



STATE OF NEW MEXICO  
BEFORE THE SECRETARY OF ENVIRONMENT

IN THE MATTER OF PROPOSED DISCHARGE  
PERMIT DP-1132 FOR THE RADIOACTIVE  
LIQUID WASTE TREATMENT FACILITY AT  
LOS ALAMOS NATIONAL LABORATORY,  
LOS ALAMOS, NEW MEXICO

No. GWB 19-24 (P)

NEW MEXICO ENVIRONMENT DEPARTMENT GROUND WATER  
QUALITY BUREAU'S CLOSING ARGUMENT, PROPOSED  
FINDINGS OF FACT AND CONCLUSIONS OF LAW

In accordance with 20.6.2.3110(I) and 20.1.4.500(B)(4) NMAC, the New Mexico Environment Department (“NMED” or the “Department”) hereby submits its Closing Argument, Proposed Findings of Fact and Conclusions of Law in this proceeding, involving the issuance of Ground Water Discharge Permit No. 1132 (DP-1132), for the Los Alamos National Laboratory (“LANL”) Radioactive Liquid Waste Treatment Facility (“RLWTF”).

CLOSING ARGUMENT

In anticipation of Concerned Citizens for Nuclear Safety, Honor our Pueblo Existence, New Mexico Acequia Association, and Tewa Women United (collectively “Citizens”) renewing their objections to the issuance of DP-1132 based on the same arguments contained in their *Motion to Dismiss DP-1132 Proceeding*, filed October 8, 2019, NMED hereby incorporates the reasoning in its *Response* to that Motion, filed October 23, 2019. Furthermore, NMED reserves the right to respond to any new legal arguments Citizens should make in post-hearing pleadings.

In addition, the testimony presented by Citizens argued that the RLWTF should be regulated pursuant to the New Mexico Hazardous Waste Act, the state analog to the federal Resource Conservation and Recovery Act (“RCRA”). *Citizens Pre-Filed Testimony of Joni Arends, Attachment 4 to Citizens Statement of Intent to Present Technical Testimony; Hrg.*

**Trans. 158:6-182:17.** To be clear, the only outcome of this proceeding is whether to grant the permit DP-1132, grant the permit subject to conditions or deny the permit. NMSA 1978, Section 74-6-5(D); 20.6.2.3109(B) NMAC; **Hrg. Trans. 184:2-24.** NMED maintains the discharge permit DP-1132 as modified and attached herein should be granted.

NMED reserves the right to respond to any arguments from any party newly introduced in post-hearing pleadings.

### **BACKGROUND**

Construction of the RLWTF began in July 1961, and the processing of radioactive liquid waste began in June 1963. On April 3, 1996, the Department notified the U.S. Department of Energy (“DOE”) and Los Alamos National Security, LLC (“LANS”) (collectively “LANS/DOE or the “Applicants”) that a discharge permit was required. The application (i.e., discharge plan) consists of the materials submitted by the Applicants on August 19, 1996, an updated application submitted to NMED on February 16, 2012, an amendment to the application submitted to NMED on August 10, 2012, supplemental information submitted on June 6, 2016, and materials contained in the administrative record prior to issuance of this Discharge Permit. On November 1, 2007, the Applicants submitted a Notice of Intent (“NOI”) for the discharge of treated effluent water to the Solar Evaporative Tank (“SET”). NMED responded to the NOI requiring a new, up-to-date, and comprehensive application. In December 2015, the Applicants submitted a draft Closure Plan for inclusion into the Discharge Permit.

Public notice associated with the draft Discharge Permit occurred at three stages of the permitting process: the notification of the Department’s receipt of the discharge permit application (Public Notice 1 or PN1), the notification of the availability of a draft discharge permit for public comment and for request of a public hearing (Public Notice 2 or PN2), and the notification that a hearing is to occur (Hearing Notice). Each of these notification processes took

place in accordance with 20.6.2.3108 NMAC and may have occurred multiple times due to changing circumstances.

The notification of the Department's receipt of the discharge permit application (PN1) occurred in accordance with 20.6.2.3108(B) NMAC. The Applicants posted the required signs, provided written notice to nearby property owners, and published the required display add in the local newspaper. The Department posted a notice of receipt of the application on its website, mailed notices to affected public agencies, and mailed notices to persons on general and facility specific mailing lists. PN1 included all information required of such notices as specified at 20.6.2.3108(F) NMAC. DP-1132 PN1 occurred two times, first in November of 1996 and then in March of 2012.

A public hearing was held on the issuance of DP-1132 on April 19, 2018. Based on that hearing a final Discharge Permit, dated August 29, 2018, was issued to the Applicants. On June 18, 2019, the New Mexico Water Quality Control Commission ("WQCC") ruled that the Hearing Officer's job application and subsequent hiring by one of the parties in that proceeding created an improper appearance of bias potentially affecting the Secretary's deliberation and issuance of DP-1132. The WQCC then ruled that, pursuant to NMSA 1978, Section 74-6-5(Q), 20.1.3.16(A)(3) NMAC, and 20.1.3.16(F)(3) NMAC, the Secretary's Order from the April 2018 hearing was vacated and the matter be remanded to the Department for a new hearing.

The notification of the availability of a draft permit for public comment and for request of a public hearing (PN2) occurred in accordance with 20.6.2.3108(H) NMAC. The Department posted a draft Discharge Permit on the Department's website, published notice in the Albuquerque Journal and the Los Alamos Monitor, mailed a notice to persons on the facility-specific mailing list, and mailed a notice to affected public agencies and tribal entities. PN2 included all information required of such notices as specified at 20.6.2.3108(F) and

20.6.2.3108(I) NMAC, and allowed for a 30-day comment period. PN2 for DP-1132 occurred eight times for various reasons, including to provide the public with the opportunity to review a draft discharge permit revised because of comments received during the previous public comment period and to address the remanded draft Discharge Permit as discussed above. Initial DP-1132 PN2s occurred in August 2003, April 2005, August 2013, November 2013, May 2017, March 9, 2018, and July 19, 2019.

On August 23, 2019, the Department issued the final public notice offering the draft Discharge Permit that is the subject of this hearing, and for which the Department held multiple listening sessions and meetings, received numerous notices concerning minor modifications to the Facility as addendums to the original Discharge Permit application, and on numerous occasions requested additional information from the Applicants. On March 5, 2018, the Department re-noticed the draft Discharge Permit, correcting the previous notice by providing the current and correct version of the Closure Plan dated September 2016.

Upon the Department's determination that a hearing was to occur, the Department notified the public of the hearing determination by posting the notice on the Department's website, publishing a Hearing Notice in the Albuquerque Journal, the Santa Fe New Mexican, and the Los Alamos Monitor, mailing a notice to persons on the facility-specific mailing list, and mailing a notice to affected public agencies and tribal entities. This Hearing Notice included all information required of such notices as specified at 20.6.2.3108(N) NMAC and described the time and place of the hearing and a brief description of the hearing process. Due to changes in the hearing date and location, and due to the remand of the permit discussed above, multiple Hearing Notices were issued, with the final notice occurring on October 11, 2019. The Department provided both English and Spanish versions of the Hearing Notice.

The Department proposes approval of DP-1132 admitted as NMED Exhibit 1 at the hearing, as modified pursuant to the changes proposed in NMED Exhibits 6 and 7 (attached). NMED Exhibit 6 represents a “clean” version of the draft permit, while NMED Exhibit 7 represents the changes from the previously issued permit in strikethrough/underline format.

### **PROPOSED FINDINGS OF FACT**

#### **A. PURPOSE OF AND NEED FOR THE DISCHARGE**

1. The RLWTF consists of an underground collection system that conveys radioactive liquid waste (“RLW”) water to Technical Area (“TA”) 50 from generators at LANL; structures at TA-50; and the Solar Evaporation Tank (“SET”) at TA-52. **NMED Exhibit 3 at page 4, lines 18 – 20.**
2. The RLWTF may discharge treated effluent to three locations; the Mechanical Evaporator System (“MES”) located near Building 50-01, the SET, or through an outfall in Effluent Canyon (Outfall 051), a tributary to Mortandad Canyon. **NMED Exhibit 3 at page 5, lines 4 – 6.**
3. The MES is co-located with the RLWTF and disposes of RLW treated effluent by mechanical evaporation. This natural gas fired evaporator had been the sole disposal method for the RLWTF for several years, until a June 2019 discharge to Outfall 051. **NMED Exhibit 3 at page 5, lines 6 - 9.**
4. The SET system is associated with the RLWTF but located at TA-52. Approximately 3500 feet of high-density polyethylene (HDPE) transfer piping connect the SET and the RLWTF. The SET is a concrete, double synthetically-lined impoundment designed to receive treated effluent from the RLWTF for disposal by evaporation. The SET was constructed and has not yet been put into service pending issuance of DP-1132. **NMED Exhibit 3 at page 5, lines 9 – 13.**

5. Outfall 051 was the Applicants' sole discharge option until the construction of the MES in 2010. Since 2010 there has been a single discharge from the Outfall, a discharge which occurred on June 18, 2019. Outfall 051 is regulated by a National Pollutant Discharge Elimination System (NPDES) permit (Permit No. NM0028355) issued by the United States Environmental Protection Agency (EPA). **NMED Exhibit 3 at page 5, lines 13 – 17.**

**B. THE PROPOSED DISCHARGE**

6. The Applicants propose to treat and discharge up to 40,000 gallons per day of treated RLW consisting of Low Level and Transuranic RLW produced through activities at LANL. **NMED Exhibit 3 at page 5, lines 20 – 22.**
7. The volume of Transuranic RLW treated at the RLWTF is small, typically one percent or less of the volume of Low Level RLW. The Discharge Permit would authorize RLW to be collected via pipeline from TA-03, TA-35, TA-48, TA-50, TA-55, and TA-59 within LANL. A double-walled pipeline influent collection system conveys RLW to the RLWTF at TA-50. Low Level RLW is also transferred to the RLWTF by truck. **NMED Exhibit 3 at page 5, lines 22 – 23 and page 6, lines 1 - 3.**
8. The RLWTF treats Low Level RLW via numerous processes: chemical addition, flocculation, micro filtration, ion exchange and reverse osmosis. The RLWTF has a separate treatment train for Transuranic waste which includes sludge solidification. This Transuranic waste system consists of the influent storage tanks for two forms of Transuranic waste stream (acidic and caustic), the associated neutralization unit, pressure filters, the final processing tanks, and other associated Transuranic waste stream conveyance, storage and treatment components. Sludge associated with Transuranic waste is disposed of at an off-site facility permitted to receive Transuranic waste. The

liquid component of the Transuranic waste stream is combined and discharged with the RLW stream. **NMED Exhibit 3 at page 6, lines 4 – 11.**

**C. DP-1132 REQUIREMENTS**

9. The proposed discharge is to the MES, to the SET, or through Outfall 051 as described *supra*. **NMED Exhibit 3 at page 5, lines 4 - 22.**
10. The Department's purpose in issuing DP-1132, and in imposing the requirements and conditions specified therein, is to control the discharge of water contaminants from activities related to treatment of Low Level RLW and Transuranic waste into ground and surface water so as to protect ground and surface water for present and potential future use as domestic and agricultural water supply and other uses and to protect public health. In developing the discharge permit, The Department has determined that the requirements of 20.6.2.3109(C) NMAC have been or will be met. **NMED Exhibit 3 at pages 19, line 8 through page 49, line 21.**

**D. COMMENTS RECEIVED**

11. NMED received various comments from a number of commenters. Those specific comments are addressed in New Mexico Environment Department's Proposed Response to Comments, NMED Exhibit 5. Due to receiving roughly 200 comments at or after the public hearing, NMED has not completed the Proposed Response to Comments at the time proposed Findings of fact and Conclusions of Law and Closing Argument are due (January 10, 2020). NMED will file NMED Exhibit 5 no later than January 17, 2020.
12. NMED received a Request for Hearing on the draft permit from a group representing Concerned Citizens for Nuclear Safety, Amigos Bravos, Tewa Women United, Honor our Pueblo Existence, and Partnership for Earth Spirituality. **AR Nos. 13495-13761.**

**E. HEARING DETERMINATION AND PUBLIC HEARING**

13. The Secretary of Environment (Secretary) granted the request for a public hearing on September 18, 2017. Each party was notified of this determination on March 18, 2018. **AR Nos. 13811-13814.**
14. Following the Order of the WQCC, remanding the proceeding back to the Department, the hearing process was re-initiated at the point of PN2. **AR 14609-14762.**
15. The Department provided the public, including the Applicants, with notice of the proposed discharge permit. **AR 14609-14762.**
16. The Department provided the public with notice of the public hearing. **AR 17173-17177.**
17. On November 4, 2019, the Department, the Applicants, and the Citizens each submitted Statements of Intent to present Technical Testimony (“SOI”). The Department’s SOI included the direct testimony and the resume of Stephen Pullen. The Applicants’ SOI included the direct testimony and the resumes of Robert Beers, Danny Katzman, and Karen Armijo. The Citizens’ SOI included the direct testimony and the resume of Joni Arends. **NMED Exhibits 2, 3; Triad/DOE Exhibits 1, 2, 11, 12, 14 and 15; Citizens’ Exhibits 1, 4.**
18. A public hearing on DP-1132 was held on November 14, 2019, beginning at 8:58 AM at the Fuller Lodge, Pajarito Room, 2132 Central Avenue, Los Alamos, New Mexico. **Hearing Transcript (Hrg. Trans.) 1:17-21.**
19. At the public hearing, appearances were entered on behalf of the Applicants, the Department, and Citizens. **Hrg. Trans. 2:8-3:17.**
20. At the public hearing, public comment was heard from five people: Emily Arasim, Mark DeVolder, Alexa Jaramillo, Kathy Wan Povi Sanchez, and Terra Hite. **Hrg. Trans. 92:6-94:3, 94:9-101:21, 103:1-105:3, 105:11-112:24, 227:9-228:9.**



21. At the public hearing, technical testimony was provided by witnesses for the Applicants, Citizens, and the Department. **Hrg. Trans. 21:5-51:3, 114:1-129:12, 136:3-146:18, 158:6-182:17, 190:4-204:7.**
22. The Department's witness, Stephen Pullen, is the manager of the Pollution Prevention Section of the Ground Water Quality Bureau (GWQB) of the Department. In that position he oversaw the permitting process for DP-1132. His resume was filed as NMED Exhibit 2. **NMED Exhibit 3 at page 1, lines 2-4; Hrg. Trans. 190:4-204:7.**
23. Mr. Pullen has 30 years' experience in the environmental field, 27 of those years with NMED. **NMED Exhibit 2. NMED Exhibit 3 at page 1, lines 2-4; Hrg. Trans. 190:4-204:7.**
24. At the public hearing, Mr. Pullen testified as to the technical need for the discharge permit, how the proposed discharge permit is protective of groundwater, how the department had gone about providing public notice of the hearing and the draft permit, and expressed his support of the issuance of the proposed discharge permit DP-1132. **NMED Exhibit 3; Hrg. Trans. 190:4-204:7.**
25. Mr. Pullen testified as to certain changes appropriate for the draft permit prior to issuance, and the reasons for those changes. Numerous activities took place during the time the Discharge Permit was in effect, many of which necessitate a change to the draft Discharge Permit. The activities necessitating a change to the Permit are those principally constituting the Applicants' accomplishment of Permit requirements. **NMED Exhibit 3 at page 9, line 15 to page 11, line 23; Hrg. Trans. 194:6-196:17.**
26. At the public hearing, Mr. Pullen was cross examined at length by counsel for Citizens as to the likelihood of a discharge from the RLWTF reaching groundwater, the June 2019

- discharge through Outfall 051, and Mr. Pullen's understanding of the regulatory basis for issuance of a discharge permit under the Water Quality Act. **Hrg. Trans. 204:15-223:19.**
27. Witnesses for the Applicants at the hearing included Robert S. Beers, Danny Katzman, and Karen E. Armijo. **Hrg. Trans. 4:3-5:8; Triad/DOE Exhibits 1, 2, 11, 12, 14 and 15.**
28. At the public hearing and in written testimony, Mr. Beers provided an introduction to the RLWTF and discussed the relevant operations at that facility, including the three discharge pathways identified in Draft DP- 1132. Mr. Beers discussed the permit application for DP-1132 and the regulatory background for issuance of the permit. He provided an overview of the requirements of Draft DP-1132, including the discharges authorized by Draft DP-1132 and the standards applicable to the RLWTF's treated effluent. Mr. Beers testified regarding certain requirements of Draft DP-1132, including requirements for the operational plan, monitoring requirements, reporting requirements, contingency plan provisions and the closure plan for the RLWTF. Mr. Beers also provided testimony and an exhibit responding to certain public comments. Mr. Beers also testified as to changes proposed to the draft DP-1132 based on new information and actions taken since issuance of DP-1132 in August 2018. **Triad/DOE Exhibits 1, 4, 7, 8, 9; Hrg. Trans. 21:5-51:3.**
29. At the public hearing, Mr. Beers was cross examined at length by counsel for Citizens, and counsel for NMED. **Hrg. Trans. 52:1-80:2; 80:6-81:20.**
30. At the public hearing and in written testimony, Mr. Katzman provided an introduction to the hydrogeologic setting at LANL and discussed why the setting is relevant to Draft DP-1132. Mr. Katzman described the groundwater monitoring requirements set forth in Draft DP-1132 at each of the discharge points included in the permit, specifically at NPDES

Outfall 051, the SET, and the MES. Mr. Katzman testified about the hydrogeologic setting of the monitoring wells, the purposes for and adequacy of the monitoring wells, the quality of the monitoring wells, and the frequency and suite of monitoring. Mr. Katzman also testified regarding Draft DP-1132's requirements and procedures for detecting and addressing any future noncompliant releases. He offered testimony about pre-existing conditions at LANL that are relevant to certain conditions in Draft DP-1132.

**Triad/DOE Exhibits 11, 13; Hrg. Trans. 114:4-129:13.**

31. At the public hearing, Ms. Armijo addressed certain comments received on the Draft DP-1132 regarding signage in the vicinity of the RLWTF and the staffing of LANL's Emergency Operations Center ("EOC"). Her testimony explained why the proposed signage requirements of Draft DP-1132 are adequate, and why the suggestions regarding signage have been resisted by Applicants and not included in Draft DP-1132. Ms. Armijo testified as to certain DOE restrictions regarding the staffing of the EOC, and explained that offsite response interfaces present an opportunity to have tribal involvement in the delivery of emergency services that is the subject of some comments regarding EOC staffing. **Hrg. Trans. 136:3-146:18.**

32. At the public hearing and in written testimony, Ms. Arends testified against issuance of the draft permit on behalf of Citizens. Her testimony addressed the intent of the applicants to discharge water contaminants from the RLWTF such that they may move into groundwater, seismic issues around the facility, and her opinion that the RLWTF should be regulated pursuant to the Federal Resource Conservation and Recovery Act ("RCRA"). *Citizens Pre-Filed Testimony of Joni Arends, Attachment 4 to Citizens Statement of Intent to Present Technical Testimony*; **Hrg. Trans. 158:6-182:17.**

33. Ms. Arends was cross examined by counsel for NMED. **Hrg. Trans. 184:6-185:6.**

**F. MOTION TO DISMISS**

34. On October 8, 2019, Citizens filed their Motion to Dismiss DP-1132 Proceeding (“Motion”). In the Motion, Citizens moved for dismissal of the proceeding on the grounds that regulation under the New Mexico Water Quality Act is precluded by the terms of that Act, because the RLWTF is subject to regulation under the New Mexico Hazardous Waste Act, and because the Applicants do not intend to discharge from the RLWTF any water contaminants within the meaning of NMSA 1978, § 74-6-5(A).

**Motion at 2-3.**

35. The Motion identified Citizens as being comprised of four organizations: Concerned Citizens for Nuclear Safety, Tewa Women United, Honor our Pueblo Existence, and New Mexico Acequia Association. **Motion at 1.**

36. On October 23, 2019, NMED and Triad/DOE filed their Response Briefs to the Motion, arguing that the discharges to the SET, MES, and through Outfall 051 are discharges under the meaning of the Water Quality Act, and therefore the Secretary has authority to issue a discharge permit.

37. On October 30, 2019, CCW filed its Reply Brief.

38. On April 18, 2018, the Hearing Officer denied the Motion on the grounds that “[t]he transcript of the June 18, 2019 meeting of the WQCC evidences the intent of the WQCC that the transcript of the 2018 Hearing not be considered on remand. Material portions of the Motion cite to and rely on the transcript of the 2018 Hearing. The 2018 Hearing is a significant part of the record on which the now vacated 2018 NMED Decision was based.” **Order at ¶¶ 3, 4.**

## PROPOSED CONCLUSIONS OF LAW

All relevant proposed findings of fact in the preceding paragraphs are incorporated herein by reference.

1. Pursuant to the Water Quality Act, the Water Quality Control Commission (“WQCC”) “may require persons to obtain from a constituent agency designated by the commission a permit for the discharge of any water contaminant.” Section 74-6-5(A).
2. The implementing regulations of the Water Quality Act are the New Mexico Ground and Surface Water Protection Regulations (“Regulations”), 20.6.2 NMAC.
3. The WQCC has adopted regulations stating that “no person shall cause or allow effluent or leachate to discharge so that it may move directly or indirectly into ground water unless he is discharging pursuant to a discharge permit issued by the secretary.” 20.6.2.3104 NMAC.
4. Applicant DOE is a department of the United States. Applicant Triad is a limited liability company (LLC). The Applicants are both “persons” within the meaning of the Regulations. 20.6.2.7(P)(2) NMAC.
5. The Department is an agency of the executive branch of the state of New Mexico, created by statute. NMSA 1978, § 9-7A-6(B)(3) (1991).
6. The Department is charged by the Regulations with evaluating applications for discharge permits, and recommending approval or disapproval by the Secretary. 20.6.2.3018 NMAC.
7. The activities described by the Applicants in their application require a discharge permit, to be evaluated by the Department. 20.6.2.3104 and 20.6.2.3018 NMAC.
8. The discharge permit application for DP-1132 complied with the requirements of Section 74-6-5 and 20.6.2.3106 NMAC.

9. The Water Quality Act provides that the constituent agency shall “either grant the permit, grant the permit subject to conditions, or deny the permit.” Section 74-6-5(D).
10. The Department provided the public, including the Applicants, with notice of the proposed discharge permit in accordance with the regulations at 20.6.2.3108(H) NMAC.
11. The Department provided the public, including the Applicants, an opportunity to comment on the proposed discharge permit in accordance with the regulations at 20.6.2.3108(M) NMAC.
12. The Department provided the public, including the Applicants, with notice of the public hearing in accordance with the regulations at 20.6.2.3110 and 20.1.4.200(C)(2) NMAC.
13. A public hearing was held on the proposed discharge permit in accordance with the Water Quality Act and the regulations at 20.6.2.3110 and 20.1.4 NMAC.
14. The conditions proposed in the draft DP-1132 “are reasonable and necessary to ensure compliance with the [Water Quality Act] and applicable regulations, including site-specific conditions.” Section 74-6-5(D).
15. The Motion was fully briefed and decided pursuant 20.1.4.200(D) NMAC.

**CONCLUSION**

The Secretary should grant to the Applicants the discharge permit DP-1132 as modified and attached as NMED Exhibit 6.

Respectfully submitted,

NEW MEXICO ENVIRONMENT DEPARTMENT  
OFFICE OF GENERAL COUNSEL

*/s/ John Verheul*

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John Verheul, Assistant General Counsel  
New Mexico Environment Department  
121 Tijeras Ave NE, suite 1000  
Albuquerque, New Mexico 87102  
Phone: (505) 383-2063  
Fax: (505) 383-2064  
Email: [John.Verheul@state.nm.us](mailto:John.Verheul@state.nm.us)

**CERTIFICATE OF SERVICE**

I hereby certify that a copy of the foregoing was filed with the Hearing Clerk and was served on the following via electronic mail on January 10, 2020:

Stuart R. Butzier  
Christina Sheehan  
Modrall, Sperling, Roehl, Harris & Sisk, PA  
P.O. Box 9318  
Santa Fe, New Mexico 87504-9318  
stuart.butzier@modrall.com  
christina.sheehan@modrall.com

Lindsay A. Lovejoy, Jr.  
Attorney at law  
3600 Cerrillos Road, Unit 1001A  
Santa Fe, New Mexico 87507  
lindsay@lindsaylovejoy.com

and

and

Susan McMichael  
Office of Laboratory Counsel  
Los Alamos National Laboratory  
P.O. Box 1663, MS A187  
Los Alamos, New Mexico 87545  
smcmichael@lanl.gov

Jonathan M. Block  
New Mexico Environmental Law Center  
1405 Luisa St., Ste. 5  
Santa Fe, New Mexico 87505  
jblock@nmelc.org

*Attorneys for Triad National Security, LLC*

*Attorneys for Concerned Citizens for  
Nuclear Safety, Honor our Pueblo  
Existence, New Mexico Acequia  
Association, and Tewa Women United*

Silas R. DeRoma  
Attorney  
U.S. Department of Energy  
National Nuclear Security Administration  
1900 Diamond Drive  
Los Alamos, New Mexico 87544  
silas.deroma@nnsa.doe.gov

*Attorney for the U.S. Department of Energy*

/s/ John Verheul  
John Verheul



GROUND WATER DISCHARGE PERMIT (DP-1132)  
RADIOACTIVE LIQUID WASTE TREATMENT FACILITY  
LOS ALAMOS NATIONAL LABORATORY

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**I. ACRONYMS:**

The following acronyms and abbreviations may be used throughout this Discharge Permit:

BOD<sub>5</sub> - biochemical oxygen demand (5-day)  
CAS - Chemical Abstract Service  
CFR - Code of Federal Regulations  
Cl - chloride  
CQCAP - Construction Quality Control Assurance Plan  
DOE - United States Department of Energy  
EPA - United States Environmental Protection Agency  
gpd - gallons per day  
LANL - Los Alamos National Laboratory  
Triad – Triad National Security, LLC  
MES - Mechanical Evaporator System  
mg/L - milligrams per liter (or parts per million)  
NMAC - New Mexico Administrative Code  
NMSA - New Mexico Statutes Annotated  
NO<sub>3</sub>-N - nitrate-nitrogen  
NPDES - National Pollutant Discharge Elimination System  
PCBs - Polychlorinated Biphenyls  
QA/QC - Quality Assurance/Quality Control  
RLW - Low-level radioactive waste water  
RLWTF - Radioactive Liquid Waste Treatment Facility  
SET - Solar Evaporative Tank System  
TA - Technical Area  
TDS - total dissolved solids  
TKN - total Kjeldahl nitrogen  
TRU - Transuranic  
TSS - total suspended solids  
WQA - Water Quality Act  
WQCC - Water Quality Control Commission

## II. DEFINITIONS:

The following is a list of definitions as they pertain specifically to this Discharge Permit:

- A. Average daily flow-** the rate determined by dividing the total monthly volume by the number of days for the reporting period.
- B. Active portion-** the portion of the Facility where treatment, storage or disposal of waste water occurs or has occurred in the past, including those portions of the Facility which are not in use and have not been closed in accordance with the conditions in this Discharge Permit.
- C. Calibration-** a comparison between an instrument of known magnitude or correctness (standard) and another measurement made in as similar a way as possible with a second device (test instrument).
- D. Closure-** to permanently discontinue the use of a unit, system, or component of the Facility (partial) or the entire Facility (final).
- E. Construction Quality Control Assurance Plan-** a written plan of activities necessary to ensure that construction and installation meet design criteria. A CQCAP includes practices and procedures for inspections, testing and evaluations of material and workmanship necessary to verify the quality of the constructed unit or system, and corrective actions to be implemented when necessary.
- F. Consent Order- Compliance Order on Consent (June 2016)** agreed to by NMED and DOE or subsequent versions.
- G. Discharge-** the intentional or unintentional release of an effluent or leachate which has the potential to move directly or indirectly into ground water or be detrimental to human health, animal or plant life, or property, or unreasonably interfere with the public welfare or the use of property.
- H. Effluent-** a liquid waste product resulting from the treatment or partial treatment of an influent waste stream intended to be discharged.
- I. Exfiltration-** the uncontrolled passage or penetration of waste water or sludge from a structural component of a unit or system through defective pipes, pipe joints, connections, cracks, structural failure, or material incompatibility and enters the surrounding environment.
- J. Flow meter-** a quantitative instrument or device that measures, displays, and records the flow of a fluid in a conduit or an open channel.
- K. Freeboard-** the vertical distance between the crest of the embankment and the carrying capacity level of an open tank, impoundment, or other open unit that contains a liquid or semi-liquid
- L. Impoundment-** a unit which is a natural topographic depression, man-made excavation, or diked area primarily constructed of earthen or other materials, specifically designed to hold, evaporate or store, an accumulation of liquid or semi-liquid waste.
- M. Industrial waste water-** the liquid wastes from industrial processes or non-household waste water which is generated through activity not solely derived from human excreta, residential sinks, showers, baths, clothes and dish-washing machines; or exceeds the characteristics of a domestic waste as defined in 20.7.3.7.D(6) NMAC; 300 mg/L BOD, 300 mg/L TSS, 80 mg/L total nitrogen or 105 mg/L fats, oils and grease.
- N. Infiltration-** the uncontrolled passage or penetration of liquids or semi-liquids into a unit or system through defective pipes, pipe joints or connections, or manhole walls. cracks, structural failure, or material incompatibility.

