



Environmental Protection Division
Water Quality & RCRA Group (ENV-RCRA)
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Date: **AUG 23 2012**
Refer To: ENV-RCRA-12-0145
LAUR: 12-24051 and 12-01738

Mr. Mark Coffman
New Mexico Environment Department
Compliance & Technical Assistance Program
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

SUBJECT: ADDITIONAL INFORMATION IN RESPONSE TO THE NEW MEXICO ENVIRONMENT DEPARTMENT'S 2012 ANNUAL HAZARDOUS WASTE INSPECTION OF LOS ALAMOS NATIONAL LABORATORY, NM 0890010515-1

Dear Mr. Coffman:

Thank you for taking the time to meet with us on June 21, 2012 to close out the 2012 Annual Hazardous Waste Inspection of Los Alamos National Laboratory (LANL) by New Mexico Environment Department – Hazardous Waste Bureau (NMED-HWB). We appreciate the opportunity to provide you with the information requested in June 14 and June 26, 2012 emails to Mark Haagenstad, ENV-RCRA, and to respond to NMED-HWB's preliminary findings presented during our June 21 meeting.

LANL is committed to environmental protection and compliance, and respectfully requests your review and consideration of the information provided below. As noted in this response, LANL took immediate corrective actions to address potential violations and implemented appropriate measures to help ensure future compliance.

The numbered sections of the letter below correspond to the numbers of the proposed findings and incorporate the information requested by NMED-HWB.

1. Alleged Failure to Complete Box No. 2 on Four Weekly Inspection Forms

NMED-HWB has alleged that LANL violated Permit Condition ("PC") 2.6, Part I, Instructions for Use of Inspection Record Forms ("Instructions") and Attachment Condition ("AC") E.2 by failing to complete Box No. 2 on four Inspection Record Forms ("IRFs") for the weeks of May 30, June 6, June 13, and June 27, 2011 at TA-54, Area G.

Box No. 2 is for the site identification number (Site ID#). As NMED-HWB recognized, the inspections documented on the IRFs at issue were "of the entirety of TA-54, Area G and not for any single Site #." AC E.2 requires the boxes of the weekly IRFs to be completed only "as applicable." Because the inspections were not for any single site, the Site ID# field in Box No. 2 was inapplicable and therefore left blank. The "Area G" entry in Box No. 1 identified the inspected area. In addition, as provided in AC E.1.1 and the NMED-approved IRF, an "NA" is required, when appropriate, only in Box Nos. 6-28 (Part I of the IRF) to indicate the condition of the specific item inspected.

Thus, LANL believes it complied with the applicable permit requirements regarding Box No. 2 on the IRFs. However, in recognition of NMED's proposed finding, LANL created a specific Site ID# applicable to the Area G-wide weekly inspections promptly after the June 21 closeout meeting. Since June 21, LANL has instructed its inspectors to use the new Site ID#, has consistently entered that Site ID# as applicable in Box No. 2 on the appropriate IRFs, and has instituted a new QA procedure to monitor IRF completion.

LANL respectfully requests that NMED-HWB withdraw this proposed finding of violation.

2. Alleged Failure to Complete Box Nos. 15-22 on One Weekly Inspection Form

NMED-HWB has alleged that LANL violated PC 2.6 and Attachment E.2 by failing to complete Box Nos. 15-22 on one IRF completed on July 22, 2011 at TA-54-231, Pad 9, CSU, Site ID# 1988. LANL agrees with this allegation, and, as described below promptly corrected the omission.

On April 17, 2012, the LANL inspector who performed this inspection completed an addendum to correct missing information on the IRF completed on July 22, 2011 (see Enclosure 2A). As noted on the addendum, the inspector performed the inspection on July 22, signed and dated the IRF, but through human error omitted the information in Box Nos. 15-22. Although this specific form was completed correctly for Monday through Thursday of the week in question, certain boxes were inadvertently left blank for Friday July 22, 2011.

LANL procedures and training incorporate inspections and proper completion of the IRF. These are addressed in the LANL Hazardous Waste Facility Permit, LANL-Wide Training Program Outline (Attachment F, Table F-1), which incorporates RCRA Personnel Training (LANL Course 7488) and RCRA Refresher (LANL Course 28582), and in LANL Procedure No. *EP-DIV-DOP-0102*,

R.4, EWMO RCRA Inspections (see Enclosure 2B). These measures are fully intended to minimize the potential for human error in completing inspection forms. A further safeguard against human error is the new QA procedure for proper IRF completion, noted above. It should be noted that numerous inspection forms are filled out correctly each week by LANL personnel. For example, at TA-50 and TA-54 alone approximately 22 IRFs are completed weekly, and 1154 IRFs are completed annually.

