subsequent) GSTRs and LLNL GSTR. See responses below.
- In addition, NA-53 reached out to CBFO for its assessment of SR, Oak Ridge, and Idaho procurement issues. NNSA does not have copies of the GSTRs nor has oversight responsibility of the DOE legacy waste sites.

For LLNL, Issue 1-2 documented two concerns with the control of procured materials or components used in waste packaging. On the front end of the process, the procurement procedure did not impose any conditions that would require a higher quality for items important to waste performance, like absorbents. These items can be obtained without controls (technical specifications or reviewed by technically qualified personnel). On the back of the process, waste treatment procedures specify that "approved" absorbents must be used, but provide no further specificity. So, LLNL needed to evaluate and identify the absorbents that can be used with TRU waste and add the appropriate procurement and procedural controls.

- NA-LL responded (April 30, 2019) to the issue with the following proposed action: LLNL does not believe it to be practical to control the purchase of absorbents at the procurement level for the entire site. Specific absorbents can be controlled at the TRU waste level. WCP-68 will be modified to provide a specific list of approved absorbents. Any absorbents that are used must be documented with specific information.
- Carlsbad Field Office responded (May 21, 2019) to NA-LL leadership: The GSTR is complete and all identified issues have been satisfactorily addressed and resolved.

For LANL, NA-53 reviewed both GSTRs. Both do not mention procurement for the purchase of absorbents. In addition, NA-LA and CBFO confirmed that there are no procurement issues.

CBFO Response regarding procurement issues at its DOE legacy waste sites:

- The sites where CBFO had GSTR procurement issues were as follows:
 - INL – GSTR-ID-17-01; Issue I-4
 - SRS – GSTR-SR-17-01; Issues I-10 and I-11
 - ANL – GSTR-AS-1-18-01; Issue I-17

- To date, CBFO accepted the various sites resolutions (i.e., appropriate SPM, AKE and chemical compatibility reviews and evaluations; revised procedures; personnel awareness/training; bulletin notifications of requirements for use of Basis of Knowledge (BoK) approved absorbents in TRU waste; and adding clarity or specificity in plans/procedures).



Department of Energy
National Nuclear Security Administration
Livermore Field Office
PO Box 808, L-293
7000 East Avenue
Livermore, California 94551-0808



APR 30 2019

5400
COR-AMP-4/8/2019-833433

Mr. Todd Shrader
Manager
U. S. Department of Energy
Carlsbad Field Office
P. O. Box 3090
Carlsbad, NM 88221-2078

Mr. Bruce C. Covert
Project Manager
Nuclear Waste Partnership LLC
Waste Isolation Pilot Plant
4021 National Parks Highway
Carlsbad, NM 88220

Subject: Department of Energy Carlsbad Field Office and Nuclear Waste Partnership LLC
Generator Site Technical Review GSTR-LL 1-18-01 Final Report for the Lawrence
Livermore National Laboratory

Reference: Transmittal (T. Shrader and B.C. Covert/P. Rodrik), *Distribution of DOE CBFO and
NWP LLC Generator Site Technical Review GSTR-LL 1-18-01 Final Report*, dated
November 13, 2018

Dear Messrs. Shrader and Covert:

In response to your letter, *T. Shrader and B.C. Covert/P. Rodrik dated November 13, 2018*, please find our responses to the eleven issues that resulted from the Generator Site Technical Review of the Lawrence Livermore National Laboratory transuranic waste activities. Closure of all issues is being coordinated with staff members from the Carlsbad Field Office and the Nuclear Waste Program LLC. As indicated in the Enclosure, the majority of the issues will be closed before our first planned shipment to the Waste Isolation Pilot Plant, which is scheduled for January 2020.

Should you have any questions, please contact James A. Davis, III at (925) 422-1075.

