

Los Alamos National Laboratory – 2014 ACO

Penalty Narrative – Violation # 1

Treatment of hazardous waste without a permit (neutralization). In the *Addendum to the LANL Hazardous Waste Facility Permit Reporting Instances of Noncompliance and Releases for Fiscal Years 2013 and 2013*, dated July 1, 2014, LANL reported that unpermitted treatment had been conducted as part of the remediation process for uncemented nitrate salt waste drums at the Waste Characterization, Reduction, and Repackaging Facility (WCRRF) located at Technical Area 50, Building 69 (TA-50-69). The processing of nitrate salt-bearing waste involved adding neutralizing agents to a waste stream and did not qualify for the elementary neutralization treatment permit exemption because this waste stream was assigned multiple EPA Hazardous Waste Numbers D and F, and was not a hazardous waste solely due to the corrosivity (D002) characteristic.

Violation # 1: Respondents failed to obtain a permit to treat hazardous wastes in violation of 20.4.1.900 NMAC, 40 C.F.R. § 270.1(c) when Respondents neutralized liquid from 232 containers that had multiple EPA HWNs, and therefore Respondents were not qualified or authorized to neutralize hazardous waste pursuant to the elementary neutralization exemption at 20.4.1.500 NMAC, which incorporated 40 C.F.R. §264.1(g)(6).

40 CFR § 264.1 Purpose, scope and applicability

(g) The requirements of this part do not apply to:

(6) The owner or operator of an elementary neutralization unit or a wastewater treatment unit as defined in § 260.10 of this chapter, provided that if the owner or operator is diluting hazardous ignitable (D001) wastes (other than the D001 High TOC Subcategory defined in § 268.40 of this chapter, Table Treatment Standards for Hazardous Wastes), or reactive (D003) waste, to remove the characteristic before land disposal, the owner/operator must comply with the requirements set out in § 264.17(b).

40 CFR § 270.1 Purpose and scope of these regulations

(c) Scope of the RCRA permit requirement. RCRA requires a permit for the “treatment,” “storage,” and “disposal” of any “hazardous waste” as identified or listed in 40 CFR part 261.

(2) Specific exclusions. The following persons are among those who are not required to obtain a RCRA permit:

(v) Owners and operators of elementary neutralization units or wastewater treatment units as defined in 40 CFR 260.10.

BACKGROUND:

- The HWMR state in part that “RCRA requires a permit for the ‘treatment,’ ‘storage,’ and ‘disposal’ of any ‘hazardous waste’ as identified or listed in 40 C.F.R. part 261.” See 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.1(c).
- The HWMR define “treatment” as “any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any

hazardous waste so as to neutralize such waste....” See 20.4.1.100 and 20.4.1.900 NMAC, incorporating 40 C.F.R. § 260.10 and 270.2.

- The HWMR exempt owners and operators of elementary neutralization units from the requirement to obtain a hazardous waste treatment permit. See 20.4.1.500 NMAC, incorporating 40 C.F.R. §264.1(g)(6).
- The HWMR define “elementary neutralization unit” as “a device which: 1) Is used for neutralizing wastes that are hazardous only because they exhibit the corrosivity characteristic defined in §261.22 of this chapter, or they are listed in subpart D of part 261 of the chapter only for this reason; and 2) Meets the definition of tank, tank system, container, transport vehicle, or vessel in §260.10 of this chapter.” See 20.4.1.100 NMAC, incorporating 40 C.F.R. § 260.10 .
- The HWMR define corrosivity as a solid waste that “[I]s aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5” See 20.4.1.200 NMAC, incorporating 40 C.F.R. § 261.22(a)(1).
- The HWMR prescribe that “[a] solid waste that exhibits the characteristic of corrosivity has the EPA Hazardous Waste Number of D002.” See 20.4.1.200 NMAC, incorporating 40 C.F.R. § 261.22(b).
- LANL Procedures issued on March 20, 2013 authorized the glovebox operators at TA-50-69 to check the pH of liquid in containers and neutralize it as necessary. See EP-WCRR-WO-DOP-0233, WCRRF Waste Characterization Glovebox Operations, Revision 37, pp. 77 and 78.
- On July 1, 2014, the Respondents notified NMED that under EP-WCRR-WO-DOP-0233, “Glovebox operators (operators) performed a pH test of the liquid and added neutralizing agents (powder and liquids) as necessary to neutralize the liquid waste. During this process, the operators encountered liquids that had a pH of less than 2 or greater than 12.5 and were therefore corrosive.” See Addendum to the LANL Hazardous Waste Facility Permit Reporting on Instances of Noncompliance and Releases for Fiscal Years 2012 and 2013 (“Addendum”), p. 3.
- On July 1, 2014, the Respondents notified NMED that “[t]he processing of the nitrate salt-bearing waste involved adding neutralizing agents to a waste stream and did not qualify for the elementary neutralization treatment permit exemption because this waste stream was assigned EPA Hazardous Waste Numbers D and F, and was not a hazardous waste solely due to the corrosivity (D002) characteristics or listing.” See Addendum, p. 3.
- On July 1, 2014, the Respondents notified NMED that Respondents had concluded “[T]hat the processing of the unconsolidated nitrate salt-bearing waste drums... falls outside the permit exemptions for treatment activities required by NMED rules.” See Addendum, p. 3.
- The Respondents acknowledge that the processing of nitrate salt bearing waste by the addition of neutralizing agents to a waste stream constitutes “noncompliance.” See Addendum, p. 3.
- NMED’s review of documentation provided by Respondents indicates that, from October 11, 2011 through April 24, 2014, Respondents neutralized liquid from 232 parent nitrate salt-bearing waste containers that exhibited the characteristic of corrosivity (EPA Hazardous Waste Number D002) in the glovebox at TA-50-69. See Respondents' September 30, 2014, Response to NMED’s August 26, 2014 Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 2 and 3; Addendum, p. 3; see also,

Department of Energy Office of Inspector General Report, dated September 30, 2014 (“DOE/IG-0922”), page 5; Energy Solutions Memo from Miles Smith to Dan Cox, dated May 19, 2014 (“Energy Solutions Memo”).

- The 232 parent nitrate salt bearing waste containers were not hazardous for corrosivity only, and therefore the Respondents’ neutralization activities did not qualify for the exemption at 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.1(g)(6). See Respondent’s September 30, 2014, Response to NMED’s August 26, 2014, Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachment 2; Addendum, p. 3.

1. GRAVITY-BASED COMPONENT

a) Potential for Harm: Major

MAJOR: The violation: 1) poses a substantial potential for harm to human or environmental receptors; and 2) substantially undermines the regulatory program.

On February 14, 2014, a drum containing waste that was unlawfully treated by Respondents breached at the Waste Isolation Pilot Plant, resulting in the release of americium and plutonium and the indefinite shutdown of that facility. It has not been demonstrated that the conditions causing the breach are unique to the particular drum, but instead potentially apply to all containers of nitrate-salt bearing wastes that were subjected to the same unlawful treatment process. As early as 2012 the Difficult Waste Team notified Respondents to discontinue use of organic absorbents with nitrate salts because of the possible dangers of mixing organic material with nitrates. See DOE/IG-0922, p. 4.

Regarding harm to the regulatory program, permits for the treatment of hazardous waste are required in part to ensure regulatory review and oversight of the process for the safe management of those wastes. By failing to obtain a permit, Respondents precluded the regulatory authority from providing that required review and oversight.

NMED therefore deems this issue to constitute an actual and continuing substantial potential for exposure and substantially undermines the regulatory program.

a) Extent of Deviation: Major

MAJOR: The violation violates the most important element of the requirement to such an extent that substantial noncompliance results.

Respondent’s treatment activities at TA-50-69 were conducted outside Permit authorization. Permits and the permitting process are fundamental to NM’s hazardous waste program.

NMED therefore deems this a major deviation from the regulatory and statutory requirement.

b) Number of Counts: 232

The 232 parent nitrate salt waste containers were not hazardous for corrosivity only, and therefore the Respondents' neutralization activities did not qualify for the exemption at 20.4.1.500 NMAC, incorporating 40 CFR §264.1(g)(6). Respondents neutralized liquid from 232 parent nitrate salt-bearing waste containers that exhibited the characteristic of corrosivity (D002) in the glovebox at TA-50-9 from October 11, 2011 through April 24, 2014. Each time Respondents were treating in these discrete events, they were making a decision to do so in violation of the permit; therefore NMED considers this as two hundred and thirty-two (232) counts.

2. MULTIPLE-DAY COMPONENT

Multiple-Day Penalty Application

Per the HWB Penalty Policy, application of a multi-day penalty for violations of major-major gravity is mandatory. Respondents conducted unpermitted treatment in accordance with procedure EP-WCRR-WO-DOP 0233, which underwent multiple reviews between October 11, 2011 and April 24, 2014. During this time period, respondents had ample opportunity to recognize that the remediation process constituted treatment and required a permit. Therefore, NMED deems that a multiday penalty of 60 days is appropriate.

3. ADJUSTMENT FACTORS

a) Effort to Comply

LANL ceased treatment only when waste shipments halted due to the radiological incident at WIPP. Respondents treated hazardous waste at TA-50-69 from October 11, 2011, through April 24, 2014, but did not notify NMED in writing of the treatment activities until submittal of the *Addendum to the LANL Hazardous Waste Facility Permit Reporting Instances of Noncompliance and Releases for Fiscal Years 2013 and 2013*, dated July 1, 2014. Respondents were explicitly informed as early as May 2012, that the nitrate salts in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 were potentially oxidizers; and Respondents knew also that zeolite should be used to remove the characteristic of ignitability. See Amount of Zeolite Required to Meet the Constraints Established by the EMRTC Report RF 10-13: Application to LANL Evaporator Nitrate Salts, LANL-Carlsbad Office Difficult Waste Team (DWT), May 8, 2012. The DWT notified Respondents to discontinue use of organic absorbents with nitrate salts because of the possible dangers of mixing organic materials with nitrates. See DOE/IG-0922, page 4. The multi-year delay in notifying NMED of known RCRA violations borders on "No Cooperation" per the HWB Penalty Policy, warranting an upward adjustment of 15%. However, in light of the Respondents self-disclosures on July 1, 2014, and October 21, 2014, NMED has deemed the effort to comply adjustment factor to be "Recalcitrant Cooperation" per the HWB Penalty Policy and deems the appropriate adjustment to the penalty to be upward by 5%. In further support of the

adjustment, when responding to issues identified at LANL, Department of Energy Headquarters worked to chill the communications from the Respondents to NMED which constituted bad faith and thus also supported the same upward adjustment.

b) Negligence / Willfulness

NMED considers there to have been substantial negligence on the part of the facility in association with this violation. The primary factors considered in making this determination include:

- The Respondents have a high degree of control over the circumstances leading to this violation, e.g., ability to establish communication with staff cognizant of permitting requirements.
- The Respondents could readily have foreseen the need for a permit to neutralize the subject wastes streams so prevalent within the DOE complex.
- The Respondents could readily have taken precautions to avoid this violation by expanding and ensuring communication between operations and regulatory compliance programs and having the appropriate personnel in the procedure review process to recognize and prevent this noncompliance.
- The Respondents have staff with the knowledge that would have prevented this violation. The Respondents have committed resources dedicated solely to permit compliance that possess the required compliance expertise to recognize neutralization as a potential noncompliance.
- The Respondents' level of sophistication regarding hazardous waste compliance is considerable and among the top tier of waste generators both state and nationwide.

Therefore, NMED deems the appropriate adjustment to the penalty per the HWB Penalty Policy to be upward by 15%.

c) History of Noncompliance

Respondents have not been cited for violating this requirement in the past. However, Respondents have a significant history of noncompliance with different Hazardous Waste Management Regulations (HWMR) and Permit requirements within the last ten years (2004-2007, 2009, and 2012, and 2013). Therefore, the adjustment to the penalty per the policy is upward 15%.

Other Factors

1) Self-Reporting

LANL reported the violation of failure to obtain a permit for the treatment of hazardous waste at TA-50-69 in the *Addendum to the LANL Hazardous Waste Facility Permit Reporting Instances of Noncompliance and Releases for Fiscal Years 2013 and 2013*, dated July 1, 2014. LANL discovered the noncompliance only as a result of investigating the February 14, 2014 radioactive release at WIPP, over 2 months after

the unpermitted treatment had ceased.

As the noncompliance reporting is required by PC 1.9.14, NMED deems that no penalty adjustment is warranted.

2) Small Businesses

LANL is a large federal government facility and not a small business, therefore, no penalty adjustment is warranted.

3) Unique Factors

There are no known unique factors in this case; therefore, no penalty adjustment is warranted.

4. FINANCIAL CONDITION

Due to the facility's demonstrated ability to abide with the hazardous waste requirements and to rectify problems identified, the NMED considers the financial condition of the facility to be an unwarranted consideration and therefore deems the penalty as calculated to be an appropriate deterrent.

5. ECONOMIC BENEFIT OF NONCOMPLIANCE

Calculation of the economic benefit of noncompliance is appropriate for this violation. NMED does not consider economic benefit to have been a factor associated with this violation.