- O. Influent collection system-** the infrastructure and associated components (e.g. sumps, pumps) used for the collection and conveyance of waste water from the originator to the Facility's treatment systems.
- P. Influent-** untreated water, waste water or other liquid or semi-liquid flowing into a reservoir, basin, or treatment plant.
- Q. Incident Command System (ICS)**– A standardized approach to the command, control, and coordination of emergency response providing a common hierarchy within which responders from multiple agencies can be effective.
- R. Leak detection system-** a system capable of detecting the failure of either the primary or secondary containment structure or the presence or release of an accumulated liquid in the secondary containment structure. The system must employ operational controls or consist of an interstitial monitoring device designed to detect continuously and automatically the failure of the primary or secondary containment structure or the presence of a release into the secondary containment structure.
- S. Maintenance and repair-** all actions associated with keeping a system or component functioning as designed or restoring a system or component to its intended function. Maintenance and repair does not include alterations to a unit or system which change the intended function or design of the unit or alter the treatment process.
- T. Maximum daily discharge-** the total daily volume of waste water (expressed in gallons per day) authorized for discharge by a discharge permit.
- U. Open unit or system-** a unit or system designed to store, treat or dispose of liquids, semi-liquids or solids in which the uppermost portion of the unit is exposed.
- V. Outfall-** the point where a treated waste water discharges to waters of the United States, or a tributary to waters of the United States.
- W. Peak instantaneous flow-** the highest design flow rate for a unit or system, expressed in gallons per minute or cubic feet per second.
- X. Record drawings-** the official record of the actual as-built conditions of the completed construction, to be held as the permanent record of each unit and system, which shall comply with the New Mexico Engineering and Surveying Practice Act (Chapter 61, Article 23 NMSA 1978).
- Y. Secondary containment-** a constructed unit or system designed to prevent any migration of waste streams or accumulated liquid out of the unit or system to the soil, ground water, or surface water at any time. Secondary containment can include, but is not limited to: double-walled pipes, concrete and floors equipped with sumps and alarm systems to detect potential leaks and must be:
- Designed, constructed and maintained to surround the unit on sides and bottom;
  - Free of cracks, gaps, or fissures;
  - Constructed of, or lined with, materials that are compatible with the waste streams to be in contact with the unit or system;
  - Placed on a foundation or base capable of withstanding pressure gradients, settling or uplift which may cause failure of the unit or system; and
  - Equipped with a leak detection system that is designed and operated so that it will detect the failure of the primary containment structure;
- Z. Settled solids measurement device-** an apparatus for testing settled solids in a liquid suspension for settling rate, compaction of the settled solids, and the resulting clarity of the liquid, or thickness of solids accumulated in an impoundment or tank.

- AA. Sludge or settled solids-** a solid or semisolid residue that results from the treatment or precipitation of solids from a waste stream, or the accumulation of natural sediment and debris settling in an open unit or system.
- BB. Synthetic Liner-** a continuous layer of man-made materials which restricts the downward or lateral escape of effluent or leachate.
- CC. Tank-** a stationary device, designed to contain an accumulation of waste water which is constructed primarily of non-earthen materials (e.g., concrete, steel, plastic) which provide structural support. Tanks can be further identified as either an **On ground tank** meaning a tank that is situated in such a way that the bottom of the tank is on the same level as the adjacent surrounding surface allowing for visual inspection of the vertical walls but not the external tank bottom, an **In-ground tank** meaning a tank constructed or installed so that a portion of the tank wall is situated to any degree within the ground, thereby preventing visual inspection of that portion of the external surface area, or an **Aboveground tank** meaning a tank that is completely elevated above the adjacent surrounding surface allowing for visual inspection of the vertical walls and external tank bottom.
- DD. Total Nitrogen-** The sum of total Kjeldahl nitrogen (TKN) and nitrate-nitrogen (NO<sub>3</sub>-N).
- EE. Toxic Pollutant-** a water contaminant or combination of water contaminants in concentration(s) which, upon exposure, ingestion, or assimilation either directly from the environment or indirectly by ingestion through food chains, will unreasonably threaten to injure human health, or the health of animals or plants which are commonly hatched, bred, cultivated or protected for use by man for food or economic benefit; as used in this definition injuries to health include death, histopathologic change, clinical symptoms of disease, behavioral abnormalities, genetic mutation, physiological malfunctions or physical deformations in such organisms or their offspring; in order to be considered a toxic pollutant a contaminant must be one or a combination of the potential toxic pollutants identified in the list in 20.6.2.7.T(2) NMAC and be at a concentration shown by scientific information currently available to the public to have potential for causing one or more of the effects listed above; any water contaminant or combination of the water contaminants identified in the list in 20.6.2.7.T(2) NMAC creating a lifetime risk of more than one cancer per 100,000 exposed persons is a toxic pollutant.
- FF. Treatment-** any method, technique or process that, through chemical biological and mechanical processes, modify waste water characteristics with the objective to neutralize and reduce or remove organic and inorganic water contaminants which if released to the environment could potentially impact ground water quality or pose a threat to human health.
- GG. Unauthorized Release or spill-** the intentional or unintentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of oil or other water contaminant not authorized in this Discharge Permit.

**HH. Untreated-** a category of waste water or other liquid or semi-liquid which has not undergone chemical or mechanical processes to neutralize and reduce or remove water contaminants to meet permit established effluent limits.

**II. Water Contaminant -** any substance that could alter if discharged or spilled the physical, chemical, biological or radiological qualities of water; "water contaminant" does not mean source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954.

### **III. Introduction**

The New Mexico Environment Department (NMED) issues this Discharge Permit (Discharge Permit), DP-1132, to the United States Department of Energy (DOE) and to Triad National Security, LLC (Triad) (collectively the Permittees) pursuant to the New Mexico Water Quality Act (WQA), NMSA 1978, §§ 74-6-1 through 74-6-17, and the New Mexico Water Quality Control Commission (WQCC) Regulations, 20.6.2 NMAC.

NMED's purpose in issuing this Discharge Permit, and in imposing the requirements and conditions specified herein, is to control the discharge, and potential release, of water contaminants from the Los Alamos National Laboratory (LANL) Radioactive Liquid Waste Treatment Facility (Facility) so as to protect public health, ground water for present and potential future use as a domestic water supply or an agricultural water supply, and those segments of surface water gaining from ground water inflow. In issuing this Discharge Permit, NMED has determined that the requirements of 20.6.2.3109.C NMAC have been or will be met.

The application (i.e., discharge plan) consists of the materials submitted by the Permittees on August 19, 1996, an updated application submitted to NMED on February 16, 2012, an amendment to the application submitted to NMED on August 10, 2012, supplemental information submitted on June 6, 2016, and materials contained in the administrative record prior to issuance of this Discharge Permit.

The Facility is located within Los Alamos National Laboratory, approximately 1.5 miles south of Los Alamos, New Mexico, in Sections 16, 17, 20, 21 and 22, Township 19N, Range 06E, Los Alamos County. Ground water most likely to be affected ranges from depths of approximately one foot to 1,306 feet and has a total dissolved solids concentration ranging from approximately 162 to 255 milligrams per liter.

The Facility, as it pertains to conditions within this Discharge Permit (DP-1132), is a wastewater treatment facility that is authorized to discharge up to 40,000 gallons per day (gpd), specifically described in section V(D) of this Discharge Permit and includes: the influent collection and storage system including the Waste Management Risk Mitigation Facility (WMRM); the low-level radioactive liquid waste treatment system; the transuranic waste water treatment system; the secondary treatment system; the Mechanical Evaporator System (MES); the Solar Evaporative Tank (SET) impoundment; and an outfall (Outfall 051) regulated by a National Pollutant Discharge Elimination System (NPDES) permit issued by the United States Environmental Protection Agency (EPA) pursuant to the federal Clean Water Act Section 402, 33 U.S.C § 1342. The discharge may contain water



contaminants with concentrations above the standards of 20.6.2.3103 NMAC and may contain toxic pollutants as defined in 20.6.2.7.T(2) NMAC.

Pursuant to 20.6.2.3109 NMAC, NMED reserves the right to require a Discharge Permit Modification in the event NMED determines that the requirements of 20.6.2 NMAC are being or may be violated or that the standards of 20.6.2.3103 NMAC are being or may be violated or a toxic pollutant as defined in 20.6.2.7.T(2) NMAC is present. Such modifications may include, without limitation, the implementation of structural controls, treatment processes, monitoring criteria, operational processes, changes in discharge activities and the abatement of water pollution and remediation of ground water quality.

Issuance of this Discharge Permit does not relieve the Permittees of the responsibility to comply with the WQA, WQCC Regulations, and all other applicable federal, state, and local laws and regulations.

#### **IV. Findings**

In issuing this Discharge Permit, NMED finds:

- A. The Permittees are discharging effluent or leachate from the Facility so that such effluent or leachate may move directly or indirectly into ground water within the meaning of 20.6.2.3104 NMAC.
- B. The Permittees are discharging effluent or leachate from the Facility so that such effluent or leachate may move into ground water of the State of New Mexico which has an existing concentration of 10,000 mg/L or less of total dissolved solids (TDS) within the meaning of 20.6.2.3101.A NMAC.
- C. The discharge from the Facility is within or into a place of withdrawal of ground water for present or reasonably foreseeable future use within the meaning of the WQA, NMSA 1978, § 74-6-5.E.3, and the WQCC Regulations at 20.6.2.3103 NMAC
- D. The discharge from the Facility to Outfall 051 is subject to the exemption set forth in 20.6.2.3105.F NMAC, to the extent that effective and enforceable effluent limitations (not including monitoring requirements) are imposed, unless the NMED Secretary determines that a hazard to public health may result.

#### **V. Authorization to Discharge**

- A. Pursuant to 20.6.2.3104 NMAC, it is the responsibility of the Permittees to ensure that discharges authorized by this Discharge Permit are consistent with the terms and conditions herein.
- B. The Permittees are authorized to discharge up to 40,000 gpd of low-level and transuranic radioactive industrial waste water using a series of treatment processes as described in Section V(D) of this Discharge Permit in accordance with the Conditions set forth in Section VI of this Discharge Permit.
- C. The Permittees are authorized to discharge up to 40,000 gpd of treated waste water, in

accordance with the Conditions set forth in Section VI of this Discharge Permit. Discharges shall be to either the Mechanical Evaporator System (MES), the synthetically lined Solar Evaporative Tank System (SET), or through an outfall (identified as Outfall 051) also regulated by a National Pollutant Discharge Elimination System (NPDES) permit (Permit No. NM0028355) issued by the United States Environmental Protection Agency [20.6.2.3104 NMAC, 20.6.2.3106.C NMAC, 20.6.2.3109.C NMAC].

- D. The Permittees are authorized to use the following defined systems with their associated units for the process of collecting, treating, and disposing of waste water:

**The Influent Collection System** is defined herein as all primary and secondary containment lines that convey transuranic or low-level radioactive waste water from Technical Areas TA-03, TA-35, TA-48, TA-50, TA-55, and TA-59 to the Transuranic Waste (TRU) treatment system and the Low-level Radioactive waste water (RLW) treatment system at TA-50. It includes the conveyance lines beginning at the point the pipe emerges from the building or other structure that comprises the site of generation, and extending to the vault immediately upstream of the influent tanks at TA-50. It also includes the conveyance of low-level radioactive waste water to the RLW treatment system by truck.

**The Waste Mitigation Risk Management (WMRM) Facility (Building 50-250)** is located about 50 meters southeast of Building 50-01. WMRM houses six tanks, with a capacity of 50,000 gallons each, for the storage of low-level RLW influent. Four of these tanks will be held in reserve for use in emergency situations; two will be used for day-to-day influent collection and storage. Tanks are located in the basement of WMRM; the basement further serves as secondary containment for the facility.

**The Low-level Radioactive Waste Water (RLW) Treatment System** is defined herein as the low-level radioactive waste water influent storage tanks, the associated treatment units (filters, feed tanks, ion exchange columns, reverse osmosis units, etc.) effluent storage tanks, and other associated low-level radioactive waste water components at TA-50 and subsequent replacement facilities utilizing the same treatment processes located within the physical confines of TA-50. The process by which the individual treatment units within the low-level radioactive treatment system are utilized may, for attaining compliance with the effluent limits set forth in this Discharge Permit, be altered, by-passed, replaced, or removed in accordance with the Conditions set forth in this Discharge Permit. The physical location of each unit and system and replacement systems that convey, store, or treat RLW waste streams coming into the low-level radioactive waste water treatment system is within TA-50.

**The Transuranic (TRU) Waste Water Treatment System** is defined herein as the influent storage tanks for each form of TRU (acidic and caustic) waste streams, the associated neutralization unit, pressure filters, the final processing tanks, and other associated TRU waste stream conveyance, storage and treatment components at TA-50. Sludge associated with TRU shall be disposed of at an off-site facility permitted to receive TRU waste.

**The Secondary Treatment System** is defined herein as the receiving tanks for reverse

osmosis concentrate waste water generated through the RLW Treatment System and treated effluent generated from the TRU Treatment System, the treatment process units for secondary reverse osmosis, the rotary vacuum filter, and other associated post-treatment conveyance, storage and treatment components at TA-50 designed to reduce waste stream volumes.

**The Mechanical Evaporator System (MES)** is defined herein as TA-50-0257 and the units in which treated RLW effluent is disposed of through natural gas generated mechanical evaporation.

**The Solar Evaporative Tank System (SET)** is defined herein as the concrete impoundment at TA-52 that receives treated effluent from the RLWTF for disposal by evaporation, and the conveyance line from TA-50. The SET consists of two cells separated by a single partitioned wall; each cell has a containerized volume of approximately 380,000 gallons. The SET is an unsealed subgrade concrete structure with a double-lined synthetic liner, and a leak detection system between the synthetic liners.

**Outfall 051** is defined herein as the outfall through which treated waste water from the Facility is discharged to Effluent Canyon, which is a tributary to Mortandad Canyon.

[20.6.2.3104 NMAC, 20.6.2.3106.C NMAC, 20.6.2.3109.C NMAC].

## VI. Conditions

NMED issues this Discharge Permit for the discharge of water contaminants subject to the following conditions:

### A. Operational Plan

1. **ANNUAL UPDATE**-The Permittees shall submit to NMED an updated Facility Process Description annually by February 1 of each year in conjunction with the February Quarterly Report. The annual Facility Process Description shall include the following:
  - a. A schematic of all major structures associated with the Facility, including all influent lines, buildings, exterior tanks, effluent lines, outfall and discharge locations identified in this Discharge Permit.
  - b. A comprehensive flow chart demonstrating the most current processes in operation for the collection, treatment and disposal of waste water for the Facility. The flow chart shall indicate any processes which have been bypassed, decommissioned, or are no longer used for the collection, treatment or final disposal of the waste water.
  - c. An associated narrative describing each of the systems and treatment units outlined in the flow chart. This narrative shall include the collection system, primary treatment units, secondary treatment units and any systems used in the disposition of any associated waste streams at the Facility. For each unit or system, the narrative shall include:
    - 1) The identification of the unit or system.
    - 2) The physical location.
    - 3) Intended function.

- 4) Physical description.
  - 5) Operational capacity, if applicable.
  - 6) The date the unit or system was placed in operation.
  - 7) Origin of waste streams that the unit or system receives.
  - 8) The unit or system(s) to which it discharges.
- d. The Annual Update shall also include the following documents to be submitted annually by February 1 of each year.
- 1) Summary of maintenance and repairs made during the reporting period.
  - 2) Water Tightness Testing results (Condition 8).
  - 3) Settled Solids measurements (Condition 10).
  - 4) Ground Water Flow report (Condition 32).

[20.6.2.3106.C NMAC]

- 2. NOTIFICATION OF CHANGES-**The Permittees shall submit to NMED a written notification of any changes in the Facility's collection, treatment or disposal systems which are not maintenance and repair (as defined in this permit Section II), and which are not modifications (as defined in Condition 3, Plans and Specifications). The notification shall be submitted no less than thirty days prior to the date proposed for implementation. The notification shall include, at a minimum, the following items listed herein and others which may be determined to be required by NMED.

- a. Date process change is planned to be implemented.
- b. Narrative of process change.
- c. Justification for making the process change.
- d. Units or components being removed from the process.
- e. Units or components being incorporated into the process.
- f. Operational controls implemented for the change in processes.
- g. Intended duration of process change (e.g., permanent or limited duration).

LANL shall submit to NMED and add to the posting required in Condition 49 (Electronic Posting) any follow-up material required later by NMED, after NMED's review of a notification.

[20.6.2.3106.C NMAC]

- 3. SUBMITTAL OF PLANS AND SPECIFICATIONS-**The Permittees shall not implement any expansion, process modification, or alteration of a system or unit that could constitute a discharge permit modification (as defined in 20.6.2.7.D(4) NMAC) of the intended function, design or capacity for any of the systems, units or components of the Facility's collection, treatment or disposal systems without prior written approval by NMED. Prior to implementing any such changes, the Permittees shall submit to NMED for approval a written proposal, including plans and specifications that describes in detail the proposed changes in the processes or components of the Facility's collection, treatment, or disposal systems. The proposal shall be delivered by certified mail or hand delivery. The Permittees shall not place any waste in a

new or changed unit or system unless the Permittees receive prior written approval from NMED. NMED will provide such approval only if it finds that the Permittees have submitted the required elements listed herein in sufficient detail to demonstrate that the unit or system is designed and constructed to minimize the possibility of an unauthorized release of water contaminants which could directly or indirectly impact ground water quality or pose a threat to human health. If NMED determines that the proposed changes require an amendment or modification of this Discharge Permit, NMED will so inform, in writing, Permittees.

The proposal shall include, at a minimum, the following information.

- a. Identification of all applicable units and a description of how they will be constructed.
- b. A map, to scale, of the Facility, with the location of the proposed unit relative to other identified structures or systems referenced in this Discharge Permit.
- c. Specifications for all new unit and system components (e.g., lift stations, valves, transfer lines, process units); whether new, retrofitted, or proposed for abandonment. All new system components for the collection, treatment or disposal of waste water at the Facility shall be designed to meet the projected needs of the Facility.
- d. Plans and specifications for proposed flow meters that will be used to measure the volume of waste water discharged to or from the unit or system.
- e. Demonstration that the proposed unit or system is adequately designed for its intended function.
- f. Compatibility of the unit or system's constructed material with the proposed waste stream, including, if applicable, information regarding corrosion protection to ensure that it will maintain its structural integrity and not collapse, rupture or fail.
- g. Certification that the foundation, structural support, seams, connections, and pressure controls, if applicable, are adequately designed and the unit or system has sufficient structural strength to convey, store, treat or dispose of the intended waste stream.
- h. Certification for all plans and specifications attesting to the capacity of the unit or system including, without limitation, waste water flow data derived using both average daily flow and peak instantaneous flow. Computations should be presented in a tabular form showing depths and velocities at minimum, design average, and peak instantaneous flow for all new system components.
- i. Water balance calculations for the capacity and evaporative potential for units which are subject to exposure to the environment and to which precipitation events may impact total capacity of the unit. The unit shall be designed such that two feet of freeboard or an NMED approved alternative is maintained at all times.
- j. Design specifications for secondary containment for all units or systems intended to convey, store, treat, or dispose of liquid or semi-liquid waste

- streams.
- k. Design specifications for leak detection systems associated with systems designed to convey, store, treat, or dispose of liquid or semi-liquid waste streams, which demonstrate the capability of detecting the failure of either primary or secondary containment or the presence of any release of any accumulated liquid in the secondary containment system within the earliest practicable time as approved in advance by NMED;
  - l. Proposed leakage tests shall be specified for all new unit or system components with direct contact to treated or untreated waste water. This may include appropriate water or low pressure air testing. The use of a camera or other visual methods used for documentation of the inspection, prior to placing the unit or system in service is recommended.
  - m. Design specifications for all units or systems designed to convey, store, treat, or dispose of liquid or semi-liquid waste streams, which demonstrate the ability to remove liquids and semi-liquids from the area of containment within the earliest practicable time as approved in advance by NMED.
  - n. A Construction Quality Control Assurance Plan (CQCAP) assuring that the proposed unit or system will meet or exceed all design criteria and specifications.

Plans and specifications shall comply with the New Mexico Engineering and Surveying Practice Act (Chapter 61, Article 23 NMSA 1978) as well as applicable DOE and LANL Engineering Standards.  
[20.6.2.1202 NMAC, 20.6.2.3106.C NMAC, 20.6.2.3109.C NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]

4. **CONSTRUCTION REPORT**-Within 90 days following completion of construction for a unit or system that requires NMED approval, the Permittees shall prepare a final construction report that contains the following items.
  - a. A complete copy of record drawings, specifications, final design calculations, addenda, and change orders, as applicable, or in the alternative, a list and description of any substantive changes to design plans and specification made during construction (based on field concerns and changes).
  - b. Description of the procedures and results from all inspection and tests that occur before, during, and after construction to ensure that the construction materials and the installed unit or system components meet the design specifications.
  - c. A complete copy of the Operation and Maintenance Manual, specific to the unit or system being constructed.[20.6.2.1202 NMAC, 20.6.2.3109.C NMAC, 20.6.2.3106.C NMAC, 20.6.2.3107.C NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]
5. **RESTRICTING ENTRY**-The Permittees shall, at all times, prevent the unauthorized entry of persons, wildlife, or livestock into the active portions of this Facility (with the exception of Outfall 051) so that physical contact with

the waste streams, structures and equipment is restricted. Means to control unauthorized access shall include an artificial or natural barrier which completely surrounds the active portions of the Facility and a means to control entry, at all times, through gates or other entrances to the active portions of the Facility (e.g., locks, surveillance system).

[20.6.2.3109.C NMAC]

6. **SIGNS**-The permittees shall post bilingual warning signs (in English and Spanish) at all gates and perimeter fences, where present, around the Facility. Signs shall be posted in sufficient numbers to be visible at all angles of approach as well as from a distance of at least 25 feet, Permittees shall include on the signs the following or an equivalent warning: DANGER – UNAUTHORIZED PERSONNEL KEEP OUT (PELIGRO – SE PROHIBE LA ENTRADA A PERSONAS NO AUTORIZADAS).

[20.6.2.3109.C NMAC]

7. **[RESERVED]**

8. **WATER TIGHTNESS TESTING**-Within 180 days following the effective date of this Discharge Permit (by **Due Date**), and every 540 days thereafter, the Permittees shall demonstrate that each unit and system intended to convey, store, treat or dispose of a liquid or semi-liquid waste stream without secondary containment is not leaking and is otherwise fit for use. To make the demonstration, the Permittees shall conduct both a visual test, for those units and systems that are above-ground and visually inspectable, and a quantifiable test, as applicable.

For units and systems that are above-ground and visually inspectable, the visual assessment shall be adequate to detect obvious cracks, leaks, and corrosion or erosion that may lead to cracks and leaks. If necessary, the Permittees shall remove the stored waste from the unit or system to allow the condition of internal surfaces to be assessed.

The quantifiable assessment for units and systems that are used to store, treat or dispose of liquid or semi-liquid waste streams shall consist of obtaining tank level measurements over at least a 36 hour period during which no liquid or semi-liquid is added to or removed from the unit. The exfiltration or infiltration rate shall not exceed 0.07 gallons per hour per thousand gallons of capacity for the unit or system.

The quantifiable assessment for units and systems designed to convey a liquid or semi-liquid waste stream shall be determined through passive testing for leakage exfiltration and infiltration. The infiltration or exfiltration rate shall not exceed 50 gallons per mile per consecutive 24 hour period for any section of the system. Infiltration and exfiltration tests for conveyance lines shall be conducted as follows:

- a. Prior to testing for infiltration, the conveyance lines shall be isolated and evacuated so that maximum infiltration conditions exist at the time of testing. The Permittees shall measure and document the volume of infiltration entering each section of the conveyance line being tested. The cumulative results for the entire collection system shall not be a satisfactory method for gauging infiltration compliance.
- b. Prior to testing for exfiltration, the conveyance lines shall be isolated and filled with water to a level that produces, at minimum, two feet of hydrologic head above the uppermost point of the section being tested. The cumulative results for the entire collection system shall not be a satisfactory method for gauging exfiltration compliance.

Demonstration of water tightness shall comply with the New Mexico Engineering and Surveying Practice Act (Chapter 61, Article 23 NMSA 1978). The Permittees shall submit to NMED the procedures and findings of the evaluation in the Annual Update (Condition 1) by February 1 of each year immediately following the date when the water tightness test was performed. In the event that inspection reveals that the leakage rate is greater than permissible in this Discharge Permit, the Permittees shall implement the requirements of Condition 9 (Actual or Potential Water-Tightness Failure) in this Discharge Permit.

[20.6.2.3106.C NMAC, 20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC]

9. **ACTUAL OR POTENTIAL WATER-TIGHTNESS FAILURE**-In the event that any unit or system does not demonstrate water-tightness in accordance with this Discharge Permit or should inspection reveal damage to the unit that could result in structural failure, the Permittees shall take the following actions.
  - a. If the unit or system failure resulted in an unauthorized release the Permittees shall provide NMED oral notification of the release in 20.6.2.1203 NMAC within 24 hours of learning of the release and take the following corrective actions.
    - 1) The Permittees shall remove the unit or system from service immediately; and
    - 2) As soon as possible following the failure of the unit or system, but within 30 days of the failure, the Permittees shall submit to NMED for approval a written proposal including a schedule for corrective actions to be taken to repair or permanently cease operation of the unit or system.

If repair or replacement of a unit or system requires construction, the Permittees shall submit plans and specifications to NMED with the proposed corrective actions. Plans and specifications shall comply with the New Mexico Engineering and Surveying Practice Act (Chapter 61, Article 23 NMSA 1978).



Upon NMED approval, the Permittees shall implement the approved corrective actions according to the approved schedule.

Prior to placing a repaired or replaced unit or system back into service, the Permittee shall repeat the water-tightness testing in accordance with Condition 8 (Water Tightness Testing) to verify the effectiveness of the repair or replacement, and submit a report detailing the completion of the corrective actions to NMED. The report shall include the date of the test, the name of the individual that performed the test, written findings, photographic documentation of the unit's interior and water tightness test results. If notified to do so by NMED, the Permittees shall also submit record drawings that include the final, construction details of the unit. Record drawings shall comply with the New Mexico Engineering and Surveying Practice Act (Chapter 61, Article 23 NMSA 1978).

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.B NMAC]

- 10. SETTLED SOLIDS; SETTLED SOLIDS REMOVAL-**The Permittees shall inspect and measure the thickness of the settled solids in the SET on an annual basis. The Permittees shall measure the thickness of settled solids in accordance with the following procedure.
- a. The total surface area of each basin shall be divided into nine equally sized areas.
  - b. A settled solids measurement device shall be utilized to obtain one settled solids thickness measurement (to the nearest half foot) within each area.
  - c. The individual settled solids thickness for each of the nine measurement areas shall be averaged.

The Permittees shall record all measurements in an inspection log which must include, at a minimum, the following.

- a. Date and time of the inspection.
- b. The name of the inspector.
- c. Identification of the unit.
- d. The location of the unit.
- e. The estimated total volume of liquid or semi-liquid in the unit or system at the time of inspection.
- f. The total depth capacity of the unit or system (allowing for freeboard requirements).
- g. The method used to determine the settled solids thickness.
- h. The average measured thickness of settled solids in the unit.

The Permittees shall not allow settled solids to accumulate in any open unit or system used to convey, store, treat, or dispose of liquid or semi-liquid at an average depth greater than one foot. In the event that the settled solids accumulation in an open unit or system exceeds an average thickness of one foot, or in the event that the Permittees otherwise plan to initiate removal of settled solids from an open unit or system, the Permittees shall propose a plan

for the removal and disposal of the settled solids from the unit or system. At least 60 days prior to any settled solids removal, the Permittees shall submit to NMED for approval a written settled solids removal and disposal plan. The plan shall include characterization of the settled solids, the estimated volume of settled solids to be removed, a method for removal throughout the unit or system in a manner that is protective of the structural integrity of the unit or system, a schedule for completing the settled solids removal and disposal, and a description of how the settled solids will be contained, transported, and disposed of in accordance with all applicable local, state, and federal laws and regulations. Upon NMED approval, the Permittees shall implement the plan according to the approved schedule.

The Permittees shall keep the inspection log on site for a minimum of five years from the date of inspection. The Permittees shall submit a summary report of all settled solids activities to NMED in the Annual Report submitted by February 1 of each year as well as the Quarterly Report for the period during which the activity occurs.

[NMSA 1978, § 74-6-5.D, 20.6.2.3109.C NMAC, 20.6.2.3107.A NMAC]

**11. FACILITY INSPECTIONS-**The Permittees shall inspect the Facility for malfunctions, deterioration, leaks or spills which may be causing, or may lead to, an unauthorized release to the environment or pose a threat to human health.

The inspection shall be performed at the frequency prescribed for each unit or system in this Discharge Permit or based on the rate of deterioration of the equipment and the probability of an environmental or human health incident for those units and systems not specifically described herein.

- a. The Permittees shall inspect and test all leak detection systems to ensure performance within manufacturer specifications on a regular monthly basis.
- b. The Permittees shall inspect all externally observable portions of units and systems conveying, treating or storing liquids, semi-liquids, or solids including any secondary containment areas on a weekly basis. The Permittees shall examine for evidence of deterioration or failure of the units and systems. The visible portions of all synthetic liners used to store or dispose of liquids or semi-liquids shall be inspected for uniformity, damage, imperfections, punctures, blisters, and evidence of seam or joint failure on a regular monthly basis.
- c. The Permittees shall inspect, on a weekly basis through indirect observation, all units and systems conveying, processing, or storing liquids, semi-liquids, or solids that are inaccessible or otherwise cannot be directly observed. The Permittees shall identify the unit or system and note any observations which may suggest a breach or failure of containment in accordance with Condition 12 (Containment).
- d. The Permittees shall inspect all open units and systems which contain a liquid or semi-liquid, on each day during which the Facility is in operation, to ensure capacity of the unit or system is not exceeded.

The Permittees shall record all inspections in an inspection log which shall be kept on site for a minimum of five years from the date of inspection. At a minimum, these inspections shall include the date and time of the inspection, the name of the inspector, identification of the unit, the location of the unit, the total volume of liquid or semi-liquid in the unit or system at the time of inspection, a notation of the observations made, and the date and nature of any maintenance and repairs made.  
[20.6.2.3107.A NMAC]

- 12. CONTAINMENT-**The Permittees shall institute corrective actions, as necessary, to ensure the protection of ground water and human health. In the event that a unit or system or secondary containment for a unit or system reveals damage that could result in structural failure or a release to the environment, the Permittees shall take the following actions.
- a. The Permittees shall remove the unit or system from service immediately.
  - b. The Permittees shall take immediate, and if necessary temporary, corrective actions to minimize the potential for a release.
  - c. Within 90 days following identification of the potential failure, the Permittees shall submit to NMED for approval a written corrective action report to include, at minimum, the following.
    - 1) Identification of the unit or system, or secondary containment for a unit or system in which the failure was observed.
    - 2) The date and time the failure was observed and the date and time it was estimated to have begun.
    - 3) The potential cause of the failure.
    - 4) For units in which a release occurred to secondary containment but was not released to the environment, the rate at which the release occurred and total volume released to the secondary containment.
    - 5) The characteristics of the waste stream being treated, stored or conveyed by the unit or system, with analytical results from waste stream samples taken with date, time, technical staff collecting the sample and the lab report with QA/QC.
    - 6) The corrective actions taken to remediate the failure or release with a timeline of when actions were implemented.
    - 7) Long-term actions, if any, that are proposed to be employed for maintaining the integrity of the secondary containment and the schedule for implementing such actions.
    - 8) Ongoing measures for monitoring, inspecting, and determining structural integrity of the secondary containment.
    - 9) Proposed operation and maintenance and repair protocol, if applicable, to be instituted to prevent future failures.
  - d. If failure of the unit or system or secondary containment resulted in a release to the environment, the Permittees shall comply with the requirements of Condition 38 (Spill or Unauthorized Release) of this Discharge Permit.