Sincerely,

Peter D. Rodrik
Manager

Enclosure: GSTR-LL-1-18-01, *Issues Tracking System February 26, 2018 through March 2, 2018*, dated June 11, 2018

cc:

J. Parenti
D. Nakahara
R. Kóng
J. Schwabe
H. McAdams
A. Chen
H. Rio
P. Pellette
R. Gaylord
R. Hollister
C. Conrad
R. Rocha
A. Trujillo
K. Abbott
A. Harris
C. Fesmire
K. Princen
P. Rodriquez

Attachment

GSTR-LL-1-18-01
ISSUES TRACKING SYSTEM
February 26, 2018 through March 2, 2018
6/11/18 Conclusion

GSTR assessment entered in the LLNL Issues Tracking System as assessment number 47186.

Issue [I-1] LL-1-18-01 (R.B. - Con Ops.)

COU7-000101 Rev. AF, Operator Area Logbooks section 7.5 required entries contain a list of information that should be found in the logbook, if applicable to the operating area. It appears that some information is not being entered into some log books; for example, the room 1010 log book contains pages of entries (one for each day), that the Daily Room checks were completed. There is no mention of activities that occurred in the room; glove changes; bag-outs of materials/wastes; abnormal room or equipment condition, etc. It is recommended that NMPT refine the expectations for the log book entries that should be found in each type of log book (room, area, process, etc.) maintained in the facilities.

Assigned to Kevin Mahoney

Proposed action: Review logbook procedure to determine if changes are needed. Brief room responsible personnel on logbook requirements.

Due Date: 7/15/2019

Issue [I-2] LL-1-18-01 (M.D. & D.H. – Waste Management, Treatment/Procurement)

This issue documents two concerns with the control of procured materials or components used in waste packaging (e.g., absorbents intended for use in treating waste). First, on the front end of the process, the procurement procedure does not impose any conditions that would require a higher quality for items important to waste performance, such as absorbents. Accordingly, such items can be obtained without controls such as technical specifications, or review by technically qualified personnel. A similar process to procure absorbents at LANL was a significant factor in the WIPP release event. Second, on the back end of the process, waste treatment procedures specify that “approved” absorbents must be used, but provide no further specificity. Accordingly, LLNL needs to evaluate and identify the absorbents that can be used with TRU waste, and add the appropriate procurement and procedural controls.

Assigned to Rod Hollister

Proposed action: LLNL does not believe it to be practical to control the purchase of absorbents at the Procurement level for the entire site. Specific absorbents can be controlled at the TRU waste level.

WCP-68 will be modified to provide a specific list of approved

Attachment

absorbents. Any absorbents that are used must be documented with specific information.

Due Date: 9/30/2019

Issue [I-3] LL-1-18-01 (M.D. – Waste Management)

It is recommended that the informal tracking sheet used by the Visual Examiner during packaging be incorporated into the procedure and included in the drum package.

It is also recommended that the use of the EPA Chemical Compatibility method be documented for each waste stream.

Assigned to Rod Hollister

Proposed action: The informal tracking sheet will be turned into a controlled form and included in the procedure. The tracking sheet will be part of the record associated with the container.

Due Date: 9/30/2019

Issue [I-4] LL-1-18-01 (M.D. – Waste Management/Document Control)

There appears to be some duplication between ADM 101, Section 7 and ADM 102, Section 8.4. Both appear to direct the review of RHWM documents.

Assigned to Angelina Flores

Proposed action: There appears to be some duplication between ADM 101, Section 7 and ADM 102, Section 8.4. Both appear to direct the review of RHWM documents.

Evaluate both documents to determine if there is duplication and whether a revision to the procedures is warranted.

Due Date: 6/14/2019

Issue [I-5] LL-1-18-01 (M.D. – Waste Management)

USQ screening will not necessarily evaluate interactions of materials that could be combined in a drum. This is not specific to LLNL; it is how the USQ questions are posed in the USQ process. LLNL should consider the need to incorporate waste issues into the screening process.

Assigned to Danny Laycak

Proposed action: The USQ process is a very structured process developed by DOE. LLNL follows the DOE process in preparing USQs.

Brief the USQ preparers to be mindful of outside influences and to contact other subject matter experts where necessary.

Attachment

Due Date: 6/28/2019

Issue [I-6] LL-1-18-01 (M.D. – Waste Management/Document Control)

ADM 102 refers to a document that no longer exists, ADM 103.

