U.S. DEPARTMENT OF ENERGY

ESHID-603542

National Nuclear Security Administration
Los Alamos Field Office
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Environmental Management
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DEC 17 2019

Date:
Symbol: N3B-19-0413
LA-UR: 19-32030
Locates Action No.: Not applicable

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

Dear Mr. Cobrain:

Subject: Response to Request for Information Regarding TRU Waste Containers Stored at Area G, TA-54, Los Alamos National Laboratory

Reference: Letter to Doug Hintze, DOE Environmental Management Los Alamos Field Office and W. Steve Goodrum, DOE/National Nuclear Security Administration Los Alamos Field office, *Request for Information TRU Waste Containers Stored At Area G, TA-54 Los Alamos National Laboratory, EPA ID #NM0890010515 HWB-LANL-MISC*, dated September 23, 2019

This correspondence is being submitted in response to the New Mexico Environment Department (NMED) referenced request for information (RFI) regarding transuranic (TRU) waste containers stored at Los Alamos National Laboratory (LANL). The U.S. Department of Energy (DOE) Environmental Management Los Alamos Field Office (EM-LA) and the DOE/National Nuclear Security Administration (NNSA) Los Alamos Field Office (NA-LA) are providing information regarding several TRU waste containers stored at Technical Area 54 (TA-54), Material Disposal Area G (Area G) in response to the letter dated September 23, 2019. On October 22, 2019, the DOE field offices requested an extension for the initial RFI due date (October 23, 2019), which NMED approved, granting a sixty day extension in order for collaboration between both DOE field offices and Triad National Security, LLC (Triad) and Newport News Nuclear BWXT-Los Alamos, LLC (N3B). This response is due to NMED no later than December 22, 2019. The enclosed documentation provides the information requested for each container, including dates of waste generation, the location within LANL where the waste was generated, characterization information for the waste containers, container numbers assigned,

and the hazardous waste codes that have been applied as part of the hazardous waste characterization process. Enclosure 1 provides this information for waste containers under the management responsibility of EM-LA/N3B. Enclosure 2 provides this information for waste containers under the management responsibility of NNSA/Triad.

The two containers LA00000083179 and LA00000091085 listed on the RFI are not among the population of identified containers on either NCR-0457-19 or NCR-0452-19. These two containers have been through the WIPP certification process and deemed certified for shipment. The containers do not carry the Environmental Protection Agency (EPA) hazardous waste codes D001, D002 or D003, do not contain any liquid and therefore are not addressed in either Enclosure.

Within the RFI, NMED expresses concern over potentially hazardous and incompatible wastes within several containers currently stored at TA-54, Area G, based upon the NCRs issued by DOE's Central Characterization Program (CCP). It should be noted that CCP's NCR process is a standard procedure within the Waste Isolation Pilot Plant (WIPP) certification program to verify that waste destined for disposal at WIPP meets their rigorous waste acceptance criteria (WAC). This process includes ensuring that supporting documentation provides a basis for acceptance at WIPP. The issuance of NCRs does not necessarily indicate that there is a safety hazard or a compliance concern, it is part of a multi-step process that identifies potential items that may need further review and may not initially meet the CCP characterization process. The NCR process allows LANL to provide additional information and another review to ensure that the waste they are submitting for WIPP certification is properly characterized and compliant. A key quality control of the Basis of Knowledge (BOK) process is to presume a worst case scenario of the configuration of the waste (e.g., compatibility) and then utilize further documentation and/or remediation of the waste to complete the certification process. In addition, this review process occurs in advance of any shipment to WIPP; as such, the questions raised by CCP will be resolved prior to any final waste certification and shipment.

The enclosed documentation provides information specifically for the containers that were identified in the referenced RFI. The information enclosed is intended to address NMED's concern that potentially incompatible wastes may be stored in preparation for shipment to the WIPP without final characterization and certification with the WIPP WAC. Should you have any additional questions with respect to these or other NCRs, please do not hesitate to contact Arturo Duran, EM-LA, at 505-257-7907, or Karen Armijo, NNSA, at 505-665-7314.

Sincerely,

Peter Maggiore
Acting Assistant Manager
Mission Assurance and Infrastructure
National Nuclear Security Administration
Los Alamos Field Office

Sincerely,

Dave Nickless
Acting Director
Office of Quality and Regulatory Compliance
Environmental Management
Los Alamos Field Office

Enclosure(s): 1) Request for Information for Waste Containers Under Responsibility of EM-LA/N3B
2) Request for Information for Waste Containers Under Responsibility of NNSA/Triad

cc w/enclosures:

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ENCLOSURE 1

Request for Information for Waste Containers
Under Responsibility of EM-LA/N3B
EM2019-0461

Date: DEC 17 2019

CERTIFICATION

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC

Response to Request for Information Regarding
TRU Waste Containers Stored at Area G, TA-54, Los Alamos National Laboratory

CERTIFICATION STATEMENT OF AUTHORIZATION

In accordance with the New Mexico Administrative Code Title 20, Chapter 4, Part 1 (incorporating the Code of Federal Regulations, Title 40 CFR § 270.11):