Upon NMED approval of the corrective action report, the Permittees shall implement any approved long-term actions to maintain the integrity of the secondary containment, and any other approved measures or protocols, according to the approved schedule.  
[20.6.2.3107.A NMAC]

- 13. MAINTENANCE and REPAIR-**The Permittees shall maintain the function and structural integrity of the Facility at all times except during maintenance or repair. All routine maintenance and repair actions shall be noted in a maintenance log which shall be kept on site for a minimum of five years. Maintenance and repair of a unit or system required due to potential malfunction which could lead to an unauthorized discharge to the environment or pose a threat to human health shall be corrected as soon as possible, but no later than 30 days from the date of the observed malfunction. For good cause, NMED may approve a longer period. The Permittees shall submit to NMED a summary and description of the maintenance and repair activities performed on the Facility as part of the quarterly monitoring reports.

In the event that routine maintenance and repair reveal significant damage likely to affect the structural integrity of a unit or system or any of its associated components, or its ability to function as designed, the Permittees shall implement the requirements of Condition 14 (Damage to Structural Integrity) of this Discharge Permit.  
[20.6.2.3107.A NMAC]

- 14. DAMAGE TO STRUCTURAL INTEGRITY-**In the event that an inspection required in this Discharge Permit, or any other observation, reveals damage likely to affect the structural integrity of a unit or system or any of its associated components, or its ability to function as designed, the Permittees shall take the affected unit out of service as quickly as possible, notify NMED orally within 24 hours, and shall propose the repair or replacement of the treatment system or its associated components. Within 30 days after discovery by the Permittees or following notification from NMED that corrective action is required, the Permittees shall submit to NMED for approval a written corrective action plan that includes a schedule for implementation and completion. The Permittees may request an extension of the submittal deadline pursuant to Condition 53 (Extensions of Time). Upon NMED approval, the Permittees shall implement the plan according to the approved schedule. The Permittees shall remedy any deterioration or malfunction of equipment or structures which are discovered during inspection.  
[20.6.2.3107.A NMAC]

- 15. FREEBOARD; FREEBOARD EXCEEDANCE-**The Permittees shall maintain two feet of freeboard in all open units and systems that contain a liquid or semi-liquid. If the Permittees determine that two feet of freeboard cannot be maintained, the Permittees shall submit to NMED for approval a written request

for alternate freeboard requirements. In the request the Permittees shall, at a minimum, propose freeboard levels that will be maintained and propose demonstrated spill prevention controls and overflow prevention controls that include the prevention of overtopping by wave, wind or precipitation events.

In the event that established freeboard of two feet or an NMED approved alternative, is not maintained in an open tank, impoundment or other open unit or system that contains a liquid or semi-liquid, the Permittees shall take immediate corrective actions to restore the required freeboard.

In the event that the required freeboard cannot be restored within a period of 72 hours following discovery, the Permittees shall submit to NMED for approval a proposed corrective action plan to restore the required freeboard within 15 days following the date when exceedance of the required freeboard was initially discovered. The plan shall include a schedule for completion of corrective actions and quantifiable assessments to demonstrate preservation of the required freeboard for a period no less than five years. Upon NMED approval, the Permittees shall implement the corrective action plan according to the approved schedule.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.B & .C NMAC]

**16. EFFLUENT LIMITS: OUTFALL 051**-The Permittees shall not discharge treated waste water to Outfall 051 that exceeds the following limits (or is outside the following pH range):

- a. All water contaminants and their associated limits as listed in Table 1.

Table 1. Effluent Quality Limits for Discharges to Outfall 051

<b>Inorganic Chemicals:</b>	<b>CAS#</b>	<b>mg/L</b>	<b>Organic Chemicals:</b>	<b>CAS#</b>	<b>mg/L</b>
Aluminum (dissolved)	7429-90-5	5.0	Benzene (total)	71-43-2	0.005
Arsenic (dissolved)	7440-38-2	0.01	Benzo (a) pyrene (total)	50-32-8	0.0002
Barium (dissolved)	7440-39-3	2.0	Carbon tetrachloride (total)	56-23-5	0.005
Boron (dissolved)	7440-42-8	0.75	Chloroform (total)	67-66-3	0.1
Cadmium (dissolved)	7440-43-9	0.005	1,1-Dichloroethane (total)	75-34-3	0.025
Chromium (dissolved)	7440-47-3	0.05	1,2-Dichloroethane (total)	107-06-2	0.005
Chloride (dissolved)	7647-14-5	250.0	1-1-Dichloroethylene (total)	75-35-4	0.007
Cobalt (dissolved)	7440-48-4	0.05	1,1,2,2-Tetrachloroethylene (PCE) (total)	127-18-4	0.005
Copper (dissolved)	7440-50-8	1.0	1,1,2-Trichloroethylene (TCE) (total)	79-01-6	0.005
Cyanide (dissolved)	57-12-5	0.2	Ethylbenzene (total)	100-41-4	0.7
Fluoride(dissolved)	16984-48-8	1.6	Ethylene dibromide (total) (EDB)	1106-93-4	0.00005

Iron (dissolved)	7439-89-6	1.0
Lead (dissolved)	7439-92-1	0.015
Manganese (dissolved)	7439-96-5	0.2
Molybdenum (dissolved)	7439-98-7	1.0
Mercury (total)	92786-62-4	0.002
Nickel (dissolved)	7440-02-0	0.2
Perchlorate (total)	14797-73-0	0.0138
pH (total)		6 – 9
Selenium (dissolved)	7782-49-2	0.05
Silver (dissolved)	7440-22-4	0.05
Sulfate (dissolved)		600.0
Antimony (Sb)	7440-36-0	0.006
Beryllium (Be)	7440-41-7	0.004
Nitrite (NO <sub>2</sub> as N)	10102-44-0	1.0
Thallium (Tl)	7440-28-0	0.002
Total Dissolved Solids (dissolved)		1000.0
Uranium (dissolved)	7440-61-1	0.03
Zinc (dissolved)	9029-97-4	10.0

Naphthalene plus monomethylnaphthalenes (total)	91-20-3, 90-12-0, 91-57-6	0.03
Methylene chloride (total)	75-09-2	0.005
Total PCBs (total)		0.0005
Phenols (total)	108-95-2	0.005
Toluene (total)	108-88-3	1.0
1,1,1-Trichloroethane (total)	71-55-6	0.2
1,1,2-Trichloroethane (total)	79-00-5	0.005
1,1,2,2-Tetrachloroethane (total)	79-34-5	0.01
Vinyl Chloride (total)	75-01-4	0.002
Xylenes (total)	108-38-3, 1330-20-7, 95-47-6, 106-42-3	0.62
cis-1,2-dichloroethene	156-59-2	0.07
trans-1,2-dichloroethene	156-60-5	0.1
1,2-dichloropropane (PDC)	78-87-5	0.005
Styrene	100-42-5	0.1
1,2-dichlorobenzene	95-50-1	0.6
1,4-dichlorobenzene	106-46-7	0.075
1,2,4-trichlorobenzene	120-82-1	0.07
Pentachlorophenol	87-86-5	0.001
Atrazine	1912-24-9	0.003
Methyl tertiary-butyl ether (MTBE)	1634-04-4	0.1

<b>Radioactivity:</b>		<b>pCi/L</b>
Combined Radium-226 & Radium-228 (total)		5

<b>Nitrogen Compounds:</b>		<b>mg/L</b>
Total Nitrogen (sum of TKN+NO <sub>3</sub> -N) (dissolved)		15

- b. For any water contaminant that is not listed in Table 1 of this Discharge Permit but is listed as a toxic pollutant in 20.6.2.7.T(2) NMAC, the limit shall be the concentration listed in Table A-1 of NMED, Risk Assessment Guidance for Site Investigation and Remediation (most recent edition). For any water contaminant that is not listed in Table 1 of this Discharge Permit or in Table A-1 of the Risk Assessment Guidance, the limit shall be the most recent EPA Regional Screening Level (RSL) for residential tap water. If an RSL is applicable for a carcinogenic water contaminant, the limit shall be adjusted to represent a lifetime risk of no more than one cancer occurrence per 100,000 persons (i.e., a cancer risk of  $1 \times 10^{-5}$ ).

In the event that effluent limits are exceeded, the Permittees shall enact the

requirements of Condition 18 (Effluent Exceedance) of this Discharge Permit. Water contaminants that are subject to effective and enforceable limitations in NPDES Permit No. NM0028355 for discharges to Outfall 051 are exempt from the limits set forth in this Condition.  
[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC]

**17. EFFLUENT LIMITS: MES and SET-**The Permittees shall not discharge treated waste water to either the MES or SET that exceeds the following limits (or is outside the following pH range):

- a. All water contaminants and their associated limits as listed in Table 2.

Table 2. Effluent Quality Limits for Discharges to the MES and SET

<b>Inorganic Chemicals:</b>	<b>CAS#</b>	<b>mg/L</b>	<b>Inorganic Chemicals:</b>	<b>CAS#</b>	<b>mg/L</b>
Aluminum (dissolved)	7429-90-5	5.0	Lead (dissolved)	7439-92-1	0.015
Arsenic (dissolved)	7440-38-2	0.01	Manganese (dissolved)	7439-96-5	0.2
Barium (dissolved)	7440-39-3	2.0	Molybdenum (dissolved)	7439-98-7	1.0
Boron (dissolved)	7440-42-8	0.75	Mercury (total)	92786-62-4	0.002
Cadmium (dissolved)	7440-43-9	0.005	Nickel (dissolved)	7440-02-0	0.2
Chromium (dissolved)	7440-47-3	0.1	Perchlorate (total)	04797-73-0	0.0138
Chloride (dissolved)	7647-14-5	250.0	pH (total)		6 – 9
Cobalt (dissolved)	7440-48-4	0.05	Selenium (dissolved)	7782-49-2	0.05
Copper (dissolved)	7440-50-8	1.3	Silver (dissolved)	7440-22-4	0.1
Cyanide (dissolved)	57-12-5	0.2	Sulfate (dissolved)		600.0
Fluoride(dissolved)	16984-48-8	1.6	Total Dissolved Solids (dissolved)		1000.0
Iron (dissolved)	7439-89-6	1.0	Uranium (dissolved)	7440-61-1	0.03
			Zinc (dissolved)	9029-97-4	10.0

<b>Radioactivity:</b>	<b>pCi/L</b>	<b>Nitrogen Compounds:</b>	<b>mg/L</b>
Combined Radium-226 & Radium-228 (total)	5	NO <sub>3</sub> -N (dissolved)	10

In the event that effluent limits are exceeded, the Permittee shall enact the requirements of Condition 18 (Effluent Exceedance) of this Discharge Permit.  
[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC]

**18. EFFLUENT EXCEEDANCE-**In the event that analytical result of an effluent sample indicate an exceedance for any of the effluent limits set forth in Condition 16 (Effluent Limits: Outfall 51) and Condition 17 (Effluent Limits: MES and SET) of this Discharge Permit, the Permittees shall, within 24 hours following receipt of analytical results indicating the exceedance, collect and submit for analysis a subsequent sample for the particular analyte that was in exceedance. In the event the analytical results of the subsequent sample confirm that the maximum limitation has been exceeded (i.e., confirmed exceedance), the Permittees shall take the following actions.

Within 24 hours of becoming aware of a confirmed exceedance, the Permittees

shall:

- a. Cease discharges to the system for which limits have been exceeded with the exception of the MES to which a confirmed exceedance shall not require immediate cessation;
- b. Notify the NMED Ground Water Quality Bureau that an effluent limit set forth in this Discharge Permit has been confirmed to be in exceedance; and
- c. Increase the frequency of effluent sampling to adequately establish the quality of discharges prior to resuming discharges to the system that was in exceedance. The sampling frequency for the particular analyte that was in exceedance shall increase from monthly or quarterly, as required by Condition 29 (Effluent Sampling) of this Discharge Permit, to weekly. If the particular analyte in exceedance remains below the effluent limit in three consecutive weekly samples, then the Permittees may resume discharges to the system that was in exceedance.

Within one week of becoming aware of a confirmed exceedance, the Permittees shall:

- a. Submit copies of the analytical results for the initial and subsequent sample confirming the exceedance to NMED;
- b. Examine the internal operational procedures, and maintenance and repair logs, required by Condition 13 (Maintenance and Repair) of this Discharge Permit, for evidence of improper operation or function of the units and systems; and
- c. Conduct a physical inspection of the treatment system to detect abnormalities, and correct any abnormalities.

A report detailing the corrections made shall be submitted to NMED within 30 days following correction.

In the event that analytical results from any two independent monthly effluent samples indicate an exceedance of the effluent limits for all discharge systems set forth in this Discharge Permit within any 12-month period, the Permittees shall propose to modify operational procedures or upgrade the treatment process to achieve the effluent limits. Within 90 days of receipt of the second sample analysis in which effluent limits have been exceeded, the Permittees shall submit to NMED for approval a corrective action plan. The plan shall include a schedule for completion of corrective actions. Upon NMED approval, the Permittees shall implement the corrective action plan according to the approved schedule.

When analytical results from three consecutive months of effluent sampling do not exceed the maximum limitations set forth by this Discharge Permit, the Permittees are authorized to return to a monthly or quarterly monitoring frequency as required in this Discharge Permit.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.B NMAC, 20.6.2.3107.C NMAC]



**19. PERSONNEL QUALIFICATIONS-**Personnel responsible for the operation and maintenance and repair of the Facility shall successfully complete a program of classroom instruction or on-the-job training that provides the skills required to ensure the Facility is operated and maintained in a manner that complies with this Discharge Permit and all applicable local, state and federal laws and regulations. At a minimum, the operators shall be competent in the following.

- a. Management procedures for hazardous waste materials.
- b. Conducting inspections.
- c. Communications or alarm systems.
- d. Emergency response due to unauthorized releases, fire, explosions, or other potential unauthorized releases from the Facility and threat to human health.
- e. Emergency shutdown operations.

The operations and maintenance and repair of all or any part of the Facility shall be performed by, or under the direct supervision of, qualified personnel. Facility personnel shall review training and certifications on an annual basis to ensure training and certifications are current with any changes to the Facility's processes.

The Permittees shall maintain the following documents and records at the Facility for current personnel until closure of the Facility.

- a. The job title for each position at the Facility with a narrative of the position responsibilities, reporting hierarchy, requisite skill, education and other qualifications assigned to the position.
- b. The name of the individual who holds each position and all records documenting training and job experience demonstrating the qualifications of that individual to hold the position.

The Permittees shall maintain all documents and records pertaining to the training of operation and maintenance personnel, including former employees, for a period of five years and shall make such documents and records available to NMED upon request.

[20.6.2.3106.C NMAC, 20.7.4 NMAC]

**20. EMERGENCY RESPONSE PROCEDURES** The Permittees shall keep and maintain emergency response procedures at the Facility at all times. At a minimum, the procedures shall include the following.

- a. Actions Facility personnel must take in response to fires, explosions or any unplanned sudden or non-sudden release of a water contaminant from the Facility to the environment.
- b. A spill prevention and response plan to address all unauthorized releases to the environment or those that pose a threat to human health, chronic or acute.

- c. A list of all emergency equipment at the Facility that may be utilized in the event of an emergency, its intended function and physical location.
- d. An evacuation procedure for all Facility personnel which describes signals to be used to notify personnel of an evacuation, routes to evacuated the Facility and alternate evacuation routes.
- e. Description of the use of the Incident Command System (ICS) in response to all emergencies. The ICS is based on the on-scene management structure protocols of the National Incident Management System (NIMS).
- f. Conditions under which activation of Los Alamos National Laboratory's Emergency Operations Center (EOC) is appropriate for incidents requiring Laboratory and/or community involvement. The EOC provides a central location for interagency and interjurisdictional coordination and executive decision making in support of an incident response.

The emergency response procedures shall be reviewed, and updated as necessary, by the Permittees on no less than a triennial basis or in the event the plan fails during an emergency, the Facility changes design, construction, or accessibility, key personnel changes or the list of equipment changes. The emergency response procedures shall be made available for inspection at the facility.

The Permittees shall submit written updates of the procedures to NMED no more than 30 days following finalization of an amended plan.  
[20.6.2.3109.C NMAC]

**21. OPERATION OF FLOW METERS-**The Permittees shall operate the following flow meters at the facility.

- a. One flow meter on the RLW influent line to the Facility at a location that will capture and measure all influent to the Facility including waste water conveyed to the Facility by alternative methods (e.g. truck).
- b. One flow meter on the effluent line to the SET at a location that will capture and measure all discharges of treated water to the SET.
- c. One flow meter on the effluent line to the MES at a location that will capture and measure all discharges of treated water to the MES.
- d. One flow meter on the discharge line to Outfall 051 at a location that will capture and measure all effluent discharges to Outfall 051.

The flow meters shall be operational except during repair or replacement. Should a meter fail, it shall be repaired or replaced as soon as practical, but no later than 30 days from the date of the failure. During periods of repair or replacement, an alternative method for determining the volume of influent and effluent shall be used until the meter is operational.

[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC]

**22. CALIBRATION OF FLOW METERS-**All flow meters referenced in this Discharge permit shall be capable of having their accuracy ascertained under actual working (field) conditions. A field calibration method shall be developed

for each flow meter and that method shall be used to check the accuracy of each respective meter. Field calibrations shall be performed on an annual basis and immediately upon repair or replacement of a flow meter.

Flow meters for the effluent lines to the SET, the MES and Outfall 051 shall be calibrated to within plus or minus 5 percent of actual flow, as measured under field conditions. The flow meter installed on the 10-inch influent line to the RLWTF shall be calibrated to within plus or minus 10 percent of actual flow, as measured under field conditions. Field calibrations shall be performed by an individual knowledgeable in flow measurement and in the installation and operation of the particular device in use. A calibration report shall be prepared for each flow meter at the frequency calibration is required.

The flow meter calibration report shall include the following information

- a. The meter location and identification.
- b. The method of flow meter field calibration employed.
- c. The measured accuracy of each flow meter prior to adjustment indicating the positive or negative offset as a percentage of actual flow as determined by an in-field calibration check.
- d. The measured accuracy of each flow meter following adjustment, if necessary, indicating the positive or negative offset as a percentage of actual flow of the meter.
- e. Any flow meter repairs made during the previous year or during field calibration.

The Permittees shall maintain records of flow meter calibration at a location accessible for review by NMED during Facility inspections.

[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC, 20.6.2.3109.H NMAC]

## **B. Monitoring and Reporting**

**23. METHODOLOGIES**-Unless otherwise approved in writing by NMED, the Permittees shall conduct sampling and analysis in accordance with the most recent edition of the following documents.

- a. American Public Health Association, Standard Methods for the Examination of Water and Waste water.
- b. U.S. Environmental Protection Agency, Methods for Chemical Analysis of Water and Waste.
- c. U.S. Geological Survey, Techniques for Water Resources Investigations of the U.S. Geological Survey.
- d. American Society for Testing and Materials, Annual Book of ASTM Standards, Part 31. Water.
- e. U.S. Geological Survey, et al., National Handbook of Recommended Methods for Water Data Acquisition.
- f. Federal Register, latest methods published for monitoring pursuant to Resource Conservation and Recovery Act regulations.

- g. Methods of Soil Analysis: Part 1. Physical and Mineralogical Methods; Part 2. Microbiological and Biochemical Properties; Part 3. Chemical Methods, American Society of Agronomy; [20.6.2.3107.A NMAC, 20.6.2.3107.B NMAC]

**24. MONITORING REPORTS-**The Permittees shall submit monitoring reports to NMED on a quarterly basis. Quarterly sampling and analysis as required in this Discharge Permit shall be performed within the following periods and reports shall be submitted as described below.

- a. Sampling and analysis completed between January 1 and March 31– report to be submitted to NMED by May 1.
- b. Sampling and analysis completed between April 1 and June 30 – report to be submitted to NMED by August 1.
- c. Sampling and analysis completed between July 1 and September 30–report to be submitted to NMED by November 1.
- d. Sampling and analysis completed between October 1 and December 31– report to be submitted to NMED by February 1.

[NMSA 1978, § 74-6-5.D, 20.6.2.3109.B NMAC, 20.6.2.3109.C NMAC, 20.6.2.3107.A NMAC]

**25. INFLUENT VOLUMES RLW-**The Permittees shall measure the volume of all RLW influent waste water being conveyed to the Facility on a daily basis using the flow meter required to be installed pursuant to this Discharge Permit.

The total daily and monthly volumes of RLW influent conveyed to the Facility shall be submitted to NMED in the quarterly monitoring reports.

[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC, 20.6.2.3109.H NMAC]

**26. INFLUENT VOLUMES TRU-**The Permittees shall measure the daily volume of TRU influent waste water being conveyed to the Facility using electronic sensors which measure tank levels in both the acid waste and caustic waste influent tanks.

The electronic sensors on these tanks shall be operational except during repair or replacement. Should a sensor used to calculate TRU influent volumes fail, it shall be repaired or replaced as soon as practical, but no later than 30 days from the date of the failure. During repair or replacement, an alternative method for determining the flow of TRU influent shall be used until the defective sensor is repaired or replaced.

Volumes shall be determined by calculation using the head change and tank size. Operators shall record changes in influent tank levels whenever a batch of TRU waste water is conveyed to the Facility. The total daily and monthly volumes of TRU influent received by the Facility shall be submitted to NMED in the quarterly monitoring reports.

[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC, 20.6.2.3109.H NMAC].

- 27. DISCHARGE VOLUMES-**The Permittees shall measure and record the volume of treated waste water discharged to the SET, MES and Outfall 051 on a daily basis. The Permittees shall determine effluent volumes as follows.
- a. Discharge volumes to the SET shall be determined by daily totalized meter readings on the flow meter required in this Discharge Permit, located on the effluent line to the unit.
  - b. Discharge volumes to Outfall 051 shall be determined by daily totalized meter readings on the flow meter required in this Discharge Permit, located on the effluent line to the outfall.
  - c. Discharge volumes to the MES shall be determined by daily totalized meter readings on the flow meter required in this Discharge Permit, located on the effluent line to the unit.

The daily and monthly discharge volumes for the reporting period shall be submitted to NMED in the quarterly monitoring reports.  
[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC, 20.6.2.3109.H NMAC]

- 28. WASTE TRACKING-**The Permittees shall maintain current written or electronic records of all waste streams conveyed to the Facility. At a minimum, the Permittees shall record the following information.
- a. The name of the generator and a unique waste stream identification number.
  - b. The time period for which the Permittee approved the generator to convey the waste stream to the Facility.
  - c. The location where the waste stream was generated.
  - d. Estimated volume and duration of the waste stream, including
    - Estimated number of days per year discharge occurred.
    - Average daily volume received by the Facility when discharge occurred.
    - Maximum daily volume received by the Facility each year when discharge occurred.
    - Estimated total volume discharged to the facility each year.
  - e. The waste stream characterization (i.e., analytical data or knowledge of process).
  - f. The names of the personnel that approved the receipt of the waste at the Facility (e.g., Waste Certifying official, RCRA Reviewer, and Facility Reviewer).

Permittees shall also maintain written or electronic records of the following waste streams conveyed from the Facility: Radioactive Liquid Waste Bottoms, low-level sludge, TRU sludge, and low-level solid waste (PPE, sample bottles, filters, membranes, etc). Records will include date of shipment, quantity shipped, description of waste stream, shipping documentation and disposal location. The Permittees shall allow NMED or an authorized representative to have access to and copy, at reasonable times, records that must be kept under this condition.

The Permittees shall maintain all waste tracking records required by this Condition for five years from the date of the final discharge from the generator of that waste stream. The Permittees shall furnish upon request, and make available at all reasonable times for inspection, the waste tracking records required in this Discharge Permit.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC]

**29. EFFLUENT SAMPLING** -The Permittees shall sample and analyze effluent waste streams discharged to Outfall 051, the SET, and the MES.

Treated effluent samples shall be collected once per calendar month for any month in which a discharge occurs to Outfall 051. The Permittees shall collect a grab sample of treated effluent which shall be analyzed for all water contaminants listed in 20.6.2.3103 NMAC, TKN and all toxic pollutants as defined in 20.6.2.7.T(2) NMAC.

Treated effluent samples shall be collected once per calendar month for any month in which a discharge occurs to the MES or SET. The Permittees shall collect a grab sample of treated effluent which shall be analyzed for TKN, NO<sub>3</sub>-N, TDS, Cl, F and perchlorate.

The Permittees shall collect and analyze effluent samples once per quarter for any quarterly period in which a discharge occurs to the MES or SET. The Permittees shall collect a grab sample of treated effluent which shall be analyzed for all water contaminants listed in 20.6.2.3103 NMAC and all toxic pollutants as defined in 20.6.2.7.T(2) NMAC.

All samples shall be properly prepared, preserved, transported and analyzed in accordance with the parameters and methods authorized in this Discharge Permit and will be submitted to an independent environmental laboratory accredited under the National Environmental Laboratory Accreditation Program. Analytical results shall be submitted to NMED in the quarterly monitoring reports. For any calendar month during which no discharge occurs, the Permittees shall submit a note in the quarterly report documenting the absence of discharge.

[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC]

**30. SOIL MOISTURE MONITORING SYSTEM FOR THE SET**-The Permittees shall construct a moisture monitoring system for the SET to detect unauthorized releases. The system shall be designed to detect, at a minimum, absolute variations in volumetric soil moisture content below the SET within a precision of 2%. The Permittees shall install the moisture monitoring boreholes in accordance with the final work plan, design and schedule approved by NMED.

The Permittees shall use neutron moisture probes to log the moisture

monitoring boreholes following installation to establish baseline conditions and to develop a calibration data set for the probe and a soil moisture action level, to be approved by NMED, which indicates that moisture is being detected below the SET at levels that are above baseline conditions.

Within 90 days following acceptance of the final construction of the moisture monitoring boreholes and prior to discharge to the SET by the Permittees, the Permittees shall submit to NMED for approval the following items.

- a. Confirmation that the moisture monitoring borehole installation has been completed.
- b. Record drawings of the final design of the completed installation.
- c. Reports on the baseline moisture condition and neutron probe calibration.
- d. A proposed action level to be used to indicate that elevated moisture has been detected beneath the SET.

Upon approval or approval with conditions by NMED of the completed installation and soil moisture action level, discharge to the SET can commence. The Permittees shall perform quarterly soil moisture monitoring in the moisture monitoring boreholes, and shall provide this information in the quarterly reports required by Condition 24 (Monitoring Reports).

The moisture monitoring boreholes and neutron probes shall be maintained so that the boreholes remain accessible for monitoring and the probe remains operational. Should the system or a component of the system fail, it shall be repaired or replaced as soon as possible, but no later than 90 days from the date of the failure. For good cause, NMED may approve a longer period.

The Permittees shall maintain all documents and records pertaining to the quarterly monitoring events and maintenance or repair of the soil moisture monitoring system for a period of five years and shall make such documents and records available to NMED upon request.

[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC]

**31. SOIL MOISTURE MONITORING SYSTEM EXCEEDANCE-** In the event that the synthetic liner leak detection system identifies a leak, or the soil moisture detection system for the SET detects a soil moisture increase beneath the SET that exceeds the NMED approved action level the Permittees shall take the following corrective actions.

- a. Notify the NMED Ground Water Quality Bureau within 24 hours of a release detected by the release detection system within the synthetic liner.
- b. Notify the NMED Ground Water Quality Bureau within 15 days following the date when the soil moisture was initially discovered beneath the SET to exceed the action level.
- c. Within 60 days following the date when the soil moisture was initially discovered to exceed the action level, identify the source of the increased

soil moisture beneath the SET to NMED and the basis for the identification of the source.

In the event the leak detection system between the primary and secondary liner identifies a leak, or the moisture exceedance in the soil moisture monitoring system is demonstrated to be associated with a leak from or breach of the SET, the Permittees shall cease discharges to the SET, remove all standing liquid from one or both cells (as appropriate), and submit a corrective action plan to NMED, for approval, within 30 days following the date when the Permittees identify the leak. At a minimum, the corrective action plan shall include the following.

- a. A proposal for repairing or replacing the synthetic liners within the SET, if leakage through the synthetic liners is found to be the source, or for other repairs.
- b. A plan for re-instituting soil moisture monitoring following repairs to the SET to demonstrate that the repairs resolved the source of the increased soil moisture beneath the SET.
- c. A schedule for implementation of the corrective action plan elements.

In the event the source of the soil moisture exceedance is demonstrated to be associated with an occurrence other than a failure of the SET, the Permittees shall submit a corrective action plan to NMED, for approval, within 120 days following the date when the soil moisture was initially discovered to exceed the action level. The corrective action plan shall include any actions necessary to ensure the soil moisture detection system is operating within its intended function as required by this Discharge Permit including, but not limited to, re-calibration.

Upon NMED approval, or approval with conditions, the Permittees shall implement the corrective action plan according to the approved schedule.  
[20.6.2.3107.A NMAC, 20.6.2.3109.E NMAC]

**32. GROUND WATER FLOW-**The Permittees shall submit a ground water flow direction report to NMED in the Annual Report in conjunction with the Quarterly Report due February 1. The report shall contain regional, intermediate and alluvial aquifer ground water depth-to-water measurements, existing interconnections with other aquifers (if any are known), a narrative description of the known characteristics of the ground water elevation and flow direction within each aquifer and, to the extent practicable, ground water elevation contour map(s) for the aquifers underlying Sandia, Pajarito, Ten-Site and Mortandad Canyons.