Assigned to Rod Hollister

Proposed action: This had been identified by RHWM prior to the GSTR. When documents are canceled it often takes a while to remove all the references. ADM 102 was under review at the time of the review and was issued on 9/14/18. - ADM 102 was updated to remove the reference to ADM 103.

Due Date: 3/8/2019

Issue [I-7] LL-1-18-01 (P.R. - Assessments)

While several examples of internal assessments/oversight activities were reviewed, the following recommendation is offered for your consideration: With regard to internal oversight and other assessment activities of waste generation/processing/treatment and /or packaging activities for TRU waste – specific reviews at an amplified frequency is recommended to be established to identify areas where potential conditions similar to the LANL issue of 2014 could occur. It's important to recognized that this recommendation (for specific TRU waste oversight), would be more applicable during TRU waste campaign periods.

Assigned to Jason Schnackenberg

Proposed action: Update all the TRU IGDs to include more information about the original process that generated the waste along with specific information about authorized components including brands and product numbers for any reagents being used (e.g., absorbents, solidification media, chemicals [CAS numbers], cutting fluids, etc.)

Part of the update/review will include a review of the chemical compatibility for the IGD.

IGDs include: 00345, 00578, 00579, 00580, 01517, 01746, 01877, 01880, 01895, 02705, 02706, 02763, 02765, 02810, 02814, 03364, and 03437

Due Date: 12/16/2019

Assigned to Clint Conrad

Attachment

Proposed action: As part of the internal review RHWM will establish a certified visual examination (VE) program at LLNL.

Work with WIPP/CCP to bring on a VE expert/SME to oversee all the TRU waste packaging operations at LLNL. The VE expert will be included in the IGD reviews for TRU waste and will be responsible for ensuring that only waste that meets the visual examination requirements is packaged and transferred to RHWM.

Due Date: 6/28/2019

Assigned to Angelina Flores

Proposed action: Add Management, Observations, and Inspections (MOIs) for TRU Waste Activities in the FY2020 RHWM Assessment Schedule. One MOI should target waste generation activities and one should target the review of documentation.

Due Date: 9/16/2019

Issue [I-8] LL-1-18-01 (D.H. – Training)

Other than a single example, the team found little evidence of any WIPP-specific training provided to LLNL personnel.

Interviews with waste handling personnel indicated some weaknesses in understanding the bases of waste management requirements (e.g., definitions and differences between D001, D002, D003 waste codes, the differences between types of codes, such as F codes and D codes, the prohibited items listing for WIPP, and why these items are prohibited).

Understanding the WIPP regulations and requirements is both necessary and beneficial for LLNL personnel. The GSTR team believes LLNL should develop WIPP-specific training, addressing the waste acceptance criteria, the waste analysis plan, the certification and audit process, the interfaces with CCP, the lessons learned throughout the complex, etc.

Assigned to Dan Spooner

Proposed action: Develop a specific training class for TRU waste that would include WIPP specifics. The training would target RHWM personnel involved in packaging, handling, and managing TRU waste.

Due Date: 1/31/2020

Issue [I-9] LL-1-18-01 (D.H. – Training)

The LLNL TRU waste expertise is primarily provided by a single individual, who has gained the expertise by involvement with WIPP operations, the Central Characterization

Attachment

Project, and the TRU Corporate Board over many years. The GSTR team believes a systematic evaluation should be performed, and some type of formal qualification or training program developed to provide backup to this single individual and to ensure recognition and agreement of the knowledge requirements to be transitioned to any future TRU SMEs.

Assigned to Dan Spooner

Proposed action: Develop a formal qualification card for the TRU Project Manager and for the TRU SME.

Due Date: 1/31/2020

Issue [I-10] LL-1-18-01 (D.H. - RCRA Permit)

Combination of EFA, WTG, TRU SME, TRU Programmatic Personnel (B235 and B332)

The GSTR team understands that the LLNL operates under a more complex regulatory structure when compared to most sites throughout the DOE complex, as the State of California imposes a significant number of California specific requirements upon the lab, as defined in the laboratories' RCRA Part B Permit. In light of the WIPP release event, as well as the recent exothermic events in Idaho, the GSTR team believes LLNL should re-evaluate whether the absorption of liquids is adequately neutralizing liquids and that this operation is covered within the bounds of the current RCRA permit.