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Penalty Narrative – Violation #2

Treatment of hazardous waste without a permit (addition of absorbents). In the *Addendum to the LANL Hazardous Waste Facility Permit Reporting Instances of Noncompliance and Releases for Fiscal Years 2013 and 2013*, dated July 1, 2014, LANL reported that unpermitted treatment had been conducted as part of the remediation process for uncemented nitrate salt waste drums at the Waste Characterization, Reduction, and Repackaging Facility (WCRRF) located at Technical Area 50, Building 69 (TA-50-69). The addition of absorbents was conducted in some deviating locations (e.g., parent drums and the glovebox floor) that did not meet the permit exception that absorbent be added “the first time” the waste is placed in a container.

Violation # 2: Respondents failed to obtain a permit to treat hazardous wastes, in violation of 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.1(c) when Respondents failed to add absorbent to hazardous waste at the time the waste was first placed into the 672 containers; and, therefore, Respondents were not qualified or authorized to operate under the absorption exemption at 20.4.1.500 NMAC, which incorporated 40 C.F.R. § 264.1(g)(10).

40 CFR § 264.1 Purpose, scope and applicability.

(g) The requirements of this part do not apply to:

(10) The addition of absorbent material to waste in a container (as defined in § 260.10 of this chapter) or the addition of waste to absorbent material in a container, provided that these actions occur at the time waste is first placed in the container; and §§ 264.17(b), 264.171, and 264.172 are complied with.

40 CFR § 270.1 Purpose and scope of these regulations.

(c) Scope of the RCRA permit requirement. RCRA requires a permit for the “treatment,” “storage,” and “disposal” of any “hazardous waste” as identified or listed in 40 CFR part 261.

(2) Specific exclusions. The following persons are among those who are not required to obtain a RCRA permit:

(vii) Persons adding absorbent material to waste in a container (as defined in § 260.10 of this chapter) and persons adding waste to absorbent material in a container, provided that these actions occur at the time waste is first placed in the container; and §§ 264.17(b), 264.171, and 264.172 of this chapter are complied with.

BACKGROUND:

- The HWMR state, in part, that “RCRA requires a permit for the ‘treatment,’ ‘storage,’ and ‘disposal’ of any ‘hazardous waste’ as identified or listed in 40 C.F.R. part 261.” See 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.1(c).
- The HWMR define “treatment” as “any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any

hazardous waste so as to neutralize such waste....” See 20.4.1.100 and 20.4.1.900 NMAC, incorporating 40 C.F.R. § 260.10 and 270.2.

- The HWMR state that exempt owners and operators who add absorbent to waste in a container at the time waste is first placed in the container are exempt from the requirement to obtain a hazardous waste treatment permit. See 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.1(g)(10).
- LANL Procedures issued on August 1, 2012 authorized the glovebox operators at TA-50-69 to add organic absorbent to nitrate salt waste. The procedures did not require operators to add the absorbent to the waste at the time the waste was first placed into the container. See EP-WCRR-WO-DOP-0233, WCRRF Waste Characterization Glovebox Operations, Revision 36, p. 85.
- On July 1, 2014, the Respondents notified NMED that Respondents added “[A]bsorbents in some deviating locations (e.g., parent drums and glovebox floor) that do not appear to meet the permit exception that absorbent be added ‘the first time’ the waste is placed in a ‘container.’” See Addendum, pp. 3-4.
- On July 1, 2014, the Respondents notified NMED that Respondents concluded “[T]hat the processing of the unconsolidated nitrate salt-bearing waste drums...falls outside the permit exemptions for treatment activities required by NMED rules incorporating 40 C.F.R. §§264.1(g)(6) [and] (10) and 40 C.F.R. §§270.1(c)(2)(iv) and (vii).” Respondents acknowledged that adding absorbents in deviating locations constitutes “noncompliance.” See Addendum, p. 3.
- Respondents provided documentation which indicated that, from October 11, 2011 through April 24, 2014, Respondents had added organic absorbent to nitrate salt waste removed from parent containers and subsequently placed into 672 daughter containers in the glovebox at TA-50-69. See Respondents’ September 30, 2014, Response to NMED’s August 26, 2014 Request for Information—Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachment 2; Addendum, pp. 2-3; DOE/IG-0922, pp. 2-4; Energy Solutions Memo.
- Respondents did not add absorbent to the waste at the time the waste was first placed into the containers, and therefore did not qualify for the exemption at 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.1(g)(10). See Respondents’ September 30, 2014, Response to NMED’s August 26, 2014 Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, p. 3; Addendum, p. 3-4.

1. GRAVITY-BASED COMPONENT

a) Potential for Harm: Major

MAJOR: The violation: 1) poses a substantial potential for harm to human or environmental receptors; and 2) substantially undermines the regulatory program.

On February 14, 2014, a drum containing waste that was unlawfully treated by Respondents breached at the Waste Isolation Pilot Plant, resulting in the release of americium and plutonium and the indefinite shutdown of that facility. It has not been demonstrated that the conditions causing the breach are

unique to the particular drum, but instead potentially apply to all containers of nitrate-salt bearing wastes that were subjected to the same unlawful treatment process. As early as 2012 the Difficult Waste Team notified Respondents to discontinue use of organic absorbents with nitrate salts because of the possible dangers of mixing organic material with nitrates. See DOE/IG-0922, p. 4.

Regarding harm to the regulatory program, permits for the treatment of hazardous waste are required in part to ensure regulatory review and oversight of the process for the safe management of those wastes. By failing to obtain a permit, Respondents precluded the regulatory authority from providing that required review and oversight.

NMED therefore deems this issue to constitute an actual and continuing substantial potential for exposure and substantially undermines the regulatory program.

a) Extent of Deviation: Major

MAJOR: The violation violates the most important element of the requirement to such an extent that substantial noncompliance results.

Respondent's treatment activities at TA-50-69 were conducted outside Permit authorization. Permits and the permitting process are fundamental to NM's hazardous waste program.

Respondent's treatment activities at TA-50-69 were conducted outside Permit authorization.

NMED therefore deems this a major deviation from the regulatory and statutory requirement.

b) Number of Counts: 672

Documentation provided by Respondents indicates that Respondents added absorbent to nitrate salt waste removed from 232 parent containers that was subsequently placed into 672 daughter containers in the glovebox at TA-50-69 from October 11, 2011 through April 24, 2014. Each time Respondents were treating in these discrete events, they were making a decision to do so in violation of the permit; therefore NMED considers this as six hundred and seventy-two (672) counts.

2. MULTIPLE-DAY COMPONENT

Multiple-Day Penalty Application

Per the HWB Penalty Policy, application of a multi-day penalty for violations of major-major gravity is mandatory. Respondents conducted unpermitted treatment in accordance with procedure EP-WCRR-WO-DOP 0233, which underwent multiple reviews between October 11, 2011 and April 24, 2014. During this time period, respondents had ample opportunity to recognize that the remediation process constituted treatment and required a permit. Therefore, NMED deems that a multiday penalty of 60 days is appropriate.

3. ADJUSTMENT FACTORS

a) Effort to Comply

LANL ceased treatment only when waste shipments halted due to the radiological incident at WIPP. Respondents treated hazardous waste at TA-50-69 from October 11, 2011 through April 24, 2014, but did not notify NMED in writing of the treatment activities until submittal of the *Addendum to the LANL Hazardous Waste Facility Permit Reporting Instances of Noncompliance and Releases for Fiscal Years 2013 and 2013*, dated July 1, 2014. Respondents were explicitly informed as early as May 2012, that the nitrate salts in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 were potentially oxidizers; and Respondents knew also that zeolite should be used to remove the characteristic of ignitability. See Amount of Zeolite Required to Meet the Constraints Established by the EMRTC Report RF 10-13: Application to LANL Evaporator Nitrate Salts, LANL-Carlsbad Office Difficult Waste Team (DWT), May 8, 2012. The DWT notified Respondents to discontinue use of organic absorbents with nitrate salts because of the possible dangers of mixing organic materials with nitrates. See DOE/IG-0922, page 4. The multi-year delay in notifying NMED of known RCRA violations borders on "No Cooperation" per the HWB Penalty Policy, warranting an upward adjustment of 15%. However, in light of the Respondents self-disclosures on July 1, 2014, and October 21, 2014, NMED has deemed the effort to comply adjustment factor to be "Recalcitrant Cooperation" per the HWB Penalty Policy and deems the appropriate adjustment to the penalty to be upward by 5%. In further support of the adjustment, when responding to issues identified at LANL, Department of Energy Headquarters worked to chill the communications from the Respondents to NMED which constituted bad faith and thus also supported the same upward adjustment.

b) Negligence / Willfulness

NMED considers there to have been substantial negligence on the part of the facility in association with this violation. The primary factors considered in making this determination include:

- The Respondents have a high degree of control over the circumstances leading to this violation, e.g., ability to establish communication with staff cognizant of permitting requirements.
- The Respondents could readily have foreseen the need for a permit to add absorbent at times other than when the waste is first placed in containers.
- The Respondents could readily have taken precautions to avoid this violation by expanding and ensuring communication between operations and regulatory compliance programs and having the appropriate personnel in the procedure review process to recognize and prevent this noncompliance.
- The Respondents have staff with the knowledge that would have prevented this violation. The Respondents have committed resources dedicated solely to permit compliance that possess the required compliance expertise to recognize neutralization as a potential noncompliance.

- The Respondents' level of sophistication regarding hazardous waste compliance is considerable and among the top tier of waste generators both state and nationwide.

Therefore, NMED deems the appropriate adjustment to the penalty per the HWB Penalty Policy to be upward by 15%.

c) History of Noncompliance

Respondents have not been cited for violating this requirement in the past. However, Respondents have a significant history of noncompliance with different Hazardous Waste Management Regulations (HWMR) and Permit requirements within the last ten years (2004-2007, 2009, and 2012, and 2013). Therefore, the adjustment to the penalty per the policy is upward 15%.

Other Factors

1) Self-Reporting

LANL reported the violation of failure to obtain a permit for the treatment of hazardous waste at TA-50-69 in the *Addendum to the LANL Hazardous Waste Facility Permit Reporting Instances of Noncompliance and Releases for Fiscal Years 2013 and 2013*, dated July 1, 2014. LANL discovered the noncompliance only as a result of investigating the February 14, 2014 radioactive release at WIPP, over 2 months after the unpermitted treatment had ceased.

As the noncompliance reporting is required by PC 1.9.14, NMED deems that no penalty adjustment is warranted.

2) Small Businesses

LANL is a large federal government facility and not a small business, therefore, no penalty adjustment is warranted.

3) Unique Factors

There are no known unique factors in this case; therefore, no penalty adjustment is warranted.

4. FINANCIAL CONDITION

Due to the facility's demonstrated ability to abide with the hazardous waste requirements and to rectify problems identified, the NMED considers the financial condition of the facility to be an unwarranted consideration and therefore deems the penalty as calculated to be an appropriate deterrent.

5. ECONOMIC BENEFIT OF NONCOMPLIANCE

Calculation of the economic benefit of noncompliance is appropriate for this violation. NMED does not consider economic benefit to have been a factor associated with this violation.

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Penalty Narrative – Violations # 3-7

Failure to obtain a permit to treat hazardous waste - In the *Addendum to the LANL Hazardous Waste Facility Permit Reporting Instances of Noncompliance and Releases for Fiscal Years 2013 and 2013*, dated July 1, 2014, LANL reported that unpermitted treatment had been conducted as part of the remediation process for uncemented nitrate salt waste drums at the Waste Characterization, Reduction, and Repackaging Facility (WCRRF) located at Technical Area 50, Building 69 (TA-50-69). LANL did not submit a Class 1 Permit Modification for prior NMED approval to conduct treatment of hazardous waste at TA-50-69, and the current Permit does not authorize LANL to conduct treatment of hazardous waste at TA-50-69.

Failure to obtain a permit to treat hazardous waste resulted in the following violations:

Violation # 3: Respondents treated hazardous waste in a storage unit not authorized by the Permit for treatment, in violation of 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.1(c).

40 CFR 270.1(c) Scope of the RCRA permit requirement

RCRA requires a permit for the “treatment,” “storage,” and “disposal” of any “hazardous waste” as identified or listed in 40 CFR part 261.

Violation # 4: Respondents failed to confine waste treatment to only those units which Respondents had proposed as treatment units in their Permit Application in violation of Permit Condition 2.2.

Permit Section 2.2 Authorized Wastes

The Permittees shall accept, store, treat, or otherwise manage at permitted units at the Facility only those hazardous wastes the Permittees proposed to manage at the units in the Permit Application, which are those wastes bearing the EPA Hazardous Waste Numbers (i.e., waste codes) listed in Attachment B (*Part A Application*), unless otherwise prohibited by the Permit.

Violation # 5: Respondents failed to submit a permit modification request to treat waste at TA-50-69 in violation of 20.4.1.900 NMAC, incorporating 40 CFR § 270.42.

40 CFR § 270.42 Permit modification at the request of the permittee

(a) Class 1 modifications. (1) Except as provided in paragraph (a)(2) of this section, the permittee may put into effect Class 1 modifications listed in appendix I of this section...