The ground water elevation contour maps shall depict the ground water flow direction based on the most recent representative ground water elevation data from monitoring wells located in the subject areas. Ground water elevations shall be estimated using common interpolation methods to a contour interval



approved by NMED and appropriate to the available data. Ground water elevation contour maps shall depict the water table and potentiometric surfaces, ground water flow directions, and the location and name of each monitoring well and discharge location unit associated with this Discharge Permit.  
[20.6.2.3107.A NMAC, 20.6.2.3109.C]

**33. [RESERVED]**

**34. MONITORING WELL LOCATION** - In the event that ground water flow information obtained pursuant to this Discharge Permit indicates that a monitoring well is not located hydrologically downgradient of the discharge location it is intended to monitor, NMED may require the Permittees to install a replacement well or wells. Within 90 days following receipt of such notification from NMED, the Permittees shall submit to NMED for approval a well installation work plan, describing each proposed well location, drilling methods and well specifications, and proposing a schedule for construction. Upon NMED approval, the Permittees shall construct the replacement well or wells according to the approved work plan and schedule.

Within 90 days following well completion, the Permittees shall survey the elevation and location of the newly installed replacement monitoring well or wells. Within 120 days following well completion, the Permittees shall submit to NMED a well completion report that will include: construction and lithologic logs, survey data, and a ground water elevation contour map.

Replacement wells shall be located, installed, and completed in accordance with the attachment titled: *Ground Water Quality Bureau Monitoring Well Construction and Abandonment Conditions, Revision 1.1*, March 2011, or according to other specifications as approved by NMED.  
[NMSA 1978, § 74-6-5.D, 20.6.2.3109.B NMAC]

**35. MONITORING WELL CONSTRUCTION** - In the event that information available to NMED indicates that a well is not constructed in a manner consistent with the *Ground Water Quality Bureau Monitoring Well Construction and Abandonment Guidelines, Revision 1.1*, March 2011 or NMED approved specification; contains insufficient water to effectively monitor ground water quality; or is not completed in a manner that is protective of ground water quality, NMED may require the Permittees to install a replacement well or wells. Within 90 days following receipt of such notification from NMED, the Permittees shall submit to NMED for approval a well installation work plan, describing each proposed well location, drilling methods, well specifications, and proposed schedule for construction. Upon NMED approval, the Permittees shall construct the replacement well or wells according to the approved work plan and schedule.

Within 90 days following well completion, the Permittees shall survey the

elevation and location of the newly installed replacement monitoring well or wells. Within 120 days of well completion, the Permittees shall submit to NMED construction and lithologic logs, survey data, and a ground water elevation contour map.

Replacement wells shall be located, installed, and completed in accordance with the attachment titled: *Ground Water Quality Bureau Monitoring Well Construction and Abandonment Conditions, Revision 1.1*, March 2011, or according to other specifications as approved by NMED.

Upon completion of the replacement monitoring well, the monitoring well requiring replacement shall be properly plugged and abandoned. Well plugging, and abandonment and documentation of the abandonment procedures shall be completed in accordance with the *Ground Water Quality Bureau Monitoring Well Construction and Abandonment Conditions, Revision 1.1*, March 2011, and all applicable local, state, and federal laws and regulations. The well abandonment documentation shall be submitted to NMED within 60 days of completion of well plugging activities.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.B NMAC]

- 36. GROUND WATER MONITORING** - The Permittees shall collect ground water samples from the following ground water monitoring wells on a quarterly basis and analyze the samples for TKN, NO<sub>3</sub>-N, TDS, Cl, F and perchlorate.
- a. **MCA-RLW-1** – Previously constructed and located in the alluvial aquifer hydrologically downgradient of Outfall 051.
  - b. **MCA-RLW-2** – Previously constructed and located in the alluvial aquifer hydrologically downgradient of Outfall 051.
  - c. **MCOI-6**-previously constructed and located in the intermediate aquifer hydrologically downgradient of Outfall 051.

The Permittees shall collect ground water samples from the following ground water monitoring wells on an annual basis and analyze the samples for all water contaminants listed in 20.6.2.3103 NMAC and all toxic pollutants listed in 20.6.2.7.T(2).

- a. **MCA-RLW-1** – Previously constructed and located in the alluvial aquifer hydrologically downgradient of Outfall 051.
- b. **MCA-RLW-2** – Previously constructed and located in the alluvial aquifer hydrologically downgradient of Outfall 051
- c. **MCOI-6** - previously constructed and located in the intermediate aquifer presumed to be hydrologically downgradient of Outfall 051.
- d. **R-46** - previously constructed and located in the regional aquifer, topographically downgradient of the RLWTF.
- e. **R-60** - previously constructed and located in the regional aquifer, topographically downgradient of the RLWTF.
- f. **R-1** - previously constructed and located in the regional aquifer, topographically downgradient of the RLWTF.

- g. **R-14** - previously constructed and located in the regional aquifer, topographically downgradient of the RLWTF.

Sampling shall be done in accordance with the methods authorized in this Discharge Permit and using the following procedure.

- a. Measure the ground-water surface elevation, to the nearest hundredth (0.01) of a foot, from the top of the casing, each time ground water is sampled.
- b. Calculate total volume of water within the monitoring well using the most recent total depth measurement.
- c. For intermediate and regional aquifer wells, purge three well volumes of water from the monitoring well prior to sampling, using an adequate pumping system. For alluvial wells, purge well for a minimum of one well volume.
- d. Collect samples from the well using appropriate methods to avoid cross-contamination of the samples and sources.
- e. Prepare the Chain-of-Custody, preserve the sample and transport samples in accordance with methods authorized in this Discharge Permit.
- f. Samples shall be analyzed by an independent analytical laboratory accredited under the National Environmental Laboratory Accreditation Program (NELAP) using EPA approved test methods.

The Permittees may submit to NMED for approval Standard Operating Procedures developed for the Interim Facility-Wide Groundwater Monitoring Plan that would apply in lieu of the sampling protocols described in this Permit Condition. Upon NMED approval or partial approval of such alternate plan, the approved plan or portion thereof shall apply and be fully enforceable in lieu of this Permit Condition.

The Permittees shall use sampling and analytical methods that ensure the production of accurate and reliable data indicative of ground water quality in all ground water that may be affected by any discharges from the Facility. The Permittees shall prepare ground water monitoring reports describing, in detail, the sampling and analytical methods used. The ground water monitoring reports shall contain, at minimum, the following information.

- a. Date sample was collected.
- b. Time sample was collected.
- c. Individuals collecting sample.
- d. Monitoring well identification.
- e. Physical description of monitoring well location.
- f. Ground-water surface elevation.
- g. Total depth of the well.
- h. Total volume of water in the monitoring well prior to sample collection.
- i. Total volume of water purged prior to sample collection.
- j. Physical parameters including temperature, conductivity, pH, oxidation-reduction potential.
- k. Description of sample methods (i.e., constituent being sampled for,

container used, preservation methods).

- l. Chain-of custody.
- m. Map, to scale, identifying monitoring wells and their location.

The ground water monitoring report shall be submitted to NMED with the quarterly monitoring report required in this Discharge Permit.  
[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC]

**37. GROUND WATER EXCEEDANCE-** NMED reviews ground water data that is generated by the Permittees from samples collected from the monitoring wells identified in this Discharge Permit and other monitoring wells in the vicinity of the Facility. The Permittees report newly detected ground water quality standard exceedances or the newly detected toxic pollutants (as defined in this Discharge Permit and in 20.6.2.7.T(2) NMAC) in ground water for the entire Laboratory to NMED. If NMED determines that a ground water quality standard is exceeded or that a toxic pollutant is present in ground water, potentially due to a discharge associated with the Facility or defined systems in this Discharge Permit, the Permittees shall submit a ground water investigation/source control work plan to NMED for approval within 60 days following notification to do so by NMED.

At a minimum, the ground water investigation/source control work plan shall include the following elements.

- a. A proposal to investigate the source, nature and extent of the ground water contamination, if unknown, which may utilize existing ground water monitoring wells or may propose the installation of new monitoring wells, as appropriate.
- b. A proposal to mitigate the discharge or mobilization of the water contaminant which might be causing ground water contamination, as appropriate.
- c. A schedule for implementation of the work plan and submittal of a report to NMED.

Upon NMED approval of the ground water investigation/source control work plan, or approval of the plan with conditions, the Permittees shall implement the work plan and submit a written report to NMED in accordance with the approved schedule.

Should the findings of the ground water investigation reveal that a discharge associated with the Facility or defined systems in this Discharge Permit is a source of the ground water contamination, the Permittees shall abate water pollution pursuant to 20.6.2.4000 through 20.6.2.4115 NMAC, following notification from NMED.

This Permit Condition does not apply to an exceedance of ground water quality standard or the presence of a toxic pollutant in ground water unrelated to a discharge associated with the Facility or defined systems in this Discharge

Permit, to the extent that abatement of such ground water contamination is occurring, or will occur, pursuant to and in accordance with the June 2016 Compliance Order on Consent (Consent Order) agreed to by NMED, and the Permittees pursuant to the New Mexico Hazardous Waste Act, NMSA 1978, §74-4-10 and the New Mexico Solid Waste Act, NMSA 1978, §74-9-36(D). [NMSA 1978, § 74-6-5.D, 20.6.2.3109.E NMAC, 20.6.2.3107.A NMAC]

### C. Contingency Plans

**38. SPILL OR UNAUTHORIZED RELEASE**-In the event of a release not authorized in this Discharge Permit, the Permittees shall take measures to mitigate damage from the unauthorized discharge and initiate the notifications and corrective actions required in 20.6.2.1203 NMAC and summarized below.

Within 24 hours following discovery of the unauthorized discharge, the Permittees shall orally notify NMED and provide the following information.

- a. The name, address, and telephone number of the person or persons in charge of the Facility.
- b. The identity and location of the Facility.
- c. The date, time, location, and duration of the unauthorized discharge.
- d. The source and cause of unauthorized discharge.
- e. A description of the unauthorized discharge, including its estimated chemical composition.
- f. The estimated volume of the unauthorized discharge.
- g. Any actions taken to mitigate immediate damage from the unauthorized discharge.

Within one week following discovery of the unauthorized discharge, the Permittees shall submit written notification to NMED with the information listed above and any pertinent updates.

Within 15 days following discovery of the unauthorized discharge, the Permittees shall submit to NMED for approval a corrective action report and plan describing any corrective actions taken and to be taken to address the unauthorized discharge that includes the following.

- a. A description of proposed actions to mitigate damage from the unauthorized discharge.
- b. A description of proposed actions to prevent future unauthorized discharges of this nature.
- c. A schedule for completion of proposed actions.

Upon NMED approval of the corrective action report and plan, the Permittees shall implement the approved actions according to the approved schedule.

In the event that the unauthorized discharge causes or may with reasonable probability cause water pollution in excess of the standards and requirements

of 20.6.2.4103 NMAC, and the water pollution will not be abated within 180 days after notice is required to be given pursuant to 20.6.2.1203.A(1) NMAC, the Permittees may be required to abate water pollution pursuant to 20.6.2.4000 through 20.6.2.4115 NMAC.

Nothing in this condition shall be construed as relieving the Permittees of the obligation to comply with all requirements of 20.6.2.1203 NMAC.  
[NMSA 1978, § 74-6-5.D, 20.6.2.1203 NMAC, 20.6.2.3109.B NMAC]

- 39. FAILURES IN DISCHARGE PLAN/DISCHARGE PERMIT**-In the event that NMED or the Permittees identify any failure of the discharge plan or this Discharge Permit not specifically set forth herein, NMED may require the Permittees to submit for its approval a corrective action plan and a schedule for completion of corrective actions to address the failure. Additionally, NMED may require a Discharge Permit modification to achieve compliance with Part 20.6.2 NMAC.  
[20.6.2.3107.A NMAC, 20.6.2.3109.E NMAC]

#### **D. Closure**

**40. [RESERVED]**

- 41. STABILIZATION OF INDIVIDUAL UNITS AND SYSTEMS** - Within 120 days from the permanent cessation of operation of a unit or system, the Permittees shall submit to NMED for approval a written work plan for the stabilization of the unit or system for which operation has ceased. The work plan shall identify activities to be taken, and steps necessary to ensure that the unit or system can no longer receive a discharge and that no further releases of water contaminants occur as a result of the unit or system. At a minimum, the work plan shall include the following.
- a. Identification of the unit or system in which cessation of use has occurred.
  - b. A detailed description of the function of the unit or system.
  - c. A detailed description of the historic influent waste streams to the unit or system.
  - d. A detailed description of all conveyance lines leading to the unit or system and a description of how the lines will be terminated, plugged, re-routed or bypassed so that a discharge to the unit or system can no longer occur.
  - e. Identification of those portions of the approved Closure Plan required in Condition 42 (Closure Plan) of this Discharge Permit that will be implemented.
  - f. A description of all proposed interim measures, actions and controls that will be implemented until such time of final removal of the unit, system or component to prevent the release of water contaminants into the environment; to prevent water contaminants, including storm water run-on and run-off, from moving into ground water; and to prevent water contaminants from posing a threat to human health.

- g. A detailed description of the actions that will be taken under the Consent Order to investigate and characterize the potential impact to soil and groundwater from the facility, system, or individual unit pursuant to Condition 46 (Integration with the Consent Order).
- h. A schedule for implementation.

Upon NMED approval of the work plan, the Permittees shall implement the plan according to the approved schedule.

Within 30 days following the completion of all interim measures, actions and controls as required by this condition, the Permittees shall submit to NMED for approval a final written report on the actions taken to implement the partial closure.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.B NMAC, 20.6.2.3109.E NMAC]

**42. CLOSURE PLAN** - A closure plan is provided as an Attachment to this Discharge Permit. The closure plan includes the following.

- a. A detailed description of how each unit and system at the Facility will be closed.
- b. A detailed description of the actions to be taken to decommission, demolish, and remove each unit, system, and other structure, including any secondary containment system components.
- c. A detailed description of the actions and controls that will be implemented during closure to prevent the release of water contaminants into the environment; to prevent water contaminants, including run-on and run-off, from moving into ground water; and to prevent water contaminants from posing a threat to human health.
- d. A detailed description of the methods to be used for decontamination of the site and decontamination of equipment used during closure.
- e. A detailed description of the actions that will be taken to reclaim the site, including placement of clean fill material and re-grading to blend with surrounding surface topography, minimize run-on and run-off, and prevent infiltration of water, and re-vegetation.
- f. A detailed description of all monitoring, maintenance and repair, and controls that will be implemented after closure, and of all actions that will be taken to minimize the need for post-closure monitoring, maintenance and repair, and controls.
- g. A ground water monitoring plan to detect water contaminants that might move directly or indirectly into ground water after closure, which shall provide for, at a minimum, eight consecutive quarters of ground water monitoring after achieving the standards of 20.6.2.3103 NMAC.
- h. A detailed description of the methods that will be used to characterize all wastes generated during closure, including treatment residues, contaminated debris, and contaminated soil, in compliance with all local, state, and federal laws and regulations.

- i. A detailed description of the actions that will be taken to investigate and characterize the potential impact to soil and groundwater from the facility, system, or individual unit, or, pursuant to Condition 46 (Integration with the Consent Order), if the unit or system will be investigated and characterized under the Consent Order, a description of such activities.
- j. A detailed description of the methods that will be used to remove, transport, treat, recycle, and dispose of all wastes generated during closure in compliance with all applicable local, state, and federal laws and regulations.
- k. A detailed schedule for the closure and removal of each unit and system, which lists each proposed action and the estimated time to complete it.

For changes that would affect the implementation of the attached Closure Plan, the Permittees shall submit to NMED for approval a written notification and an amended Closure Plan. Permittees will provide annual updates to NMED describing modifications to the Closure Plan. Public comments will be accepted by NMED for a period of 90 days after the submittal of a modified or amended closure plan prior to approval.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.B NMAC, 20.6.2.3109.E NMAC]

**43. FINAL CLOSURE - Permittee will notify the NMED a minimum of 120 days prior to initiation of closure activities at the facility.** Once closure begins, and until all closure requirements (excluding post-closure ground water monitoring) are completed, the Permittees shall submit to NMED, with the monitoring reports required in this Discharge Permit, quarterly status reports describing the closure actions taken during the previous reporting period and the actions scheduled for the next reporting period. Within 90 days following the completion of the closure, the Permittees shall submit to NMED for approval a final written report on the actions taken to implement closure.

Upon termination of the RLWTF mission, Permittee will submit to NMED for approval a revised closure plan for the decommissioning of the active facility that incorporates the same criteria as identified in this condition.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.B NMAC, 20.6.2.3109.E NMAC]

**44. POST-CLOSURE GROUND WATER MONITORING -** After closure has been completed and approved by NMED, the Permittees shall continue ground water monitoring of any wells dedicated to the Facility according to the approved Closure Plan to confirm that the standards of 20.6.2.3103 NMAC are not exceeded and toxic pollutants in 20.6.2.7.T(2) NMAC are not present in



ground water. Such monitoring shall continue for a minimum of eight consecutive quarters.

If monitoring results show that a ground water quality standard in 20.6.2.3103 NMAC is exceeded or a toxic pollutant in 20.6.2.7.T(2) NMAC is present in ground water, the Permittees shall implement the requirements of Condition 37 (Ground Water Exceedance) of this Discharge Permit.

This Permit Condition does not apply to an exceedance of ground water quality standard or the presence of a toxic pollutant in ground water unrelated to a discharge associated with the Facility or defined systems in this Discharge Permit, to the extent that abatement of such ground water contamination is occurring, or will occur, pursuant to and in accordance with the June 2016 Compliance Order on Consent (Consent Order) agreed to by NMED and the DOE.

Upon demonstration confirming ground water quality does not exceed the standards of 20.6.2.3103 NMAC and does not contain a toxic pollutant in 20.6.2.7.T(2) NMAC, the Permittees may submit a written request to cease ground water monitoring activities.

Following notification from NMED that post-closure monitoring may cease, the Permittees shall plug and abandon the monitoring well in accordance with the *Ground Water Quality Bureau Monitoring Well Construction and Abandonment Conditions, Revision 1.1*, March 2011.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.B NMAC, 20.6.2.3109.F NMAC, 20.6.2.4103.D NMAC]

**45. TERMINATION-** When all closure and post-closure requirements have been met, the Permittees may submit to NMED a written request for termination of the Discharge Permit.

If the Discharge Permit expires or is terminated for any reason and any standard of 20.6.2.3103 NMAC is or will be exceeded, or a toxic pollutant in 20.6.2.7.T(2) NMAC is or will be present in ground water, NMED may require the Permittees to submit an abatement plan pursuant to 20.6.2.4104 NMAC.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.B NMAC, 20.6.2.3109.F NMAC, 20.6.2.4103.D NMAC]

**46. INTEGRATION WITH THE CONSENT ORDER** -- The investigation, characterization, cleanup and corrective action requirements for potential releases of contaminants into soil, groundwater and other environmental media from “solid waste management units” (SWMUs) and “areas of concern” (AOCs) associated with the Facility and contained within the Compliance Order on Consent (June 2016, Consent Order) entered into between the New Mexico Environment Department and the DOE pursuant to the New Mexico Hazardous Waste Act, NMSA 1978, §74-4-10 and the New Mexico Solid Waste Act, NMSA 1978, §74-9-36(D) (*see* [https://www.env.nm.gov/wp-content/uploads/2015/12/LANL\\_Consent\\_Order\\_FINAL.pdf](https://www.env.nm.gov/wp-content/uploads/2015/12/LANL_Consent_Order_FINAL.pdf)) shall be governed by the Consent Order. The investigation, characterization, cleanup and corrective action of any future SWMUs and AOCs associated with the Facility shall be conducted solely under the Consent Order and not under this Permit until termination of the Consent Order. No activities required under this Permit shall conflict with or duplicate activities required for SWMUs and AOCs identified under the Consent Order. Permittees shall provide information regarding which units and systems are covered by the Consent Order in the submittals required by Condition 41 (Stabilization of Individual Units and Systems) and Condition 43 (Final Closure) of this permit, along with a description of the investigation and characterization that will occur under the Consent Order for each unit and system.  
[NMSA 1978, §74-4-10 NMSA 1978, §74-9-36(D)]

#### **E. General Terms and Conditions**

**47. APPROVALS** - Upon receipt of a work plan, written proposal, report, or other document subject to NMED approval, NMED will review the document and may either approve the document, approve the document with conditions, or disapprove the document. Upon completing its review, NMED will notify the Permittees in writing of its decision, including the reasons for any conditional approval or disapproval.  
[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC]

**48. RECORD KEEPING** - The Permittees shall maintain a written record of the following information and shall make it available to NMED upon request.

- a. Information and data used to prepare the application for this Discharge Permit.
- b. Records of any releases or discharges not authorized in this Discharge Permit and reports submitted pursuant to 20.6.2.1203 NMAC.
- c. Records, including logs, of the operation and maintenance and repair of all Facility and equipment used to treat, store or dispose of waste water.
- d. Facility record drawings (plans and specifications) showing the actual construction of the Facility and shall comply with the New Mexico Engineering and Surveying Practice Act (Chapter 61, Article 23 NMSA 1978).
- e. Copies of monitoring reports completed and submitted to NMED pursuant

- to this Discharge Permit.
- f. The volume of waste water or other wastes discharged pursuant to this Discharge Permit.
  - g. Ground water quality and waste water quality data collected pursuant to this Discharge Permit.
  - h. Copies of construction records (well logs) for all ground water monitoring wells required to be sampled pursuant to this Discharge Permit.
  - i. Records of the maintenance and repair, replacement, and calibration of any monitoring equipment or flow measurement devices required by this Discharge Permit.
  - j. Data and information related to field measurements, sampling, and analysis conducted pursuant to this Discharge Permit.

With respect to sampling and laboratory analysis, the Permittees shall record and maintain following information and shall make it available to NMED upon request.

- a. The dates, location and times of sampling or field measurements.
- b. The name and job title of the individuals who performed each sample collection or field measurement.
- c. The sample analysis date of each sample.
- d. The name and address of the laboratory, and the name of the signatory authority for the laboratory analysis.
- e. The analytical technique or method used to analyze each sample or collect each field measurement.
- f. The results of each analysis or field measurement, including raw data;
- g. The results of any split, spiked, duplicate or repeat sample.
- h. All laboratory analysis chain-of-custody forms and a description of the quality assurance and quality control procedures used.

The written record shall be maintained by the Permittees at a location accessible during a Facility inspection by NMED for a period of at least five years from the date of application, report, collection or measurement and shall be made available to NMED upon request.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.D NMAC, 20.6.2.3109.B NMAC]

**49. ELECTRONIC POSTING - MANDATORY** Commencing on the Effective Date of this Discharge Permit the permittees shall, within thirty calendar days of submittal to NMED, post on LANL's Electronic Public Reading Room located at <http://epr.lanl.gov/oppie/service> (or as updated) the following submittals to NMED.

- Condition 1 – Annual Update Report
- Condition 3 – Submittal of Plans and Specifications
- Condition 9 – Water Tightness Testing Failure
- Condition 14 – Damage to Structural Integrity
- Condition 18 – Exceedance of Effluent Standards
- Condition 31 – Soil Moisture Monitoring System Exceedance

- Condition 37 – Exceedance of Groundwater Quality Standard
- Condition 38 – Spill or Unauthorized Discharge
- Condition 39 – Failures in Discharge Plan
- Condition 42 – Closure Plan Amendments or Modifications
- Condition 43 – Final Closure Report
- Condition 45 – Termination

**ELECTRONIC POSTING – VOLUNTARY** Commencing on the effective date of this Discharge Permit, permittees voluntarily agree to post on LANL’s Electronic Public Reading Room located at <http://epr.lanl.gov/oppie/service> (or as updated) within seven calendar days after submission to NMED, the information listed below. Because permittees have voluntarily agreed to post the below-information, such posting shall not be subject to civil or criminal enforcement actions.

- Condition 2 – Notification of Changes
- Condition 4 – Construction Report
- Condition 10 – Summary Report for Settled Solids Removal
- Condition 15 – Freeboard Exceedance Corrective Action Plan
- Condition 20 – Emergency Response Procedures
- Condition 24 – Monitoring Reports
- Condition 34 – Monitoring Well Location Changes
- Condition 35 – Monitoring Well Construction Report
- Condition 41- Stabilization of Individual Units and Systems

[20.6.2.3107.A.8 NMAC]

**50. INSPECTION AND ENTRY** – The Permittees shall allow inspection by NMED of the Facility and its operations which are subject to this Discharge Permit and the WQCC regulations. NMED may upon presentation of proper credentials, enter at reasonable times upon or through any premises in which a water contaminant source is located or in which are located any records required to be maintained by regulations of the federal government or the WQCC.

The Permittees shall allow NMED to have access to and reproduce any copy of the records, and to perform assessments, sampling or monitoring during an inspection for the purpose of evaluating compliance with this Discharge Permit and the WQCC regulations.

Nothing in this Discharge Permit shall be construed as limiting in any way the inspection and entry authority of NMED in the WQA, the WQCC Regulations, or any other local, state or federal laws and regulations.

[NMSA 1978, §§ 74-6-9.B and 74-6-9.E, 20.6.2.3107.D NMAC]

**51. DUTY TO PROVIDE INFORMATION** - The Permittees shall, upon NMED’s request, allow NMED to inspect and duplicate any and all records

required by this Discharge Permit and furnish NMED with copies of such records.

Nothing in this Discharge Permit shall be construed as limiting in any way the authority of NMED to gather information as stipulated in the WQA, the WQCC Regulations, or any other local, state or federal laws and regulations.

[NMSA 1978, §§ 74-6-5.D, 74-6-9.B, and 74-6-9.E, 20.6.2.3107.D NMAC, 20.6.2.3109.B NMAC]

**52. MODIFICATIONS AND AMENDMENTS**– In the event the Permittees propose a change to the Facility or the Facility’s discharge that would result in a change in the volume discharged; the location of the discharge; or in the amount or character of water contaminants received, treated or discharged by the Facility, the Permittees shall notify NMED prior to implementing such changes. The Permittees shall obtain written approval (which may require modification of this Discharge Permit) from NMED prior to implementing such changes.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.C NMAC, 20.6.2.3109.E NMAC,]

**53. EXTENSIONS OF TIME** - The Permittees may seek an extension of time in which to perform an obligation in this Discharge Permit, for good cause, by sending a written request for extension of time that states the length of the requested extension and describes the basis for the request. NMED shall respond in writing, stating the reasons for any denial.

**54. CIVIL PENALTIES** - Any violation of the requirements and conditions of this Discharge Permit, including any failure to allow NMED staff to enter and inspect records or Facility, or any refusal or failure to provide NMED with records or information, may subject the Permittees to a civil enforcement action. Pursuant to WQA 74-6-10(A) and (B), such action may include a compliance order requiring compliance immediately or in a specified time, assessing a civil penalty, modifying or terminating the Discharge Permit, or any combination of the foregoing; or an action in district court seeking injunctive relief, civil penalties, or both. Pursuant to WQA 74-6-10.C and 74-6-10.1, civil penalties of up to \$15,000 per day of noncompliance may be assessed for each violation of the WQA 74-6-5, the WQCC Regulations, or this Discharge Permit, and civil penalties of up to \$10,000 per day of noncompliance may be assessed for each violation of any other provision of the WQA, or any regulation, standard, or order adopted pursuant to such other provision. In any action to enforce this Discharge Permit, the Permittees waives any objection to the admissibility as evidence of any data generated pursuant to this Discharge Permit.

[NMSA 1978, §§ 74-6-10 and 74-6-10.1]

**55. CRIMINAL PENALTIES** – The WQA provides that no person shall:  
a. Make any false material statement, representation, certification or omission

- of material fact in an application, record, report, plan or other document filed, submitted or required to be maintained in the WQA;
- b. Falsify, tamper with or render inaccurate any monitoring device, method or record required to be maintained in the WQA; or
  - c. Fail to monitor, sample or report as required by a permit issued pursuant to a state or federal law or regulation.

Any person who knowingly violates or knowingly causes or allows another person to violate the requirements of this condition is guilty of a fourth degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who is convicted of a second or subsequent violation of the requirements of this condition is guilty of a third degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who knowingly violates the requirements of this condition or knowingly causes another person to violate the requirements of this condition and thereby causes a substantial adverse environmental impact is guilty of a third degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who knowingly violates the requirements of this condition and knows at the time of the violation that he is creating a substantial danger of death or serious bodily injury to any other person is guilty of a second degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15.  
[NMSA 1978, §§ 74-6-10.2.A through 74-6-10.2.F]

**56. COMPLIANCE WITH OTHER LAWS** - Nothing in this Discharge Permit shall be construed in any way as relieving the Permittees of the obligation to comply with all applicable federal, state, and local laws, regulations, permits or orders.

[20.6.2 NMAC]

**57. LIABILITY**- The Permittees shall be jointly and severally liable for all their obligations in this Discharge Permit.

[NMSA 1978, §§ 74-6-5.A and 74-6-10]

**58. RIGHT TO APPEAL** - The Permittees may file a petition for review before the WQCC on this Discharge Permit. Such petition shall be in writing to the WQCC, shall be filed within thirty days of the receipt of this Discharge Permit, and shall include a statement of the issues to be raised and the relief sought. Unless a timely petition for review is made, the decision of NMED shall be final and not subject to judicial review.

[NMSA 1978, § 74-6-5.O]

**59. TRANSFER OF OWNERSHIP**- Prior to the transfer of any ownership, control, or possession of this Facility or any portion thereof, the Permittees shall.

- a. Notify the proposed transferee in writing of the existence of this Discharge

Permit.

- b. Include a copy of this Discharge Permit with the notice.
- c. Deliver or send by certified mail to NMED a copy of the notification and proof that such notification has been received by the proposed transferee.

Until both ownership and possession of the Facility have been transferred to the transferee, the Permittees shall continue to be responsible for any discharge from the Facility.

[20.6.2.3104 NMAC, 20.6.2.3111 NMAC]

- 60. PERMIT FEES-** Payment of permit fees is due at the time of Discharge Permit approval. Permit fees shall be paid in a single payment or shall be paid in equal installments on a yearly basis over the term of the Discharge Permit. Payments shall be remitted to NMED no later than 30 days after the Discharge Permit effective date.

Permit fees are associated with issuance of this Discharge Permit. Nothing in this Discharge Permit shall be construed as relieving the Permittees of the obligation to pay all permit fees assessed by NMED. If the Permittees cease discharging at or from the Facility during the term of the Discharge Permit, they shall nevertheless pay all permit fees assessed by NMED. An approved Discharge Permit shall be suspended or terminated if the Permittees fail to remit payment when due.