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Elizabeth Lowes — 12-10-2019

Elizabeth Lowes, Program Manager
Environment, Health and Safety
Newport News Nuclear BWXT-Los Alamos, LLC

Date

David J. Nickless — 12/13/19

David J. Nickless, Acting Director
Office of Quality and Regulatory Compliance
Environmental Management
Los Alamos Field Office

Date

CCP NCR	Container Number	Original Container Number	Current RCRA Codes Assigned and Date Codes Assigned	RCRA Codes D001, D002 and D003	Estimated Liquid	Current Container Accumulation Start Date	Generation Location	Current Location	Current Status
NCR-LANL-0457-19	LA00000068161	55193	Date Codes Assigned: 03/31/14 D004-D011, D018, D019, D021, D022, D035, D038-D040, F001, F002 and F005	At this time, based on documentation and Acceptable Knowledge (AK) surrounding this container, the container does not meet the requirements for the RCRA characteristic codes D001, D002 or D003. Further investigation into the possibility of remaining liquid is ongoing.	~1L (Absorbed)	6/25/1993	TA-55	TA-54 G, Dome 49	This container was sent to 231 remediation on 3/31/14. After many interviews and more investigation into the containers with contents that include an amount of Rad-Release and Wastelock 770 absorbent, the following are our findings. The Rad-Release II step 1 (acid with nitric acid) would have been sprayed into the glovebox, and then the Rad-Release II step 2 (base NaOH) would have been added after it to neutralize the pH at about 7. Then 3 cups of Waste lock 770 would have been added to a 1-liter pool in the glovebox, absorbing the majority of the spent rad-release solution. Some remaining liquid would have been wiped up with Pig wipes (gray polypropylene). The ratio was actually 1.4: 1 to 2:1, solution to absorbent. Because this decon operation would have been run multiple times using the same amounts, we have confidence in this ratio. These remediation activities would have been done in Domes 412, 231, and 375 with a date range of 9-30-13 to 4-2014. This ratio should be used for the basis of knowledge (BOK) calculation for this container and not a ratio of 100:1. This new information should address previous questions and support acceptable BOK.
NCR-LANL-0457-19	LA00000068264	55121	Date Codes Assigned: 1/28/14 D004-D011, D018, D019, D021, D022, D035, D038-D040, F001, F002 and F005	At this time, based on documentation and Acceptable Knowledge (AK) surrounding this container, the container does not meet the requirements for the RCRA characteristic codes D001, D002 or D003. Further investigation into the possibility of remaining liquid is ongoing.	~1L (Absorbed)	10/3/1988	TA-55	TA-54 G, Dome 49	This container was sent to TA-54-231 Remediation 1/28/14. After many interviews and more investigation into the containers with contents that include an amount of Rad-Release and Wastelock 770 absorbent, the following are our findings. The Rad-Release II step 1 (acid with nitric acid) would have been sprayed into the glovebox, and then the Rad-Release II step 2 (base NaOH) would have been added after it to neutralize the pH at about 7. Then 3 cups of Waste lock 770 would have been added to a 1-liter pool in the glovebox, absorbing the majority of the spent rad-release solution. Some remaining liquid would have been wiped up with Pig wipes (gray polypropylene). The ratio was actually 1.4: 1 to 2:1, solution to absorbent. Because this decon operation would have been run multiple times using the same amounts, we have confidence in this ratio. These remediation activities would have been done in Domes 412, 231, and 375 with a date range of 9-30-13 to 4-2014. This ratio should be used for the BOK calculation for this container and not a ratio of 100:1. This new information should address previous questions and support acceptable BOK.
NCR-LANL-0452-19	LA00000069044	S863122	Date Codes Assigned: 12/10/13 D004-D011, D018, D019, D021, D022, D035, D038-D040, F001, F002 and F005	At this time, based on documentation and Acceptable Knowledge (AK) surrounding this container, the container does not meet the requirements for the RCRA characteristic codes D001, D002 or D003. Further investigation into the possibility of remaining liquid is ongoing.	6oz (absorbed)	9/30/1986	TA-3-29 (CMR)	TA-54 G, Dome 49	This container was sent for remediation at TA-54-412 on 12/10/13 and moved for remediation at the Waste Characterization, Reduction, and Repackaging Facility on 12/21/13. This container had 6 ounces (oz) of free liquids and contained personal protective equipment (PPE), wood, paint brushes, plastic containers, and absorbent material (kitty litter). Plastic and kitty litter were added during waste processing. This container did not pass the BOK evaluation because the specific absorbent was not identified during remediation and the liquid that was absorbed was not specified.
NCR-LANL-0457-19	LA00000068154	56066	Date Codes Assigned: 3/06/14 D004-D011, D018, D019, D021, D022, D035, D038-D040, F001, F002 and F005	At this time, based on documentation and Acceptable Knowledge (AK) surrounding this container, the container does not meet the requirements for the RCRA characteristic codes D001, D002 or D003. Further investigation into the possibility of remaining liquid is ongoing.	Less than 1 liter of the mixture was absorbed on to Waste Lock 770 and gray polypropylene pig wipes.	5/25/1995	TA-55	TA-54 G, Dome 49	This container went through TA-54-375 remediation 3/6/14. After many interviews and more investigation into the containers with contents that include an amount of Rad-Release and Wastelock 770 absorbent, the following are our findings. The Rad-Release II step 1 (acid with nitric acid) would have been sprayed into the glovebox, and then the Rad-Release II step 2 (base NaOH) was added after it to neutralize the pH at about 7. Then 3 cups of Waste lock 770 would have been added to a 1-liter pool in the glovebox, absorbing the majority of the spent rad-release solution. Some remaining liquid would have been wiped up with Pig wipes (gray polypropylene). The ratio was actually 1.4: 1 to 2:1, solution to absorbent. Because this decon operation would have been run multiple times using the same amounts, we have confidence in this ratio. These remediation activities would have been done in Domes 412, 231, and 375 with a date range of 9-30-13 to 4-2014. This ratio should be used for the BOK calculation for this container and not a ratio of 100:1. This new information should address previous questions and support acceptable BOK.