Assigned to Reggie Gaylord

Proposed action: Based on investigations conducted by EFA and RHWM there is a potential for some generators to generate TRU liquids that cannot be treated using the California bench top treatment regulations.

RHWM will develop a project schedule that lays out all the steps necessary to begin treating TRU waste in RHWM. The associated duration for each step will be included in the project schedule along with any dependencies. Based on the project schedule additional action can be entered in ITS.

Due Date: 9/30/2019

Issue [I-11] LL-1-18-01 (R.B. – Con. Ops.)

Noteworthy Practice. The control sheet for Operator Aids in the NMTP Operator Aid program provides a single document where the history of the current version of an operator aid can be found. The control sheet provides general information for the operator aid, documents the approval to post the operator aid, and documents the required periodic reviews on one sheet.

Attachment

Resolution: N/A – This issue commends the facility and personnel, and highlights a practice worthy of mentioning. The issue is closed.

Issue [I-12] LL-1-18-01 (P.R. – Performance Assurance/Lessons Learned)

Noteworthy Practice. This issue is documented to commend the laboratory's comprehensive evaluations and responses to requests for Evaluation of Nitrate-Bearing Transuranic Waste Streams. (Re.: WCI Nuclear and Hazardous Operation Manager's presentation: *Planning for an Accident, January 30, 2015*, LLNL-PRES-747118, LLNL March 15, 2015 correspondence, including the *Independent Review Team Report Regarding Uncemented Nitrate Waste At Los Alamos National Laboratory, Dec 23, 2014* (this is a documented LLNL review of the Longenecker report); and LLNL WCI Response to OE-2:2015-1, *Evaluation of Nitrate-Bearing Transuranic Waste at LLNL*, August 28, 2015).

Resolution: N/A – This issue applauds the facility and highlights personnel/departmental practices worth mentioning and is duly closed.

Issue [I-13] LL-1-18-01 (D. H. – Training)

Noteworthy Practice – The three mandatory training classes required by all site personnel involved with any waste management activities are comprehensive, and clearly identify roles and responsibilities for the management of waste at the LLNL site. Of all the sites evaluated by the GSTR team thus far, this is probably the best set of core training documents presented.

Resolution: NA – This issue commends the facility and highlights noteworthy practices implemented by the LLNL, relative to waste management training.

Issue [I-14] LL-1-18-01 (C.F. – Federal Oversight)

The Federal Oversight review team is recommending that LSO consider additional staffing of FRs and oversight personnel coupled with augmented training for current and new FR staff. This recommendation is based in light of additional staffing burdens that will be placed on its staff when the facility gears up to conduct its characterization and shipping campaign of TRU waste. Succession planning as well as backup support for current FRs is encouraged. An additional recommendation is for LFO to consider a short detail for program staff at CBFO to familiarize, or re-familiarize themselves with the characterization, certification, and shipping of TRU waste under the National TRU Waste Program.

Assigned to James A. Davis, III/Alan Chen

Proposed action: LFO Management has evaluated this issue and made the determination to provide additional resources to the Waste Storage Facility FR for oversight of A625. Regarding training, it was discussed during the review that the Carlsbad Field Office will develop a RCRA class for FRs. When this class becomes available, this training will be considered as part of the LFO FR's continuing training

Attachment

plan. LFO supports and will consider a short term detail for its waste management program managers to familiarize themselves with the National TRU Waste Program.