[20.6.2.3114.F NMAC, NMSA 1978, § 74-6-5.K]

## **VII. Permit Term and Signature**

EFFECTIVE DATE:

TERM ENDS:

[20.6.2.3109.H NMAC, NMSA 1978, § 74-6-5.I]

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MICHELLE HUNTER  
Chief, Ground Water Quality Bureau  
New Mexico Environment Department

GROUND WATER DISCHARGE PERMIT (DP-1132)  
RADIOACTIVE LIQUID WASTE TREATMENT FACILITY  
LOS ALAMOS NATIONAL LABORATORY

DRAFT



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**I. ACRONYMS:**

The following acronyms and abbreviations may be used throughout this Discharge Permit:

- BOD<sub>5</sub> - biochemical oxygen demand (5-day)
- CAS - Chemical Abstract Service
- CFR - Code of Federal Regulations
- Cl - chloride
- CQCAP - Construction Quality Control Assurance Plan
- DOE - United States Department of Energy
- EPA - United States Environmental Protection Agency
- gpd - gallons per day
- LANL - Los Alamos National Laboratory
- ~~Triad - Triad National Security, LLC~~ ~~LANS - Los Alamos National Security, LLC~~
- MES - Mechanical Evaporator System
- Mg/L - milligrams per liter (or parts per million)
- NMAC - New Mexico Administrative Code
- NMSA - New Mexico Statutes Annotated
- NO<sub>3</sub>-N - nitrate-nitrogen
- NPDES - National Pollutant Discharge Elimination System
- PCBs - Polychlorinated Biphenyls
- QA/QC - Quality Assurance/Quality Control
- RLW - Low-level radioactive waste water
- RLWTF - Radioactive Liquid Waste Treatment Facility
- SET - Solar Evaporative Tank System
- TA - Technical Area
- TDS - total dissolved solids
- TKN - total Kjeldahl nitrogen
- TRU - Transuranic
- TSS - total suspended solids
- WQA - Water Quality Act
- WQCC - Water Quality Control Commission

## II. DEFINITIONS:

The following is a list of definitions as they pertain specifically to this Discharge Permit:

- A. Average daily flow-** the rate determined by dividing the total monthly volume by the number of days for the reporting period.
- B. Active portion-** the portion of the Facility where treatment, storage or disposal of waste water occurs or has occurred in the past, including those portions of the Facility which are not in use and have not been closed in accordance with the conditions in this Discharge Permit.
- C. Calibration-** a comparison between an instrument of known magnitude or correctness (standard) and another measurement made in as similar a way as possible with a second device (test instrument).
- D. Closure-** to permanently discontinue the use of a unit, system, or component of the Facility (partial) or the entire Facility (final).
- E. Construction Quality Control Assurance Plan-** a written plan of activities necessary to ensure that construction and installation meet design criteria. A CQCAP includes practices and procedures for inspections, testing and evaluations of material and workmanship necessary to verify the quality of the constructed unit or system, and corrective actions to be implemented when necessary.
- F. Consent Order- Compliance Order on Consent (June, 2016)~~March 1, 2005~~**  
~~Compliance Order on Consent~~ agreed to by NMED and, DOE or subsequent versions.
- G. Discharge-** the intentional or unintentional release of an effluent or leachate which has the potential to move directly or indirectly into ground water or be detrimental to human health, animal or plant life, or property, or unreasonably interfere with the public welfare or the use of property.
- H. Effluent-** a liquid waste product resulting from the treatment or partial treatment of an influent waste stream intended to be discharged.
- I. Exfiltration-** the uncontrolled passage or penetration of waste water or sludge from a structural component of a unit or system through defective pipes, pipe joints, connections, cracks, structural failure, or material incompatibility and enters the surrounding environment.
- J. Flow meter-** a quantitative instrument or device that measures, displays, and records the flow of a fluid in a conduit or an open channel.
- K. Freeboard-** the vertical distance between the crest of the embankment and the carrying capacity level of an open tank, impoundment, or other open unit that contains a liquid or semi-liquid
- L. Impoundment-** a unit which is a natural topographic depression, man-made excavation, or diked area primarily constructed of earthen or other materials, specifically designed to hold, evaporate or store, an accumulation of liquid or semi-liquid waste.
- M. Industrial waste water-** the liquid wastes from industrial processes or non-household waste water which is generated through activity not solely derived from human excreta, residential sinks, showers, baths, clothes and dish-washing machines; or exceeds the characteristics of a domestic waste as defined in 20.7.3.7.D(6) NMAC; 300 mg/L BOD, 300 mg/L TSS, 80 mg/L total nitrogen or 105 mg/L fats, oils and grease.
- N. Infiltration-** the uncontrolled passage or penetration of liquids or semi-liquids into a unit or system through defective pipes, pipe joints or connections, or manhole walls. cracks, structural failure, or material incompatibility.

- O. Influent collection system-** the infrastructure and associated components (e.g. sumps, pumps) used for the collection and conveyance of waste water from the originator to the Facility's treatment systems.
- P. Influent-** untreated water, waste water or other liquid or semi-liquid flowing into a reservoir, basin, or treatment plant.
- Q. Incident Command System (ICS)**– A standardized approach to the command, control, and coordination of emergency response providing a common hierarchy within which responders from multiple agencies can be effective.
- R. Leak detection system-** a system capable of detecting the failure of either the primary or secondary containment structure or the presence or release of an accumulated liquid in the secondary containment structure. The system must employ operational controls or consist of an interstitial monitoring device designed to detect continuously and automatically the failure of the primary or secondary containment structure or the presence of a release into the secondary containment structure.
- S. Maintenance and repair-** all actions associated with keeping a system or component functioning as designed or restoring a system or component to its intended function. Maintenance and repair does not include alterations to a unit or system which change the intended function or design of the unit or alter the treatment process.
- T. Maximum daily discharge-** the total daily volume of waste water (expressed in gallons per day) authorized for discharge by a discharge permit.
- U. Open unit or system-** a unit or system designed to store, treat or dispose of liquids, semi-liquids or solids in which the uppermost portion of the unit is exposed.
- V. Outfall-** the point where a treated waste water discharges to waters of the United States, or a tributary to waters of the United States.
- W. Peak instantaneous flow-** the highest design flow rate for a unit or system, expressed in gallons per minute or cubic feet per second.
- X. Record drawings-** the official record of the actual as-built conditions of the completed construction, to be held as the permanent record of each unit and system, which shall comply with the New Mexico Engineering and Surveying Practice Act (Chapter 61, Article 23 NMSA 1978).
- Y. Secondary containment-** a constructed unit or system designed to prevent any migration of waste streams or accumulated liquid out of the unit or system to the soil, ground water, or surface water at any time. Secondary containment can include, but is not limited to: double-walled pipes, concrete and floors equipped with sumps and alarm systems to detect potential leaks and must be:
- Designed, constructed and maintained to surround the unit on sides and bottom;
  - Free of cracks, gaps, or fissures;
  - Constructed of, or lined with, materials that are compatible with the waste streams to be in contact with the unit or system;
  - Placed on a foundation or base capable of withstanding pressure gradients, settling or uplift which may cause failure of the unit or system; and
  - Equipped with a leak detection system that is designed and operated so that it will detect the failure of the primary containment structure;
- Z. Settled solids measurement device-** an apparatus for testing settled solids in a liquid suspension for settling rate, compaction of the settled solids, and the resulting clarity of the liquid, or thickness of solids accumulated in an impoundment or tank.

- AA. Sludge or settled solids-** a solid or semisolid residue that results from the treatment or precipitation of solids from a waste stream, or the accumulation of natural sediment and debris settling in an open unit or system.
- BB. Synthetic Liner-** a continuous layer of man-made materials which restricts the downward or lateral escape of effluent or leachate.
- CC. Tank-** a stationary device, designed to contain an accumulation of waste water which is constructed primarily of non-earthen materials (e.g., concrete, steel, plastic) which provide structural support. Tanks can be further identified as either an **On ground tank** meaning a tank that is situated in such a way that the bottom of the tank is on the same level as the adjacent surrounding surface allowing for visual inspection of the vertical walls but not the external tank bottom, an **In-ground tank** meaning a tank constructed or installed so that a portion of the tank wall is situated to any degree within the ground, thereby preventing visual inspection of that portion of the external surface area, or an **Aboveground tank** meaning a tank that is completely elevated above the adjacent surrounding surface allowing for visual inspection of the vertical walls and external tank bottom.
- DD. Total Nitrogen-** The sum of total Kjeldahl nitrogen (TKN) and nitrate-nitrogen (NO<sub>3</sub>-N).
- EE. Toxic Pollutant-** a water contaminant or combination of water contaminants in concentration(s) which, upon exposure, ingestion, or assimilation either directly from the environment or indirectly by ingestion through food chains, will unreasonably threaten to injure human health, or the health of animals or plants which are commonly hatched, bred, cultivated or protected for use by man for food or economic benefit; as used in this definition injuries to health include death, histopathologic change, clinical symptoms of disease, behavioral abnormalities, genetic mutation, physiological malfunctions or physical deformations in such organisms or their offspring; in order to be considered a toxic pollutant a contaminant must be one or a combination of the potential toxic pollutants identified in the list in 20.6.2.7. [T\(2\)WW](#) NMAC and be at a concentration shown by scientific information currently available to the public to have potential for causing one or more of the effects listed above; any water contaminant or combination of the water contaminants identified in the list in 20.6.2.7. [T\(2\)WW](#) NMAC creating a lifetime risk of more than one cancer per 100,000 exposed persons is a toxic pollutant.
- FF. Treatment-** any method, technique or process that, through chemical biological and mechanical processes, modify waste water characteristics with the objective to neutralize and reduce or remove organic and inorganic water contaminants which if released to the environment could potentially impact ground water quality or pose a threat to human health.
- GG. Unauthorized Release or spill-** the intentional or unintentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of oil or other water contaminant not authorized in this Discharge Permit.

**HH. Untreated-** a category of waste water or other liquid or semi-liquid which has not undergone chemical or mechanical processes to neutralize and reduce or remove water contaminants to meet permit established effluent limits.

**GG-II. Water Contaminant** - any substance that could alter if discharged or spilled the physical, chemical, biological or radiological qualities of water; "water contaminant" does not mean source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954.

### III. Introduction

The New Mexico Environment Department (NMED) issues this Discharge Permit (Discharge Permit), DP-1132, to the United States Department of Energy (DOE) and to ~~Los Alamos Triad~~ National Security, LLC (~~Triad~~LANS) (collectively the Permittees) pursuant to the New Mexico Water Quality Act (WQA), NMSA 1978, §§ 74-6-1 through 74-6-17, and the New Mexico Water Quality Control Commission (WQCC) Regulations, 20.6.2 NMAC.

NMED's purpose in issuing this Discharge Permit, and in imposing the requirements and conditions specified herein, is to control the discharge, and potential release, of water contaminants from the Los Alamos National Laboratory (LANL) Radioactive Liquid Waste Treatment Facility (Facility) so as to protect public health, ground water for present and potential future use as a domestic water supply or an agricultural water supply, and those segments of surface water gaining from ground water inflow. In issuing this Discharge Permit, NMED has determined that the requirements of 20.6.2.3109.C NMAC have been or will be met.

The application (i.e., discharge plan) consists of the materials submitted by the Permittees on August 19, 1996, an updated application submitted to NMED on February 16, 2012, an amendment to the application submitted to NMED on August 10, 2012, supplemental information submitted on June 6, 2016, and materials contained in the administrative record prior to issuance of this Discharge Permit.

The Facility is located within Los Alamos National Laboratory, approximately 1.5 miles south of Los Alamos, New Mexico, in Sections 16, 17, 20, 21 and 22, Township 19N, Range 06E, Los Alamos County. Ground water most likely to be affected ranges from depths of approximately one foot to 1,306 feet and has a total dissolved solids concentration ranging from approximately 162 to 255 milligrams per liter.

The Facility, as it pertains to conditions within this Discharge Permit (DP-1132), is a wastewater treatment facility that is authorized to discharge up to 40,000 gallons per day (gpd), specifically described in section V(D) of this Discharge Permit and includes: the influent collection and storage system including the Waste Management Risk Mitigation Facility (WMRM); the low-level radioactive liquid waste treatment system; the transuranic waste water treatment system; the secondary treatment system; the Mechanical Evaporator System (MES); the Solar Evaporative Tank (SET) impoundment; and an outfall (Outfall 051) regulated by a National Pollutant Discharge Elimination System (NPDES) permit

issued by the United States Environmental Protection Agency (EPA) pursuant to the federal Clean Water Act Section 402, 33 U.S.C § 1342. The discharge may contain water contaminants with concentrations above the standards of 20.6.2.3103 NMAC and may contain toxic pollutants as defined in 20.6.2.7.T(2)WW NMAC.

Pursuant to 20.6.2.3109 NMAC, NMED reserves the right to require a Discharge Permit Modification in the event NMED determines that the requirements of 20.6.2 NMAC are being or may be violated or that the standards of 20.6.2.3103 NMAC are being or may be violated or a toxic pollutant as defined in 20.6.2.7.T(2)WW NMAC is present. Such modifications may include, without limitation, the implementation of structural controls, treatment processes, monitoring criteria, operational processes, changes in discharge activities and the abatement of water pollution and remediation of ground water quality.

Issuance of this Discharge Permit does not relieve the Permittees of the responsibility to comply with the WQA, WQCC Regulations, and all other applicable federal, state, and local laws and regulations.

#### **IV. Findings**

In issuing this Discharge Permit, NMED finds:

- A. The Permittees are discharging effluent or leachate from the Facility so that such effluent or leachate may move directly or indirectly into ground water within the meaning of 20.6.2.3104 NMAC.
- B. The Permittees are discharging effluent or leachate from the Facility so that such effluent or leachate may move into ground water of the State of New Mexico which has an existing concentration of 10,000 mg/L or less of total dissolved solids (TDS) within the meaning of 20.6.2.3101.A NMAC.
- C. The discharge from the Facility is within or into a place of withdrawal of ground water for present or reasonably foreseeable future use within the meaning of the WQA, NMSA 1978, § 74-6-5.E.3, and the WQCC Regulations at 20.6.2.3103 NMAC
- D. The discharge from the Facility to Outfall 051 is subject to the exemption set forth in 20.6.2.3105.F NMAC, to the extent that effective and enforceable effluent limitations (not including monitoring requirements) are imposed, unless the NMED Secretary determines that a hazard to public health may result.

#### **V. Authorization to Discharge**

- A. Pursuant to 20.6.2.3104 NMAC, it is the responsibility of the Permittees to ensure that discharges authorized by this Discharge Permit are consistent with the terms and conditions herein.
- B. The Permittees are authorized to discharge up to 40,000 gpd of low-level and transuranic radioactive industrial waste water using a series of treatment processes as described in Section V(D) of this Discharge Permit in accordance with the Conditions set forth in Section VI of this Discharge Permit.



- C. The Permittees are authorized to discharge up to 40,000 gpd of treated waste water, in accordance with the Conditions set forth in Section VI of this Discharge Permit. Discharges shall be to either the Mechanical Evaporator System (MES), the synthetically lined Solar Evaporative Tank System (SET), or through an outfall (identified as Outfall 051) also regulated by a National Pollutant Discharge Elimination System (NPDES) permit (Permit No. NM0028355) issued by the United States Environmental Protection Agency [20.6.2.3104 NMAC, 20.6.2.3106.C NMAC, 20.6.2.3109.C NMAC].
- D. The Permittees are authorized to use the following defined systems with their associated units for the process of collecting, treating, and disposing of waste water:
- The Influent Collection System** is defined herein as all primary and secondary containment lines that convey transuranic or low-level radioactive waste water from Technical Areas TA-03, TA-35, TA-48, TA-50, TA-55, and TA-59 to the Transuranic Waste (TRU) treatment system and the Low-level Radioactive waste water (RLW) treatment system at TA-50. It includes the conveyance lines beginning at the point the pipe emerges from the building or other structure that comprises the site of generation, and extending to the vault immediately upstream of the influent tanks at TA-50. It also includes the conveyance of low-level radioactive waste water to the RLW treatment system by truck.
- The Waste Mitigation Risk Management (WMRM) Facility (Building 50-250)** is located about 50 meters southeast of Building 50-01. WMRM houses six tanks, with a capacity of 50,000 gallons each, for the storage of low-level RLW influent. Four of these tanks will be held in reserve for use in emergency situations; two will be used for day-to-day influent collection and storage. Tanks are located in the basement of WMRM; the basement further serves as secondary containment for the facility.
- The Low-level Radioactive Waste Water (RLW) Treatment System** is defined herein as the low-level radioactive waste water influent storage tanks, the associated treatment units (filters, feed tanks, ion exchange columns, reverse osmosis units, etc.) effluent storage tanks, and other associated low-level radioactive waste water components at TA-50 and subsequent replacement facilities utilizing the same treatment processes located within the physical confines of TA-50. The process by which the individual treatment units within the low-level radioactive treatment system are utilized may, for attaining compliance with the effluent limits set forth in this Discharge Permit, be altered, by-passed, replaced, or removed in accordance with the Conditions set forth in this Discharge Permit. The physical location of each unit and system and replacement systems that convey, store, or treat RLW waste streams coming into the low-level radioactive waste water treatment system is within TA-50.
- The Transuranic (TRU) Waste Water Treatment System** is defined herein as the influent storage tanks for each form of TRU (acidic and caustic) waste streams, the associated neutralization unit, pressure filters, the final processing tanks, and other associated TRU waste stream conveyance, storage and treatment components at TA-50. Sludge associated with TRU shall be disposed of at an off-site facility

permitted to receive TRU waste.

**The Secondary Treatment System** is defined herein as the receiving tanks for reverse osmosis concentrate waste water generated through the RLW Treatment System and treated effluent generated from the TRU Treatment System, the treatment process units for secondary reverse osmosis, the rotary vacuum filter, and other associated post-treatment conveyance, storage and treatment components at TA-50 designed to reduce waste stream volumes.

**The Mechanical Evaporator System (MES)** is defined herein as TA-50-0257 and the units in which treated RLW effluent is disposed of through natural gas generated mechanical evaporation.

**The Solar Evaporative Tank System (SET)** is defined herein as the concrete impoundment at TA-52 that receives treated effluent from the RLWTF for disposal by evaporation, and the conveyance line from TA-50. The SET consists of two cells separated by a single partitioned wall; each cell has a containerized volume of approximately 380,000 gallons. The SET is an unsealed subgrade concrete structure with a double-lined synthetic liner, and a leak detection system between the synthetic liners.

**Outfall 051** is defined herein as the outfall through which treated waste water from the Facility is discharged to Effluent Canyon, which is a tributary to Mortandad Canyon.

[20.6.2.3104 NMAC, 20.6.2.3106.C NMAC, 20.6.2.3109.C NMAC].

## VI. Conditions

NMED issues this Discharge Permit for the discharge of water contaminants subject to the following conditions:

### A. Operational Plan

1. **ANNUAL UPDATE**-The Permittees shall submit to NMED an updated Facility Process Description annually by February 1 of each year in conjunction with the February Quarterly Report. The annual Facility Process Description shall include the following:
  - a. A schematic of all major structures associated with the Facility, including all influent lines, buildings, exterior tanks, effluent lines, outfall and discharge locations identified in this Discharge Permit.
  - b. A comprehensive flow chart demonstrating the most current processes in operation for the collection, treatment and disposal of waste water for the Facility. The flow chart shall indicate any processes which have been bypassed, decommissioned, or are no longer used for the collection, treatment or final disposal of the waste water.
  - c. An associated narrative describing each of the systems and treatment units outlined in the flow chart. This narrative shall include the collection system, primary treatment units, secondary treatment units and any systems used in the disposition of any associated waste streams at the Facility. For each unit or system, the narrative shall include:
    - 1) The identification of the unit or system.

- 2) The physical location.
  - 3) Intended function.
  - 4) Physical description.
  - 5) Operational capacity, if applicable.
  - 6) The date the unit or system was placed in operation.
  - 7) Origin of waste streams that the unit or system receives.
  - 8) The unit or system(s) to which it discharges.
- d. The Annual Update shall also include the following documents to be submitted annually by February 1 of each year.
- 1) Summary of maintenance and repairs made during the reporting period.
  - 2) Water Tightness Testing results ([Condition VI.A.8](#)).
  - 3) Settled Solids measurements ([Condition VI.A.10](#)).
  - 4) Ground Water Flow report ([Condition VI.A.32](#)).
- [20.6.2.3106.C NMAC]

- 2. NOTIFICATION OF CHANGES-**The Permittees shall submit to NMED a written notification of any changes in the Facility's collection, treatment or disposal systems which are not maintenance and repair (as defined in this permit Section II), and which are not modifications (as defined in [Condition VI.A.3](#), Plans and Specifications). The notification shall be submitted no less than thirty days prior to the date proposed for implementation. The notification shall include, at a minimum, the following items listed herein and others which may be determined to be required by NMED.
- a. Date process change is planned to be implemented.
  - b. Narrative of process change.
  - c. Justification for making the process change.
  - d. Units or components being removed from the process.
  - e. Units or components being incorporated into the process.
  - f. Operational controls implemented for the change in processes.
  - g. Intended duration of process change (e.g., permanent or limited duration).

LANL shall submit to NMED and add to the posting required in [Condition VI.E.49](#) (Electronic Posting) any follow-up material required later by NMED, after NMED's review of a notification.

[20.6.2.3106.C NMAC]

- 3. SUBMITTAL OF PLANS AND SPECIFICATIONS-**The Permittees shall not implement any expansion, process modification, or alteration of a system or unit that could constitute a discharge permit modification (as defined in 20.6.2.7.D(4)P NMAC) of the intended function, design or capacity for any of the systems, units or components of the Facility's collection, treatment or disposal systems without prior written approval by NMED. Prior to implementing any such changes, the Permittees shall submit to NMED for approval a written proposal, including plans and specifications that describes in detail the proposed changes in the processes or components of the Facility's

collection, treatment, or disposal systems. The proposal shall be delivered by certified mail or hand delivery. The Permittees shall not place any waste in a new or changed unit or system unless the Permittees receive prior written approval from NMED. NMED will provide such approval only if it finds that the Permittees have submitted the required elements listed herein in sufficient detail to demonstrate that the unit or system is designed and constructed to minimize the possibility of an unauthorized release of water contaminants which could directly or indirectly impact ground water quality or pose a threat to human health. If NMED determines that the proposed changes require an amendment or modification of this Discharge Permit, NMED will so inform, in writing, Permittees.

The proposal shall include, at a minimum, the following information.

- a. Identification of all applicable units and a description of how they will be constructed.
- b. A map, to scale, of the Facility, with the location of the proposed unit relative to other identified structures or systems referenced in this Discharge Permit.
- c. Specifications for all new unit and system components (e.g., lift stations, valves, transfer lines, process units); whether new, retrofitted, or proposed for abandonment. All new system components for the collection, treatment or disposal of waste water at the Facility shall be designed to meet the projected needs of the Facility.
- d. Plans and specifications for proposed flow meters that will be used to measure the volume of waste water discharged to or from the unit or system.
- e. Demonstration that the proposed unit or system is adequately designed for its intended function.
- f. Compatibility of the unit or system's constructed material with the proposed waste stream, including, if applicable, information regarding corrosion protection to ensure that it will maintain its structural integrity and not collapse, rupture or fail.
- g. Certification that the foundation, structural support, seams, connections, and pressure controls, if applicable, are adequately designed and the unit or system has sufficient structural strength to convey, store, treat or dispose of the intended waste stream.
- h. Certification for all plans and specifications attesting to the capacity of the unit or system including, without limitation, waste water flow data derived using both average daily flow and peak instantaneous flow. Computations should be presented in a tabular form showing depths and velocities at minimum, design average, and peak instantaneous flow for all new system components.
- i. Water balance calculations for the capacity and evaporative potential for units which are subject to exposure to the environment and to which precipitation events may impact total capacity of the unit. The unit shall be designed such that two feet of freeboard or an NMED approved alternative is maintained at all times.

- j. Design specifications for secondary containment for all units or systems intended to convey, store, treat, or dispose of liquid or semi-liquid waste streams.
- k. Design specifications for leak detection systems associated with systems designed to convey, store, treat, or dispose of liquid or semi-liquid waste streams, which demonstrate the capability of detecting the failure of either primary or secondary containment or the presence of any release of any accumulated liquid in the secondary containment system within the earliest practicable time as approved in advance by NMED;
- l. Proposed leakage tests shall be specified for all new unit or system components with direct contact to treated or untreated waste water. This may include appropriate water or low pressure air testing. The use of a camera or other visual methods used for documentation of the inspection, prior to placing the unit or system in service is recommended.
- m. Design specifications for all units or systems designed to convey, store, treat, or dispose of liquid or semi-liquid waste streams, which demonstrate the ability to remove liquids and semi-liquids from the area of containment within the earliest practicable time as approved in advance by NMED.
- n. A Construction Quality Control Assurance Plan (CQCAP) assuring that the proposed unit or system will meet or exceed all design criteria and specifications.

Plans and specifications shall comply with the New Mexico Engineering and Surveying Practice Act (Chapter 61, Article 23 NMSA 1978) as well as applicable DOE and LANL Engineering Standards.

[20.6.2.1202 NMAC, 20.6.2.3106.C NMAC, 20.6.2.3109.C NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]

- 4. CONSTRUCTION REPORT-**Within 90 days following completion of construction for a unit or system that requires NMED approval, the Permittees shall prepare a final construction report that contains the following items.
  - a. A complete copy of record drawings, specifications, final design calculations, addenda, and change orders, as applicable, or in the alternative, a list and description of any substantive changes to design plans and specification made during construction (based on field concerns and changes).
  - b. Description of the procedures and results from all inspection and tests that occur before, during, and after construction to ensure that the construction materials and the installed unit or system components meet the design specifications.
  - c. A complete copy of the Operation and Maintenance Manual, specific to the unit or system being constructed.

[20.6.2.1202 NMAC, 20.6.2.3109.C NMAC, 20.6.2.3106.C NMAC, 20.6.2.3107.C NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]

- 5. RESTRICTING ENTRY-**The Permittees shall, at all times, prevent the

unauthorized entry of persons, wildlife, or livestock into the active portions of this Facility (with the exception of Outfall 051) so that physical contact with the waste streams, structures and equipment is restricted. Means to control unauthorized access shall include an artificial or natural barrier which completely surrounds the active portions of the Facility and a means to control entry, at all times, through gates or other entrances to the active portions of the Facility (e.g., locks, surveillance system).  
[20.6.2.3109.C NMAC]

6. **SIGNS**-The permittees shall post bilingual warning signs (in English and Spanish) at all gates and perimeter fences, where present, around the Facility. Signs shall be posted in sufficient numbers to be visible at all angles of approach as well as from a distance of at least 25 feet, Permittees shall include on the signs the following or an equivalent warning: DANGER – UNAUTHORIZED PERSONNEL KEEP OUT (PELIGRO – SE PROHIBE LA ENTRADA A PERSONAS NO AUTORIZADAS).  
[20.6.2.3109.C NMAC]

~~7. **VERIFICATION OF SECONDARY CONTAINMENT**[RESERVED]- Within 90 days following the effective date of this Discharge Permit (by **Due Date**), the Permittees shall submit to NMED verification demonstrating all units and systems intended to convey, store, treat or dispose of an untreated liquid or semi-liquid waste streams meet the requirements of secondary containment as defined in this Discharge Permit. Verification must also include certification of an operational leak detection system for the unit or system.~~

~~8.7.[20.6.2.3106.C NMAC, 20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC]~~

~~9.8.~~**WATER TIGHTNESS TESTING**-Within 180 days following the effective date of this Discharge Permit (by **Due Date**), and every 540 days thereafter, the Permittees shall demonstrate that each unit and system intended to convey, store, treat or dispose of a liquid or semi-liquid waste stream without secondary containment is not leaking and is otherwise fit for use. To make the demonstration, the Permittees shall conduct both a visual test, for those units and systems that are above-ground and visually inspectable, and a quantifiable test, as applicable.

For units and systems that are above-ground and visually inspectable, the visual assessment shall be adequate to detect obvious cracks, leaks, and corrosion or erosion that may lead to cracks and leaks. If necessary, the Permittees shall remove the stored waste from the unit or system to allow the condition of internal surfaces to be assessed.

The quantifiable assessment for units and systems that are used to store, treat or dispose of liquid or semi-liquid waste streams shall consist of obtaining tank level measurements over at least a 36 hour period during which no liquid or semi-liquid is added to or removed from the unit. The exfiltration or infiltration

rate shall not exceed 0.07 gallons per hour per thousand gallons of capacity for the unit or system.

The quantifiable assessment for units and systems designed to convey a liquid or semi-liquid waste stream shall be determined through passive testing for leakage exfiltration and infiltration. The infiltration or exfiltration rate shall not exceed 50 gallons per mile per consecutive 24 hour period for any section of the system. Infiltration and exfiltration tests for conveyance lines shall be conducted as follows:

- a. Prior to testing for infiltration, the conveyance lines shall be isolated and evacuated so that maximum infiltration conditions exist at the time of testing. The Permittees shall measure and document the volume of infiltration entering each section of the conveyance line being tested. The cumulative results for the entire collection system shall not be a satisfactory method for gauging infiltration compliance.
- b. Prior to testing for exfiltration, the conveyance lines shall be isolated and filled with water to a level that produces, at minimum, two feet of hydrologic head above the uppermost point of the section being tested. The cumulative results for the entire collection system shall not be a satisfactory method for gauging exfiltration compliance.

Demonstration of water tightness shall comply with the New Mexico Engineering and Surveying Practice Act (Chapter 61, Article 23 NMSA 1978). The Permittees shall submit to NMED the procedures and findings of the evaluation in the Annual Update (Condition ~~VI.A.1, Annual Update~~) by February 1 of each year immediately following the date when the water tightness test was performed. In the event that inspection reveals that the leakage rate is greater than permissible in this Discharge Permit, the Permittees shall implement the requirements of Condition ~~V.I.A.9~~ (Actual or Potential Water-Tightness Failure) in this Discharge Permit.

[20.6.2.3106.C NMAC, 20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC]

**10.9. ACTUAL OR POTENTIAL WATER-TIGHTNESS FAILURE**-In the event that any unit or system does not demonstrate water-tightness in accordance with this Discharge Permit or should inspection reveal damage to the unit that could result in structural failure, the Permittees shall take the following actions.