Appendix I, Item F.1c. Or treatment processes necessary to treat wastes that are restricted from land disposal to meet some or all of the applicable treatment standards or to treat wastes to satisfy (in whole or in part) the standard of “use of practically available technology that yields the greatest environmental benefit” contained in § 268.8(a)(2)(ii), with prior approval of the Director. This modification may also involve addition of new waste codes or narrative descriptions of wastes. It is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026, 027, and 028).

Permit Section 1.6.2 Permit Modification

This Permit may be modified for both routine and significant changes as specified in 40 CFR §§ 270.41 through 270.43, and any modification shall conform to the requirement specified in these regulations. The filing of a permit modification request by the Permittees, or the notification by the Permittees of planned changes or anticipated noncompliance, does not stay the applicability or enforceability of any permit conditions (see 40 CFR § 27.30(f)).

Violation # 6: Respondents failed to notify NMED in writing within 30 days of discovery of the deviation from the information contained in the Application which caused Respondents to be out of compliance with the Permit in violation of Permit Section 1.5.

Permit Section 1.5 Effect of Inaccuracies in Permit Application

... The Permittees shall inform the Department of any deviation from, or changes in, the information contained in the Application that would affect the Permittees' ability to comply with this Permit. Upon knowledge of such deviations, the Permittees shall, within 30 days, provide this information in writing to the Department in accordance with Permit Sections 1.9.14 and 1.9.15 and 40 CFR §§ 270.30(l)(11) and 270.43(a)(2), which are incorporated herein by reference.

Violation # 7: Respondents failed to notify NMED that they did not submit relevant facts in their permit application or otherwise Respondents submitted incorrect information in their permit application in violation of Permit Section 1.9.15.

Permit Section 1.9.15 Omissions or Misstatements in Applications or Other Reports

Whenever the Permittees become aware that they have failed to submit any relevant facts in a permit application, or have submitted incorrect information in a permit application or a report to the Department, the Permittees shall promptly report such facts or information in compliance with 40 CFR § 270.30(l)(11), which is incorporated herein by reference.

BACKGROUND:

- The HWMR state, in part, that "RCRA requires a permit for the 'treatment,' 'storage,' and 'disposal' of any 'hazardous waste' as identified or listed in 40 C.F.R. part 261." See 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.1(c).
- The HWMR define "treatment" as "any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste...." See 20.4.1.100 and 20.4.1.900 NMAC, incorporating 40 C.F.R. § 260.10 and 270.2.
- The Permit states that "[t]he Permittees shall accept, store, treat, or otherwise manage at permitted units at the Facility only those hazardous wastes the Permittees proposed to manage at the units in the Permit Application, which are those wastes bearing the EPA Hazardous Waste Numbers (i.e., waste codes) listed in Attachment B (Part A Application), unless otherwise prohibited by this Permit." See Permit Condition 2.2.

- The Waste Characterization, Reduction, and Repackaging Facility (“WCCRF”) is a permitted container storage unit at Technical Area 50, Building 69 (“TA-50-69”). See Permit Attachment B (Part A Application); Permit Attachment J, Table J-1.
- The Permit does not authorize the Respondents to conduct treatment of hazardous waste at TA-50-69. See Permit Attachment B (Part A Application); Permit Attachment J, Table J-1.
- On July 1, 2014, the Respondents notified NMED that “Permittees conclude that the processing of the remediated nitrate salt-bearing wastes constituted a noncompliance that resulted in unpermitted treatment.” See Addendum, p. 4.
- The HWMR require Respondents to submit a Class 1 permit modification for prior NMED approval to modify or add container units or “[T]reatment processes necessary to treat wastes that are restricted from land disposal to meet some or all of the applicable treatment standards....” See 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.42 Appendix I, Item F.1.c.
- Respondents did not submit a permit modification before treating hazardous waste at TA-50-69. See Addendum, p. 4.
- The Permit states that “[t]he Permittees shall inform the Department of any deviation from, or changes in, the information contained in the Application that would affect the Permittees’ ability to comply with this Permit. Upon knowledge of such deviations, the Permittees shall, within 30 days, provide this information in writing to the Department in accordance with Permit Conditions 1.9.14 and 1.9.15 and 40 C.F.R. §§ 270.30(l)(11) and 270.43(a)(2), which are incorporated herein by reference.” See Permit Condition 1.5.
- Respondents did not notify NMED in writing within 30 days of discovery that there was any deviation from or changes in the information contained in the Application by which Respondents were out of compliance with the Permit. Respondents treated hazardous waste at TA-50-69 from February 28, 2012 through April 24, 2014, but did not notify NMED in writing of the treatment activities at TA-50-69 until July 1, 2014. See Respondents’ September 30, 2014, Response to NMED’s August 26, 2014 Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 2 and 3; see also Addendum, p. 4.
- The Permit states that “[w]hensoever the Permittees become aware that they have failed to submit any relevant facts in a permit application, or have submitted incorrect information in a permit application or a report to the Department, the Permittees shall promptly report such facts or information in compliance with 40 C.F.R. § 270.30(1)(11), which is incorporated herein by reference.” See Permit Condition 1.9.15.
- The Respondents did not promptly report to NMED that they had failed to submit relevant facts in the permit application. Respondents treated hazardous waste at TA-50-69 from February 28, 2012 through April 24, 2014, but did not notify NMED of the treatment activities at TA-50-69 until July 1, 2014. See Respondents’ September 30, 2014, Response to NMED’s August 26, 2014 Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 2 and 3; see also Addendum, p. 4.

NMED chooses to consider Violations 3 and 4 as a single violation, Violation 5 as a single violation, and Violations 6 and 7 as a single violation, for the purpose of penalty calculations.

1. GRAVITY-BASED COMPONENT

a) Potential for Harm: Major

MAJOR: The violation: 1) poses a substantial potential for harm to human or environmental receptors; and 2) substantially undermines the regulatory program.

On February 14, 2014, a drum containing waste that was unlawfully treated by Respondents breached at the Waste Isolation Pilot Plant, resulting in the release of americium and plutonium and the indefinite shutdown of that facility. It has not been demonstrated that the conditions causing the breach are unique to the particular drum, but instead potentially apply to all containers of nitrate-salt bearing wastes that were subjected to the same unlawful treatment process. As early as 2012 the Difficult Waste Team notified Respondents to discontinue use of organic absorbents with nitrate salts because of the possible dangers of mixing organic material with nitrates. See DOE/IG-0922, p. 4.

Regarding harm to the regulatory program, permits for the treatment of hazardous waste are required in part to ensure regulatory review and oversight of the process for the safe management of those wastes. By failing to obtain a permit, Respondents precluded the regulatory authority from providing that required review and oversight.

NMED therefore deems this issue to constitute an actual and continuing substantial potential for exposure and substantially undermines the regulatory program.

a) Extent of Deviation: Major

MAJOR: The violation violates the most important element of the requirement to such an extent that substantial noncompliance results.

Respondent's treatment activities at TA-50-69 were conducted outside Permit authorization. Permits and the permitting process are fundamental to NM's hazardous waste program.

NMED therefore deems this a major deviation from the regulatory and statutory requirement.

b) Number of Counts: 2

Respondent's unpermitted remediation process involved two treatment steps: neutralization and absorption; therefore NMED considers this as two (2) counts, applicable to each Violation 3 and 4

combined, Violation 5, and Violation 6 and 7 combined.

2. MULTIPLE-DAY COMPONENT

Multiple-Day Penalty Application

Per the HWB Penalty Policy, application of a multi-day penalty for violations of major-major gravity is mandatory. Respondents conducted unpermitted treatment in an unauthorized unit between October 11, 2011 and April 24, 2014. During this time period, respondents had ample opportunity to recognize that the remediation process constituted treatment and required a permit, and that TA-50-69 was not an authorized unit. Therefore, NMED deems that a multiday penalty of 60 days is appropriate.

3. ADJUSTMENT FACTORS

a) Effort to Comply

LANL ceased treatment only when waste shipments halted due to the radiological incident at WIPP. Respondents treated hazardous waste at TA-50-69 from October 11, 2011 through April 24, 2014, but did not notify NMED in writing of the treatment activities until submittal of the *Addendum to the LANL Hazardous Waste Facility Permit Reporting Instances of Noncompliance and Releases for Fiscal Years 2013 and 2013*, dated July 1, 2014. Respondents were explicitly informed as early as May 2012, that the nitrate salts in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 were potentially oxidizers; and Respondents knew also that zeolite should be used to remove the characteristic of ignitability. See Amount of Zeolite Required to Meet the Constraints Established by the EMRTC Report RF 10-13: Application to LANL Evaporator Nitrate Salts, LANL-Carlsbad Office Difficult Waste Team (DWT), May 8, 2012. The DWT notified Respondents to discontinue use of organic absorbents with nitrate salts because of the possible dangers of mixing organic materials with nitrates. See DOE/IG-0922, page 4. The multi-year delay in notifying NMED of known RCRA violations borders on "No Cooperation" per the HWB Penalty Policy, warranting an upward adjustment of 15%. However, in light of the Respondents self-disclosures on July 1, 2014, and October 21, 2014, NMED has deemed the effort to comply adjustment factor to be "Recalcitrant Cooperation" per the HWB Penalty Policy and deems the appropriate adjustment to the penalty to be upward by 5%. In further support of the adjustment, when responding to issues identified at LANL, Department of Energy Headquarters worked to chill the communications from the Respondents to NMED which constituted bad faith and thus also supported the same upward adjustment.

b) Negligence / Willfulness

NMED considers there to have been substantial negligence on the part of the facility in association with this violation. The primary factors considered in making this determination include:

- The Respondents have a high degree of control over the circumstances leading to this violation, e.g., ability to establish communication with staff cognizant of permitting

requirements.

- The Respondents could readily have foreseen the need for a permit to treat the subject wastes streams at TA-50-69, which is an unauthorized unit.
- The Respondents could readily have taken precautions to avoid this violation by expanding and ensuring communication between operations and regulatory compliance programs and having the appropriate personnel in the procedure review process to recognize and prevent this noncompliance.
- The Respondents have staff with the knowledge that would have prevented this violation. The Respondents have committed resources dedicated solely to permit compliance that possess the required compliance expertise to recognize unpermitted treatment as a noncompliance.
- The Respondents' level of sophistication regarding hazardous waste compliance is considerable and among the top tier of waste generators both state and nationwide.

Therefore, NMED deems the appropriate adjustment to the penalty per the HWB Penalty Policy to be upward by 15%.

c) History of Noncompliance

Respondents have not been cited for violating this requirement in the past. However, Respondents have a significant history of noncompliance with different Hazardous Waste Management Regulations (HWMR) and Permit requirements within the last ten years (2004-2007, 2009, and 2012, and 2013). Therefore, the adjustment to the penalty per the policy is upward 15%.

Other Factors

1) Self-Reporting

LANL reported the violation of failure to obtain a permit for the treatment of hazardous waste at TA-50-69 in the *Addendum to the LANL Hazardous Waste Facility Permit Reporting Instances of Noncompliance and Releases for Fiscal Years 2013 and 2013*, dated July 1, 2014. LANL discovered the noncompliance only as a result of investigating the February 14, 2014 radioactive release at WIPP, over 2 months after the unpermitted treatment had ceased.

As the noncompliance reporting is required by PC 1.9.14, NMED deems that no penalty adjustment is warranted.

2) Small Businesses

LANL is a large federal government facility and not a small business, therefore, no penalty adjustment is warranted.

3) Unique Factors

There are no known unique factors in this case; therefore, no penalty adjustment is warranted.

4. FINANCIAL CONDITION

Due to the facility's demonstrated ability to abide with the hazardous waste requirements and to rectify problems identified, the NMED considers the financial condition of the facility to be an unwarranted consideration and therefore deems the penalty as calculated to be an appropriate deterrent.

5. ECONOMIC BENEFIT OF NONCOMPLIANCE

Calculation of the economic benefit of noncompliance is appropriate for this violation. NMED considers economic benefit to have been a factor associated with Violation #5. By failing to submit a Class 1 Permit Modification for the treatment of hazardous wastes at TA-50-69, Respondents have benefitted by avoiding the cost associated with a Class 1 Permit Modification fee of \$2,500 and an Annual Treatment Fee of 3,000 per 20.4.2 NMAC. Respondents conducted the unpermitted treatment activities from October 11, 2011 to April 24, 2014. The review time required for this class of modification is 120 days, therefore the Class 1 Permit Modification fee would have been due no later than June 13, 2011, and the Annual Treatment Fee of \$3000 for CYs 2011-2014.

Using EPA's BEN model, NMED has calculated Respondents economic benefit of noncompliance to be minimally \$19,649 in avoided Hazardous Waste Fees. The calculation was based on assessing the above defined fees to the first day of noncompliance (June 13, 2011) and a Return to Compliance (RTC) date of December 31, 2015. The estimated paid penalty date is December 31, 2015, a conservative estimate of settlement. An earlier penalty payment date will result in a smaller calculated penalty.

Model inputs include a one-time non-depreciable expenditure and annually recurring costs.