Department of Energy

Carlsbad Field Office
P. O. Box 3090
Carlsbad, New Mexico 88221

MAY 21 2019

Mr. Peter Rodrik, Acting Manager
National Nuclear Security Administration
Livermore Field Office
P.O. Box 808, L-293
7000 East Avenue
Livermore, CA 94551-0808

Subject: Closure of Lawrence Livermore National Laboratory Generator Site Technical Review by the Co-Permittees at the Waste Isolation Pilot Plant

Reference: Letter from Mr. Peter Rodrik, Manager, DOE LFO to Mr. Todd Shrader, Manager, DOE CBFO and Mr. Bruce Covert, Project Manager, NWP, dated April 30, 2019; Subject: Department of Energy Carlsbad Field Office and Nuclear Waste Partnership LLC Generator Site Technical Review GSTR-LL 1-18-01 Final

Dear Mr. Rodrik:

In February through March of 2018, the Department of Energy (DOE) Carlsbad Field Office (CBFO) and Nuclear Waste Partnership LLC (NWP) as co-permittees of the Waste Isolation Pilot Plant (WIPP) conducted the on-site portion of the Generator Site Technical Review (GSTR) at the Lawrence Livermore National Laboratory (LLNL). The GSTR was mandated by the Waste Isolation Pilot Plant (WIPP) Documented Safety Analysis in response to the radiation release incident at WIPP in February 2014.

This letter shall serve as notice that the subject GSTR is complete and all identified issues have been satisfactorily addressed and resolved. This is an important step in the resumption of shipping of newly generated transuranic (TRU) waste from the LLNL to the WIPP. The co-permittees received generous cooperation from the DOE Livermore Field Office (LFO) staff and contractors of both organizations. Please pass along our thanks to them for that cooperation.

The GSTR is an ongoing process. Follow-on reviews will occur as directed by our office. If you have any questions, please direct them to Courtland Fesmire at 575-706-0044 or courtland.fesmire@cbfo.doe.gov.

Sincerely,

Handwritten signature of Todd Shrader in black ink.

Todd Shrader, Manager
Carlsbad Field Office

Handwritten signature of Bruce C. Covert in black ink.

For Bruce C. Covert, Project Manager
Nuclear Waste Partnership LLC

Enclosure

Mr. Pete Rodrik

-2-

MAY 2 1 2019

cc: w/enclosure

A. Harris, EM-HQ	*ED
D. Chung, EM-3.1	ED
K. Lachman, CBFO	ED
K. Princen, CBFO	ED
C. Fesmire, CBFO	ED
C. Gadbury, CBFO	ED
T. Carver, CBFO	ED
N. Castaneda, CBFO	ED
H. Cruickshank, CBFO	ED
R. Gill, CBFO	ED
A. Chen, LLNL	ED
C. Conrad, LLNL	ED
J. Davis, III, LLNL	ED
R. Hollister, LLNL	ED
P. Pellette, LLNL	ED
B. Broderick, DNFSB	ED
R. Maestas, NMED	ED
G. Balsmeier, NWP	ED
M. Percy, NWP	ED
S. Strong, NWP	ED
R. Billett, NWP	ED
L. Calder, NWP	ED
K. Donovan, NWP	ED
R. Lee, NWP	ED
C. Luoma, NWP	ED
D. Moody, NWP	ED
M. Ramirez, NWP	ED
T. Sellmer, NWP	ED
P. Rodriguez, NWP	ED
M. Valentine, NWP	ED
M. Gonzales, NWP	ED
J. Carter, NWP	ED
R. Garcia, Excel	ED
H. Greenwood, CCP-TechSpecs	ED
Site Docs	ED
CBFO M&RC	

*ED denotes electronic distribution

GSTR-LL-1-18-01
ISSUES TRACKING SYSTEM
February 26, 2018 through March 2, 2018; and 6/11/18 Conclusion;
May 14, 2019 Closure of Issues

✓ *[Signature]*
5/15/19

Issue [I-1] LL-1-18-01 (R.B. - Con Ops.)

COU7-000101 Rev. AF, Operator Area Logbooks section 7.5 required entries contain a list of information that should be found in the logbook, if applicable to the operating area. It appears that some information is not being entered into some log books; for example, the room 1010 log book contains pages of entries (one for each day), that the Daily Room checks were completed. There is no mention of activities that occurred in the room; glove changes; bag-outs of materials/wastes; abnormal room or equipment condition, etc. It is recommended that NMPT refine the expectations for the log book entries that should be found in each type of log book (room, area, process, etc.) maintained in the facilities.