3. Alleged Failure to Complete Box No. 30 on One Weekly Inspection Form

NMED-HWB has alleged that LANL violated PC 2.6 and AC E.2 by failing to note the "time of the inspection" in Box No. 30 on one IRF completed on December 28, 2011 at TA-50-69, WCRRF. LANL agrees with this allegation, and as described below, promptly corrected the omission.

On April 19, 2012, the LANL inspector who performed this inspection completed an addendum to correct this oversight. The inspector completed all of the boxes on the specific IRF for each day of the week, but due to an oversight, failed to fill in Box No. 30. As noted on the addendum, the inspector corrected this error and noted that the inspection was performed at 10:00 am on December 28, 2011 (see Enclosure 3A).

As described above, LANL procedures and training specifically address inspections and proper completion of the IRF (see Enclosure 2B). Although this specific form was not completed correctly for Box No. 30, as noted above, LANL inspectors complete thousands of IRFs correctly each year. In addition, as shown by LANL records, it is believed that is the first time the facility has received this specific finding (i.e., failure to denote the "time" of inspection).

4. Alleged Failure to Make a Hazardous Waste Determination for 13 85-Gallon Drums

On April 11, 2012, NMED-HWB inspectors observed 13 unlabeled drums located in an outdoor area immediately west of Dome 375 at TA-54, Area G. As discussed in our June 14, 2012 letter, analytical results on the 13 drums confirm that none of the drums contain hazardous waste; two drums were empty and eleven (11) contained non-hazardous solid waste. All drums have been labeled and are being properly managed.

Further information regarding the waste in the 13 drums is as follows:

- The 13 drums were previously stored in TA-54's 85-gallon drum collection area. Historically this area was used for the storage of unused surplus containers and liners that were to be dispositioned as non-hazardous waste.

The area was originally used to stage new 85-gallon overpacks intended for use by the Transuranic Waste Inspection and Storage Project ("TWISP"), starting in approximately 1996.

Many of these drums went unused during TWISP and remained stored in that area. Due to long-term outdoor storage, the surplus 85-gallon drums were ultimately considered waste. Surplus unused plastic drum liners were added to this segregated area and also considered waste. Other TWISP waste was not stored or commingled with these surplus containers and liners.

- Drums 6 and 11: These drums were empty.
- Drums 2, 5, 10, 12, and 13: The analytical results indicate that the composition of the material in these drums is consistent with rain water.
- Drums 1, 3, 4, 7, 8, and 9: Based on the recent analysis LANL has concluded that the non-hazardous material in these drums is waste associated with floor sweeping compound. Floor sweeping compound was historically used in TA-54 as an absorbent of small water and other liquid spills, and as overpack material for waste shipments to an off-site treatment facility. The used absorbent material was consistently characterized as non-hazardous waste. The overpack material was occasionally returned to LANL in 85-gallon drums by the treatment facility. This overpack material did not contact the shipped waste and was characterized by LANL as non-hazardous material upon its return. In sum, floor sweeping compound waste was consistently characterized as non-hazardous in TA-54.

Per NMED-HWB's request, enclosed are copies of the analytical data reports associated with the 13 unlabeled drums, along with the accompanying QA/QC documentation. Electronic copies (on DVD) of the three laboratory analysis data packages for the 13 drums are provided in Enclosure 4A. Enclosure 4A also contains an updated version of the data summary table previously transmitted with LANL's June 14, 2012 letter (ref: ENV-RCRA 12-0133). The enclosed table replaces the June 14, 2012 table.

LANL confirms that the abbreviation "CN" in Enclosure 1 of the June 14, 2012 letter did, in fact, refer to cyanides. The LANL sampling team used CN field test kits and the test kit product information is provided in Enclosure 4B to this letter.

5. Alleged Failure to Make a Hazardous Waste Determination for One 55-Gallon Drum

NMED-HWB has alleged that LANL failed to make a hazardous waste determination on one 55-gallon drum #84454 at TA-54, Area G, Pad 10. This preliminary finding appears to be based on the fact that during the inspection, drum #84454 was labeled "non-hazardous" and had an attached blue cardboard tag with comments indicating that the drum was placed on hold due to a pH-14 liquid. As described below, LANL made a hazardous waste determination on February 24, 2010 that drum #84454 contained non-hazardous waste, and Real Time Radiography (RTR) logs and

video confirm the absence of any liquid in this drum. Per your email requests, we have attached copies of the RTR quick scan log books, RTR video and additional supporting documentation.