ENCLOSURE 2

Request for Information for Waste Containers
Under Responsibility of NNSA/Triad

LA-UR: 19-32030

Date: DEC 17 2019

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



10 December 2019

Jennifer E. Payne
Division Leader
Environmental Protection and Compliance Division
Triad National Security, LLC

Date Signed



17 Dec 2019

Karen E. Armijo
Permitting and Compliance Program Manager
Los Alamos Site Office
National Nuclear Security Administration
U.S. Department of Energy

Date Signed

CCP NCR	Container Number	Original Container Number	Current RCRA Codes Assigned and Date Codes Assigned	RCRA Codes D001, D002 and D003	Estimated Liquid	Current Container Accumulation Start Date.	Generation Location	Current Location	Current Status
NCR-LANL-0452-19	LA00000068163	57457	Date Codes Assigned 3/7/2014: D004-D011, D018, D019, D021, D022, D035, D038-D040, F001, F002 and F005	At this time, based on documentation and Acceptable Knowledge (AK) surrounding this container, the container does not meet the requirements for the RCRA characteristic codes D001, D002 or D003. Due to not passing the initial Basis of Knowledge (BOK), further investigation into the characterization and possibility of remaining liquid is ongoing.	Investigation into the characterization of the liquid is currently under way.	3/25/2014	TA-3-29 (CMR)	TA-54-Area G, Dome 49	This container was remediated on 3/28/14 at TA-54-375. Waste records and processing information from the remediation activities indicate that LA00000068163 contains a ¾" conduit and Radiation Control Technician (RCT) generated trash. This container originally did not pass the Basis of Knowledge (BoK) Evaluation because at the time, an unknown amount of liquid was potentially absorbed into 10kg of Waste Lock 770. Additional characterization information regarding potential oxidizers are currently being verified through the certification process.
NCR-LANL-0452-19	LA00000069506	53700	Date Codes Assigned 2/27/2014: D004-D011, D018, D019, D021, D022, D035, D038-D040, F001, F002 and F005	The unknown liquid was originally absorbed with kitty litter. Until the final analysis (remediation) has been completed, further characterization is necessary and remediation efforts may be required to determine if the RCRA characteristic codes D001, D002 or D003 would apply, which is unlikely. Once the characterization and remediation efforts are completed, the container will once again be sent for re-evaluation by CCP for the characterization disposal at WIPP.	3 oz. (Absorbed)	2/27/2014	TA-3-29 (CMR)	TA-54-Area G, Dome 49	This container was remediated at TA-54-412 on 2/15/14 and subsequently at the Waste Characterization, Reduction and Repackaging Facility (WCRRF) on 2/28/14. Processing information from the WCRRF remediation activities indicate the original container contained approximately 3 oz. of unknown liquid that was absorbed with kitty litter, lead lined gloves, plastic vials, wood, cardboard, plastic, cheese cloth, and light bulbs. Charaterization of the waste within this container is still under evaluation due to the specific absorbent and the liquid that were not identified during remediation activities.
NCR-LANL-0457-19	LA00000068155	62450	Date Codes Assigned 3/25/2014: D004-D011, D018, D019, D021, D022, D035, D038-D040, F001, F002 and F005	At this time, based on documentation and surrounding this container, the container does not meet the requirements for the RCRA characteristic codes D001, D002 or D003. Further investigation into the characterization and possibility of remaining liquid is ongoing.	Less than 1 liter of the mixture was absorbed on to Waste Lock 770 and gray polypropylene pig wipes.	3/7/2014	TA-55	TA-54-Area G, Dome 49	This container was remediated at TA-54-375 on 3/8/14 and remediation activities were completed on 3/11/2014. This container contains nitric acid that was neutralized with sodium hydroxide to a pH of 7 prior to being absorbed with 3 cups of Waste Lock 770 and surrounded by gray polypropylene wipes. Additional characterization information regarding potential oxidizers and liquid are currently being verified through the certification process.