Expenditure	One-Time	Annually Recurring
Class 1 Permit Modification w/prior approval	\$2,500	-
Annual Treatment Fee (2011 – 2014)	-	\$3,000
Total	\$2,500	\$12,000

Violation #5 Failure to submit a Class 1 permit modification request

<u>Present Values as of Noncompliance Date (NCD).</u>	<u>13-Jun-2011</u>
A) On-Time Capital & One-Time Costs	\$3,791
B) Delay Capital & One-Time Costs	\$0
C) Avoided Annually Recurring Costs	\$14,736
D) Initial Economic Benefit (A-B+C)	\$18,526
E) Final Econ. Ben. at Penalty Payment Date,	
<u>31-Dec-2015</u>	<u>\$19,649</u>

Federal Facility, which pays no taxes

Discount/Compound Rate	1.3%
Discount/Compound Rate Calculated By:	BEN
Compliance Date	31-Dec-2015

Capital Investment: **avoided**

Cost Estimate	\$2,500
Cost Estimate Date	01-Mar-2009
Cost Index for Inflation	PCI
Consider Future Replacement (Useful Life)	y (15)

One-Time, Nondepreciable Expenditure:

Cost Estimate	\$0
Cost Estimate Date	N/A
Cost Index for Inflation	N/A
Tax Deductible?	N/A

Annually Recurring Costs:

Cost Estimate	\$3,000
Cost Estimate Date	01-Mar-2009
Cost Index for Inflation	PCI

User-Customized Specific Cost Estimates: **N/A**

On-Time Capital Investment	
Delay Capital Investment	
On-Time Nondepreciable Expenditure	
<u>Delay Nondepreciable Expenditure</u>	

Los Alamos National Laboratory – 2014 ACO

Penalty Narrative – Violations # 8-9

Failure to notify NMED of planned changes which may result in noncompliance - In the *Addendum to the LANL Hazardous Waste Facility Permit Reporting Instances of Noncompliance and Releases for Fiscal Years 2013 and 2013*, dated July 1, 2014, LANL reported that unpermitted treatment had been conducted as part of the remediation process for uncemented nitrate salt waste drums at the Waste Characterization, Reduction, and Repackaging Facility (WCRRF) located at Technical Area 50, Building 69 (TA-50-69). LANL did not provide NMED advanced written notice for the treatment of hazardous waste TA-50-69.

Failure to notify NMED of planned changes which could result in a noncompliance resulted in the following violations:

Violation # 8: Respondents failed to provide NMED advanced written notice that they were going to treat hazardous waste at TA-50-69 in violation of Permit Section 1.9.11.

Permit Section 1.9.11 Reporting Anticipated Noncompliance

The Permittees shall give advance written notice to the Department of any planned changes to any permitted unit at the Facility or activity which may result in noncompliance with Permit requirements (see 40 CFR § 270.30(l)(2)).

Violation # 9: Respondents failed to provide NMED an opportunity to inspect the modified unit to ensure Respondents complied with the Permit in violation of Permit Section 1.9.21.

Permit Section 1.9.21 New or Modified Permitted Units

The Permittees may not treat or store hazardous waste at a new permitted unit or in a modified portion of an existing permitted unit except as provided in 40 CFR § 270.42 until the Permittees have complied with the requirements of 40 CFR § 270.30(l)(2)(i) and (ii).

40 CFR § 270.30 Conditions applicable to all permits

(l) Reporting requirements—

(2) Anticipated noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. For a new facility, the permittee may not treat, store, or dispose of hazardous waste; and for a facility being modified, the permittee may not treat, store, or dispose of hazardous waste in the modified portion of the facility except as provided in § 270.42, until:

- (i) The permittee has submitted to the Director by certified mail or hand delivery a letter signed by the permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the permit; and
- (ii)(A) The Director has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit.

BACKGROUND:

- The Permit states that “[t]he Permittees shall give advance written notice to the Department of any planned changes to any permitted unit at the Facility or activity which may result in noncompliance with Permit requirements (see 40 C.F.R. § 270.30(l)(2)).” See Permit Condition 1.9.11.
- Respondents did not provide NMED advanced written notice that they would treat any hazardous waste at TA-50-69.
- The Permit prescribes that, “[P]ermittees may not treat or store hazardous waste at a new permitted unit or in a modified portion of an existing permitted unit except as provided in 40 C.F.R. § 270.42 until the Respondents have complied with the requirements of 40 C.F.R. §§ 270.30(l)(2)(i) and (ii).” See Permit Condition 1.9.21.
- The HWMR require the Respondents to notify NMED in advance of any changes to a permitted unit, and provide NMED the opportunity to inspect the modified unit to ensure compliance with the Permit. See 20.4.1.900 NMAC, incorporating 40 C.F.R. §§ 270.30(l)(2)(i) and (ii).
- The Respondents did not provide NMED an opportunity to inspect the modified unit to ensure compliance with the Permit. See Respondents’ September 30, 2014, Response to NMED’s August 26, 2014 Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 2 and 3; see also Addendum, p. 4.

1. GRAVITY-BASED COMPONENT

a) Potential for Harm: **Major**

MAJOR: The violation: 1) poses a substantial potential for harm to human or environmental receptors; and 2) substantially undermines the regulatory program.

Failure to provide NMED advanced written notice of the treatment of hazardous waste and failure to provide NMED an opportunity to inspect an associated unit can be attributed to the harm caused by the breached container at WIPP that underwent unlawful treatment at LANL. That harm includes the release of americium and plutonium and the indefinite shutdown of that facility.

Regarding harm to the regulatory program, not involving the regulatory authority precludes that authority from providing appropriate review and oversight.

NMED therefore deems this issue to constitute a substantial potential for exposure and substantially undermines the regulatory program.

a) Extent of Deviation: **Major**

MAJOR: The violation violates the most important element of the requirement to such an extent that

substantial noncompliance results.

The purpose of the requirement of advance notification of any planned changes which may result in noncompliance with Permit requirements and regulatory inspection of a proposed unit is to ensure regulatory review and oversight of the process for the safe management of hazardous wastes. By failing to provide advance notification, Respondents precluded the regulatory authority from providing that required review and oversight.

NMED therefore deems this a major deviation from the regulatory and statutory requirement.

b) Number of Counts: 2

Respondent's unpermitted remediation process involved two treatment steps: neutralization and absorption; therefore NMED considers this as two (2) counts, applicable to each Violation 8 and 9.

2. MULTIPLE-DAY COMPONENT

Multiple-Day Penalty Application

Per the HWB Penalty Policy, application of a multi-day penalty for violations of major-major gravity is mandatory. Respondents conducted unpermitted treatment in an unauthorized unit between October 11, 2011 and April 24, 2014. During this time period, respondents had ample opportunity to recognize that the remediation process constituted treatment and required a permit, and that TA-50-69 was not an authorized unit. Therefore, NMED deems that a multiday penalty of 60 days is appropriate.

3. ADJUSTMENT FACTORS

a) Effort to Comply

LANL ceased treatment only when waste shipments halted due to the radiological incident at WIPP. Respondents treated hazardous waste at TA-50-69 from October 11, 2011 through April 24, 2014, but did not notify NMED in writing of the treatment activities until submittal of the *Addendum to the LANL Hazardous Waste Facility Permit Reporting Instances of Noncompliance and Releases for Fiscal Years 2013 and 2013*, dated July 1, 2014. Respondents were explicitly informed as early as May 2012, that the nitrate salts in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 were potentially oxidizers; and Respondents knew also that zeolite should be used to remove the characteristic of ignitability. See Amount of Zeolite Required to Meet the Constraints Established by the EMRTC Report RF 10-13: Application to LANL Evaporator Nitrate Salts, LANL-Carlsbad Office Difficult Waste Team (DWT), May 8, 2012. The DWT notified Respondents to discontinue use of organic absorbents with nitrate salts because of the possible dangers of mixing organic materials with nitrates. See DOE/IG-0922, page 4. The multi-year delay in notifying NMED of known RCRA violations borders on "No Cooperation" per the HWB Penalty Policy, warranting an upward adjustment of 15%. However, in

light of the Respondents self-disclosures on July 1, 2014, and October 21, 2014, NMED has deemed the effort to comply adjustment factor to be “Recalcitrant Cooperation” per the HWB Penalty Policy and deems the appropriate adjustment to the penalty to be upward by 5%. In further support of the adjustment, when responding to issues identified at LANL, Department of Energy Headquarters worked to chill the communications from the Respondents to NMED which constituted bad faith and thus also supported the same upward adjustment.

b) Negligence / Willfulness

NMED considers there to have been substantial negligence on the part of the facility in association with this violation. The primary factors considered in making this determination include:

- The Respondents have a high degree of control over the circumstances leading to this violation, e.g., ability to establish communication with staff cognizant of permitting requirements.
- The Respondents could readily have foreseen the need to provide advance written notification of treatment of the subject wastes streams at TA-59-60, which is an unauthorized unit.
- The Respondents could readily have taken precautions to avoid this violation by expanding and ensuring communication between operations and regulatory compliance programs and having the appropriate personnel in the procedure review process to recognize and prevent this noncompliance.
- The Respondents have staff with the knowledge that would have prevented this violation. The Respondents have committed resources dedicated solely to permit compliance that possess the required compliance expertise to recognize unpermitted treatment as a potential noncompliance.
- The Respondents’ level of sophistication regarding hazardous waste compliance is considerable and among the top tier of waste generators both state and nationwide.

Therefore, NMED deems the appropriate adjustment to the penalty per the HWB Penalty Policy to be upward by 15%.

c) History of Noncompliance

The facility was previously cited for failure to report a permit noncompliance in a timely manner in 1997, but has not been cited for this violation during the last 10 years. However, Respondents have a significant history of noncompliance with different Hazardous Waste Management Regulations (HWMR) and Permit requirements within the last ten years (2004-2007, 2009, and 2012, and 2013). Therefore, the adjustment to the penalty per the policy is upward 15%.

Other Factors

1) Self-Reporting

This violation was determined by NMED following review of the *Addendum to the LANL Hazardous Waste Facility Permit Reporting Instances of Noncompliance and Releases for Fiscal Years 2013 and 2013*, dated July 1, 2014, in which LANL reported the violation of failure to obtain a permit for the treatment of hazardous waste at TA-50-69.

As the noncompliance reporting is required by PC 1.9.14, NMED deems that no penalty adjustment is warranted.

2) Small Businesses

LANL is a large federal government facility and not a small business, therefore, no penalty adjustment is warranted.

3) Unique Factors

There are no known unique factors in this case; therefore, no penalty adjustment is warranted.

4. FINANCIAL CONDITION

Due to the facility's demonstrated ability to abide with the hazardous waste requirements and to rectify problems identified, the NMED considers the financial condition of the facility to be an unwarranted consideration and therefore deems the penalty as calculated to be an appropriate deterrent.

5. ECONOMIC BENEFIT OF NONCOMPLIANCE

Calculation of the economic benefit of noncompliance is appropriate for this violation. NMED does not consider economic benefit to have been a factor associated with this violation.

Los Alamos National Laboratory – 2014 ACO
Penalty Narrative – Violation # 10

Failure to adequately characterize waste - LANL failed to fully characterize waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 prior to treating, storing, or otherwise managing containers of those wastes. Initial characterization of these waste streams did not indicate that the waste streams contained D001 or D002 waste. Subsequent processing, sampling and analysis, and re-evaluation of AK indicate some containers in these waste streams may contain D001 and D002 waste, and therefore the initial characterization using AK was insufficient.

Violation # 10: Respondents accepted waste streams for storage and treatment at permitted units at the Facility that were not fully characterized in violation of Permit Section 2.4.1.

Permit Section 2.4.1 General Waste Characterization Requirements

The Permittees shall accept, store, treat, or otherwise manage at permitted units at the Facility only those hazardous waste streams that have been fully characterized in accordance with the requirements of 40 CFR § 264.13, which is incorporated herein by reference, the conditions in this Permit Part, and Attachment C (Waste Analysis Plan).

Permit Attachment C.3.2 Mixed Transuranic Waste Characterization

If AK is inadequate to characterize a homogenous MTRUW stream or container (e.g., homogenous solids, oil and gravel, aqueous liquids and slurries) the Permittees shall collect a representative sample of the waste and submit the waste for laboratory analysis.

BACKGROUND:

- The Permit requires that “Permittees shall accept, store, treat, or otherwise manage at permitted units at the Facility only those hazardous waste streams that have been fully characterized in accordance with the requirements of 40 C.F.R. § 264.13, which is incorporated herein by reference, the conditions in this Permit Part, and Attachment C (Waste Analysis Plan).” See Permit Condition 2.4.1.
- The Permit requires Respondents to obtain and document “all applicable EPA hazardous waste numbers” prior to treating, storing, or otherwise managing a hazardous waste stream. See Permit Condition 2.4.1(1).
- The Permit requires that “[W]hen acceptable knowledge is insufficient to fully characterize a waste stream, the Permittees shall utilize sampling and analysis to complete that characterization.” See Permit Condition 2.4.1; see also Permit Attachment C.3.2.
- On July 1, 2014, the Respondents notified NMED that “[I]n the early 1990s, the Respondents conducted initial hazardous waste characterization of all mixed transuranic waste streams, which included extensive information on acceptable knowledge and other documentation.” See Addendum, p. 4.
- On July 1, 2014, the Respondents notified NMED that “[d]uring the processing of the nitrate salt-bearing waste drums [at TA-50-69] operators conducted pH tests and determined that some of

the liquids decanted from the parent drum(s) had a pH of less than 2 and were corrosive for D002.” See Addendum, p. 4.