- a. If the unit or system failure resulted in an unauthorized release the Permittees shall provide NMED oral notification of the release in 20.6.2.1203 NMAC within 24 hours of learning of the release and take the following corrective actions.
  - 1) The Permittees shall remove the unit or system from service immediately; and
  - 2) As soon as possible following the failure of the unit or system, but within 30 days of the failure, the Permittees shall submit to NMED for

approval a written proposal including a schedule for corrective actions to be taken to repair or permanently cease operation of the unit or system.

If repair or replacement of a unit or system requires construction, the Permittees shall submit plans and specifications to NMED with the proposed corrective actions. Plans and specifications shall comply with the New Mexico Engineering and Surveying Practice Act (Chapter 61, Article 23 NMSA 1978).

Upon NMED approval, the Permittees shall implement the approved corrective actions according to the approved schedule.

Prior to placing a repaired or replaced unit or system back into service, the Permittee shall repeat the water-tightness testing in accordance with Condition ~~VI.A.8~~ (Water Tightness Testing) to verify the effectiveness of the repair or replacement, and submit a report detailing the completion of the corrective actions to NMED. The report shall include the date of the test, the name of the individual that performed the test, written findings, photographic documentation of the unit's interior and water tightness test results. If notified to do so by NMED, the Permittees shall also submit record drawings that include the final, construction details of the unit. Record drawings shall comply with the New Mexico Engineering and Surveying Practice Act (Chapter 61, Article 23 NMSA 1978).

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.B NMAC]

**11.10. SETTLED SOLIDS; SETTLED SOLIDS REMOVAL**-The Permittees shall inspect and measure the thickness of the settled solids in the SET on an annual basis. The Permittees shall measure the thickness of settled solids in accordance with the following procedure.

- a. The total surface area of each basin shall be divided into nine equally sized areas.
- b. A settled solids measurement device shall be utilized to obtain one settled solids thickness measurement (to the nearest half foot) within each area.
- c. The individual settled solids thickness for each of the nine measurement areas shall be averaged.

The Permittees shall record all measurements in an inspection log which must include, at a minimum, the following.

- a. Date and time of the inspection.
- b. The name of the inspector.
- c. Identification of the unit.
- d. The location of the unit.
- e. The estimated total volume of liquid or semi-liquid in the unit or system at the time of inspection.
- f. The total depth capacity of the unit or system (allowing for freeboard requirements).



- g. The method used to determine the settled solids thickness.
- h. The average measured thickness of settled solids in the unit.

The Permittees shall not allow settled solids to accumulate in any open unit or system used to convey, store, treat, or dispose of liquid or semi-liquid at an average depth greater than one foot. In the event that the settled solids accumulation in an open unit or system exceeds an average thickness of one foot, or in the event that the Permittees otherwise plan to initiate removal of settled solids from an open unit or system, the Permittees shall propose a plan for the removal and disposal of the settled solids from the unit or system. At least 60 days prior to any settled solids removal, the Permittees shall submit to NMED for approval a written settled solids removal and disposal plan. The plan shall include characterization of the settled solids, the estimated volume of settled solids to be removed, a method for removal throughout the unit or system in a manner that is protective of the structural integrity of the unit or system, a schedule for completing the settled solids removal and disposal, and a description of how the settled solids will be contained, transported, and disposed of in accordance with all applicable local, state, and federal laws and regulations. Upon NMED approval, the Permittees shall implement the plan according to the approved schedule.

The Permittees shall keep the inspection log on site for a minimum of five years from the date of inspection. The Permittees shall submit a summary report of all settled solids activities to NMED in the Annual Report submitted by February 1 of each year as well as the Quarterly Report for the period during which the activity occurs.

[NMSA 1978, § 74-6-5.D, 20.6.2.3109.C NMAC, 20.6.2.3107.A NMAC]

**12.11. FACILITY INSPECTIONS**-The Permittees shall inspect the Facility for malfunctions, deterioration, leaks or spills which may be causing, or may lead to, an unauthorized release to the environment or pose a threat to human health.

The inspection shall be performed at the frequency prescribed for each unit or system in this Discharge Permit or based on the rate of deterioration of the equipment and the probability of an environmental or human health incident for those units and systems not specifically described herein.

- a. The Permittees shall inspect and test all leak detection systems to ensure performance within manufacturer specifications on a regular monthly basis.
- b. The Permittees shall inspect all externally observable portions of units and systems conveying, treating or storing liquids, semi-liquids, or solids including any secondary containment areas on a weekly basis. The Permittees shall examine for evidence of deterioration or failure of the units and systems. The visible portions of all synthetic liners used to store or dispose of liquids or semi-liquids shall be inspected for uniformity, damage, imperfections, punctures, blisters, and evidence of seam or joint failure on a regular monthly basis.

- c. The Permittees shall inspect, on a weekly basis through indirect observation, all units and systems conveying, processing, or storing liquids, semi-liquids, or solids that are inaccessible or otherwise cannot be directly observed. The Permittees shall identify the unit or system and note any observations which may suggest a breach or failure of containment in accordance with Condition ~~VI.A~~.12 (Containment).
- d. The Permittees shall inspect all open units and systems which contain a liquid or semi-liquid, on each day during which the Facility is in operation, to ensure capacity of the unit or system is not exceeded.

The Permittees shall record all inspections in an inspection log which shall be kept on site for a minimum of five years from the date of inspection. At a minimum, these inspections shall include the date and time of the inspection, the name of the inspector, identification of the unit, the location of the unit, the total volume of liquid or semi-liquid in the unit or system at the time of inspection, a notation of the observations made, and the date and nature of any maintenance and repairs made.

[20.6.2.3107.A NMAC]

**13.12. CONTAINMENT**-The Permittees shall institute corrective actions, as necessary, to ensure the protection of ground water and human health. In the event that a unit or system or secondary containment for a unit or system reveals damage that could result in structural failure or a release to the environment, the Permittees shall take the following actions.

- a. The Permittees shall remove the unit or system from service immediately.
- b. The Permittees shall take immediate, and if necessary temporary, corrective actions to minimize the potential for a release.
- c. Within 90 days following identification of the potential failure, the Permittees shall submit to NMED for approval a written corrective action report to include, at minimum, the following.
  - 1) Identification of the unit or system, or secondary containment for a unit or system in which the failure was observed.
  - 2) The date and time the failure was observed and the date and time it was estimated to have begun.
  - 3) The potential cause of the failure.
  - 4) For units in which a release occurred to secondary containment but was not released to the environment, the rate at which the release occurred and total volume released to the secondary containment.
  - 5) The characteristics of the waste stream being treated, stored or conveyed by the unit or system, with analytical results from waste stream samples taken with date, time, technical staff collecting the sample and the lab report with QA/QC.
  - 6) The corrective actions taken to remediate the failure or release with a timeline of when actions were implemented.
  - 7) Long-term actions, if any, that are proposed to be employed for maintaining the integrity of the secondary containment and the schedule

- for implementing such actions.
- 8) Ongoing measures for monitoring, inspecting, and determining structural integrity of the secondary containment.
  - 9) Proposed operation and maintenance and repair protocol, if applicable, to be instituted to prevent future failures.
- d. If failure of the unit or system or secondary containment resulted in a release to the environment, the Permittees shall comply with the requirements of Condition ~~VII.C.38~~ (Spill or Unauthorized Release) of this Discharge Permit.

Upon NMED approval of the corrective action report, the Permittees shall implement any approved long-term actions to maintain the integrity of the secondary containment, and any other approved measures or protocols, according to the approved schedule.  
[20.6.2.3107.A NMAC]

**14.13. MAINTENANCE and REPAIR-**The Permittees shall maintain the function and structural integrity of the Facility at all times except during maintenance or repair. All routine maintenance and repair actions shall be noted in a maintenance log which shall be kept on site for a minimum of five years. Maintenance and repair of a unit or system required due to potential malfunction which could lead to an unauthorized discharge to the environment or pose a threat to human health shall be corrected as soon as possible, but no later than 30 days from the date of the observed malfunction. For good cause, NMED may approve a longer period. The Permittees shall submit to NMED a summary and description of the maintenance and repair activities performed on the Facility as part of the quarterly monitoring reports.

In the event that routine maintenance and repair reveal significant damage likely to affect the structural integrity of a unit or system or any of its associated components, or its ability to function as designed, the Permittees shall implement the requirements of Condition ~~VII.A.14~~ (Damage to Structural Integrity) of this Discharge Permit.  
[20.6.2.3107.A NMAC]

**15.14. DAMAGE TO STRUCTURAL INTEGRITY-**In the event that an inspection required in this Discharge Permit, or any other observation, reveals damage likely to affect the structural integrity of a unit or system or any of its associated components, or its ability to function as designed, the Permittees shall take the affected unit out of service as quickly as possible, notify NMED orally within 24 hours, and shall propose the repair or replacement of the treatment system or its associated components. Within 30 days after discovery by the Permittees or following notification from NMED that corrective action is required, the Permittees shall submit to NMED for approval a written corrective action plan that includes a schedule for implementation and completion. The Permittees may request an extension of the submittal deadline

pursuant to Condition ~~VI.E.53~~ (Extensions of Time). Upon NMED approval, the Permittees shall implement the plan according to the approved schedule. The Permittees shall remedy any deterioration or malfunction of equipment or structures which are discovered during inspection.  
[20.6.2.3107.A NMAC]

**16.15. FREEBOARD; FREEBOARD EXCEEDANCE**-The Permittees shall maintain two feet of freeboard in all open units and systems that contain a liquid or semi-liquid. If the Permittees determine that two feet of freeboard cannot be maintained, the Permittees shall submit to NMED for approval a written request for alternate freeboard requirements. In the request the Permittees shall, at a minimum, propose freeboard levels that will be maintained and propose demonstrated spill prevention controls and overflow prevention controls that include the prevention of overtopping by wave, wind or precipitation events.

In the event that established freeboard of two feet or an NMED approved alternative, is not maintained in an open tank, impoundment or other open unit or system that contains a liquid or semi-liquid, the Permittees shall take immediate corrective actions to restore the required freeboard.

In the event that the required freeboard cannot be restored within a period of 72 hours following discovery, the Permittees shall submit to NMED for approval a proposed corrective action plan to restore the required freeboard within 15 days following the date when exceedance of the required freeboard was initially discovered. The plan shall include a schedule for completion of corrective actions and quantifiable assessments to demonstrate preservation of the required freeboard for a period no less than five years. Upon NMED approval, the Permittees shall implement the corrective action plan according to the approved schedule.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.B & .C NMAC]

**17.16. EFFLUENT LIMITS: OUTFALL 051**-The Permittees shall not discharge treated waste water to Outfall 051 that exceeds the following limits (or is outside the following pH range):

- a. All water contaminants and their associated limits as listed in Table 1.

Table 1. Effluent Quality Limits for Discharges to Outfall 051

<b>Inorganic Chemicals:</b>	<b>CAS#</b>	<b>mg/L</b>
Aluminum (dissolved)	7429-90-5	5.0
Arsenic (dissolved)	7440-38-2	0.01
Barium (dissolved)	7440-39-3	2.0
Boron (dissolved)	7440-42-8	0.75
Cadmium (dissolved)	7440-43-9	0.0054
Chromium (dissolved)	7440-47-3	0.05
Chloride (dissolved)	7647-14-5	250.0
Cobalt (dissolved)	7440-48-4	0.05
Copper (dissolved)	7440-50-8	1.0
Cyanide (dissolved)	57-12-5	0.2
Fluoride(dissolved)	16984-48-8	1.6

<b>Organic Chemicals:</b>	<b>CAS#</b>	<b>mg/L</b>
Benzene (total)	71-43-2	0.0054
Benzo (a) pyrene (total)	50-32-8	0.00027
Carbon tetrachloride (total)	56-23-5	0.0054
Chloroform (total)	67-66-3	0.1
1,1-Dichloroethane (total)	75-34-3	0.025
1,2-Dichloroethane (total)	107-06-2	0.0054
1-1-Dichloroethylene (total)	75-35-4	0.0075
1,1,2,2-Tetrachloroethylene (PCE) (total)	127-18-4	0.0052
1,1,2-Trichloroethylene (TCE) (total)	<del>79-01-686-42-0</del>	0.0054
Ethylbenzene (total)	100-41-4	0.75
Ethylene dibromide (total) (EDB)	1106-93-4	0.000054

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Iron (dissolved)	7439-89-6	1.0
Lead (dissolved)	7439-92-1	0.015
Manganese (dissolved)	7439-96-5	0.2
Molybdenum (dissolved)	7439-98-7	1.0
Mercury (total)	92786-62-4	0.002
Nickel (dissolved)	7440-02-0	0.2
Perchlorate (total)	14797-73-0	0.0138
pH (total)		6 – 9
Selenium (dissolved)	7782-49-2	0.05
Silver (dissolved)	7440-22-4	0.05
Sulfate (dissolved)		600.0
<u>Antimony (Sb)</u>	<u>7440-36-0</u>	<u>0.006</u>
<u>Beryllium (Be)</u>	<u>7440-41-7</u>	<u>0.004</u>
<u>Nitrite (NO<sub>2</sub> as N)</u>	<u>10102-44-0</u>	<u>1.0</u>
<u>Thallium (Tl)</u>	<u>7440-28-0</u>	<u>0.002</u>
<u>Total Dissolved Solids (dissolved)</u>		<u>1000.0</u>
<u>Uranium (dissolved)</u>	<u>7440-61-1</u>	<u>0.03</u>
<u>Zinc (dissolved)</u>	<u>9029-97-4</u>	<u>10.0</u>
<u>Total Dissolved Solids (dissolved)</u>		<u>1000.0</u>
<u>Uranium (dissolved)</u>	<u>7440-61-1</u>	<u>0.03</u>
<u>Zinc (dissolved)</u>	<u>9029-97-4</u>	<u>10.0</u>

Naphthalene plus monomethylnaphthalenes (total)	91-20-3, 90-12-0, 91-57-6	0.03
Methylene chloride (total)	75-09-2	0.005+
Total PCBs (total)		0.0005+
Phenols (total)	108-95-2	0.005
Toluene (total)	108-88-3	1.075
1,1,1-Trichloroethane (total)	<del>71-55-6</del> <del>74552-83-3</del>	0.206
1,1,2-Trichloroethane (total)	79-00-5	0.005+
1,1,2,2-Tetrachloroethane (total)	79-34-5	0.01
Vinyl Chloride (total)	75-01-4	0.002+
Xylenes (total)	108-38-3, 1330-20-7, 95-47-6, 106-42-3	0.62
<u>cis-1,2-dichloroethene</u>	<u>156-59-2</u>	<u>0.07</u>
<u>trans-1,2-dichloroethene</u>	<u>156-60-5</u>	<u>0.1</u>
<u>1,2-dichloropropane (PDC)</u>	<u>78-87-5</u>	<u>0.005</u>
<u>Styrene</u>	<u>100-42-5</u>	<u>0.1</u>
<u>1,2-dichlorobenzene</u>	<u>95-50-1</u>	<u>0.6</u>
<u>1,4-dichlorobenzene</u>	<u>106-46-7</u>	<u>0.075</u>
<u>1,2,4-trichlorobenzene</u>	<u>120-82-1</u>	<u>0.07</u>
<u>Pentachlorophenol</u>	<u>87-86-5</u>	<u>0.001</u>
<u>Atrazine</u>	<u>1912-24-9</u>	<u>0.003</u>
<u>Methyl tertiary-butyl ether (MTBE)</u>	<u>1634-04-4</u>	<u>0.1</u>

<b>Radioactivity:</b>		<b>pCi/L</b>
Combined Radium-226 & Radium-228 (total)		530

<b>Nitrogen Compounds:</b>		<b>mg/L</b>
Total Nitrogen (sum of TKN+NO <sub>3</sub> -N) (dissolved)		15

b. ~~Until LANL is operating new reverse osmosis treatment units, but no later than 120 days following the effective date of this Discharge Permit, the following alternative effluent quality limits for Total Nitrogen shall apply for discharges to Outfall 051:~~

- ~~• Daily Maximum: 45 mg/L~~
- ~~• Quarterly average: 15 mg/L~~

e.b. For any water contaminant that is not listed in Table 1 of this Discharge

Permit but is listed as a toxic pollutant in 20.6.2.7. ~~T(2)WW~~ NMAC, the limit shall be the concentration listed in Table A-1 of NMED, Risk Assessment Guidance for Site Investigation and Remediation (most recent edition ~~and provided as Appendix 1~~). For any water contaminant that is not listed in Table 1 of this Discharge Permit or in Table A-1 of the Risk Assessment Guidance, the limit shall be the most recent EPA Regional Screening Level (RSL) for residential tap water. If an RSL is applicable for a carcinogenic water contaminant, the limit shall be adjusted to represent a lifetime risk of no more than one cancer occurrence per 100,000 persons (i.e., a cancer risk of  $1 \times 10^{-5}$ ).

In the event that effluent limits are exceeded, the Permittees shall enact the requirements of Condition ~~VI.A.18~~ (Effluent Exceedance) of this Discharge Permit. Water contaminants that are subject to effective and enforceable limitations in NPDES Permit No. NM0028355 for discharges to Outfall 051 are exempt from the limits set forth in this Condition.  
[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC]

**17. EFFLUENT LIMITS: MES and SET**-The Permittees shall not discharge treated waste water to either the MES or SET that exceeds the following limits (or is outside the following pH range):

- a. ~~a)~~ All water contaminants and their associated limits as listed in Table 2.

Table 2. Effluent Quality Limits for Discharges to the MES and SET

Inorganic Chemicals:	CAS#	mg/L
Aluminum (dissolved)	7429-90-5	5.0
Arsenic (dissolved)	7440-38-2	0.01
Barium (dissolved)	7440-39-3	2.0
Boron (dissolved)	7440-42-8	0.75
Cadmium (dissolved)	7440-43-9	0.005+
Chromium (dissolved)	7440-47-3	0.1
Chloride (dissolved)	7647-14-5	250.0
Cobalt (dissolved)	7440-48-4	0.05
Copper (dissolved)	7440-50-8	1.3
Cyanide (dissolved)	57-12-5	0.2
Fluoride(dissolved)	16984-48-8	1.6
Iron (dissolved)	7439-89-6	1.0

Inorganic Chemicals:	CAS#	mg/L
Lead (dissolved)	7439-92-1	0.015
Manganese (dissolved)	7439-96-5	0.2
Molybdenum (dissolved)	7439-98-7	1.0
Mercury (total)	92786-62-4	0.002
Nickel (dissolved)	7440-02-0	0.2
Perchlorate (total)	04797-73-0	0.0138
pH (total)		6 – 9
Selenium (dissolved)	7782-49-2	0.05
Silver (dissolved)	7440-22-4	0.1
Sulfate (dissolved)		600.0
Total Dissolved Solids (dissolved)		1000.0
Uranium (dissolved)	7440-61-1	0.03
Zinc (dissolved)	9029-97-4	10.0

Radioactivity:	pCi/L
Combined Radium-226 & Radium-228 (total)	530

Nitrogen Compounds:	mg/L
NO <sub>3</sub> -N (dissolved)	10

- ~~d. Until LANL is operating new reverse osmosis treatment units, but no later than 120 days following the effective date of this Discharge Permit, the~~

~~following alternative effluent quality limits for NO<sub>3</sub>-N shall apply for discharges to the SET and MES:~~

- ~~• Daily Maximum: 30 mg/L~~
- ~~• Quarterly average: 10 mg/L~~

In the event that effluent limits are exceeded, the Permittee shall enact the requirements of Condition ~~VI.A.18~~ (Effluent Exceedance) of this Discharge Permit.

[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC]

**18. EFFLUENT EXCEEDANCE-**In the event that analytical result of an effluent sample indicate an exceedance for any of the effluent limits set forth in Conditions ~~VI.A.16~~ (Effluent Limits: Outfall 51) and ~~Condition VI.A.17~~ (Effluent Limits: MES and SET) of this Discharge Permit, the Permittees shall, within 24 hours following receipt of analytical results indicating the exceedance, collect and submit for analysis a subsequent sample for the particular analyte that was in exceedance. In the event the analytical results of the subsequent sample confirm that the maximum limitation has been exceeded (i.e., confirmed exceedance), the Permittees shall take the following actions.

Within 24 hours of becoming aware of a confirmed exceedance, the Permittees shall:

- a. Cease discharges to the system for which limits have been exceeded with the exception of the MES to which a confirmed exceedance shall not require immediate cessation;
- b. Notify the NMED Ground Water Quality Bureau that an effluent limit set forth in this Discharge Permit has been confirmed to be in exceedance; and
- c. Increase the frequency of effluent sampling to adequately establish the quality of discharges prior to resuming discharges to the system that was in exceedance. The sampling frequency for the particular analyte that was in exceedance shall increase from monthly or quarterly, as required by Condition ~~VI.B.29~~ (Effluent Sampling) of this Discharge Permit, to weekly. If the particular analyte in exceedance remains below the effluent limit in three consecutive weekly samples, then the Permittees may resume discharges to the system that was in exceedance.

Within one week of becoming aware of a confirmed exceedance, the Permittees shall:

- a. Submit copies of the analytical results for the initial and subsequent sample confirming the exceedance to NMED;
- b. Examine the internal operational procedures, and maintenance and repair logs, required by Condition ~~VI.A.13~~ (Maintenance and Repair) of this Discharge Permit, for evidence of improper operation or function of the units and systems; and
- c. Conduct a physical inspection of the treatment system to detect abnormalities, and correct any abnormalities.



A report detailing the corrections made shall be submitted to NMED within 30 days following correction.

In the event that analytical results from any two independent monthly effluent samples indicate an exceedance of the effluent limits for all discharge systems set forth in this Discharge Permit within any 12-month period, the Permittees shall propose to modify operational procedures or upgrade the treatment process to achieve the effluent limits. Within 90 days of receipt of the second sample analysis in which effluent limits have been exceeded, the Permittees shall submit to NMED for approval a corrective action plan. The plan shall include a schedule for completion of corrective actions. Upon NMED approval, the Permittees shall implement the corrective action plan according to the approved schedule.

When analytical results from three consecutive months of effluent sampling do not exceed the maximum limitations set forth by this Discharge Permit, the Permittees are authorized to return to a monthly or quarterly monitoring frequency as required in this Discharge Permit.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.B NMAC, 20.6.2.3107.C NMAC]

**19. PERSONNEL QUALIFICATIONS-**Personnel responsible for the operation and maintenance and repair of the Facility shall successfully complete a program of classroom instruction or on-the-job training that provides the skills required to ensure the Facility is operated and maintained in a manner that complies with this Discharge Permit and all applicable local, state and federal laws and regulations. At a minimum, the operators shall be competent in the following.

- a. Management procedures for hazardous waste materials.
- b. Conducting inspections.
- c. Communications or alarm systems.
- d. Emergency response due to unauthorized releases, fire, explosions, or other potential unauthorized releases from the Facility and threat to human health.
- e. Emergency shutdown operations.

The operations and maintenance and repair of all or any part of the Facility shall be performed by, or under the direct supervision of, qualified personnel. Facility personnel shall review training and certifications on an annual basis to ensure training and certifications are current with any changes to the Facility's processes.

The Permittees shall maintain the following documents and records at the Facility for current personnel until closure of the Facility.

- a. The job title for each position at the Facility with a narrative of the position responsibilities, reporting hierarchy, requisite skill, education and other

qualifications assigned to the position.

- b. The name of the individual who holds each position and all records documenting training and job experience demonstrating the qualifications of that individual to hold the position.

The Permittees shall maintain all documents and records pertaining to the training of operation and maintenance personnel, including former employees, for a period of five years and shall make such documents and records available to NMED upon request.

[20.6.2.3106.C NMAC, 20.7.4 NMAC]

**20. EMERGENCY RESPONSE PROCEDURES** The Permittees shall keep and maintain emergency response procedures at the Facility at all times. At a minimum, the procedures shall include the following.

- a. Actions Facility personnel must take in response to fires, explosions or any unplanned sudden or non-sudden release of a water contaminant from the Facility to the environment.
- b. A spill prevention and response plan to address all unauthorized releases to the environment or those that pose a threat to human health, chronic or acute.
- c. A list of all emergency equipment at the Facility that may be utilized in the event of an emergency, its intended function and physical location.
- d. An evacuation procedure for all Facility personnel which describes signals to be used to notify personnel of an evacuation, routes to evacuated the Facility and alternate evacuation routes.
- e. Description of the use of the Incident Command System (ICS) in response to all emergencies. The ICS is based on the on-scene management structure protocols of the National Incident Management System (NIMS).
- f. Conditions under which activation of Los Alamos National Laboratory's Emergency Operations Center (EOC) is appropriate for incidents requiring Laboratory and/or community involvement. The EOC provides a central location for interagency and interjurisdictional coordination and executive decision making in support of an incident response.

The emergency response procedures shall be reviewed, and updated as necessary, by the Permittees on no less than a triennial basis or in the event the plan fails during an emergency, the Facility changes design, construction, or accessibility, key personnel changes or the list of equipment changes. The emergency response procedures shall be made available for inspection at the facility.

The Permittees shall submit ~~a written summary of the procedures to NMED within 120 days of the effective date of this permit (by Due Date) and provide~~ written updates of the procedures to NMED no more than 30 days following finalization of an amended plan.

[20.6.2.3109.C NMAC]

- 21. OPERATION/INSTALLATION OF FLOW METERS**—~~Within 180 days following the effective date of this Discharge Permit, (by Due Date),~~ The Permittees shall ~~operate the install the~~ following flow meters ~~at the facility~~.
- ~~One flow meter to be installed~~ on the RLW influent line to the Facility at a location that will capture and measure all influent to the Facility including waste water conveyed to the Facility by alternative methods (e.g. truck).
  - ~~One flow meter to be installed~~ on the effluent line to the SET at a location that will capture and measure all discharges of treated water to the SET.
  - ~~One flow meter to be installed~~ on the effluent line to the MES at a location that will capture and measure all discharges of treated water to the MES.
  - ~~One flow meter to be installed~~ on the discharge line to Outfall 051 at a location that will capture and measure all effluent discharges to Outfall 051.

~~Within 60 days following the installation of flow meters, and within 240 days following the effective date of this Discharge Permit (by Due Date), the Permittees shall submit to NMED written confirmation of the meter installation, describing the type, calibration, and location of each flow meter. The flow meters shall be operational except during repair or replacement. Should a meter fail, it shall be repaired or replaced as soon as practical, but no later than 30 days from the date of the failure. Prior to installation of the flow meters, and during periods of repair or replacement, an alternative method for determining the volume of influent and effluent shall be used until the meter is operational. [20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC]~~

- 22. CALIBRATION OF FLOW METERS**—All flow meters referenced in this Discharge permit shall be capable of having their accuracy ascertained under actual working (field) conditions. A field calibration method shall be developed for each flow meter and that method shall be used to check the accuracy of each respective meter. Field calibrations shall be performed ~~within 180 days following the effective date of this Discharge Permit (by Due Date) and, at a minimum, on an annual basis thereafter,~~ and immediately upon repair or replacement of a flow meter.

Flow meters for the effluent lines to the SET, the MES and Outfall 051 shall be calibrated to within plus or minus 5 percent of actual flow, as measured under field conditions. The flow meter installed on the 10-inch influent line to the RLWTF shall be calibrated to within plus or minus 10 percent of actual flow, as measured under field conditions. Field calibrations shall be performed by an individual knowledgeable in flow measurement and in the installation and operation of the particular device in use. A calibration report shall be prepared for each flow meter at the frequency calibration is required.

The flow meter calibration report shall include the following information

- The meter location and identification.
- The method of flow meter field calibration employed.

- c. The measured accuracy of each flow meter prior to adjustment indicating the positive or negative offset as a percentage of actual flow as determined by an in-field calibration check.
- d. The measured accuracy of each flow meter following adjustment, if necessary, indicating the positive or negative offset as a percentage of actual flow of the meter.
- e. Any flow meter repairs made during the previous year or during field calibration.

The Permittees shall maintain records of flow meter calibration at a location accessible for review by NMED during Facility inspections.  
[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC, 20.6.2.3109.H NMAC]

## **B. Monitoring and Reporting**

**23. METHODOLOGIES-**Unless otherwise approved in writing by NMED, the Permittees shall conduct sampling and analysis in accordance with the most recent edition of the following documents.

- a. American Public Health Association, Standard Methods for the Examination of Water and Waste water.
- b. U.S. Environmental Protection Agency, Methods for Chemical Analysis of Water and Waste.
- c. U.S. Geological Survey, Techniques for Water Resources Investigations of the U.S. Geological Survey.
- d. American Society for Testing and Materials, Annual Book of ASTM Standards, Part 31. Water.
- e. U.S. Geological Survey, et al., National Handbook of Recommended Methods for Water Data Acquisition.
- f. Federal Register, latest methods published for monitoring pursuant to Resource Conservation and Recovery Act regulations.
- g. Methods of Soil Analysis: Part 1. Physical and Mineralogical Methods; Part 2. Microbiological and Biochemical Properties; Part 3. Chemical Methods, American Society of Agronomy;

[20.6.2.3107.A NMAC, 20.6.2.3107.B NMAC]

**24. MONITORING REPORTS-**The Permittees shall submit monitoring reports to NMED on a quarterly basis. Quarterly sampling and analysis as required in this Discharge Permit shall be performed within the following periods and reports shall be submitted as described below.

- a. Sampling and analysis completed between January 1 and March 31– report to be submitted to NMED by May 1.
- b. Sampling and analysis completed between April 1 and June 30 – report to be submitted to NMED by August 1.
- c. Sampling and analysis completed between July 1 and September 30–report to be submitted to NMED by November 1.
- d. Sampling and analysis completed between October 1 and December 31–

report to be submitted to NMED by February 1.  
[NMSA 1978, § 74-6-5.D, 20.6.2.3109.B NMAC, 20.6.2.3109.C NMAC,  
20.6.2.3107.A NMAC]

- 25. INFLUENT VOLUMES RLW-**The Permittees shall measure the volume of all RLW influent waste water being conveyed to the Facility on a daily basis using the flow meter required to be installed pursuant to this Discharge Permit.

The total daily and monthly volumes of RLW influent conveyed to the Facility shall be submitted to NMED in the quarterly monitoring reports.  
[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC, 20.6.2.3109.H NMAC]

- 26. INFLUENT VOLUMES TRU-**The Permittees shall measure the daily volume of TRU influent waste water being conveyed to the Facility using electronic sensors which measure tank levels in both the acid waste and caustic waste influent tanks.