Resolution:

The following response, as received from NNSA LFO, via 4/30/19 letter and attachment, reads as follows:

Assigned to Kevin Mahoney

Proposed action: Review logbook procedure to determine if changes are needed. Brief room responsible personnel on logbook requirements.

Due Date: 7/15/2019; This response has been evaluated and the issue closed.

Issue [I-2] LL-1-18-01 (M.D. & D.H. – Waste Management, Treatment/Procurement)

This issue documents two concerns with the control of procured materials or components used in waste packaging (e.g., absorbents intended for use in treating waste). First, on the front end of the process, the procurement procedure does not impose any conditions that would require a higher quality for items important to waste performance, such as absorbents. Accordingly, such items can be obtained without controls such as technical specifications, or review by technically qualified personnel. A similar process to procure absorbents at LANL was a significant factor in the WIPP release event. Second, on the back end of the process, waste treatment procedures specify that "approved" absorbents must be used, but provide no further specificity. Accordingly, LLNL needs to evaluate and identify the absorbents that can be used with TRU waste, and add the appropriate procurement and procedural controls.

Resolution:

The following response, as received from NNSA LFO, via 4/30/19 letter and attachment, reads as follows:

Assigned to Rod Hollister

Proposed action: LLNL does not believe it to be practical to control the purchase of absorbents at the Procurement level for the entire site. Specific absorbents can be controlled at the TRU waste level.

WCP-68 will be modified to provide a specific list of approved absorbents. Any absorbents that are used must be documented with specific information.

Due Date: 9/30/2019; This response has been evaluated and the issue closed.

Issue [I-3] LL-1-18-01 (M.D. – Waste Management)

It is recommended that the informal tracking sheet used by the Visual Examiner during packaging be incorporated into the procedure and included in the drum package.

It is also recommended that the use of the EPA Chemical Compatibility method be documented for each waste stream.

Resolution:

The following response, as received from NNSA LFO, via 4/30/19 letter and attachment, reads as follows:

Assigned to Rod Hollister

Proposed action: The informal tracking sheet will be turned into a controlled form and included in the procedure. The tracking sheet will be part of the record associated with the container.

Due Date: 9/30/2019; This response has been evaluated and the issue closed.

Issue [I-4] LL-1-18-01 (M.D. – Waste Management/Document Control)

There appears to be some duplication between ADM 101, Section 7 and ADM 102, Section 8.4. Both appear to direct the review of RHWM documents.

Resolution:

The following response, as received from NNSA LFO, via 4/30/19 letter and attachment, reads as follows:

Assigned to Angelina Flores

Proposed action: There appears to be some duplication between ADM 101, Section 7 and ADM 102, Section 8.4. Both appear to direct the review of RHWM documents. Evaluate both documents to determine if there is duplication and whether a revision to the procedures is warranted.

Due Date: 6/14/2019; This response has been evaluated and the issue closed.

Issue [I-5] LL-1-18-01 (M.D. – Waste Management)

USQ screening will not necessarily evaluate interactions of materials that could be combined in a drum. This is not specific to LLNL; it is how the USQ questions are posed in the USQ process. LLNL should consider the need to incorporate waste issues into the screening process.

Resolution:

The following response, as received from NNSA LFO, via 4/30/19 letter and attachment, reads as follows:

Assigned to Danny Laycak

Proposed action: The USQ process is a very structured process developed by DOE. LLNL follows the DOE process in preparing USQs. Brief the USQ preparers to be mindful of outside influences and to contact other subject matter experts where necessary.

Due Date: 6/28/2019; This response has been evaluated and the issue closed.

Issue [I-6] LL-1-18-01 (M.D. – Waste Management/Document Control)

ADM 102 refers to a document that no longer exists, ADM 103.

Resolution:

The following response, as received from NNSA LFO, via 4/30/19 letter and attachment, reads as follows:

Assigned to Rod Hollister

Proposed action: This had been identified by RHWM prior to the GSTR. When documents are canceled it often takes a while to remove all the references. ADM 102 was under review at the time of the review and was issued on 9/14/18. - ADM 102 was updated to remove the reference to ADM 103.

Due Date: 3/8/2019; This response has been evaluated and the issue closed.