- On September 30, 2014, the Respondents notified NMED that they had assigned D002 for corrosivity to 26 of the 29 un-remediated nitrate salt-bearing waste containers with free liquid in Dome 231. See Respondents’ September 30, 2014, Response to NMED’s August 26, 2014 Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, p. 5.
- The CCP AK summary report that was released on December 12, 2012, states the waste in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 are not liquid and are therefore not corrosive, illustrating that the characterization of these waste streams at the time they were placed in storage was insufficient. See CCP-AK-LANL-006, Revision 12, pp. 104, 122, 137, and 150.
- On July 30, 2014, the Respondents notified NMED that they had assigned D001 for ignitability to the 57 remediated nitrate salt-bearing waste containers and to the 29 un-remediated nitrate salt-bearing waste containers in isolation at LANL. See July 30, 2014, Written Notice Regarding Application of EPA Hazardous Waste Number D001 to Certain Nitrate Salt-Bearing Waste Containers at LANL.
- In a letter dated September 5, 2014, LANL informed NMED that they had assigned D001 for ignitability to all nitrate salt-bearing waste containers in storage at LANL because analytical results from tests conducted on May 22, 2014, and July 29, 2014 indicated that LANL could not exclude the application of D001, and that the nitrate salt-bearing waste containers could be classified as oxidizers. Also, LANL failed to mitigate the ignitability characteristic when it remediated the nitrate salt-bearing waste containers using organic absorbents instead of the zeolite-based absorbents recommended by the LANL Difficult Waste Team on May 8, 2012. See Respondents’ September 5, 2014, Response to NMED’s Information Request Regarding LANL’s Nitrate Salt-Bearing Waste Container Isolation Plan, p. 3-4.
- On October 21, 2014, the Respondents confirmed to NMED that they “[F]ailed to conduct an adequate hazardous waste determination for the nitrate salt-bearing wastes with regard to EPA Hazardous Waste Number (HWN) D001 (ignitability characteristic)” and “failed to meet specific LANL Permit requirements.” See Second Addendum, Reporting Additional Instances of Noncompliance with Hazardous Waste Facility Permit and Generator Requirements, LANL (“Second Addendum”), p. 3.
- The Central Characterization Project (“CCP”) AK summary report, released December 12, 2012, states the nitrate salts in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 are not an oxidizer, illustrating that the characterization of these waste streams at the time they were placed in storage was insufficient. See CCP-AK-LANL-006, Revision 12, pp. 104, 121, 136, and 150.
- The nitrate salt-bearing waste containers that were processed at TA-50-69 were from waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001. See Respondents’ September 30, 2014, Response to NMED’s August 26, 2014 Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 2 and 3.

- Subsequent processing, sampling and analysis, and re-evaluation of AK indicates that some containers in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 contained D001 and D002 waste. See Respondents' September 5, 2014, Response to NMED's Information Request Regarding LANL's Nitrate Salt Bearing Waste Container Isolation Plan, p. 3-4; see also Respondents' September 30, 2014, Response to NMED's August 26, 2014 Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 2 and 3.
- The Respondents' AK used for initial characterization of waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 was insufficient, and the Respondents did not utilize sampling or analysis to complete the characterization. The Respondents' initial characterization of waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 did not indicate that the waste streams contained D001 or D002 waste. The Respondents did not fully characterize waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 prior to storage as required by Permit Condition 2.4.1.

1. **GRAVITY-BASED COMPONENT**

a) **Potential for Harm:** **Major**

MAJOR: The violation: 1) poses a substantial potential for harm to human or environmental receptors; and 2) substantially undermines the regulatory program.

Failure to fully characterize waste streams resulted in ignitable and corrosive wastes inappropriately being transferred to WIPP and can be attributed to the February 14, 2014, container breach that resulted in the release of americium and plutonium and the indefinite shutdown of that facility.

Regarding harm to the regulatory program, appropriate waste characterization and the determination of all applicable waste codes, particularly the determination of whether a waste is ignitable or corrosive, is fundamental to the hazardous waste program. Both the LANL and WIPP permits contain significant requirements associated with ignitable and corrosive wastes and failure to make this determination caused the lack of adherence to many of these requirements.

Furthermore, NMED utilized the following table to quantify the harm caused by this violation.

POTENTIAL FOR HARM RANKING SYSTEM FOR HAZARDOUS WASTE VIOLATIONS

Violation	Description	Nature of Waste	Waste Volume	Releases	Affected Population	Total Score
PC 2.4.1 40 CFR 264.13(a)	Failure to adequately characterize waste.	8	8	6	3*	25

SCORING SYSTEM

Nature of Waste		Waste Volume	Receptors	
			Releases	Affected Population
Category 1 8	F, P, U wastes with "H" designation	8 - > 25 drums	6 - Actual Discharge	4 - > 1,000
	D003 reactive wastes; F, K, U, P wastes with "R" designation	5 - 6-25 drums	4 - Potential for Discharge	3 - 100 - 1,000
	Other waste which may present a significantly greater hazard due to extreme ignitability, corrosivity, toxicity, or acutely toxic or reactive	2 - < 6 drums	1 - No Discharge	2 - 10 - 100
Category 2 4	Any other waste not meeting Category 1			1 - < 10

TOTAL POTENTIAL FOR HARM

19-26	Major
13-18	Moderate
6-12	Minor

*The affected population is nominally based on the number of WIPP employees potentially exposed during the radiological release event. Approximately 150 employees have been included in bioassay monitoring. Potential affected population continues to include WIPP employees as well as workers associated with the isolated containers at LANL, and the containers in storage at WCS.

NMED therefore deems this issue to constitute a substantial potential for exposure and substantially undermines the regulatory program.

a) Extent of Deviation: Major

MAJOR: The violation violates the most important element of the requirement to such an extent that substantial noncompliance results.

Two significant reasons for the requirement to adequately perform waste characterization are; 1) to prevent accidental or spontaneous ignition or reaction of ignitable or reactive wastes, including, but not limited to, ignition or reaction in containers and tank systems, and 2) to determine whether the waste stream is prohibited from land disposal" prior to treating, storing, or otherwise managing a hazardous waste stream. Inadequate characterization of the unremediated wastes likely contributed to the facility's failure to recognize the incompatibility proposed in TA-50-69 remediation procedure EP-WCRR-WO-DOP-0233.

NMED therefore deems this a major deviation from the regulatory and statutory requirement.

b) Number of Counts: 4

Violation #10 is associated with the acceptance of four waste streams (LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001) for storage and treatment at permitted units that were not fully characterized; therefore NMED considers this as four (4) counts.

2. MULTIPLE-DAY COMPONENT

Multiple-Day Penalty Application

Per the HWB Penalty Policy, application of a multi-day penalty for violations of major-major gravity is mandatory. NMED considers Violation 10 to be associated with the storage and treatment of insufficiently characterized wastes. As these wastes were generated and then stored for a period exceeding 60 days prior to treatment, NMED deems a multiday penalty of 60 days to be appropriate.

3. ADJUSTMENT FACTORS

a) Effort to Comply

LANL ceased treatment only when waste shipments halted due to the radiological incident at WIPP. Respondents treated hazardous waste at TA-50-69 from October 11, 2011 through April 24, 2014, but did not notify NMED in writing of the treatment activities until submittal of the *Addendum to the LANL Hazardous Waste Facility Permit Reporting Instances of Noncompliance and Releases for Fiscal Years 2013 and 2013*, dated July 1, 2014. Respondents were explicitly informed as early as May 2012, that the nitrate salts in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 were potentially oxidizers; and Respondents knew also that zeolite should be used to remove the characteristic of ignitability. See Amount of Zeolite Required to Meet the Constraints Established by the EMRTC Report RF 10-13: Application to LANL Evaporator Nitrate Salts, LANL-Carlsbad Office Difficult Waste Team (DWT), May 8, 2012. The DWT notified Respondents to discontinue use of organic absorbents with nitrate salts because of the possible dangers of mixing organic materials with nitrates. See DOE/IG-0922, page 4. The multi-year delay in notifying NMED of known RCRA violations borders on “No Cooperation” per the HWB Penalty Policy, warranting an upward adjustment of 15%. However, in light of the Respondents self-disclosures on July 1, 2014, and October 21, 2014, NMED has deemed the effort to comply adjustment factor to be “Recalcitrant Cooperation” per the HWB Penalty Policy and deems the appropriate adjustment to the penalty to be upward by 5%. In further support of the adjustment, when responding to issues identified at LANL, Department of Energy Headquarters worked to chill the communications from the Respondents to NMED which constituted bad faith and thus also supported the same upward adjustment.

b) **Negligence / Willfulness**

NMED considers there to have been substantial negligence on the part of the facility in association with this violation. The primary factors considered in making this determination include:

- The Respondents have a high degree of control over the circumstances leading to this violation, e.g., the obligation to utilize sampling and analysis to complete characterization when acceptable knowledge was insufficient.
- The Respondents had identified nitrates as a Class 1 oxidizer that is prohibited at TA-50-69 as early as June 2007. See R1 revision history in EP-WCRR-WO-DOP-0233, R.37.
- Respondents had conducted an internal review of the applicability of D001, D002, and D003 waste codes for the TA-55 nitrate salt wastes in February 2012, and concluded that the waste may potentially behave as an oxidizer and that direct testing would be necessary to make that determination. See ENV-RCRA-12-0053.
- The Respondents instead relied on the Central Characterization Project (“CCP”) AK summary report, released December 12, 2012, states the nitrate salts in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 are not an oxidizer, without performing confirmatory sampling and analysis.
- The Respondents could readily have foreseen the need for thorough characterization given the availability of data on the subject wastes streams so prevalent within the DOE complex.
- The Respondents could readily have taken precautions to avoid this violation by expanding and ensuring communication to ensure that the available subject waste stream data within the DOE complex was included in the characterization process.
- The Respondents have staff with the knowledge that would have prevented this violation. The Respondents have committed resources dedicated solely to permit compliance that possess the required compliance expertise to recognize insufficient characterization and/or the acceptance and storage of insufficiently characterized waste as potential noncompliances.
- The Respondents’ level of sophistication regarding hazardous waste compliance is considerable and among the top tier of waste generators both state and nationwide.

Therefore, NMED deems the appropriate adjustment to the penalty per the HWB Penalty Policy to be upward by 15%.

c) **History of Noncompliance**

Respondents have not been cited for violating this requirement in the past. However, Respondents have a significant history of noncompliance with different Hazardous Waste Management Regulations (HWMR) and Permit requirements within the last ten years (2004-2007, 2009, and 2012, and 2013). Therefore, the adjustment to the penalty per the policy is upward 15%.

Other Factors

1) Self-Reporting

LANL reported the D001 and D002 noncompliances in the *Written Notice Regarding Application of EPA Hazardous Waste Number D001 to Certain Nitrate Salt Bearing Waste Containers at LANL*, dated July 30, 2014 and the *June 5, 2014 Technical Update*, respectively.

As the noncompliance reporting is required by PC 1.9.14, NMED deems that no penalty adjustment is warranted.

2) Small Businesses

LANL is a large federal government facility and not a small business, therefore, no penalty adjustment is warranted.

3) Unique Factors

There are no known unique factors in this case; therefore, no penalty adjustment is warranted.

4. FINANCIAL CONDITION

Due to the facility's demonstrated ability to abide with the hazardous waste requirements and to rectify problems identified, the NMED considers the financial condition of the facility to be an unwarranted consideration and therefore deems the penalty as calculated to be an appropriate deterrent.

5. ECONOMIC BENEFIT OF NONCOMPLIANCE

NMED does not consider economic benefit to have been a factor associated with this violation.

Los Alamos National Laboratory – 2014 ACO
Penalty Narrative – Violations # 11-14

Failure to reevaluate initial waste characterization - LANL failed to perform reevaluation of initial characterization information and annual verification of waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001. The initial characterization of these streams did not indicate the characteristics of corrosivity or ignitability. Remediation records dating to February 2012 indicate that some of the liquid in the nitrate salt-bearing waste containers had a pH below 2, which obligated the reevaluation of the characterization and assigned HWN D002 for corrosivity. The nitrate salts were identified as potential oxidizers in "Amount of Zeolite Required to Meet the Constraints Established by the EMRTC Report RF 10-13: Application to LANL Evaporator Nitrate Salts," LANL-Carlsbad Office Difficult Waste Team, dated May 8, 2012, which obligated the reevaluation of the characterization and assigned HWN D001 for ignitability. LANL did not review, repeat, or annually reevaluate the initial characterization nor recharacterize based on documented changes in the waste stream.

Failure to reevaluate initial waste characterizations resulted in the following violations:

Violation # 11: Respondents failed to ensure that the initial characterization of waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 was reviewed or repeated to verify that the characterization was accurate and up to date is a violation of Permit Section 2.4.7.

