



*Environmental Protection Division*  
Water Quality & RCRA Group (ENV-RCRA)  
P.O. Box 1663, MS K490  
Los Alamos, New Mexico 87545  
505-667-0666

*National Nuclear Security Administration*  
Los Alamos Site Office, A316  
3747 West Jemez Road  
Los Alamos, New Mexico 87545  
(505) 667-5794/FAX (505) 667-5948

Date: **DEC 19 2012**  
Refer To: ENV-RCRA-12-0246  
LAUR: 12-25989

Mr. John E. Kieling  
New Mexico Environment Department  
Hazardous Waste Bureau  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, NM 87505-6303

Dear Mr. Kieling:

**SUBJECT: RESPONSES TO QUESTIONS - TEMPORARY AUTHORIZATION REQUEST FOR WASTE REPACKAGING OPERATIONS AT TECHNICAL AREA (TA) 55, LOS ALAMOS NATIONAL LABORATORY (LANL), EPA ID NM 0890010515-1**

The purpose of this letter is to formally transmit the U.S. Department of Energy/National Nuclear Security Agency and the Los Alamos National Security's (collectively DOE/LANS's) responses to questions regarding the October 15, 2012 Technical Area-55 Temporary Authorization request. DOE/LANS received these questions from the New Mexico Environment Department Hazardous Waste Bureau (NMED-HWB) in two emails dated October 19, 2012 and believe this response is sufficient to allow the NMED-HWB to proceed with the public notice, as mentioned in your October 24, 2012 email. Enclosure 1 is a hard copy of the responses sent previously via email on November 6, 2012.

In a November 13, 2012, teleconference, NMED-HWB representatives provided initial feedback on the November 6, 2012 responses, and asked additional questions focused primarily on why the Permittees were not pursuing other options for repackaging the nine Site Treatment Plan (STP) drums. The other realistic option available would involve transporting the drums to TA-54 for pre-WCRRF safety evaluations (i.e., headspace gas analysis, nondestructive assay) and then to the Waste Characterization, Reduction, and Repackaging Facility (WCRRF) in TA-50, Building 69 for repackaging, according to the established LANL process for non-conforming waste items.

Partial responses to NMED's November 13, 2012 questions are covered in Responses 1 and 9 in Enclosure 1 of this submittal. The Temporary Authorization will prevent disruption of ongoing waste management activities by avoiding impacts to facilities or operations involved in the January 5, 2012 Framework Agreement (3706 TRU Waste Campaign). The potentially impacted facilities and operations include not only WCRRF, but also TA-54 facilities. Attempting to obtain the necessary safety approvals and insert these nine drums into the work schedules of the existing remediation facilities at TA-54 and WCRRF would impact the 3706 TRU Waste Campaign schedule. This conflicts with the regulatory intent of a temporary authorization. For these reasons, the original Temporary Authorization request was limited to siting the repackaging activity at TA-55, rather than complicating the process by involving other already-committed waste management sites at LANL.

In order to take advantage of the limited window of opportunity, DOE/LANS request that NMED-HWB formally respond to the Permittees as quickly as possible as to whether or not it intends to approve the October 15, 2012 Temporary Authorization request as written.

We welcome the opportunity to discuss further with you any remaining concerns you may have. Please contact Gene Turner at (505) 667-5794 or Mark Haagenstad, LANS, at (505) 665-2014.

Sincerely,



Michael T. Saladen  
Group Leader, (Acting)  
Water Quality & RCRA Group (ENV-RCRA)  
Los Alamos National Security, LLC

Sincerely,



Gene E. Turner  
Environmental Permitting Manager  
Environmental Projects Office  
Los Alamos Site Office  
U.S. Department of Energy

MTS:GET:MPH/lm

Mr. John E. Kieling  
ENV-RCRA-12-0246

-3-

Enclosures: 1. Responses to Questions - Temporary Authorization Request - Technical  
Area 55 Site Treatment Plan Transuranic Waste Work-Off

Cy: Laurie King, USEPA/Region 6, Dallas, TX, w/enc.  
Tim Hall, NMED/HWB, Santa Fe, NM, w/enc.  
Gene E. Turner, LASO-EPO, w/enc., (E-File)  
Pete Maggiore, LASO-EPO, w/enc., (E-File)  
George C. Henckel, LASO-EPO, w/enc., (E-File)  
Carl A. Beard, PADOPS, w/o enc., A102  
Michael T. Brandt, ADESH, w/o enc., (E-File)  
Alison M. Dorries, ENV-DO, w/o enc., (E-File)  
Peter H. Carson, NPI-7, w/o enc., (E-File)  
Mark P. Haagenstad, ENV-RCRA, w/enc., (E-File)  
Jeff Carmichael, ENV-RCRA, w/enc., (E-File)  
IRM-RMMSO, w/enc., A150, (E-File)  
ENV-RCRA, Correspondence File, w/enc., K490