The facts regarding this allegation are as follows: on February 24, 2010, drum #84454 was created in Dome 231 as a daughter drum due to processing parent drum #835337. On that same date, LANL performed a hazardous waste determination identifying drum #84454 as non-hazardous waste (see the attached *TRU Waste Storage Record (TWSR)* (Enclosure 5A) and *Waste Profile Form (WPF) 32358*¹) (Enclosure 5B). During processing of the parent drum, approximately one teaspoon of liquid was found with a pH of 14. Central Characterization Project (CCP) personnel placed a "blue tag" on drum # 84454, however, this was not intended to indicate that the daughter drum itself contained liquid waste with a pH 14 or to confirm a non-conformance with the WIPP-WAC. Instead, under CCP procedure, the blue tag is used as an administrative hold to identify WIPP-destined containers that require a further decision as to whether to issue a non-conformance report (NCR)² (see Enclosure 5C, CCP-TP-120, Rev. 14, CCP Container Management Procedure, Sec. 4, note 2). In this case, CCP did not require an NCR for drum #84454. All available information confirms that no liquid is present in drum #84454, including RTR quick scan log sheets (April 12, 2012 and June 27, 2012) and RTR video (see Enclosure 5D).³ Since these facts confirm that no liquid is present in drum #84454, there is no reasonable basis to conclude that a RCRA corrosive liquid waste is present in the form of a pH-14 liquid.

As documented above, LANL performed a hazardous waste determination on February 24, 2010 for drum #84454 and RTR log books and video confirm the absence of liquid. For these reasons, LANL respectfully requests that NMED-HWB withdraw this proposed finding of a violation.

6. Alleged Failure to Provide Secondary Containmentment for Two 55-Gallon Drums

NMED-HWB has alleged that LANL failed to provide secondary containmentment for drum #84454 and drum #84390 under the LANL Hazardous Waste Facility Permit at PC 3.7.1(1). For the reasons stated above, drum #84554 did not contain liquid hazardous waste and as such, it was not subject to secondary containmentment requirements under PC 3.7.1(1). As a result, LANL would respectfully request that this proposed finding be withdrawn.

Drum #84390

Drum #84390 originated on February 19, 2010 as the result of repackaging parent drum S853860. Drum #84390 is a new 55-gallon DOT 7A, Type A container. This drum contained waste that

¹ The generic WPF 32358 for repackaging operations provides that "all new pertinent RCRA classification/characterization information will be documented on the TWSR for each drum" (see Enclosure 5B, the WCATS report for Waste Stream Profile Id. 13944, which covers WPF 32358)).

² If an NCR was issued, resolution of the non-conformance is required prior to disposal at WIPP.

³ Please note, this DVD will play on any PC computer running Windows Media Player.

consisted of 5 aerosol cans and one (1) 4 liter metal can secured by a lid. RTR quick scan and log books show that liquids were present in the aerosol cans and the metal can but no free liquids were present in the primary container. Conservatively assuming that the aerosol cans and 4 liter metal can were completely filled with liquids, then the total amount of liquids would be no more than 2 gallons.⁴ LANL visually inspected the aerosol cans and metal can and verified that they were intact and not leaking.

On April 11, 2012, NMED personnel first identified the concern with Drum # 84390 which, at the time, was stored inside of Dome 231.⁵ The next day, on April 12, 2012, LANL moved drum #84390 from Dome 231 to Pad 10 to perform an RTR quick scan. On April 16, 2012, NMED requested photos of the drum which was still located on Pad 10 (see note 8). On April 17, 2012, after the RTR quick scan, the drum was moved inside Dome 48 and placed on to a RCRA Hazardous Waste Facility permit-compliant metal secondary containment pallet with a chemical resistant coating. LANL informed NMED-HWB at the closeout briefing on June 21, 2012 that this drum was stored inside Dome 231 on a metal pallet at the time of discovery by NMED personnel.

Drum #84390 stored low-level mixed waste, and was required to meet the secondary containment standards under PC 3.7.1(1) due to the presence of liquid hazardous waste contained within the aerosol cans and the metal can. Secondary containment is required to ensure that there is a "backup system to prevent releases into the environment in the event the primary containment, i.e., the container, fails." See U.S. EPA, RCRA Training Module, Introduction to Containers, EPA530-K-05-010 at 3 (Sept. 2005). The liquids at issue present inside these cans were packed into a new DOT 7A, Type A drum (#84390) and stored on a metal pallet inside Dome 231. Dome 231 is a tension fabric dome secured to a concrete ring wall that is elevated above the asphalt surface of the dome floor. In addition, the entrance to Dome 231 is ramped to prevent precipitation run on to the dome surface and equipped with drains on the southeast end that would collect liquids (designed to capture fire suppression water) and transfer them via drain pipe to Dome 229 sump (see Permit Attachment A.4.2.1 Pad 9). Drum 231, in turn, is completely surrounded by asphalt Pad 9 which is large (approximately 570 x 275 feet wide) and constructed with 4-6" inch thick asphalt. Asphalt Pad 9 extends to the concrete curbs on the east and west sides of the dome approximately 25 ft away.