Permit Section 2.4.7 Waste Characterization Review

The Permittees shall ensure that the initial characterization of any hazardous waste stream managed under this Permit is reviewed or repeated to verify that the characterization is accurate and up-to-date (see 40 CFR § 264.13(b)(4)). The Permittees shall document this review on the Facility Operating Record.

The Permittees shall perform the following:

- (1) Annually reevaluate all hazardous waste streams generated to verify the accuracy of initial and subsequent characterization results. The annual reevaluation shall be required no later than one year from the date of initial characterization of the hazardous waste stream or one year from the last annual reevaluation.
- (2) Recharacterize hazardous wastes whenever there is a change in the waste-generating processes which includes a change in the status of the waste for purpose of Land Disposal Restrictions or when analytical results indicate a change in the waste stream.

40 CFR § 264.13 General waste analysis.

(b) The owner or operator must develop and follow a written waste analysis plan which describes the procedures which he will carry out to comply with paragraph (a) of this section. He must keep this plan at the facility. At a minimum, the plan must specify:

- (4) The frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up to date.

Violation # 12: Respondents failed to annually reevaluate waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 to verify the accuracy of initial and subsequent characterization results is a violation of Permit Section 2.4.7(1).

Permit Section 2.4.7 Waste Characterization Review

The Permittees shall perform the following:

- (1) Annually reevaluate all hazardous waste streams generated to verify the accuracy of initial and subsequent characterization results. The annual reevaluation shall be required no later than one year from the date of initial characterization of the hazardous waste stream or one year from the last annual reevaluation.

Violation # 13: Respondents failed to reevaluate waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 to assess the accuracy of the initial waste characterization regarding EPA HWN assignments is a violation of Permit Section 2.4.7(2).

Permit Section 2.4.7 Waste Characterization Review

The Permittees shall perform the following:

- (2) Recharacterize hazardous wastes whenever there is a change in the waste generating processes which includes a change in the status of the waste for purposes of Land Disposal Restrictions or when analytical results indicate a change in the waste streams.

Violation # 14: The Permittees' failure to perform reevaluation of initial characterization information and annual verification of waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 is a violation of Permit Attachment C, Section C.3.

Permit Attachment C, Section C.3.

... The Permittees shall perform reevaluation of initial characterization information and annual verification in accordance with Permit Section 2.4.7.

BACKGROUND:

- The Permit prescribes that "Permittees shall ensure that the initial characterization of any hazardous waste stream managed under this Permit is reviewed or repeated to verify that the characterization is accurate and up to date (see 40 C.F.R. § 264.13(b)(4)). The Permittees shall document this review in the Facility Operating Record." See Permit Condition 2.4.7.
- The Respondents did not conduct a review of the initial characterization to verify that the characterization was accurate or updated. See Addendum, p. 4.
- The Permit requires Respondents to "Annually reevaluate all hazardous waste streams generated to verify the accuracy of initial and subsequent characterization results. The annual reevaluation shall be required no later than one year from the date of initial characterization of the hazardous waste stream or one year from the last annual reevaluation." See Permit Condition 2.4.7(1).
- The Respondents knew as early as February 2012 that some of the liquid in the nitrate salt bearing waste containers had a pH below 2, and therefore Respondents were required to

reevaluate the characterization and assign HWN D002 for corrosivity. See Respondents' September 30, 2014, Response to NMED's August 26, 2014 Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachment 3.

- The Respondents knew as early as May 2012 that the nitrate salts in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 were potentially oxidizers and therefore Respondents were required to reevaluate the characterization and assign HWN D001 for ignitibility. See "Amount of Zeolite Required to Meet the Constraints Established by the EMRTC Report RF 10-13: Application to LANL Evaporator Nitrate Salts," LANL-Carlsbad Office Difficult Waste Team, May 8, 2012.
- Respondents had an obligation to reevaluate the nitrate salt bearing waste streams after becoming aware of subsequent characterization results that indicated the waste may be ignitable (D001) and corrosive (D002).
- The Permit requires that Respondents "Recharacterize hazardous waste whenever there is a change in the waste generating processes which includes a change in the status of the waste for purposes of Land Disposal Restrictions or when analytical results indicate a change in the waste stream." See Permit Condition 2.4.7(2).
- On July 1, 2014, Respondents notified NMED that "[D]uring the processing of the nitrate salt-bearing waste drums... operators conducted pH tests and determined that some of the liquids decanted from the parent drum(s) had a pH of less than 2 and were corrosive for D002. Based on the operators' analytical results, Permittees concluded that they had an obligation to reevaluate the unconsolidated nitrate salt-bearing waste to assess the accuracy of the initial waste characterization in accordance with Permit Condition 2.4.7(2)." See Addendum, p. 4.
- Respondents were informed in May 2012 that the nitrate salts in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 were potentially oxidizers, and therefore Respondents were required to reevaluate the characterization and assign HWN D001 for ignitibility. See "Amount of Zeolite Required to Meet the Constraints Established by the EMRTC Report RF 10-13: Application to LANL Evaporator Nitrate Salts," LANL-Carlsbad Office Difficult Waste Team, May 8, 2012.
- The Permit requires that, "Permittees shall perform reevaluation of initial characterization information and annual verification in accordance with Permit Condition 2.4.7." See Permit Attachment C, Condition C.3.
- The Respondents did not perform reevaluation of initial waste characterization information or annual verification pursuant to Permit Condition 2.4.7.

For the purposes of penalty calculations, NMED chooses to assess Violations 11 through 14 as a single violation.

1. GRAVITY-BASED COMPONENT

a) Potential for Harm: Major

MAJOR: The violation: 1) poses a substantial potential for harm to human or environmental receptors;

and 2) substantially undermines the regulatory program.

Failure to reevaluate the initial characterization of waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 may have contributed to: 1) the facility's failure to recognize the incompatible treatment proposed in TA-50-69 remediation procedure EP-WCRR-WO-DOP-0233; 2) the facility's failure to identify wastes that did not conform to the WIPP Waste Acceptance Criteria (WAC) which prohibits EPA hazardous waste number D001; 3) a container breach at the Waste Isolation Pilot Plant; and 4) the release of americium and plutonium at WIPP.

Subsequent analysis and remediation records review for the waste streams resulted in the retrospective application of hazardous waste number D001 to 86 containers in isolation at LANL, 368 containers transported to WIPP, and 119 containers transported to WCS; and hazardous waste number D002 to 26 un-remediated containers at LANL.

Regarding harm to the regulatory program, appropriate waste characterization and recharacterization and the determination of all applicable waste codes, particularly the determination of whether a waste is ignitable or corrosive, is fundamental to the hazardous waste program. Both the LANL and WIPP permits contain significant requirements associated with ignitable and corrosive wastes and failure to make this determination caused the lack of adherence to many of these requirements.

NMED therefore deems this issue to constitute a substantial potential for exposure and substantially undermines the regulatory program.

a) Extent of Deviation: Major

MAJOR: The violation violates the most important element of the requirement to such an extent that substantial noncompliance results.

NMED considers failure to review, repeat, or annually reevaluate the initial waste characterization or to recharacterize in light of documented deviant pH readings in remediation records and suspect oxidizer characterization by the Difficult Waste Team report a major deviation from the regulatory and statutory requirement.

b) Number of Counts: 92

Violations #11-14 are associated with the failure to annually reevaluate four waste streams (LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001) to verify the accuracy of initial and subsequent characterization results. Respondents advised that initial characterization was conducted "in the early 1990s" (see Addendum, p.4); therefore Respondents have failed to conduct annual reevaluation of each of the four waste streams approximately 23 times. NMED therefore considers this as ninety-two (92) counts.

2. MULTIPLE-DAY COMPONENT

Multiple-Day Penalty Application

Per the HWB Penalty Policy, application of a multi-day penalty for violations of major-major gravity is mandatory. NMED considers the duration of noncompliance to be addressed in the counts, and chooses not to assign a separate multi-day penalty.

3. ADJUSTMENT FACTORS

a) Effort to Comply

LANL ceased treatment only when waste shipments halted due to the radiological incident at WIPP. Respondents treated hazardous waste at TA-50-69 from October 11, 2011 through April 24, 2014, but did not notify NMED in writing of the treatment activities until submittal of the *Addendum to the LANL Hazardous Waste Facility Permit Reporting Instances of Noncompliance and Releases for Fiscal Years 2013 and 2013*, dated July 1, 2014. Respondents were explicitly informed as early as May 2012, that the nitrate salts in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 were potentially oxidizers; and Respondents knew also that zeolite should be used to remove the characteristic of ignitability. See Amount of Zeolite Required to Meet the Constraints Established by the EMRTC Report RF 10-13: Application to LANL Evaporator Nitrate Salts, LANL-Carlsbad Office Difficult Waste Team (DWT), May 8, 2012. The DWT notified Respondents to discontinue use of organic absorbents with nitrate salts because of the possible dangers of mixing organic materials with nitrates. See DOE/IG-0922, page 4. The multi-year delay in notifying NMED of known RCRA violations borders on “No Cooperation” per the HWB Penalty Policy, warranting an upward adjustment of 15%. However, in light of the Respondents self-disclosures on July 1, 2014, and October 21, 2014, NMED has deemed the effort to comply adjustment factor to be “Recalcitrant Cooperation” per the HWB Penalty Policy and deems the appropriate adjustment to the penalty to be upward by 5%. In further support of the adjustment, when responding to issues identified at LANL, Department of Energy Headquarters worked to chill the communications from the Respondents to NMED which constituted bad faith and thus also supported the same upward adjustment.

b) Negligence / Willfulness

NMED considers there to have been substantial negligence on the part of the facility in association with this violation. The primary factors considered in making this determination include:

- The Respondents have a high degree of control over the circumstances leading to this violation, e.g., the obligation to reevaluate when 1) the remediation process first identified corrosivity, and 2) the subject waste streams were identified as potential oxidizers; both are deviations from the original AK-based characterization.
- The Respondents could readily have foreseen the need for reevaluation of the initial characterization based solely on this additional waste stream data, not to mention the

annual permit requirement.

- The Respondents had identified nitrates as a Class 1 oxidizer that is prohibited at TA-50-69 as early as June 2007. See R1 revision history in EP-WCRR-WO-DOP-0233, R.37.
- Respondents had conducted an internal review of the applicability of D001, D002, and D003 waste codes for the TA-55 nitrate salt wastes in February 2012, and concluded that the waste may potentially behave as an oxidizer and that direct testing would be necessary to make that determination. See ENV-RCRA-12-0053.
- The Respondents were advised in that the nitrate salts in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 were potentially oxidizers, thus obligating reevaluation of the characterization data. See EMTRC- Report RF 10-13.
- The Respondents instead relied on the Central Characterization Project (“CCP”) AK summary report, released December 12, 2012, states the nitrate salts in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 are not an oxidizer, without performing confirmatory sampling and analysis.
- The Respondents could readily have taken precautions to avoid this violation by expanding and ensuring communication between operations and regulatory compliance programs to recognize and prevent this noncompliance.
- The Respondents have staff with the knowledge that would have prevented this violation. The Respondents have committed resources dedicated solely to permit compliance that possess the required compliance expertise to recognize the failure to recharacterize annually and/or when there is a change in the waste generating process as potential noncompliances.
- The Respondents’ level of sophistication regarding hazardous waste compliance is considerable and among the top tier of waste generators both state and nationwide.

Therefore, NMED deems the appropriate adjustment to the penalty per the HWB Penalty Policy to be upward by 15%.

c) History of Noncompliance

Respondents have not been cited for violating this requirement in the past. However, Respondents have a significant history of noncompliance with different Hazardous Waste Management Regulations (HWMR) and Permit requirements within the last ten years (2004-2007, 2009, and 2012, and 2013). Therefore, the adjustment to the penalty per the policy is upward 15%.

Other Factors

1) Self-Reporting

This violation was determined by NMED following review of the *Written Notice Regarding Application of EPA Hazardous Waste Number D001 to Certain Nitrate Salt Bearing Waste Containers at LANL*, dated July 30, 2014.

As the noncompliance reporting is required by PC 1.9.14, NMED deems that no penalty adjustment is warranted.

2) Small Businesses

LANL is a large federal government facility and not a small business, therefore, no penalty adjustment is warranted.

3) Unique Factors

There are no known unique factors in this case; therefore, no penalty adjustment is warranted.

4. FINANCIAL CONDITION

Due to the facility's demonstrated ability to abide with the hazardous waste requirements and to rectify problems identified, the NMED considers the financial condition of the facility to be an unwarranted consideration and therefore deems the penalty as calculated to be an appropriate deterrent.

5. ECONOMIC BENEFIT OF NONCOMPLIANCE

Calculation of the economic benefit of noncompliance is appropriate for this violation. NMED does not consider economic benefit to have been a factor associated with this violation.

Los Alamos National Laboratory – 2014 ACO

Penalty Narrative – Violations # 15-16

Failure to ensure incompatible wastes are not placed in the same container - LANL conducted unpermitted treatment as part of the remediation process for uncemented nitrate salt-bearing waste drums at the Waste Characterization, Reduction, and Repackaging Facility (WCRRF) located at Technical Area 50, Building 69 (TA-50-69), which combined incompatible materials [nitrate salts (an oxidizer) with organic neutralizers and organic absorbents (incompatible with oxidizers)] into containers.