The electronic sensors on these tanks shall be operational except during repair or replacement. Should a sensor used to calculate TRU influent volumes fail, it shall be repaired or replaced as soon as practical, but no later than 30 days from the date of the failure. During repair or replacement, an alternative method for determining the flow of TRU influent shall be used until the defective sensor is repaired or replaced.

Volumes shall be determined by calculation using the head change and tank size. Operators shall record changes in influent tank levels whenever a batch of TRU waste water is conveyed to the Facility. The total daily and monthly volumes of TRU influent received by the Facility shall be submitted to NMED in the quarterly monitoring reports.  
[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC, 20.6.2.3109.H NMAC].

- 27. DISCHARGE VOLUMES-**The Permittees shall measure and record the volume of treated waste water discharged to the SET, MES and Outfall 051 on a daily basis. The Permittees shall determine effluent volumes as follows.
- a. Discharge volumes to the SET shall be determined by daily totalized meter readings on the flow meter required in this Discharge Permit, located on the effluent line to the unit.
  - b. Discharge volumes to Outfall 051 shall be determined by daily totalized meter readings on the flow meter required in this Discharge Permit, located on the effluent line to the outfall.
  - c. Discharge volumes to the MES shall be determined by daily totalized meter readings on the flow meter required in this Discharge Permit, located on the effluent line to the unit.

The daily and monthly discharge volumes for the reporting period shall be submitted to NMED in the quarterly monitoring reports.

[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC, 20.6.2.3109.H NMAC]

- 28. WASTE TRACKING-**The Permittees shall maintain current written or electronic records of all waste streams conveyed to the Facility. At a minimum, the Permittees shall record the following information.
- a. The name of the generator and a unique waste stream identification number.
  - b. The time period for which the Permittee approved the generator to convey the waste stream to the Facility.
  - c. The location where the waste stream was generated.
  - d. Estimated volume and duration of the waste stream, including
    - Estimated number of days per year discharge occurred.
    - Average daily volume received by the Facility when discharge occurred.
    - Maximum daily volume received by the Facility each year when discharge occurred.
    - Estimated total volume discharged to the facility each year.
  - e. The waste stream characterization (i.e., analytical data or knowledge of process).
  - f. The names of the personnel that approved the receipt of the waste at the Facility (e.g., Waste Certifying official, RCRA Reviewer, and Facility Reviewer).

Permittees shall also maintain written or electronic records of the following waste streams conveyed from the Facility: Radioactive Liquid Waste Bottoms, low-level sludge, TRU sludge, and low-level solid waste (PPE, sample bottles, filters, membranes, etc). Records will include date of shipment, quantity shipped, description of waste stream, shipping documentation and disposal location. The Permittees shall allow NMED or an authorized representative to have access to and copy, at reasonable times, records that must be kept under this condition.

The Permittees shall maintain all waste tracking records required by this Condition for five years from the date of the final discharge from the generator of that waste stream. The Permittees shall furnish upon request, and make available at all reasonable times for inspection, the waste tracking records required in this Discharge Permit.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC]

- 29. EFFLUENT SAMPLING -**The Permittees shall sample and analyze effluent waste streams discharged to Outfall 051, the SET, and the MES.

Treated effluent samples shall be collected once per calendar month for any month in which a discharge occurs to Outfall 051. The Permittees shall collect a grab sample of treated effluent which shall be analyzed for all water contaminants listed in 20.6.2.3103 NMAC, TKN and all toxic pollutants as defined in 20.6.2.7. ~~T(2)WW~~ NMAC.

Treated effluent samples shall be collected once per calendar month for any month in which a discharge occurs to the MES or SET. The Permittees shall collect a grab sample of treated effluent which shall be analyzed for TKN, NO<sub>3</sub>-N, TDS, Cl, F and perchlorate.

The Permittees shall collect and analyze effluent samples once per quarter for any quarterly period in which a discharge occurs to the MES or SET. The Permittees shall collect a grab sample of treated effluent which shall be analyzed for all water contaminants listed in 20.6.2.3103 NMAC and all toxic pollutants as defined in 20.6.2.7. ~~T(2)WW~~ NMAC.

All samples shall be properly prepared, preserved, transported and analyzed in accordance with the parameters and methods authorized in this Discharge Permit and will be submitted to an independent environmental laboratory accredited under the National Environmental Laboratory Accreditation Program. Analytical results shall be submitted to NMED in the quarterly monitoring reports. For any calendar month during which no discharge occurs, the Permittees shall submit a note in the quarterly report documenting the absence of discharge.

[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC]

**30. SOIL MOISTURE MONITORING SYSTEM FOR THE SET** ~~Within 120 days following the effective date of this Discharge Permit (by Due Date), the Permittees shall submit to NMED for approval a proposed work plan, design and schedule for the installation of a moisture monitoring system for the detection of unauthorized releases from the SET. The Permittees shall construct a moisture monitoring system for the SET to detect unauthorized releases.~~ The system shall be designed to detect, at a minimum, absolute variations in volumetric soil moisture content below the SET within a precision of 2%. The Permittees shall install the moisture monitoring boreholes in accordance with the final work plan, design and schedule approved by NMED.

The Permittees shall use neutron moisture probes to log the moisture monitoring boreholes following installation to establish baseline conditions and to develop a calibration data set for the probe and a soil moisture action level, to be approved by NMED, which indicates that moisture is being detected below the SET at levels that are above baseline conditions.

Within 90 days following acceptance of the final construction of the moisture monitoring boreholes and prior to discharge to the SET by the Permittees, the Permittees shall submit to NMED for approval the following items.

- a. Confirmation that the moisture monitoring borehole installation has been completed.
- b. Record drawings of the final design of the completed installation.
- c. Reports on the baseline moisture condition and neutron probe calibration.

- d. A proposed action level to be used to indicate that elevated moisture has been detected beneath the SET.

Upon approval or approval with conditions by NMED of the completed installation and soil moisture action level, discharge to the SET can commence. The Permittees shall perform quarterly soil moisture monitoring in the moisture monitoring boreholes, and shall provide this information in the quarterly reports required by Condition ~~VI.B.24~~ (Monitoring Reports).

The moisture monitoring boreholes and neutron probes shall be maintained so that the boreholes remain accessible for monitoring and the probe remains operational. Should the system or a component of the system fail, it shall be repaired or replaced as soon as possible, but no later than 90 days from the date of the failure. For good cause, NMED may approve a longer period.

The Permittees shall maintain all documents and records pertaining to the quarterly monitoring events and maintenance or repair of the soil moisture monitoring system for a period of five years and shall make such documents and records available to NMED upon request.  
[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC]

**31. SOIL MOISTURE MONITORING SYSTEM EXCEEDANCE-** In the event that the synthetic liner leak detection system identifies a leak, or the soil moisture detection system for the SET detects a soil moisture increase beneath the SET that exceeds the NMED approved action level the Permittees shall take the following corrective actions.

- a. Notify the NMED Ground Water Quality Bureau within 24 hours of a release detected by the release detection system within the synthetic liner.
- b. Notify the NMED Ground Water Quality Bureau within 15 days following the date when the soil moisture was initially discovered beneath the SET to exceed the action level.
- c. Within 60 days following the date when the soil moisture was initially discovered to exceed the action level, identify the source of the increased soil moisture beneath the SET to NMED and the basis for the identification of the source.

In the event the leak detection system between the primary and secondary liner identifies a leak, or the moisture exceedance in the soil moisture monitoring system is demonstrated to be associated with a leak from or breach of the SET, the Permittees shall cease discharges to the SET, remove all standing liquid from one or both cells (as appropriate), and submit a corrective action plan to NMED, for approval, within 30 days following the date when the Permittees identify the leak. At a minimum, the corrective action plan shall include the following.

- a. A proposal for repairing or replacing the synthetic liners within the SET, if leakage through the synthetic liners is found to be the source, or for other



repairs.

- b. A plan for re-instituting soil moisture monitoring following repairs to the SET to demonstrate that the repairs resolved the source of the increased soil moisture beneath the SET.
- c. A schedule for implementation of the corrective action plan elements.

In the event the source of the soil moisture exceedance is demonstrated to be associated with an occurrence other than a failure of the SET, the Permittees shall submit a corrective action plan to NMED, for approval, within 120 days following the date when the soil moisture was initially discovered to exceed the action level. The corrective action plan shall include any actions necessary to ensure the soil moisture detection system is operating within its intended function as required by this Discharge Permit including, but not limited to, re-calibration.

Upon NMED approval, or approval with conditions, the Permittees shall implement the corrective action plan according to the approved schedule.  
[20.6.2.3107.A NMAC, 20.6.2.3109.E NMAC]

- 32. GROUND WATER FLOW-**The Permittees shall submit a ground water flow direction report to NMED in the Annual Report in conjunction with the Quarterly Report due February 1. The report shall contain regional, intermediate and alluvial aquifer ground water depth-to-water measurements, existing interconnections with other aquifers (if any are known), a narrative description of the known characteristics of the ground water elevation and flow direction within each aquifer and, to the extent practicable, ground water elevation contour map(s) for the aquifers underlying Sandia, Pajarito, Ten-Site and Mortandad Canyons.

The ground water elevation contour maps shall depict the ground water flow direction based on the most recent representative ground water elevation data from monitoring wells located in the subject areas. Ground water elevations shall be estimated using common interpolation methods to a contour interval approved by NMED and appropriate to the available data. Ground water elevation contour maps shall depict the water table and potentiometric surfaces, ground water flow directions, and the location and name of each monitoring well and discharge location unit associated with this Discharge Permit.  
[20.6.2.3107.A NMAC, 20.6.2.3109.C]

- 33. ~~[REPLACEMENT OF TWO EXISTING ALLUVIAL GROUND WATER MONITORING WELLS – RESERVED]~~** Within 90 days of the effective date of this Discharge Permit (by **Due Date**), the permittees shall submit to NMED a work plan for the installation of two replacement monitoring wells in the alluvial aquifer at a location hydrologically downgradient of Outfall 051. The well installation work plan will include proposed well locations, drilling methods, well specifications, and proposed schedule for construction. Upon

~~NMED approval, the Permittees shall construct the replacement wells in accordance with the Groundwater Quality Bureau, Monitoring Well Construction and Abandonment Guidelines, Revision 1.1, March 2011 and the approved work plan and schedule. A monitoring well completion report documenting the installation will be submitted to NMED within 60 days following completion.~~

~~[NMSA 1978, § 74-6-5.D, 20.6.2.3109.B NMAC]~~

**34. MONITORING WELL LOCATION** - In the event that ground water flow information obtained pursuant to this Discharge Permit indicates that a monitoring well is not located hydrologically downgradient of the discharge location it is intended to monitor, NMED may require the Permittees to install a replacement well or wells. Within 90 days following receipt of such notification from NMED, the Permittees shall submit to NMED for approval a well installation work plan, describing each proposed well location, drilling methods and well specifications, and proposing a schedule for construction. Upon NMED approval, the Permittees shall construct the replacement well or wells according to the approved work plan and schedule.

Within 90 days following well completion, the Permittees shall survey the elevation and location of the newly installed replacement monitoring well or wells. Within 120 days following well completion, the Permittees shall submit to NMED a well completion report that will include: construction and lithologic logs, survey data, and a ground water elevation contour map.

Replacement wells shall be located, installed, and completed in accordance with the attachment titled: *Ground Water Quality Bureau Monitoring Well Construction and Abandonment Conditions, Revision 1.1*, March 2011, or according to other specifications as approved by NMED.

[NMSA 1978, § 74-6-5.D, 20.6.2.3109.B NMAC]

**35. MONITORING WELL CONSTRUCTION** - In the event that information available to NMED indicates that a well is not constructed in a manner consistent with the *Ground Water Quality Bureau Monitoring Well Construction and Abandonment Guidelines, Revision 1.1*, March 2011 or NMED approved specification; contains insufficient water to effectively monitor ground water quality; or is not completed in a manner that is protective of ground water quality, NMED may require the Permittees to install a replacement well or wells. Within 90 days following receipt of such notification from NMED, the Permittees shall submit to NMED for approval a well installation work plan, describing each proposed well location, drilling methods, well specifications, and proposed schedule for construction. Upon NMED approval, the Permittees shall construct the replacement well or wells according to the approved work plan and schedule.

Within 90 days following well completion, the Permittees shall survey the

elevation and location of the newly installed replacement monitoring well or wells. Within 120 days of well completion, the Permittees shall submit to NMED construction and lithologic logs, survey data, and a ground water elevation contour map.

Replacement wells shall be located, installed, and completed in accordance with the attachment titled: *Ground Water Quality Bureau Monitoring Well Construction and Abandonment Conditions, Revision 1.1*, March 2011, or according to other specifications as approved by NMED.

Upon completion of the replacement monitoring well, the monitoring well requiring replacement shall be properly plugged and abandoned. Well plugging, and abandonment and documentation of the abandonment procedures shall be completed in accordance with the *Ground Water Quality Bureau Monitoring Well Construction and Abandonment Conditions, Revision 1.1*, March 2011, and all applicable local, state, and federal laws and regulations. The well abandonment documentation shall be submitted to NMED within 60 days of completion of well plugging activities.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.B NMAC]

- 36. GROUND WATER MONITORING** - The Permittees shall collect ground water samples from the following ground water monitoring wells on a quarterly basis and analyze the samples for TKN, NO<sub>3</sub>-N, TDS, Cl, F and perchlorate.
- a. ~~MCA-RLW-1 Replacement Alluvial Well~~ - Alluvial Previously constructed and located in the alluvial aquifer ~~replacement well installed as a condition of this Discharge Permit located~~ hydrologically downgradient of Outfall 051.
  - b. ~~MCA-RLW-2 Replacement Alluvial Well~~ - Previously constructed and located in the Alluvial aquifer ~~replacement well installed as a condition of this Discharge Permit located~~ hydrologically downgradient of Outfall 051.
  - c. **MCOI-6** - previously constructed and located in the intermediate aquifer hydrologically downgradient of Outfall 051.

The Permittees shall collect ground water samples from the following ground water monitoring wells on an annual basis and analyze the samples for all water contaminants listed in 20.6.2.3103 NMAC and all toxic pollutants listed in 20.6.2.7. ~~WWT(2)~~.

- a. ~~Replacement Alluvial MCA-RLW-1 Well~~ - Previously constructed and located in the alluvial aquifer ~~Installed as a condition of this Discharge Permit and~~ hydrologically downgradient of Outfall 051.
- b. ~~MCA-RLW-2 Replacement Alluvial Well~~ - Previously constructed and located in the alluvial aquifer ~~Installed as a condition of this Discharge Permit and~~ hydrologically downgradient of Outfall 051
- c. **MCOI-6** - previously constructed and located in the intermediate aquifer presumed to be hydrologically downgradient of Outfall 051.
- d. **R-46** - previously constructed and located in the regional aquifer,

- topographically downgradient of the RLWTF.
- e. **R-60** - previously constructed and located in the regional aquifer, topographically downgradient of the RLWTF.
  - f. **R-1** - previously constructed and located in the regional aquifer, topographically downgradient of the RLWTF.
  - g. **R-14** - previously constructed and located in the regional aquifer, topographically downgradient of the RLWTF.

Sampling shall be done in accordance with the methods authorized in this Discharge Permit and using the following procedure.

- a. Measure the ground-water surface elevation, to the nearest hundredth (0.01) of a foot, from the top of the casing, each time ground water is sampled.
- b. Calculate total volume of water within the monitoring well using the most recent total depth measurement.
- c. For intermediate and regional aquifer wells, purge three well volumes of water from the monitoring well prior to sampling, using an adequate pumping system. For alluvial wells, purge well for a minimum of one well volume.
- d. Collect samples from the well using appropriate methods to avoid cross-contamination of the samples and sources.
- e. Prepare the Chain-of-Custody, preserve the sample and transport samples in accordance with methods authorized in this Discharge Permit.
- f. Samples shall be analyzed by an independent analytical laboratory accredited under the National Environmental Laboratory Accreditation Program (NELAP) using EPA approved test methods.

The Permittees may submit to NMED for approval Standard Operating Procedures developed for the Interim Facility-Wide Groundwater Monitoring Plan that would apply in lieu of the sampling protocols described in this Permit Condition. Upon NMED approval or partial approval of such alternate plan, the approved plan or portion thereof shall apply and be fully enforceable in lieu of this Permit Condition.

The Permittees shall use sampling and analytical methods that ensure the production of accurate and reliable data indicative of ground water quality in all ground water that may be affected by any discharges from the Facility. The Permittees shall prepare ground water monitoring reports describing, in detail, the sampling and analytical methods used. The ground water monitoring reports shall contain, at minimum, the following information.

- a. Date sample was collected.
- b. Time sample was collected.
- c. Individuals collecting sample.
- d. Monitoring well identification.
- e. Physical description of monitoring well location.
- f. Ground-water surface elevation.
- g. Total depth of the well.

- h. Total volume of water in the monitoring well prior to sample collection.
- i. Total volume of water purged prior to sample collection.
- j. Physical parameters including temperature, conductivity, pH, oxidation-reduction potential.
- k. Description of sample methods (i.e., constituent being sampled for, container used, preservation methods).
- l. Chain-of custody.
- m. Map, to scale, identifying monitoring wells and their location.

The ground water monitoring report shall be submitted to NMED with the quarterly monitoring report required in this Discharge Permit.  
[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC]

**37. GROUND WATER EXCEEDANCE-** NMED reviews ground water data that is generated by the Permittees from samples collected from the monitoring wells identified in this Discharge Permit and other monitoring wells in the vicinity of the Facility. The Permittees report newly detected ground water quality standard exceedances or the newly detected toxic pollutants (as defined in this Discharge Permit and in 20.6.2.7.T(2)WW NMAC) in ground water for the entire Laboratory to NMED. If NMED determines that a ground water quality standard is exceeded or that a toxic pollutant is present in ground water, potentially due to a discharge associated with the Facility or defined systems in this Discharge Permit, the Permittees shall submit a ground water investigation/source control work plan to NMED for approval within 60 days following notification to do so by NMED.

At a minimum, the ground water investigation/source control work plan shall include the following elements.

- a. A proposal to investigate the source, nature and extent of the ground water contamination, if unknown, which may utilize existing ground water monitoring wells or may propose the installation of new monitoring wells, as appropriate.
- b. A proposal to mitigate the discharge or mobilization of the water contaminant which might be causing ground water contamination, as appropriate.
- c. A schedule for implementation of the work plan and submittal of a report to NMED.

Upon NMED approval of the ground water investigation/source control work plan, or approval of the plan with conditions, the Permittees shall implement the work plan and submit a written report to NMED in accordance with the approved schedule.

Should the findings of the ground water investigation reveal that a discharge associated with the Facility or defined systems in this Discharge Permit is a source of the ground water contamination, the Permittees shall abate water pollution pursuant to 20.6.2.4000 through 20.6.2.4115 NMAC, following

notification from NMED.

This Permit Condition does not apply to an exceedance of ground water quality standard or the presence of a toxic pollutant in ground water unrelated to a discharge associated with the Facility or defined systems in this Discharge Permit, to the extent that abatement of such ground water contamination is occurring, or will occur, pursuant to and in accordance with the June 2016 Compliance Order on Consent (Consent Order) agreed to by NMED, and the Permittees pursuant to the New Mexico Hazardous Waste Act, NMSA 1978, §74-4-10 and the New Mexico Solid Waste Act, NMSA 1978, §74-9-36(D). [NMSA 1978, § 74-6-5.D, 20.6.2.3109.E NMAC, 20.6.2.3107.A NMAC]

### C. Contingency Plans

**38. SPILL OR UNAUTHORIZED RELEASE-**In the event of a release not authorized in this Discharge Permit, the Permittees shall take measures to mitigate damage from the unauthorized discharge and initiate the notifications and corrective actions required in 20.6.2.1203 NMAC and summarized below.

Within 24 hours following discovery of the unauthorized discharge, the Permittees shall orally notify NMED and provide the following information.

- a. The name, address, and telephone number of the person or persons in charge of the Facility.
- b. The identity and location of the Facility.
- c. The date, time, location, and duration of the unauthorized discharge.
- d. The source and cause of unauthorized discharge.
- e. A description of the unauthorized discharge, including its estimated chemical composition.
- f. The estimated volume of the unauthorized discharge.
- g. Any actions taken to mitigate immediate damage from the unauthorized discharge.

Within one week following discovery of the unauthorized discharge, the Permittees shall submit written notification to NMED with the information listed above and any pertinent updates.

Within 15 days following discovery of the unauthorized discharge, the Permittees shall submit to NMED for approval a corrective action report and plan describing any corrective actions taken and to be taken to address the unauthorized discharge that includes the following.

- a. A description of proposed actions to mitigate damage from the unauthorized discharge.
- b. A description of proposed actions to prevent future unauthorized discharges of this nature.
- c. A schedule for completion of proposed actions.

Upon NMED approval of the corrective action report and plan, the Permittees shall implement the approved actions according to the approved schedule.

In the event that the unauthorized discharge causes or may with reasonable probability cause water pollution in excess of the standards and requirements of 20.6.2.4103 NMAC, and the water pollution will not be abated within 180 days after notice is required to be given pursuant to 20.6.2.1203.A(1) NMAC, the Permittees may be required to abate water pollution pursuant to 20.6.2.4000 through 20.6.2.4115 NMAC.

Nothing in this condition shall be construed as relieving the Permittees of the obligation to comply with all requirements of 20.6.2.1203 NMAC.

[NMSA 1978, § 74-6-5.D, 20.6.2.1203 NMAC, 20.6.2.3109.B NMAC]

**39. FAILURES IN DISCHARGE PLAN/DISCHARGE PERMIT**-In the event that NMED or the Permittees identify any failure of the discharge plan or this Discharge Permit not specifically set forth herein, NMED may require the Permittees to submit for its approval a corrective action plan and a schedule for completion of corrective actions to address the failure. Additionally, NMED may require a Discharge Permit modification to achieve compliance with Part 20.6.2 NMAC.

[20.6.2.3107.A NMAC, 20.6.2.3109.E NMAC]

#### D. Closure

~~40. [RESERVED] CESSATION OF OPERATION OF SPECIFIC UNITS- Within 60 days of the effective date of this Discharge Permit (by Due Date), the Permittees shall permanently cease operation of the following units:~~

~~41. The 75,000 gallon concrete influent storage tank (75K tank) will be taken out of service as an influent storage tank but remain available for use as emergency storage.~~

~~42. The 100,000 gallon steel influent storage tank (100K tank).~~

~~43. The two 26,000 gallon concrete clarifiers located within Building 1 of TA-50.~~

~~44. The two 25,000 gallon concrete effluent storage tanks (WM2-N, WM2-S).~~

~~45. The gravity filter located within Building 1 of TA-50.~~

~~46. Upon the cessation of operation of these specific units, the Permittees shall initiate the requirements for stabilization (Condition 41) of the individual units, systems and components in accordance with this Discharge Permit.~~

~~47.40. [NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.B NMAC, 20.6.2.3109.E NMAC]~~

**48.41. STABILIZATION OF INDIVIDUAL UNITS AND SYSTEMS** - Within 120 days from the permanent cessation of operation of a unit or system, the Permittees shall submit to NMED for approval a written work plan for the

stabilization of the unit or system for which operation has ceased. The work plan shall identify activities to be taken, and steps necessary to ensure that the unit or system can no longer receive a discharge and that no further releases of water contaminants occur as a result of the unit or system. At a minimum, the work plan shall include the following.

- a. Identification of the unit or system in which cessation of use has occurred.
- b. A detailed description of the function of the unit or system.
- c. A detailed description of the historic influent waste streams to the unit or system.
- d. A detailed description of all conveyance lines leading to the unit or system and a description of how the lines will be terminated, plugged, re-routed or bypassed so that a discharge to the unit or system can no longer occur.
- e. Identification of those portions of the approved Closure Plan required in Condition 42- (Closure Plan) of this Discharge Permit that will be implemented.
- f. A description of all proposed interim measures, actions and controls that will be implemented until such time of final removal of the unit, system or component to prevent the release of water contaminants into the environment; to prevent water contaminants, including storm water run-on and run-off, from moving into ground water; and to prevent water contaminants from posing a threat to human health.
- g. A detailed description of the actions that will be taken under the Consent Order to investigate and characterize the potential impact to soil and groundwater from the facility, system, or individual unit pursuant to Condition 46- (Integration with the Consent Order).
- h. A schedule for implementation.

Upon NMED approval of the work plan, the Permittees shall implement the plan according to the approved schedule.

Within 30 days following the completion of all interim measures, actions and controls as required by this condition, the Permittees shall submit to NMED for approval a final written report on the actions taken to implement the partial closure.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.B NMAC, 20.6.2.3109.E NMAC]

**49.42. CLOSURE PLAN** - A closure plan is provided as an Attachment to this Discharge Permit. The closure plan includes the following.

- a. A detailed description of how each unit and system at the Facility will be closed.
- b. A detailed description of the actions to be taken to decommission, demolish, and remove each unit, system, and other structure, including any secondary containment system components.
- c. A detailed description of the actions and controls that will be implemented during closure to prevent the release of water



- contaminants into the environment; to prevent water contaminants, including run-on and run-off, from moving into ground water; and to prevent water contaminants from posing a threat to human health.
- d. A detailed description of the methods to be used for decontamination of the site and decontamination of equipment used during closure.
  - e. A detailed description of the actions that will be taken to reclaim the site, including placement of clean fill material and re-grading to blend with surrounding surface topography, minimize run-on and run-off, and prevent infiltration of water, and re-vegetation.
  - f. A detailed description of all monitoring, maintenance and repair, and controls that will be implemented after closure, and of all actions that will be taken to minimize the need for post-closure monitoring, maintenance and repair, and controls.
  - g. A ground water monitoring plan to detect water contaminants that might move directly or indirectly into ground water after closure, which shall provide for, at a minimum, eight consecutive quarters of ground water monitoring after achieving the standards of 20.6.2.3103 NMAC.
  - h. A detailed description of the methods that will be used to characterize all wastes generated during closure, including treatment residues, contaminated debris, and contaminated soil, in compliance with all local, state, and federal laws and regulations.
  - i. A detailed description of the actions that will be taken to investigate and characterize the potential impact to soil and groundwater from the facility, system, or individual unit, or, pursuant to Condition ~~VI.D.46~~ (Integration with the Consent Order), if the unit or system will be investigated and characterized under the Consent Order, a description of such activities.
  - j. A detailed description of the methods that will be used to remove, transport, treat, recycle, and dispose of all wastes generated during closure in compliance with all applicable local, state, and federal laws and regulations.
  - k. A detailed schedule for the closure and removal of each unit and system, which lists each proposed action and the estimated time to complete it.

For changes that would affect the implementation of the attached Closure Plan, the Permittees shall submit to NMED for approval a written notification and an amended Closure Plan. Permittees will provide annual updates to NMED describing modifications to the Closure Plan. Public comments will be accepted by NMED for a period of ~~90~~ 30 days after the submittal of a modified or amended closure plan prior to approval.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.B NMAC, 20.6.2.3109.E NMAC]

**50.43. FINAL CLOSURE - Permittee will notify the NMED a minimum of 120 days prior to initiation of closure activities at the facility.** Once closure begins, and until all closure requirements (excluding post-closure ground water monitoring) are completed, the Permittees shall submit to NMED, with the monitoring reports required in this Discharge Permit, quarterly status reports describing the closure actions taken during the previous reporting period and the actions scheduled for the next reporting period. Within 90 days following the completion of the closure, the Permittees shall submit to NMED for approval a final written report on the actions taken to implement closure.

Upon termination of the RLWTF mission, Permittee will submit to NMED for approval a revised closure plan for the decommissioning of the active facility that incorporates the same criteria as identified in this condition.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.B NMAC, 20.6.2.3109.E NMAC]

**51.44. POST-CLOSURE GROUND WATER MONITORING -** After closure has been completed and approved by NMED, the Permittees shall continue ground water monitoring of any wells dedicated to the Facility according to the approved Closure Plan to confirm that the standards of 20.6.2.3103 NMAC are not exceeded and toxic pollutants in 20.6.2.7.T(2)WW NMAC are not present in ground water. Such monitoring shall continue for a minimum of eight consecutive quarters.

If monitoring results show that a ground water quality standard in 20.6.2.3103 NMAC is exceeded or a toxic pollutant in 20.6.2.7.T(2)WW NMAC is present in ground water, the Permittees shall implement the requirements of Condition 37 (Ground Water Exceedance) of this Discharge Permit.

This Permit Condition does not apply to an exceedance of ground water quality standard or the presence of a toxic pollutant in ground water unrelated to a discharge associated with the Facility or defined systems in this Discharge Permit, to the extent that abatement of such ground water contamination is occurring, or will occur, pursuant to and in accordance with the June 2016 Compliance Order on Consent (Consent Order) agreed to by NMED and the DOE.

Upon demonstration confirming ground water quality does not exceed the standards of 20.6.2.3103 NMAC and does not contain a toxic pollutant in 20.6.2.7.T(2)WW NMAC, the Permittees may submit a written request to cease ground water monitoring activities.

Following notification from NMED that post-closure monitoring may cease, the Permittees shall plug and abandon the monitoring well in accordance with

the *Ground Water Quality Bureau Monitoring Well Construction and Abandonment Conditions, Revision 1.1*, March 2011.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.B NMAC, 20.6.2.3109.F NMAC, 20.6.2.4103.D NMAC]

**52.45. TERMINATION-** When all closure and post-closure requirements have been met, the Permittees may submit to NMED a written request for termination of the Discharge Permit.

If the Discharge Permit expires or is terminated for any reason and any standard of 20.6.2.3103 NMAC is or will be exceeded, or a toxic pollutant in 20.6.2.7.T(2)WW NMAC is or will be present in ground water, NMED may require the Permittees to submit an abatement plan pursuant to 20.6.2.4104 NMAC.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.A NMAC, 20.6.2.3109.B NMAC, 20.6.2.3109.F NMAC, 20.6.2.4103.D NMAC]

**53.46. INTEGRATION WITH THE CONSENT ORDER --** The investigation, characterization, cleanup and corrective action requirements for potential releases of contaminants into soil, groundwater and other environmental media from “solid waste management units” (SWMUs) and “areas of concern” (AOCs) associated with the Facility and contained within the Compliance Order on Consent (June 2016, Consent Order) entered into between the New Mexico Environment Department and the DOE pursuant to the New Mexico Hazardous Waste Act, NMSA 1978, §74-4-10 and the New Mexico Solid Waste Act, NMSA 1978, §74-9-36(D)(see [https://www.env.nm.gov/wp-content/uploads/2015/12/LANL\\_Consent\\_Order\\_FINAL.pdf](https://www.env.nm.gov/wp-content/uploads/2015/12/LANL_Consent_Order_FINAL.pdf)) shall be governed by the Consent Order. The investigation, characterization, cleanup and corrective action of any future SWMUs and AOCs associated with the Facility shall be conducted solely under the Consent Order and not under this Permit until termination of the Consent Order. No activities required under this Permit shall conflict with or duplicate activities required for SWMUs and AOCs identified under the Consent Order. Permittees shall provide information regarding which units and systems are covered by the Consent Order in the submittals required by Conditions ~~VI.D~~.41 (Stabilization of Individual Units and Systems) and ~~Condition VI.D~~.43 (Final Closure) of this permit, along with a description of the investigation and characterization that will occur under the Consent Order for each unit and system.