Issue [I-7] LL-1-18-01 (P.R. - Assessments)

While several examples of internal assessments/oversight activities were reviewed, the following recommendation is offered for your consideration: With regard to internal oversight and other assessment activities of waste generation/processing/treatment and /or packaging activities for TRU waste – specific reviews at an amplified frequency is recommended to be established to identify areas where potential conditions similar to the LANL issue of 2014 could occur. It's important to recognize that this recommendation (for specific TRU waste oversight), would be more applicable during TRU waste campaign periods.

Resolution:

The following response, as received from NNSA LFO, via 4/30/19 letter and attachment, reads as follows:

Assigned to Jason Schnackenberg

Proposed action: Update all the TRU IGDs to include more information about the original process that generated the waste along with specific information about authorized components including brands and product numbers for any reagents being

used (e.g., absorbents solidification media, chemicals [CAS numbers], cutting fluids, etc.)

Part of the update/review will include a review of the chemical compatibility for the IGD. IGDs include: 00345, 00578, 00579, 00580, 01517, 01746, 01877, 01880, 01895, 02705, 02706, 02763, 02765, 02810, 02814, 03364, and 03437

Due Date: 12/16/2019

Assigned to Clint Conrad

Proposed action: As part of the internal review RHWM will establish a certified visual examination (VE) program at LLNL.

Work with WIPP/CCP to bring on a VE expert/SME to oversee all the TRU waste packaging operations at LLNL. The VE expert will be included in the IGD reviews for TRU waste and will be responsible for ensuring that only waste that meets the visual examination requirements is packaged and transferred to RHWM.

Due Date: 6/28/2019

Assigned to Angelina Flores

Proposed action: Add Management, Observations, and Inspections (MOIs) for TRU Waste Activities in the FY2020 RHWM Assessment Schedule. One MOI should target waste generation activities and one should target the review of documentation.

Due Date: 9/16/2019;

These responses have been evaluated and the issue closed.

Issue [I-8] LL-1-18-01 (D.H. – Training)

Other than a single example, the team found little evidence of any WIPP-specific training provided to LLNL personnel.

Interviews with waste handling personnel indicated some weaknesses in understanding the bases of waste management requirements (e.g., definitions and differences between D001, D002, D003 waste codes, the differences between types of codes, such as F codes and D codes, the prohibited items listing for WIPP, and why these items are prohibited).

Understanding the WIPP regulations and requirements is both necessary and beneficial for LLNL personnel. The GSTR team believes LLNL should develop WIPP-specific training, addressing the waste acceptance criteria, the waste analysis plan, the certification and audit process, the interfaces with CCP, the lessons learned throughout the complex, etc.

Resolution:

The following response, as received from NNSA LFO, via 4/30/19 letter and attachment, reads as follows:

Assigned to Dan Spooner

Proposed action: Develop a specific training class for TRU waste that would include WIPP specifics. The training would target RHWM personnel involved in packaging, handling, and managing TRU waste.

Due Date: 1/31/2020; This response has been evaluated and the issue closed.

Issue [I-9] LL-1-18-01 (D.H. – Training)

The LLNL TRU waste expertise is primarily provided by a single individual, who has gained the expertise by involvement with WIPP operations, the Central Characterization Project, and the TRU Corporate Board over many years. The GSTR team believes a systematic evaluation should be performed, and some type of formal qualification or training program developed to provide backup to this single individual and to ensure recognition and agreement of the knowledge requirements to be transitioned to any future TRU SMEs, as part of a good succession plan.

Resolution:

The following response, as received from NNSA LFO, via 4/30/19 letter and attachment, reads as follows:

Assigned to Dan Spooner

Proposed action: Develop a formal qualification card for the TRU Project Manager and for the TRU SME.

Due Date: 1/31/2020; This response has been evaluated and the issue closed.