Failure to ensure incompatible wastes are not placed in the same container resulted in the following violations:

Violation # 15: Respondents mixed incompatible wastes (nitrate salts) and organic materials (organic kitty litter and organic neutralizers) in the same container in violation of Permit Condition 2.8 and 20.4.1.500 NMAC, both incorporating 40 C.F.R. § 264.177(a).

40 CFR § 264.177 Special requirements for incompatible wastes.

- (a) Incompatible wastes, or incompatible wastes and materials (see appendix V for examples), must not be placed in the same container, unless § 264.17(b) is complied with.

Violation # 16: Respondents failed to exercise reasonable and necessary precautions during treatment or storage of ignitable or reactive waste, mixing of incompatible waste, or mixing of incompatible wastes and other materials to prevent reactions which could generate or result in extreme heat, gas pressure, fire, explosions, or dangerous chemical reactions which Respondents knew or should have known could harm human health or the environment in violation of Permit Sections 2.8 (1) and (5), incorporating 40 C.F.R § 264.17(b).

Permit Section 2.8 Special Requirements for Ignitable, Reactive or Incompatible Waste

... The Permittees shall take precautions during the treatment or storage of ignitable or reactive waste, the mixing of incompatible waste, or the mixing of incompatible wastes and other materials to prevent reactions that could lead to or cause the following:

- (1) Generation of extreme heat, pressure, fire, explosions, or violent reactions, and
- (5) A threat to human health or the environment.

40 CFR § 264.17 General requirements for ignitable, reactive, or incompatible wastes.

(b) Where specifically required by other sections of this part, the owner or operator of a facility that treats, stores or disposes ignitable or reactive waste, or mixes incompatible waste or incompatible wastes and other materials, must take precautions to prevent reactions which:

- (1) Generate extreme heat or pressure, fire or explosions, or violent reactions;
- (2) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;
- (3) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
- (4) Damage the structural integrity of the device or facility;

(5) Through other like means threaten human health or the environment.

BACKGROUND:

- The Permit states that “Permittees shall manage ignitable, reactive, and incompatible hazardous waste in containers and tanks in compliance with the requirements of 40 C.F.R. §§ 264.17, 264.176, 264.177, 264.198, and 264.199, which are incorporated herein by reference, and Permit Parts 3 and 4.” See Permit Condition 2.8.
- The HWMR state that “Incompatible waste, or incompatible wastes and materials (see appendix V for examples), must not be placed in the same container, unless §264.17(b) is complied with.” See 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.177(a).
- The HWMR state that mixing “nitrates” with “other flammable and combustible wastes” could lead to fire, explosion, or violent reaction. See 20.4.1.500 NMAC, incorporating Appendix V to 40 C.F.R. Part 264.
- The Permit, incorporating requirements from 40 C.F.R. § 264.17(b), prescribes that “Permittees shall take precautions during the treatment or storage of ignitable or reactive waste, the mixing of incompatible waste, or the mixing of incompatible wastes and other materials to prevent reactions that could lead to or cause ... (1) generation of extreme heat, pressure, fire, explosions, or violent reactions... (5) a threat to human health or the environment. (see 40 C.F.R. § 264.17(b)).” See Permit Conditions 2.8(1) and (5).
- U.S. Department of Transportation regulations defines a Division 5.1 “oxidizer” as “a material that may, generally by yielding oxygen, cause or enhance the combustion of other materials.” See 49 C.F.R. § 173.127.
- The nitrate salts in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 are an oxidizer. See Respondents’ September 5, 2014, Response to NMED’s Information Request Regarding the Los Alamos National Laboratory Nitrate Salt Bearing Waste Container Isolation Plan, p. 3-4.
- On October 21, 2014, Respondents confirmed to NMED that they had “[P]laced an organic absorbent and neutralizer containing triethanolamine into drums with the nitrate salts-bearing waste (D001) which, in turn, would constitute placement of incompatible wastes and materials in the same container....” See Second Addendum, p. 8.
- Incompatible materials were mixed when Respondents added organic absorbent to nitrate salt waste that was subsequently placed into 672 containers at TA-50-69. See Respondents’ September 30, 2014, Response to NMED’s August 26, 2014 Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 2 and 3.
- Incompatible materials were mixed when Respondents added an organic neutralizer to liquid from parent nitrate salt-bearing waste containers at TA-50-69; and the neutralized liquid was then mixed with the organic absorbent and placed into daughter containers. See Respondents’ September 30, 2014, Response to NMED’s August 26, 2014 Request for Information, Treatment

of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 2 and 3. Respondents combined nitrate salts with incompatible materials in 672 containers.

- Respondents combined materials (organic absorbent and organic neutralizers) that were incompatible with waste (nitrate salts) in 672 containers and the Respondents did not take precautions during the unauthorized treatment and storage of ignitable incompatible waste to prevent reactions that could lead to or cause the generation of extreme heat, pressure, fire explosions, or violent reactions; or a threat to human health or the environment. See Respondents' September 30, 2014, Response to NMED's August 26, 2014 Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 2 and 3.
- Respondents mixed incompatible waste in 672 containers and did not take the required precautions to manage such waste under Permit Condition 2.8, incorporating 40 C.F.R. §§ 264.177(a) and 264.17(b).

1. GRAVITY-BASED COMPONENT

a) Potential for Harm: **Major**

MAJOR: The violation poses a substantial potential for harm to human or environmental receptors.

The Respondent's failure to ensure incompatible wastes are not placed in the same container resulted in: 1) the combination of nitrate salts (an oxidizer) with organic neutralizers and organic absorbents (incompatible with oxidizers)] into containers; 2) the mixing of incompatible waste which could result in extreme heat, gas pressure, fire, explosions, or dangerous chemical reactions; 3) a container breach at the Waste Isolation Pilot Plant; and 4) the release of americium and plutonium at WIPP.

Furthermore, NMED utilized the following table to quantify the harm caused by this violation.

POTENTIAL FOR HARM RANKING SYSTEM FOR HAZARDOUS WASTE VIOLATIONS

Violation	Description	Nature of Waste	Waste Volume	Releases	Affected Population	Total Score
PC 2.8 40 CFR 264.177 40 CFR 264.17	Failure to ensure incompatible wastes are not placed in the same container.	8	8	6	3*	25

SCORING SYSTEM

Nature of Waste		Waste Volume	Receptors	
			Releases	Affected Population
Category 1 8	F, P, U wastes with "H" designation	8 - > 25 drums	6 - Actual Discharge	4 - > 1,000
	D003 reactive wastes; F, K, U, P wastes with "R" designation	5 - 6-25 drums	4 - Potential for Discharge	3 - 100 - 1,000
	Other waste which may present a significantly greater hazard due to extreme ignitability, corrosivity, toxicity, or acutely toxic or reactive	2 - < 6 drums	1 - No Discharge	2 - 10 - 100
Category 2 4	Any other waste not meeting Category 1			1 - < 10

TOTAL POTENTIAL FOR HARM

19-26	Major
13-18	Moderate
6-12	Minor

*The affected population is nominally based on the number of WIPP employees potentially exposed during the radiological release event. Approximately 150 employees have been included in bioassay monitoring. Potential affected population continues to include WIPP employees as well as workers associated with the isolated containers at LANL, and the containers in storage at WCS.

NMED therefore deems this issue to constitute a substantial potential for exposure.

a) Extent of Deviation: Major

MAJOR: The violation violates the most important element of the requirement to such an extent that substantial noncompliance results.

The purpose of this requirement is to prevent fires, explosions, gaseous emission, leaching, or other discharge of hazardous waste or hazardous waste constituents which could result from the mixing of incompatible wastes or materials if containers break or leak. Permittees combined incompatible materials (organic kitty litter and neutralizers) with nitrate salt-bearing wastes in 672 containers. This incompatibility caused at least one of those containers to breach at WIPP and caused a threat to human health and the environment.

NMED therefore deems this a major deviation from the regulatory and statutory requirement.

b) Number of Counts: 672

The Permittees combined incompatible materials with nitrate salt-bearing wastes in 672 daughter containers at TA-50-69. Therefore, NMED considers this as six hundred and seventy two (672) counts. NMED considers these counts to apply to each Violation 15 and 16.

2. MULTIPLE-DAY COMPONENT

Multiple-Day Penalty Application

Per the HWB Penalty Policy, application of a multi-day penalty for violations of major-major gravity is mandatory.

NMED considers Violation 15 to have occurred systematically over a span of time greater than 60 days. Between October 11, 2011, and April 24, 2014, incompatible waste or material was combined in containers for over 60 days.

57 remediated daughter containers, generated prior to February 2014, remain in storage at LANL; therefore NMED deems a multiday penalty of 60 days to be appropriate for Violation 16.

3. ADJUSTMENT FACTORS

a) Effort to Comply

LANL ceased treatment only when waste shipments halted due to the radiological incident at WIPP. Respondents treated hazardous waste at TA-50-69 from October 11, 2011 through April 24, 2014, but did not notify NMED in writing of the treatment activities until submittal of the *Addendum to the LANL Hazardous Waste Facility Permit Reporting Instances of Noncompliance and Releases for Fiscal Years 2013 and 2013*, dated July 1, 2014. Respondents were explicitly informed as early as May 2012, that the nitrate salts in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 were potentially oxidizers; and Respondents knew also that zeolite should be used to remove the characteristic of ignitability. See Amount of Zeolite Required to Meet the Constraints Established by the EMRTC Report RF 10-13: Application to LANL Evaporator Nitrate Salts, LANL-Carlsbad Office Difficult Waste Team (DWT), May 8, 2012. The DWT notified Respondents to discontinue use of organic absorbents with nitrate salts because of the possible dangers of mixing organic materials with nitrates. See DOE/IG-0922, page 4. The multi-year delay in notifying NMED of known RCRA violations borders on "No Cooperation" per the HWB Penalty Policy, warranting an upward adjustment of 15%. However, in light of the Respondents self-disclosures on July 1, 2014, and October 21, 2014, NMED has deemed the effort to comply adjustment factor to be "Recalcitrant Cooperation" per the HWB Penalty Policy and deems the appropriate adjustment to the penalty to be upward by 5%. In further support of the adjustment, when responding to issues identified at LANL, Department of Energy Headquarters worked

to chill the communications from the Respondents to NMED which constituted bad faith and thus also supported the same upward adjustment.

b) Negligence / Willfulness

NMED considers there to have been substantial negligence on the part of the facility in association with this violation. The primary factors considered in making this determination include:

- The Permittees could readily have identified the potential incompatibility had they considered readily available information on chemicals reactions, and performed an appropriate matter expert (SME) review of the remediation procedure in light of the identification of the waste streams as a potential oxidizer.
- The Respondents had identified nitrates as a Class 1 oxidizer that is prohibited at TA-50-69 as early as June 2007. *See* R1 revision history in EP-WCRR-WO-DOP-0233, R.37.
- Respondents had conducted an internal review of the applicability of D001, D002, and D003 waste codes for the TA-55 nitrate salt wastes in February 2012, and concluded that the waste may potentially behave as an oxidizer and that direct testing would be necessary to make that determination. *See* ENV-RCRA-12-0053.
- The Respondents instead relied on the Central Characterization Project (“CCP”) AK summary report, released December 12, 2012, states the nitrate salts in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 are not an oxidizer and not corrosive, without performing confirmatory sampling and analysis.
- The Permittees have a high degree of control over the circumstances leading to this violation, e.g., the facility’s incorporation of a procedural change contrary to the technical guidance provided by the DOE by using organic absorbents instead of the zeolite-based absorbents. *See* EMTRC- Report RF 10-13.
- The Permittees could readily have taken precautions to avoid this violation by expanding and ensuring communication between operations and regulatory compliance programs and having the appropriate personnel in the procedure review process to recognize and prevent this noncompliance.
- The Permittees have staff with the knowledge that would have prevented this violation. The Permittees have committed resources dedicated solely to permit compliance that possess the required compliance expertise to recognize that incompatible wastes placed in the same container as a potential noncompliance.
- The Permittees’ level of sophistication regarding hazardous waste compliance is considerable and among the top tier of waste generators both state and nationwide.

Therefore, NMED deems the appropriate adjustment to the penalty per the HWB Penalty Policy to be upward by 15%.

c) History of Noncompliance

Permittees have not been cited for violating this requirement in the past. However, Permittees have a significant history of noncompliance with different Hazardous Waste Management Regulations (HWMR) and Permit requirements within the last ten years (2004-2007, 2009, and 2012, and 2013). Therefore, the adjustment to the penalty per the policy is upward 15%.

Other Factors

1) Self-Reporting

In the *Addendum to the LANL Hazardous Waste Facility Permit Reporting Instances of Noncompliance and Releases for Fiscal Years 2013 and 2013*, dated July 1, 2014, LANL reported that unpermitted treatment had been conducted as part of the remediation process for uncemented nitrate salt waste drums at TA-50-69. However, LANL did not report that the treatment resulted in the placement of incompatible materials into 672 containers.

As the noncompliance reporting is required by PC 1.9.14, NMED deems that no penalty adjustment is warranted.