# **ENCLOSURE 1**

**Responses to Questions - Temporary Authorization  
Request  
Technical Area 55 Site Treatment Plan Transuranic Waste  
Work-Off**

**ENV-RCRA-12-0246**

**LAUR-12-25989**

**Date: DEC 19 2012**

**ENCLOSURE 1****LANL Response to NMED Questions (NMED email dated October 19, 2012)**

***Question 1) "One of the outstanding questions I have regarding the TA-55 Temporary Authorization request is why LANL cannot repack the waste across the street at WCRRF."***

Response 1): All the waste to be addressed as part of this Temporary Authorization request is mixed transuranic (MTRU) waste that does not satisfy Waste Isolation Pilot Plant (WIPP) acceptance criteria in its current form. Thus, it must be remediated to satisfy the WIPP criteria before it can be shipped offsite for disposal. Prohibited items (if any) must be removed or corrected, and the container must also comply with applicable Department of Transportation (DOT) requirements and satisfy limits on the amount of radioactive material in each container.

Containers that fail to satisfy the WIPP criteria are normally sent to the Waste Characterization, Reduction, and Repackaging Facility (WCRRF) in TA-50, Building 69 to be safely remediated. LANL safety requirements prohibit WCRRF from accepting MTRU waste containers for remediation if they contain certain constituents (such as hydrogen or volatile organic compounds [VOCs]) in excess of specified limits, or if they have other safety hazards that might prevent the processing of the waste container. The pre-WCRRF safety evaluation includes headspace gas analysis and collection of radiological data. WCRRF lacks the necessary facilities and equipment for performing the prerequisite safety evaluation; those facilities are located at TA-54. Therefore, MTRU waste to be remediated at WCRRF first must be sent to TA-54 for the safety evaluation.

The nine waste drums included in the October 15, 2012 request cannot be easily or quickly remediated at WCRRF for three reasons.

1. None of the nine waste drums are DOT-approved shipping containers. DOE Order 460.1C, Section 4.C requires that all transfers "onsite" comply with DOT requirements or an approved Transportation Safety Document. This includes transfers from TA-55 to TA-54 or TA-50. Therefore, it is not feasible to ship these drums to TA-54 for the required pre-WCRRF safety evaluation because none of the nine waste drums included in the October 15, 2012 request are DOT approved shipping containers (see Question 2 response).
2. Likewise, the drums cannot simply be "shipped across the street" for processing, because not only are they not DOT-compliant, but WCRRF lacks the equipment and facilities (i.e., for headspace gas analysis, nondestructive assay, etc.) required for the pre-WCRRF safety evaluation.
3. Even if the drums were DOT-compliant and underwent the pre-WCRRF safety evaluation, WCRRF is unavailable for processing these drums until the 3706 TRU Waste Campaign is completed. There are no available time windows during which the nine TA-55 drums might be processed until the campaign is completed. Thus, even if these drums could be shipped to WCRRF for remediation, the activity would have a negative impact on the 3706 TRU Waste Campaign schedule (see response to Question 9).



**Question 2) “I was expecting the request to give more information, including documentation and justification, regarding the statement that “the waste could not be transported to another facility within LANL or elsewhere for the required processing, because the containers, as-stored, do not meet internal TA-55 and/or DOT requirements.” Which internal TA-55 and/or DOT requirements prevent LANL from moving the waste to another LANL facility? Since the 1.9 cubic meters are stored in 55-gallon drums, why is transportation between technical areas an issue?”**

Response: 2) As stated above, DOE Order 460.1C, Section 4.C requires that all transfers “onsite” - including transfers from TA-55 to TA-54 or TA-50 - comply with DOT requirements have an approved Transportation Safety Document. LANL Procedure P930-1, *LANL Waste Acceptance Criteria (WAC)*, requires that containers used for packaging transuranic (TRU) waste must meet DOT specification 7A for Type A shipping containers. The 55 gallon drums described in the LANL temporary authorization request do not meet DOT specification 7A for Type A shipping containers. One of the purposes of the proposed TA waste management activities is to repackage the waste in containers that meet DOT requirements.