Based on these facts, it is reasonable to conclude that if the aerosol cans and sealed metal can breached, there is very little (if any) risk that the small amount of liquids could pose a direct or immediate potential threat to the environment. If these cans (which were intact and in good

⁴ The total volume of the aerosol cans and metal can was conservatively calculated assuming the largest volume (800ml) for 5 aerosol cans and a full 4L for the metal which was identified as a "less than 4L" metal can. Assuming these cans were all full, the volume of liquids for all containers in #84390 was conservatively estimated at 2 gallons.

⁵ In its proposed findings, NMED-HWB mistakenly identifies Drum #84390 as being stored "outdoors at TA-54, Area G, Pad 10." Although the photo of the drum requested by NMED-HWB was taken on Pad 10, at the time of the inspection, the drum was stored inside Dome 231.

condition) breached, the liquids would be fully contained within the new DOT 7A, Type A drum (#84390). This is reasonable because this brand new drum was in perfect condition and far exceeds the technical specifications of a standard 55-gallon drum. There is no basis to conclude that the new drum would also fail. However, in the unlikely event that the new drum also failed, the total amount of potential liquids (~ 2 gallons) would be released onto a metal pallet located inside Dome 231 on asphalt Pad 9. Under these circumstances, it is highly improbable that any liquids would escape Dome 231 due to its technical construction (e.g., to capture run-on). If these liquids did escape Dome 231, it would be virtually impossible to penetrate the large 4-6" inch asphalt Pad 9 to impact the environment.

These measures, taken together, show that although the storage of drum #84390 may not have met the technical specifications for secondary containment prescribed by the Permit, the fact is that these liquids were fully contained within closed and sealed cans within a new DOT Type A drum stored on a metal pallet, inside Dome 231 and upon asphalt Pad 9. These circumstances clearly serve as a "back-up system" to prevent releases to the environment and are the functional equivalent to a system for secondary containment. Any potential release of the liquids from the sealed cans would not pose a direct or immediate threat to the environment. Additionally, LANL records show that the facility has not received a past notice or compliance order for this specific violation.

7. Alleged Failure to Make a Hazardous Waste Determination for Two Epinephrine Vials

NMED-HWB has alleged that LANL failed to make a hazardous waste determination in violation of PC 2.4.1, AC C.2.2, and 20 NMAC 4.1.300 (incorporating 40 CFR 262.11) with respect to two vials of epinephrine observed in the pharmacy at the LANL Occupational Medicine Building (TA-3, Building 1411).

The two unused vials contain Epinephrine Injection, USP, an aqueous solution containing no more than 0.1 percent epinephrine by weight. Like most medical applications of epinephrine (see Enclosure 7A), this formulation contains soluble epinephrine salts rather than insoluble epinephrine base, and is neither a listed nor a characteristic hazardous waste.

U.S. EPA has made clear that the P042 hazardous waste listing for epinephrine excludes epinephrine salts. Enclosure 7B contains the October 15, 2007 memorandum from U.S. EPA that clarifies the scope of the hazardous waste listing P042 for epinephrine, and the February 17, 2012 U.S. EPA memorandum reaffirming its position on epinephrine salts. As such, the two vials do not contain listed hazardous waste.

Moreover, the MSDS for this product, included in Enclosure 7C, indicates that the product does not exhibit hazardous waste characteristics. The aqueous solution of $\leq 0.1\%$ epinephrine has a pH of 3.3 (2.5 to 5.0) and is not reactive, flammable, or toxic. Thus the vials do not contain characteristic hazardous waste.

For the foregoing reasons, LANL respectfully requests that NMED-HWB withdraw this proposed finding of violation.

Please contact Mark P. Haagenstad of the Water Quality and RCRA Group (ENV-RCRA) at (505) 665-2014 with any questions.