2) Small Businesses

LANL is a large federal government facility and not a small business, therefore, no penalty adjustment is warranted.

3) Unique Factors

There are no known unique factors in this case; therefore, no penalty adjustment is warranted.

4. FINANCIAL CONDITION

Due to the facility's demonstrated ability to abide with the hazardous waste requirements and to rectify problems identified, the NMED considers the financial condition of the facility to be an unwarranted consideration and therefore deems the penalty as calculated to be an appropriate deterrent.

5. ECONOMIC BENEFIT OF NONCOMPLIANCE

NMED does not consider economic benefit to have been a factor associated with this violation.

Los Alamos National Laboratory – 2014 ACO

Penalty Narrative – Violations # 17-18

Failure to notify NMED of noncompliances that endangered human health and the environment - LANL conducted remediation of nitrate salt-bearing waste drums at TA-50-69 which combined incompatible materials [nitrate salts (an oxidizer) with organic neutralizers and organic absorbents (incompatible with oxidizers)] into containers. Respondents did not notify NMED orally within 24 hours and in writing within five days of becoming aware that the addition of organic absorbents and organic neutralizer to nitrate salt-bearing waste at TA-50-69 endangered human health and the environment.

Failure to notify NMED of noncompliances that endangered human health and the environment resulted in the following violations:

Violation # 17: Respondents failed to provide an oral report within 24 hours after the time they knew or should have known of the noncompliance which endangered human health or the environment in violation of Permit Section 1.9.12.1.

Permit Condition 1.9.12.1 24 Hour Oral Report.

The Permittees shall make an initial oral report within 24 hours after the time the Permittees become aware of the noncompliance or the incident specified in Permit Section 1.9.12.

Violation # 18: Respondents failed to provide a written report within five days after they knew or should have known of the noncompliance that endangered human health or the environment in violation of Permit Section 1.9.12.2.

Permit Condition 1.9.12.2 Five Day Written Report.

The Permittees shall submit a written report within five days after the time the Permittees become aware of the noncompliance or incident under Permit Section 1.9.12.

Permit Section 1.9.12 24 Hour and Subsequent Reporting.

The Permittees shall report to the Department, both orally and in writing, any noncompliance that may endanger human health or the environment and any incident that requires implementation of Attachment D (Contingency Plan).) (see 40 CFR § 270.30(l)(6)). This report shall be submitted in accordance with Permit Sections 1.9.12.1 and 1.9.12.2.

40 CFR § 270.30 Conditions applicable to all permits.

(l) Reporting requirements

(6) Twenty-four hour reporting.

(i) The permittee shall report any noncompliance which may endanger health or the environment orally within 24 hours from the time the permittee becomes aware of the circumstances, including:

(A) Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies.

- (B) Any information of a release or discharge of hazardous waste or of a fire or explosion from the HWM facility, which could threaten the environment or human health outside the facility.
- (ii) The description of the occurrence and its cause shall include:
- (A) Name, address, and telephone number of the owner or operator;
 - (B) Name, address, and telephone number of the facility;
 - (C) Date, time, and type of incident;
 - (D) Name and quantity of material(s) involved;
 - (E) The extent of injuries, if any;
 - (F) An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and
 - (G) Estimated quantity and disposition of recovered material that resulted from the incident.
- (iii) A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Director may waive the five day written notice requirement in favor of a written report within fifteen days.

BACKGROUND:

- The Permit states “The Permittees shall report to the Department, both orally and in writing, any noncompliance that may endanger human health or the environment and any incident that requires implementation of Attachment D (Contingency Plan) (see 40 C.F.R. § 270.30(l)(6)). This report shall be submitted in accordance with Permit Sections 1.9.12.1 and 1.9.12.2.” See Permit Section 1.9.12.
- The Permit requires Respondents to provide an oral report within 24 hours after the time they become aware of the noncompliance specified in Permit Section 1.9.12. See Permit Section 1.9.12.1.
- The Permit requires Respondents to provide a written report within five days after the time they become aware of the noncompliance specified in Permit Section 1.9.12. See Permit Section 1.9.12.2.
- On May 8, 2012, the LANL-Carlsbad Office Difficult Waste Team (“DWT”) provided recommendations on the amount of zeolite/kitty litter Respondents must add to nitrate salts to remove the characteristic of ignitability (D001) from the nitrate salts. See “Amount of Zeolite Required to Meet the Constraints Established by the EMRTC Report RF 10-13: Application to LANL Evaporator Nitrate Salts,” by LANL-Carlsbad Office Difficult Waste Team, May 8, 2012; see also EMRTC Report RF 10-13.

- As early as 2012, DWT notified Respondents to discontinue use of organic absorbents with nitrate salts because of the possible dangers of mixing organic material with nitrates. *See DOE/IG-0922, p. 4.*
- The DOE Office of Inspector General (“DOE-OIG”) found that Respondents “made a procedural change to its existing waste procedures that did not conform to technical guidance provided by the Department for the processing of nitrate salt waste.” *See DOE/IG-0922, p. 2.*
- The DOE-OIG determined that Permittees did not include appropriate individuals and/or organizations in Respondents’ procedure approval process, which in turn led to an incompatible mixture of hazardous waste (nitrate salts) and remediation materials (organic absorbents and neutralizers) that together “were known to be inherently hazardous.” *See DOE/IG-0922, pp. 3-4.*
- From NMED’s review of documentation received from Respondents, NMED could not determine precise amounts of organic absorbents, organic neutralizers, or nitrate salts that Respondents had combined in any given container.
- Therefore NMED has concluded that the amount of potential energy which any drum breach may release is extremely difficult if not impossible to predict. *See Respondents’ September 30, 2014, Response to NMED’s August 26, 2014 Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, p. 3 and Attachments 2 and 3.*
- From DOE’s technical expertise and guidance and from commonly available knowledge about nitrate salts being incompatible with the organic absorbents or organic neutralizer, Respondents knew or should have known that combining those materials in containers would have endangered human health or the environment.
- Permittees began using organic absorbents to absorb liquids at TA-50-69 on December 11, 2012. *See Respondents’ September 30, 2014, Response to NMED’s August 26, 2014 Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 3.*
- Respondents began using an organic neutralizer to treat liquids at TA-50-69 on September 24, 2013. *See Respondents’ September 30, 2014, Response to NMED’s August 26, 2014 Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 3.*
- A LANL nitrate salt-bearing waste container with added organic absorbents was emplaced in the WIPP underground where eventually it breached its containment capacity, and resulted in the February 14, 2014 radiological release in the WIPP underground.
- After reviewing associated documentation and attendant facts and circumstances NMED has concluded that the addition of organic absorbents and organic neutralizer to nitrate salt-bearing waste containers at TA-50-69 endangered human health and the environment at each location where such containers were stored, transported, or emplaced.
- After reviewing associated documentation and attendant facts and circumstances NMED has concluded that Respondents knew or should have known that the addition of organic absorbents and organic neutralizer to salt-bearing waste containers at TA-50-69 would endanger human health or the environment at each location where such containers were stored, transported, or emplaced.

- Respondents did not notify NMED orally within 24 hours or in writing within five days of becoming aware that the addition of organic absorbents and organic neutralizer to nitrate salt-bearing waste at TA-50-69 created known or knowable dangers to human health or the environment.

GRAVITY-BASED COMPONENT

a) Potential for Harm: Major

MAJOR: The violation substantially undermines the regulatory program.

NMED considers the lack of timely reporting of a noncompliance that endangered human health and the environment to substantially undermine the regulatory program. NMED's regulatory oversight of WIPP was substantially hindered by LANL's failure to provide the notification.

b) Extent of Deviation: Major

MAJOR: The violation violates the most important element of the requirement to such an extent that substantial noncompliance results.

The purpose of the requirement to notify of any noncompliance with Permit requirements is to ensure regulatory review and oversight of the process for the safe management of hazardous wastes. By failing to provide the notification, Respondents precluded the regulatory authority from providing that required review and oversight.

NMED therefore deems this a major deviation from the regulatory and statutory requirement.

c) Number of Counts: 1

NMED considers this as one (1) count, applicable to each Violation 17 and 18.

1. MULTIPLE-DAY COMPONENT

Multiple-Day Penalty Application

Despite the fact that, as early as 2012, DWT notified Respondents to discontinue use of organic absorbents with nitrate salts because of the possible dangers of mixing organic material with nitrates, Respondents to date have failed to acknowledge that the remediation procedure, which instructed the combination of incompatible materials in containers constitutes an endangerment to human health and the environment. As such, Respondents have never submitted a 24-hour oral or 5-day written report of this noncompliance per PC 1.9.12; therefore NMED deems a multi-day penalty of 60 days to be appropriate.

2. ADJUSTMENT FACTORS

a) Effort to Comply

LANL ceased treatment only when waste shipments halted due to the radiological incident at WIPP. Respondents treated hazardous waste at TA-50-69 from October 11, 2011 through April 24, 2014, but did not notify NMED in writing of the treatment activities until submittal of the *Addendum to the LANL Hazardous Waste Facility Permit Reporting Instances of Noncompliance and Releases for Fiscal Years 2013 and 2013*, dated July 1, 2014. Respondents were explicitly informed as early as May 2012, that the nitrate salts in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 were potentially oxidizers; and Respondents knew also that zeolite should be used to remove the characteristic of ignitability. See Amount of Zeolite Required to Meet the Constraints Established by the EMRTC Report RF 10-13: Application to LANL Evaporator Nitrate Salts, LANL-Carlsbad Office Difficult Waste Team (DWT), May 8, 2012. The DWT notified Respondents to discontinue use of organic absorbents with nitrate salts because of the possible dangers of mixing organic materials with nitrates. See DOE/IG-0922, page 4. The multi-year delay in notifying NMED of known RCRA violations borders on “No Cooperation” per the HWB Penalty Policy, warranting an upward adjustment of 15%. However, in light of the Respondents self-disclosures on July 1, 2014, and October 21, 2014, NMED has deemed the effort to comply adjustment factor to be “Recalcitrant Cooperation” per the HWB Penalty Policy and deems the appropriate adjustment to the penalty to be upward by 5%. In further support of the adjustment, when responding to issues identified at LANL, Department of Energy Headquarters worked to chill the communications from the Respondents to NMED which constituted bad faith and thus also supported the same upward adjustment.

b) Negligence / Willfulness

NMED considers there to have been substantial negligence on the part of the facility in association with this violation. The primary factors considered in making this determination include:

- The Respondents have a high degree of control over the circumstances leading to this violation, e.g., the obligation to report the endangerment to human health and the environment by the combining of incompatible materials as a result of the noncompliant remediation process.
- The Respondents could readily have foreseen the potential for endangerment, having been advised to discontinue the addition of organics to nitrate salt-bearing waste streams in 2012.
- The Respondents could readily have foreseen the requirement to notify of a noncompliance that endangered human health and the environment, following the identification of the breached drum at WIPP as containing remediated nitrate salt-bearing waste originating at LANL.
- The Respondents could readily have foreseen that the nitrate salt wastes posed an endangerment to human health and the environment upon being ordered by NMED to

isolate those wastes.

- The Respondents could readily have taken precautions to avoid this violation by expanding and ensuring communication between operations and regulatory compliance programs to recognize and prevent this noncompliance.
- The Respondents have staff with the knowledge that would have prevented this violation. The Respondents have committed resources dedicated solely to permit compliance that possess the required compliance expertise to recognize that the noncompliant combination of incompatible materials in containers posed an endangerment to human health and the environment that required notification to NMED.
- The Respondents' level of sophistication regarding hazardous waste compliance is considerable and among the top tier of waste generators both state and nationwide.

Therefore, NMED deems the appropriate adjustment to the penalty per the HWB Penalty Policy to be upward by 15%.

c) History of Noncompliance

The facility was previously cited for failure to report a permit noncompliance in a timely manner in 1997, but has not been cited for this violation during the last 10 years. However, Respondents have a significant history of noncompliance with different Hazardous Waste Management Regulations (HWMR) and Permit requirements within the last ten years (2004-2007, 2009, and 2012, and 2013). Therefore, the adjustment to the penalty per the policy is upward 15%.

Other Factors

1) Self-Reporting

This violation was not self-reported, but was determined by NMED following review of the *Addendum to the LANL Hazardous Waste Facility Permit Reporting Instances of Noncompliance and Releases for Fiscal Years 2013 and 2013*, dated July 1, 2014, in which LANL reported the violation of failure to obtain a permit for the treatment of hazardous waste at TA-50-69.

Therefore, NMED deems that no penalty adjustment is warranted.

2) Small Businesses

LANL is a large federal government facility and not a small business, therefore, no penalty adjustment is warranted.

3) Unique Factors

There are no known unique factors in this case; therefore, no penalty adjustment is warranted.

3. FINANCIAL CONDITION

Due to the facility's demonstrated ability to abide with the hazardous waste requirements and to rectify problems identified, the NMED considers the financial condition of the facility to be an unwarranted consideration and therefore deems the penalty as calculated to be an appropriate deterrent.

4. ECONOMIC BENEFIT OF NONCOMPLIANCE

NMED does not consider economic benefit to have been a factor associated with this violation.