Issue [I-10] LL-1-18-01 (D.H. - RCRA Permit)

Combination of EFA, WTG, TRU SME, TRU Programmatic Personnel (B235 and B332)

The GSTR team understands that the LLNL operates under a more complex regulatory structure when compared to most sites throughout the DOE complex, as the State of California imposes a significant number of California specific requirements upon the lab, as defined in the laboratories' RCRA Part B Permit. In light of the WIPP release event, as well as the recent exothermic events in Idaho, the GSTR team believes LLNL should re-evaluate whether the absorption of liquids is adequately neutralizing liquids and that this operation is covered within the bounds of the current RCRA permit.

Resolution:

The following response, as received from NNSA LFO, via 4/30/19 letter and attachment, reads as follows:

Assigned to Reggie Gaylord

Proposed action: Based on investigations conducted by EFA and RHWM there is a potential for some generators to generate TRU liquids that cannot be treated using the California bench top treatment regulations.

RHWM will develop a project schedule that lays out all the steps necessary to begin treating TRU waste in RHWM. The associated duration for each step will be included in the project schedule along with any dependencies. Based on the project schedule additional action can be entered in ITS.

Due Date: 9/30/2019; This response has been evaluated and the issue closed.

Issue [I-11] LL-1-18-01 (R.B. – Con. Ops.)

Noteworthy Practice. The control sheet for Operator Aids in the NMTP Operator Aid program provides a single document where the history of the current version of an operator aid can be found. The control sheet provides general information for the operator aid, documents the approval to post the operator aid, and documents the required periodic reviews on one sheet.

Resolution: N/A – This issue commends the facility and personnel, and highlights a practice worthy of mentioning. The issue is closed.

Issue [I-12] LL-1-18-01 (P.R. – Performance Assurance/Lessons Learned)

Noteworthy Practice. This issue is documented to commend the laboratory's comprehensive evaluations and responses to requests for Evaluation of Nitrate-Bearing Transuranic Waste Streams. (Re.: WCI Nuclear and Hazardous Operation Manager's presentation: *Planning for an Accident, January 30, 2015*, LLNL-PRES-747118, LLNL March 15, 2015 correspondence, including the *Independent Review Team Report Regarding Uncemented Nitrate Waste At Los Alamos National Laboratory*, Dec 23, 2014 (this is a documented LLNL review of the Longenecker report); and LLNL WCI Response to OE-2:2015-1, *Evaluation of Nitrate-Bearing Transuranic Waste at LLNL*, August 28, 2015).

Resolution: N/A – This issue applauds the facility and highlights personnel/departmental practices worth mentioning and is duly closed.

Issue [I-13] LL-1-18-01 (D. H. – Training)

Noteworthy Practice – The three mandatory training classes required by all site personnel involved with any waste management activities are comprehensive, and clearly identify roles and responsibilities for the management of waste at the LLNL site. Of all the sites evaluated by the GSTR team thus far, this is probably the best set of core training documents presented.

Resolution: NA – This issue commends the facility and highlights noteworthy practices implemented by the LLNL, relative to waste management training.

Issue [I-14] LL-1-18-01 (C.F. – Federal Oversight)

The Federal Oversight review team is recommending that LSO consider additional staffing of FRs and oversight personnel coupled with augmented training for current and new FR staff. This recommendation is based in light of additional staffing burdens that will be placed on its staff when the facility gears up to conduct its characterization and shipping campaign of TRU waste. Succession planning as well as backup support for current FRs is encouraged. An additional recommendation is for LFO to consider a short detail for program staff at CBFO to familiarize, or re-familiarize themselves with the characterization, certification, and shipping of TRU waste under the National TRU Waste Program.

Resolution:

The following response, as received from NNSA LFO, via 4/30/19 letter and attachment, reads as follows:

Assigned to James A. Davis, III/Alan Chen

Proposed action: LFO Management has evaluated this issue and made the determination to provide additional resources to the Waste Storage Facility FR for oversight of A625. Regarding training, it was discussed during the review that the Carlsbad Field Office will develop a RCRA class for FRs. When this class becomes available, this training will be considered as part of the LFO FR's continuing training plan. LFO supports and will consider a short term detail for its waste management program managers to familiarize themselves with the National TRU Waste Program.

This response has been evaluated and the issue closed.

Note: Proposed Actions cited above, entered in the LLNL Issues Tracking System (ITS).