Sincerely,



Anthony R. Grieggs
Group Leader
Water Quality & RCRA Group
Los Alamos National Security, LLC

ARG:MH:SM/lm

Enclosures:

- 2A. April 17, 2012 Addendum to the IRF for the Week Including July 22, 2011, Location TA-54-231, Pad 9 CSU, Site ID# 1988
- 2B. Excerpts from *RCRA Personnel Training Course #7488, Module 5: Inspections; RCRA Refresher Course # 28582, Module 5: Inspections; and EP-DIV-DOP-0102, R.4 EWMO RCRA Inspections, Section 5-5.4*
- 3A. April 18, 2012 Addendum to the IRF for the Week Including December 28, 2011, Location TA-50-69, Site ID# 461, 462
- 4A. Updated Data Summary Table Replacing the June 14, 2012 Table; and Three Laboratory Analysis Data Packages for the 13 85-Gallon Drums (Included on DVD);
- 4B. Cyanide Test Kit Product Information
- 5A. TRU Waste Storage Record #84454
- 5B. WCATS Report for Waste Stream Profile ID 13944, Which Covers WPF 32358
- 5C. Excerpt from CCP-TP-120 Rev.14, CCP Container Management Procedure, Sec. 4, Note 2
- 5D. RTR Container Quick Screening Log Sheets, #84454, April 12, 2012 and June 27, 2012; and June 27, 2012 RTR Video (Included on DVD)
- 7A. State of Colorado Regulatory Compliance Notice Update: Epinephrine Waste Management, August 30, 2006
- 7B. U.S. EPA Memoranda: Scope of Hazardous Waste Listing P042 (Epinephrine), October 15, 2007; and Scope of Hazardous Waste Listing P046 (Phentermine), February 17, 2012
- 7C. Epinephrine Injection MSDS

Cy: Steve Pullen, NMED/HWB, Santa Fe, NM, w/enc.
Gene Turner, LASO-EPO, w/enc., A316
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)
Mark P. Haagenstad, ENV-RCRA, w/o enc., (E-File)
Geri E. Martinez, ENV-RCRA, w/enc., (E-File)
Paul B. Schumann, ENV-RCRA, w/o enc., (E-File)
Robert A. Lechel, ENV-ES, w/o enc., (E-File)
Victoria A. George, REG-DO, w/o enc., (E-File)
Donald L. Allen, REG-DO, w/o enc., (E-File)
Susan McMichael, LC-LESH, w/enc., A187
IRM-RMMSO, w/enc., (E-File)
ENV-RCRA Correspondence File, w/enc., K490

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Signature/Review/Coordination Sheet

This form is to accompany all documents requiring review, approval, or signature by the Laboratory Director or Designee.

Date August 13, 2012	Deadline August 15, 2012	Is this a response to an action item? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
From: ENV-RCRA Name: Paul Schumann	MS: K490	<input checked="" type="checkbox"/> Call for Pick-up Name: Linda M. Salazar Phone: 7-7407

Title: Identify document, briefly describing subject matter.
 ENV-RCRA-12- 0145: ADDITIONAL INFORMATION IN RESPONSE TO THE NEW MEXICO ENVIRONMENT DEPARTMENT'S 2012 ANNUAL HAZARDOUS WASTE INSPECTION OF LOS ALAMOS NATIONAL LABORATORY NM 0800010515.1

Action Information Only

Background/Issues:
 This letter provides additional information to address potential violations that were observed by New Mexico Environment Department – Hazardous Waste Bureau (NMED-HWB) inspectors during the 2012 Annual Hazardous Waste Inspection of Los Alamos National Laboratory (LANL).
 It follows-up letter no. ENV-RCRA-12-0133 (6/14/12), which summarized the analytical results (because NMED subsequently requested the original data packages, via email dated 6/14/12).
 The date is left blank on this correspondence pending routing approval and will be stamped before release.

ACTION requested of Laboratory Director or Designee:
 Review and endorse.

PAD Endorsement

Name (print)	Signature	Date
Carl A. Beard	N/A	

AD Endorsement

Name (print)	Signature	Date
Michael T. Brandt	<i>[Signature]</i>	8/23/12

Coordinated with

1. Name (print)	Signature	Date
Michael Graham	<i>[Signature]</i>	14 Aug. 12
2. Name (print)	Signature	Date
Alison M. Dorries	<i>[Signature]</i>	8/14/12
3. Name (print)	Signature	Date
Anthony R. Grieggs	ARG	8/15/12
4. Name (print)	Signature	Date
Mark Haagenstad	<i>[Signature]</i>	8/15/12
5. Name (print)	Signature	Date
Kathryn Roberts	<i>[Signature]</i>	8/14/2012

Please ensure appropriate inter/intra Directorate/Divisional coordination and review prior to submittal to the Director's Office.
 Form 1824 (1/07)