**Response to Stakeholder Questions (Email from NMED dated October 19, 2012)**

**Question 3) “What are the 9 specific drums? What does AK say about the contents of each drum? What waste stream(s) are involved? Why is that information not provided?”**

Response 3): The drums are identified as LA00000055925, LA00000056038, LA00000056078, LA00000056098 LA00000056123, LA00000056132, LA00000056140, LA00000056144, and LA00000056158, which fall within two waste streams (see Table 1, attached):

- Drums LA00000055925 and LA00000056038 are in waste stream LA-MIN04-S: Mixed Inorganic Homogeneous Waste: Salts. This waste stream consists of mixed inorganic homogeneous waste generated by plutonium recovery, R&D processes, and facility and equipment operations and maintenance. Based on acceptable knowledge (AK), the waste consists of non-cemented inorganic salts.
- Drums LA00000056078, LA00000056098 LA00000056123, LA00000056132, LA00000056158, LA00000056140, and LA00000056144 are in waste stream LA-TA-55-19: Mixed Combustible Debris Waste. This waste stream consists of mixed combustible debris waste generated by plutonium recovery, R&D processes, and facility and equipment operations and maintenance. Based on AK, the debris waste in these containers includes paper, rags, plastic, rubber, wood-based High Efficiency Particulate Air (HEPA) filters, and other plastic-based and cellulose-based items.

**Question 4) “Section 1.0 of the request indicates: ‘DOE/LANS has recently identified a one-time limited opportunity at TA-55 to process the majority of its STP backlog, i.e., nine (9) drums of STP MTRU waste, during a limited time window- between November 2012 and March 2013. This will enable their shipment to WIPP.’ What are the other drums that won’t be included?”**

Response 4): The Permittees' intended meaning was to refer to the majority of the TA-55 STP backlog that was originally proposed for work-off under the temporary authorization. LANL's original proposal, as discussed with NMED on June 21 and August 20, 2012, referred to all STP containers at TA-55 that must be opened or repacked before they can be dispositioned. Included were four containers with MTRU liquids in addition to the nine drums in the October 15, 2012 formal request (see Response to question 5). These containers cannot be remediated by the means proposed in the October 15, 2012 temporary authorization request and were therefore, not included as part of the request. Table 1 lists the nine (9) containers included in the October 15, 2012 temporary authorization request and the four (4) containers that were not included in the October 15, 2012 request.

***Question 5): "Why are they not included?"***

Response 5): The four containers that contain MTRU liquids were found to be incompatible with the glove bag materials. Therefore, they were not included in the October 15, 2012 formal request. The October 15, 2012 temporary authorization request is restricted to sorting, segregation, and repackaging activities for the nine containers that can compatibly be managed within a glovebag. This meant LANL's final request was restricted to sorting, segregation, and repackaging only, and did not include treatment activities (such as neutralization) as originally proposed.

***Question 6): "When and how will the other backlog drums be processed?"***

Response 6): Disposition of the additional four containers will be determined at a later date when an appropriate authorized facility becomes available.

***Question 7): "Since the 9 drums will be processed over three months, that means the average time is a week per drum. Why would there need to be 'temporary storage of four waste containers' (2.9.4)? It would appear that any temporary authorization should limit that only one of the nine waste containers at a time be in Room 432 (of course there needs to be storage room for the drum(s) into which the waste is transferred)."***

Response 7): Waste will be stored in the area in additional containers as the original waste drums are processed. A minimum capacity of two drums is needed for the drum being unpackaged and the second drum that receives the waste. If a prohibited item is identified during the sort and segregation process, a third container would be needed to receive the prohibited item. In addition, as part of the waste management strategy, staging two parent drums in the processing room at once will greatly increase the operating efficiency.

***Question 8): "Any additional drum (other than the one in the glove box) could end up being stored for several days or a few weeks and could endanger public health and the environment and the Room is not a permitted storage facility."***

Response 8): It is not the intent of the temporary authorization request to use Room 432 for long term storage of the wastes to be reprocessed. The remediated waste containers will be placed into

the TA-55 permitted storage areas the original drums came from as soon as repackaging is complete. Room 432 was selected for this activity because its safety features equal or exceed the safety features of the permitted TA-55-PF-4 basement permitted units, but there is no need for additional long term storage capacity at TA-55 that would warrant seeking a permit. See discussions in Section 1.3, second paragraph, and in Section 2.9 of the TA request.

***Question 9) "The 9 drums are apparently not part of the 3706 Campaign. Will there be any effect on that Campaign from the TA-proposed activities?"***

Response 9): The proposed temporary authorization activity will not have a negative effect on the 3706 TRU Waste Campaign, for two reasons.

1. The TA-55 drums to be processed in the proposed temporary authorization activity are not part of the TA-54 TRU waste inventory being removed from LANL via the 3706 TRU Waste Campaign. This will be a separate activity.
2. Some of the TA-54 TRU waste drums in the 3706 TRU Waste Campaign will require processing at WCRRF in order to be shipped to WIPP, which is why WCRRF is unavailable for processing these drums from TA-55 until after completion of the 3706 TRU Waste Campaign. This is part of the basis for requesting the Temporary Authorization (see Response to Question 1). As stated in Section 1.4 of the TA request, not only will the TA allow processing of these STP wastes in accordance with the waste management standards of 40 CFR Part 268 (per 40 CFR §270.42(e)(2)(ii)(C), but will also prevent disruption of ongoing waste management activities per 40 CFR §270.42(e)(3)(ii)(C) by avoiding impacts to facilities or operations involved in the 3706 TRU Waste Campaign, such as WCRRF.



**TABLE 1 – COVERED STP WASTE IN STORAGE AS OF 09-30-2012**

Bar Code Number	Old Bar Code	Activity	Treatability Group	Waste Item Description	Accumulation Start Date	EPA Waste Numbers*	Waste Amount (Gal)	Disposition
<b>Containers to be Processed Under the Temporary Authorization</b>								
LA00000056 925	NA	TRU	Combined Combustible and Noncombustible	Heterogeneous debris	12/12/95	Group B	55	To be repacked under the proposed TA
LA00000056 038	NA	TRU	Combined Combustible and Noncombustible	Heterogeneous debris	03/28/96	Group B	55	To be repacked under the proposed TA
LA00000056 078	NA	TRU	Combined Combustible and Noncombustible	Heterogeneous debris	04/21/11	Group B	55	To be repacked under the proposed TA
LA00000056 098	NA	TRU	Combined Combustible and Noncombustible	Heterogeneous debris	04/21/11	Group B	55	To be repacked under the proposed TA
LA00000056 123	NA	TRU	Combined Combustible and Noncombustible	Organic Contaminated heterogeneous debris	04/19/11	Group C	55	To be repacked under the proposed TA
LA00000056 132	NA	TRU	Combined Combustible and Noncombustible	Organic Contaminated heterogeneous debris	04/21/11	Group C	55	To be repacked under the proposed TA
LA00000056 140	NA	TRU	Combined Combustible and Noncombustible	Heterogeneous debris	04/19/11	Group B	55	To be repacked under the proposed TA
LA00000056 144	NA	TRU	Combined Combustible and Noncombustible	Organic Contaminated heterogeneous debris	04/21/11	Group C	55	To be repacked under the proposed TA
LA00000056 158	NA	TRU	Combined Combustible and Noncombustible	Heterogeneous debris	04/21/11	Group B	55	To be repacked under the proposed TA

Bar Code Number	Old Bar Code	Activity	Treatability Group	Waste Item Description	Accumulation Start Date	EPA Waste Numbers*	Waste Amount (Gal)	Disposition
<b>Containers No Longer Included Under the Temporary Authorization Request</b>								
2144877	2135731	TRU	Combined Combustible and Noncombustible	Thionyl Chloride	02/24/98	D002, D003	500 ml	Disposition to be determined
2295977	2214368	TRU	Combined Combustible and Noncombustible	Bromobenzene	05/02/02	D001	85	Disposition to be determined
10095775	1009834	TRU	Combined Combustible and Noncombustible	Buehler Release Agent	05/13/09	D001	5	Disposition to be determined
LA00000059 417	NA	TRU	Solidified Organic Waste with Inorganics	TCE	02/13/02	F001	55	Disposition to be determined
<b>*Note::</b>								
Group B = D005, D006, D007, D008, D009, D010, and D011								
Group C = D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D035, D038, D039, D040, F001, F002, and F003								

Document: Temporary Authorization Request TA-55.  
NMED Comments Response  
Date: November 2012

INTERNAL CERTIFICATION  
NUCLEAR PROCESS INFRASTRUCTURE DIVISION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with 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.

Robert S. Dodge  
Robert Dodge  
Acting Division Leader, NPI-DO

11/06/12  
Date Signed

**CERTIFICATION**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with 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.



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**Alison M. Dorries**  
Division Leader  
Environmental Protection Division  
Los Alamos National Laboratory  
Operator

11/8/12

Date Signed



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**Kevin W. Smith**  
Manager  
Los Alamos Site Office  
National Nuclear Security Administration  
U.S. Department of Energy  
Owner/Operator

12/19/12

Date Signed

# COPY



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New Mexico Environment Department  
Hazardous Waste Bureau  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, NM 87505-6303



Dear Mr. Kieling:

**SUBJECT: RESPONSES TO QUESTIONS - TEMPORARY AUTHORIZATION REQUEST FOR WASTE REPACKAGING OPERATIONS AT TECHNICAL AREA (TA) 55, LOS ALAMOS NATIONAL LABORATORY (LANL), EPA ID NM 0890010515-1**

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