[NMSA 1978, §74-4-10 NMSA 1978, §74-9-36(D)]

## **E. General Terms and Conditions**

**47. APPROVALS -** Upon receipt of a work plan, written proposal, report, or other document subject to NMED approval, NMED will review the document and may either approve the document, approve the document with conditions, or

disapprove the document. Upon completing its review, NMED will notify the Permittees in writing of its decision, including the reasons for any conditional approval or disapproval.

[20.6.2.3107.A NMAC, 20.6.2.3109.C NMAC]

**48. RECORD KEEPING** - The Permittees shall maintain a written record of the following information and shall make it available to NMED upon request.

- a. Information and data used to prepare the application for this Discharge Permit.
- b. Records of any releases or discharges not authorized in this Discharge Permit and reports submitted pursuant to 20.6.2.1203 NMAC.
- c. Records, including logs, of the operation and maintenance and repair of all Facility and equipment used to treat, store or dispose of waste water.
- d. Facility record drawings (plans and specifications) showing the actual construction of the Facility and shall comply with the New Mexico Engineering and Surveying Practice Act (Chapter 61, Article 23 NMSA 1978).
- e. Copies of monitoring reports completed and submitted to NMED pursuant to this Discharge Permit.
- f. The volume of waste water or other wastes discharged pursuant to this Discharge Permit.
- g. Ground water quality and waste water quality data collected pursuant to this Discharge Permit.
- h. Copies of construction records (well logs) for all ground water monitoring wells required to be sampled pursuant to this Discharge Permit.
- i. Records of the maintenance and repair, replacement, and calibration of any monitoring equipment or flow measurement devices required by this Discharge Permit.
- j. Data and information related to field measurements, sampling, and analysis conducted pursuant to this Discharge Permit.

With respect to sampling and laboratory analysis, the Permittees shall record and maintain following information and shall make it available to NMED upon request.

- a. The dates, location and times of sampling or field measurements.
- b. The name and job title of the individuals who performed each sample collection or field measurement.
- c. The sample analysis date of each sample.
- d. The name and address of the laboratory, and the name of the signatory authority for the laboratory analysis.
- e. The analytical technique or method used to analyze each sample or collect each field measurement.
- f. The results of each analysis or field measurement, including raw data;
- g. The results of any split, spiked, duplicate or repeat sample.
- h. All laboratory analysis chain-of-custody forms and a description of the quality assurance and quality control procedures used.

The written record shall be maintained by the Permittees at a location accessible during a Facility inspection by NMED for a period of at least five years from the date of application, report, collection or measurement and shall be made available to NMED upon request.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.D NMAC, 20.6.2.3109.B NMAC]

**49. ELECTRONIC POSTING - MANDATORY** Commencing on the Effective Date of this Discharge Permit the permittees shall, within thirty calendar days of submittal to NMED, post on LANL's Electronic Public Reading Room located at <http://epr.lanl.gov/oppie/service> (or as updated) the following submittals to NMED.

- Condition ~~VI.A.1~~ – Annual Update Report
- Condition ~~VI.A.3~~ – Submittal of Plans and Specifications
- Condition ~~VI.A.9~~ – Water Tightness Testing Failure
- Condition ~~VI.A.14~~ – Damage to Structural Integrity
- Condition ~~VI.A.18~~ – Exceedance of Effluent Standards
- Condition ~~VI.B.31~~ – Soil Moisture Monitoring System Exceedance
- ~~Condition VI.B.33 – Alluvial Monitoring Well Replacement Installation Report~~
- Condition ~~VI.B.37~~ – Exceedance of Groundwater Quality Standard
- Condition ~~VI.C.38~~ – Spill or Unauthorized Discharge
- Condition ~~VI.C.39~~ – Failures in Discharge Plan
- Condition ~~VI.D.42~~ – Closure Plan Amendments or Modifications
- Condition ~~VI.D.43~~ – Final Closure Report
- Condition ~~VI.D.45~~ – Termination

**ELECTRONIC POSTING – VOLUNTARY** Commencing on the effective date of this Discharge Permit, permittees voluntarily agree to post on LANL's Electronic Public Reading Room located at <http://epr.lanl.gov/oppie/service> (or as updated) within seven calendar days after submission to NMED, the information listed below. Because permittees have voluntarily agreed to post the below-information, such posting shall not be subject to civil or criminal enforcement actions.

- Condition ~~VI.A.2~~ – Notification of Changes
- Condition ~~VI.A.4~~ – Construction Report
- ~~Condition VI.A.7 – Verification of Secondary Containment~~
- Condition ~~VI.A.10~~ – Summary Report for Settled Solids Removal
- Condition ~~VI.A.15~~ – Freeboard Exceedance Corrective Action Plan
- Condition ~~VI.A.20~~ – Emergency Response Procedures
- ~~Condition VI.A.21 – Written Confirmation of Installation of Flow Meters~~
- Condition ~~VI.A.24~~ – Monitoring Reports

• ~~Condition VI.B.33 – Work plan for Replacement of Two Existing Ground Water Monitoring Wells~~

- Condition ~~VI.B.34~~ – Monitoring Well Location Changes
- Condition ~~VI.B.35~~ – Monitoring Well Construction Report
- Condition ~~VI.D.41~~ - Stabilization of Individual Units and Systems

[20.6.2.3107.A.8 NMAC]

**50. INSPECTION AND ENTRY** – The Permittees shall allow inspection by NMED of the Facility and its operations which are subject to this Discharge Permit and the WQCC regulations. NMED may upon presentation of proper credentials, enter at reasonable times upon or through any premises in which a water contaminant source is located or in which are located any records required to be maintained by regulations of the federal government or the WQCC.

The Permittees shall allow NMED to have access to and reproduce any copy of the records, and to perform assessments, sampling or monitoring during an inspection for the purpose of evaluating compliance with this Discharge Permit and the WQCC regulations.

Nothing in this Discharge Permit shall be construed as limiting in any way the inspection and entry authority of NMED in the WQA, the WQCC Regulations, or any other local, state or federal laws and regulations.

[NMSA 1978, §§ 74-6-9.B and 74-6-9.E, 20.6.2.3107.D NMAC]

**51. DUTY TO PROVIDE INFORMATION** - The Permittees shall, upon NMED's request, allow NMED to inspect and duplicate any and all records required by this Discharge Permit and furnish NMED with copies of such records.

Nothing in this Discharge Permit shall be construed as limiting in any way the authority of NMED to gather information as stipulated in the WQA, the WQCC Regulations, or any other local, state or federal laws and regulations.

[NMSA 1978, §§ 74-6-5.D, 74-6-9.B, and 74-6-9.E, 20.6.2.3107.D NMAC, 20.6.2.3109.B NMAC]

**52. MODIFICATIONS AND AMENDMENTS**– In the event the Permittees propose a change to the Facility or the Facility's discharge that would result in a change in the volume discharged; the location of the discharge; or in the amount or character of water contaminants received, treated or discharged by the Facility, the Permittees shall notify NMED prior to implementing such changes. The Permittees shall obtain written approval (which may require modification of this Discharge Permit) from NMED prior to implementing such changes.

[NMSA 1978, § 74-6-5.D, 20.6.2.3107.C NMAC, 20.6.2.3109.E NMAC,]

**53. EXTENSIONS OF TIME** - The Permittees may seek an extension of time in

which to perform an obligation in this Discharge Permit, for good cause, by sending a written request for extension of time that states the length of the requested extension and describes the basis for the request. NMED shall respond in writing, stating the reasons for any denial.

**54. CIVIL PENALTIES** - Any violation of the requirements and conditions of this Discharge Permit, including any failure to allow NMED staff to enter and inspect records or Facility, or any refusal or failure to provide NMED with records or information, may subject the Permittees to a civil enforcement action. Pursuant to WQA 74-6-10(A) and (B), such action may include a compliance order requiring compliance immediately or in a specified time, assessing a civil penalty, modifying or terminating the Discharge Permit, or any combination of the foregoing; or an action in district court seeking injunctive relief, civil penalties, or both. Pursuant to WQA 74-6-10.C and 74-6-10.1, civil penalties of up to \$15,000 per day of noncompliance may be assessed for each violation of the WQA 74-6-5, the WQCC Regulations, or this Discharge Permit, and civil penalties of up to \$10,000 per day of noncompliance may be assessed for each violation of any other provision of the WQA, or any regulation, standard, or order adopted pursuant to such other provision. In any action to enforce this Discharge Permit, the Permittees waives any objection to the admissibility as evidence of any data generated pursuant to this Discharge Permit.

[NMSA 1978, §§ 74-6-10 and 74-6-10.1]

**55. CRIMINAL PENALTIES** – The WQA provides that no person shall:

- a. Make any false material statement, representation, certification or omission of material fact in an application, record, report, plan or other document filed, submitted or required to be maintained in the WQA;
- b. Falsify, tamper with or render inaccurate any monitoring device, method or record required to be maintained in the WQA; or
- c. Fail to monitor, sample or report as required by a permit issued pursuant to a state or federal law or regulation.

Any person who knowingly violates or knowingly causes or allows another person to violate the requirements of this condition is guilty of a fourth degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who is convicted of a second or subsequent violation of the requirements of this condition is guilty of a third degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who knowingly violates the requirements of this condition or knowingly causes another person to violate the requirements of this condition and thereby causes a substantial adverse environmental impact is guilty of a third degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who knowingly violates the requirements of this condition and knows at the time of the violation that he is creating a substantial danger of death or serious bodily injury to any other

person is guilty of a second degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15.  
[NMSA 1978, §§ 74-6-10.2.A through 74-6-10.2.F]

**56. COMPLIANCE WITH OTHER LAWS** - Nothing in this Discharge Permit shall be construed in any way as relieving the Permittees of the obligation to comply with all applicable federal, state, and local laws, regulations, permits or orders.  
[20.6.2 NMAC]

**57. LIABILITY**- The Permittees shall be jointly and severally liable for all their obligations in this Discharge Permit.  
[NMSA 1978, §§ 74-6-5.A and 74-6-10]

**58. RIGHT TO APPEAL** - The Permittees may file a petition for review before the WQCC on this Discharge Permit. Such petition shall be in writing to the WQCC, shall be filed within thirty days of the receipt of this Discharge Permit, and shall include a statement of the issues to be raised and the relief sought. Unless a timely petition for review is made, the decision of NMED shall be final and not subject to judicial review.  
[NMSA 1978, § 74-6-5.O]

**59. TRANSFER OF OWNERSHIP**- Prior to the transfer of any ownership, control, or possession of this Facility or any portion thereof, the Permittees shall.

- a. Notify the proposed transferee in writing of the existence of this Discharge Permit.
- b. Include a copy of this Discharge Permit with the notice.
- c. Deliver or send by certified mail to NMED a copy of the notification and proof that such notification has been received by the proposed transferee.

Until both ownership and possession of the Facility have been transferred to the transferee, the Permittees shall continue to be responsible for any discharge from the Facility.  
[20.6.2.3104 NMAC, 20.6.2.3111 NMAC]

**60. PERMIT FEES**- Payment of permit fees is due at the time of Discharge Permit approval. Permit fees shall be paid in a single payment or shall be paid in equal installments on a yearly basis over the term of the Discharge Permit. Payments shall be remitted to NMED no later than 30 days after the Discharge Permit effective date.

Permit fees are associated with issuance of this Discharge Permit. Nothing in this Discharge Permit shall be construed as relieving the Permittees of the obligation to pay all permit fees assessed by NMED. If the Permittees cease discharging at or from the Facility during the term of the Discharge Permit, they



shall nevertheless pay all permit fees assessed by NMED. An approved Discharge Permit shall be suspended or terminated if the Permittees fail to remit payment when due.  
[20.6.2.3114.F NMAC, NMSA 1978, § 74-6-5.K]

**VII. Permit Term and Signature**

EFFECTIVE DATE:

TERM ENDS:

[20.6.2.3109.H NMAC, NMSA 1978, § 74-6-5.I]

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MICHELLE HUNTER  
Chief, Ground Water Quality Bureau  
New Mexico Environment Department

DRAFT

**NEW MEXICO ENVIRONMENT DEPARTMENT  
BEFORE THE SECRETARY OF THE ENVIRONMENT**



IN THE MATTER OF PROPOSED DISCHARGE )  
PERMIT 1132 FOR THE RADIOACTIVE LIQUID )  
WASTE TREATMENT FACILITY AT THE )  
LOS ALAMOS NATIONAL LABORATORY, )  
LOS ALAMOS, NEW MEXICO )

**No. GWB-19-24(P)**

**CITIZENS' PROPOSED FINDINGS OF FACT,  
CONCLUSIONS OF LAW AND FINAL ARGUMENT**

**INTRODUCTION**

This proceeding involves the proposed issuance, under the New Mexico Water Quality Act, NMSA 1978, § 74-6-1 *et seq.* (“WQA”), of a permit (“DP-1132”) for the Los Alamos National Laboratory (“LANL”) Radioactive Liquid Waste Treatment Facility (“RLWTF”) to discharge contaminants to ground water. A hearing was held on April 19, 2018, the result of which was vacated, and a second hearing took place on November 14, 2019. The Hearing Officer has scheduled submission of Proposed Findings of Fact and Conclusions of Law and Argument for January 10, 2020. Three<sup>1</sup> citizen groups—Concerned Citizens for Nuclear Safety (“CCNS”), Honor Our Pueblo Existence, and the New Mexico Acequia Association (collectively, “Citizens”) herein present Proposed Findings of Fact and Conclusions

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<sup>1</sup> A fourth citizen group, Tewa Women United, has withdrawn from this proceeding.

of Law and Final Argument.

Citizens' position is that the New Mexico Environment Department ("NMED") should deny the Application for the following reasons:

**1. Jurisdiction not established.**

The Applicants, U.S. Department of Energy ("DOE") and Triad National Security, LLC ("Triad") (collectively, "Applicants"), have the burden of establishing that NMED has jurisdiction to issue a WQA permit, and, specifically, that the proposed permit is authorized under the WQA provision, NMSA 1978, § 74-6-12.B, which states that the WQA "does not apply to any activity or condition subject to the authority of the environmental improvement board pursuant to the [HWA]." That provision establishes that the jurisdiction of the WQA and the Hazardous Waste Act, NMSA 1978, § 74-4-1 *et seq.* ("HWA"), cannot overlap, and that the HWA prevails in event of conflict, ousting the WQA. The RLWTF manages hazardous waste and is *prima facie* subject to the HWA. On the fundamental question of NMED's jurisdiction, Applicants have refused to go forward.

**2. NMED has not fulfilled its statutory obligations.**

Under the WQA, NMED has the burden to show that the draft permit complies with the WQA and applicable regulations; NMED "shall deny" the application if the WQA would be violated. NMSA 1978, § 74-6-5.E(2). Here, NMED has not established that the draft permit complies with NMSA 1978, § 74-6-12.B. Again,

the RLWTF is prima facie subject to the HWA, which renders the WQA inapplicable. NMED has not attempted to show otherwise.

**3. No discharge—no WQA permit.**

Applicants have told NMED that they will discharge through Outfall 051 only if the RLWTF's evaporation units are unavailable or inadequate in capacity, a situation that is indisputably "highly unlikely." Thus, Applicants have no intention to *actually* discharge. But the WQA only authorizes a permit for a discharge. NMSA 1978, § 74-6-5.A. Without an intention to discharge, there can be no WQA permit.

**4. The wastewater treatment unit ("WWTU") exemption does not apply where the Clean Water Act, 33 U.S.C. § 1342 ("CWA") does not apply.**

Since the RLWTF clearly manages hazardous waste, an activity that normally requires a HWA permit, to obtain a WQA permit, the Applicants must demonstrate an exemption from the HWA. The wastewater treatment unit ("WWTU") exemption is the only possibly available HWA exemption. However, without a requirement of a Clean Water Act ("CWA") permit, there is no WWTU exemption. An intention to discharge is *required* for a CWA permit. 33 U.S.C. § 1342. Here, there is no intention to discharge. Therefore, the WWTU exemption does not apply, the RLWTF is subject to the HWA, and there can be no WQA permit.

**5. The WWTU exemption does not apply where effluent goes to units unregulated by the CWA.**

Even if the RLWTF actually discharged from an outfall and had a CWA permit, there is no WWTU exemption, because much of the RLWTF's effluent is directed to the mechanical evaporation system ("MES") and would be directed to the solar evaporation tanks ("SET"). These evaporation systems are *separate* from the tank system that the existing CWA permit regulates. They are not regulated under the CWA permit. Authoritative Environmental Protection Agency ("EPA") publications state that the WWTU exemption does not apply to such situations. Thus, the RLWTF is subject to the HWA, and there can be no WQA permit.

#### **6. Contradictory positions.**

NMED has publicly taken the position that the WWTU exemption does *not* apply to the operations of the RLWTF as now configured. However, in this proceeding, NMED asserts the opposite—without explanation. The agency's simultaneous assertion of contradictory positions deserves no deference and cannot be sustained.

#### **7. Misrepresentation.**

If Applicants truly intend to discharge for "operational readiness" testing, the intention has not been disclosed in this proceeding, and the application should be dismissed for material misrepresentation.

#### **Proposed Findings of Fact:**

1. The history of the RLWTF reflects a series of changes in its basic

configuration and operation. It was constructed in 1963 to treat, store, and dispose of radioactive and hazardous liquids generated by LANL facilities, whose waste liquids are transported to the RLWTF by pipes and trucks. AR 00117, 00123; Transcript (“Tr.”) Nov. 14, 2019 at 27 (Beers). (Robert S. Beers was formerly an Environmental Professional with LANL and currently is a consultant to Triad.). Initially, the RLWTF discharged treated water through Outfall 051 into Effluent Canyon, a tributary of Mortandad Canyon. Those discharges were regulated by LANL’s permit under the CWA.

2. NMED started this proceeding in 1996 to issue a parallel state WQA groundwater discharge permit (“DP-1132”) for discharges from Outfall 051. On April 3, 1996, NMED issued a letter to LANL, stating:

Our records indicate that TA-50, the [RLWTF] . . . is currently discharging without an approved discharge plan, which is required under Section 3104. “Discharge Plan Required” of the Water Quality Control Commission (WQCC) Regulations, copy enclosed. You are hereby notified that a discharge plan, as defined . . . is required[.]

AR 00014 (Apr. 3, 1996).

3. In 1998 LANL announced its commitment to eliminate liquid discharges from the RLWTF. A 1998 LANL report<sup>2</sup> stated: “Determining viable options for

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<sup>2</sup> “Elimination of Liquid Discharge to the Environment from the TA-50 Radioactive Liquid Waste Treatment Facility,” Moss et al. (1998) (Ex. A to Request to Terminate NPDES Permit #NM0028355 to Outfall 051 for the Radioactive Liquid Waste Treatment Facility (June 17, 2016) (the “Request”)(AR 16169-17019).

eliminating the discharge of treated radioactive liquid waste to Mortandad Canyon was the directive of the outfall 051 elimination working group.”<sup>3,4</sup>

4. On April 8, 1998 the Zero Discharge Working Group outlined for LANL management the problems of releasing radioactive liquid effluent. AR 00860. LANL’s Environmental Safety and Health (“ESH”) and Environmental Management (“EM”) Divisions “agree[d] that the Laboratory should set a goal of zero discharge of radioactive liquid effluent to the environment,” adding: “To reach this ambitious goal, ESH and EM Divisions will jointly initiate the Radioactive Liquid Waste Zero Discharge Project.” *Id.*

5. LANL told NMED that the project would include gas-fired evaporation units and, later, evaporative basins. AR 01372-73 (Oct. 6, 1999); AR 03548 (Sept. 28, 2006). LANL’s 2008 Site-Wide Environmental Impact Statement (“SWEIS”), at Appx. G, discusses the “upgrade” of the RLWTF.<sup>5</sup> DOE determined to pursue

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<sup>3</sup> *Id.* v (Ex. A to Request).

<sup>4</sup> A copy of the Request with a complete set of the referenced attachments is in the possession of the Office of General Counsel of NMED, as it was provided as a courtesy to the office of the Secretary on June 20, 2016. In addition, at the April 19, 2018 hearing a computer disk with the text of the Request and attachments was entered into the Administrative Record without objection. Tr. Apr. 19, 2018 at 12:5-13:4. By the parties’ Stipulation, Nov. 27, 2019, the Request and its Exhibits are included in the Administrative Record. AR at 16169-7019 (June 17, 2016).

<sup>5</sup> SWEIS at G-60, G-73, G-83, G-88 (Request Ex. JJ).

design of a Zero Liquid Discharge RLWTF.<sup>6</sup> Thereafter, DOE decided to construct and operate a new RLWTF and the Zero Liquid Discharge facility.<sup>7</sup>

6. In the late 2000's, LANL rebuilt the RLWTF for "zero-liquid-discharge" operation, eliminating discharges through Outfall 051 except in an "emergency":

A new rad/liquid waste facility will be constructed within 3-5 years that will eventually discharge preferentially to the new evaporative basins or, under emergency, to Mortandad canyon under the NPDES permit and DP.

AR 03548 (Sept. 28, 2006).

7. In September 2007 LANL advised NMED that it planned to construct evaporation tanks to receive some or all of the RLWTF's effluent. AR 03655 (Sept. 28, 2007). LANL stated:

It is the Laboratory's view that a groundwater discharge permit will not be required for this project because there is no reasonable probability or likelihood that liquid contained in the evaporation tanks will move into groundwater, either through a leak or by overflow.

*Id.* See also Tr. Apr. 19, 2018 at 88; AR 03714 (Nov. 1, 2007), AR 03654-57 (Sept. 28, 2007) (CCW Cross Ex. 1). Similar language appears in CCW Cross Ex. 3. AR 05216-23 (Aug. 11, 2001 with enclosures dated June 11, 2008 and Sept. 15, 2008). LANL interpreted NMED's 2011 demand for a permit application as a response to

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<sup>6</sup> Record of Decision, Site-Wide Environmental Impact Statement for Continued Operation of Los Alamos National Laboratory, 73 Fed. Reg. 55833, 55839 (Sept. 26, 2008) (Request Ex. LL).

<sup>7</sup> Record of Decision, Site-Wide Environmental Impact Statement for Continued Operation of Los Alamos National Laboratory, 74 Fed. Reg. 33232, 33235 (July 10, 2009) (Request Ex. MM).



LANL's communication about the solar evaporation tanks. Tr. Nov. 14, 2019 at 42 (Beers).

8. LANL advised NMED in 2010 that it was evaluating a mechanical evaporation system with capacity exceeding effluent production. AR 04016 (Aug. 25, 2010). NMED did not then assert that a WQA permit was required for a discharge to the mechanical evaporator. Tr. Nov. 14, 2019 at 70 (Beers).

9. In the mid-2000's, NMED, by its Hazardous Waste Bureau, conducted an inquiry concerning whether the RLWTF was entitled to an exemption from the HWA. AR 03673-76 (Oct. 30, 2007). After considering LANL's submissions, NMED rejected LANL's claim to the WWTU exemption and required LANL to submit a HWA permit application for the RLWTF. NMED's decision stated:

The RLWTF is a 'dual use' unit because effluent from the unit both discharges to a National Pollution Discharge Elimination System (NPDES) permitted outfall (Outfall 51) and is transported to a non-NPDES permitted evaporation lagoon at TA-53. *The WWTU exemption is not applicable to units where wastewater is managed by means other than, or in addition to, discharge through a NPDES permitted outfall.*

AR at 03837-39 (Jan. 17, 2008). (*Emphasis supplied*). NMED's decision expressly relied upon an EPA opinion letter, E.A. Cosworth, Acting Director, Office of Solid Waste, to S. Pendleton, Resource Conservation and Recovery Act ("RCRA") On-line ("RO") No. 14262, Apr. 1998.

10. The EPA opinion letter explains that the WWTU exemption is unavailable

where a facility directs wastewater *in part* for discharge through a CWA-regulated outfall and *in part* for disposal by means that are not regulated by the CWA permit:

You ask what EPA meant by the language “dedicated” [for use with an on-site wastewater treatment facility] and offer two possible interpretations. One interpretation, you suggest, is that the WWTU must be dedicated solely for wastewater treatment at all times. A second interpretation, you suggest, is an “alternating use” scenario in which a WWTU may operate as a WWTU for a portion of the year, dedicated for wastewater treatment for that period of time in use, and then operate as an accumulation tank for a different part of the year. *The Agency confirms the first interpretation, described above.* That is, in order to satisfy the WWTU exemption, a tank must be dedicated solely for on-site wastewater treatment at all times and for no other purpose. EPA believes that the preamble language is clear on this point. EPA did not intend the WWTU exemption to apply in situations involving “dual use” of a tank (when a tank is concurrently used for wastewater treatment and for another purpose). Nor did EPA intend for the exemption to apply in situations, such as the one your letter describes, involving “alternating use” of a tank. Since the purpose of this exemption is to avoid dual regulation under the Clean Water Act and the Resource Conservation and Recovery Act (RCRA), EPA believes that *a tank must be used only for wastewater treatment purposes at all times in connection with an on-site wastewater treatment facility in order to qualify for the exemption.* EPA did not intend for the exemption to apply in either the “dual use” or “alternating use” scenario. Accordingly, a tank that operates on an “alternating use” basis, as you describe above, does not satisfy the WWTU exemption and is subject to all relevant RCRA regulations.

Letter, E.A. Cosworth, Acting Director, OSW, to S. Pendleton, RO 14262, 1998.

*(Emphasis supplied).*

11. Consistently with this requirement, NMED stated in LANL’s HWA permit that the RLWTF must discharge “all treated wastewater” through a CWA-permitted outfall, and if it fails to do so, the WWTU exemption *does not apply*:

4.6 TA-50 RADIOACTIVE LIQUID WASTE TREATMENT FACILITY. The Permittees shall discharge all treated wastewater from the TA-50 Radioactive Liquid Waste Treatment Facility (RLWTF) through the outfall permitted under Section 402 of the federal Clean Water Act, or as otherwise authorized by the terms of an applicable Clean Water Act permit that regulates the treatment and use of wastewater. If the Permittees intentionally discharge through a location other than the permitted outfall or as otherwise authorized, they will fail to comply with this requirement, and as a consequence the wastewater treatment unit exemption under 40 CFR § 264.1(g)(6) will no longer apply to the RLWTF.

2010 LANL HWA permit at 86 (published at NMED web site, [www.env.nm.gov](http://www.env.nm.gov)) (reviewed Jan. 10, 2020).

12. LANL's current CWA permit is in the Administrative Record. Request Ex. SS. Wastewater disposal through the MES and the SET is not regulated or even mentioned by that CWA permit.

13. In the early 2010's LANL's zero-liquid-discharge project went forward. A NMED inspection report in March 2012 stated that LANL would use a mechanical evaporator and solar evaporation tanks to dispose of all liquid output from the RLWTF:

LANL has not discharged to the NPDES outfall for over a year and they are not intending to discharge due to the difficulty in treating the effluent to meet the NPDES copper limitations. Currently, the facility has been mechanically evaporating all effluent. . . .

At the time of inspection, LANL was nearing completion of the uncovered Solar Evaporative Tanks (SET). All treated effluent from the RLWTF will be discharged via a 3,500-foot single-lined gravity fed conveyance pipe (with welds every 500 feet) to the SET. LANL is anticipating having the as-built drawings for the SET completed by

mid-May and would be looking at placing the SET on-line and commencing discharge approximately 3-4 months after that.

AR 08122 (Mar. 20, 2012).

14. Discharges from Outfall 051 ended in late 2010. A 2014 LANL report states: “Discharges from Outfall 051 decreased significantly after the mid-1980s and effectively ended in late 2010.”<sup>8</sup> In late 2014 NMED advised EPA that Outfall 051 had not discharged since November 2010.<sup>9</sup> A LANL web site states that “a mechanical evaporator was installed so no water has been discharged at Outfall 051 since November 2010.”<sup>10</sup> Quarterly reports show that there has been no regulated discharge since November 2010<sup>11</sup>. No such discharges are planned. See the Request, note 3, *supra*.

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<sup>8</sup> Isotopic evidence for reduction of anthropogenic hexavalent chromium in Los Alamos National Laboratory groundwater, 373 Chemical Geology 1, 4 (12 May 2014) (Ex. PP to Request).

<sup>9</sup> Letter, Yurdin to Dorries with Inspection Report, at 4th page (August 5, 2014) (Ex. QQ to Request).

<sup>10</sup> LANL web site, NPDES Industrial Permit Outfall Locations, <http://www.lanl.gov/environment/protection/compliance/industrial-permit/index.php> (reviewed June 17, 2016) (Request Ex. RR).

<sup>11</sup> See: AR 04030-36 (3d Quarter 2010) (Oct. 28, 2010); AR 04044-48 (4th Quarter 2010) (Jan. 11, 2011); AR 04578-83 (1st Quarter 2011) (Apr. 19, 2011); AR 05209-14 (2d Quarter 2011) (July 25, 2011) (“all effluent was evaporated on-site.” AR 05210); AR 05237-42 (3d Quarter 2011) (Oct. 21, 2011) (listed in 2018 AR); AR 05303-08 (4th Quarter 2011) (Jan. 24, 2012); AR 08215-21 (1st Quarter 2012) (Apr. 26, 2012); AR 08235-41 (2d Quarter 2012) (July 17, 2012); AR 08323-29 (3d Quarter 2012) (Oct. 29, 2012); AR 08329-32 (4th Quarter 2012) (Jan. 30, 2013); AR 08681-83 (1st Quarter 2013) (Apr. 30, 2013); AR 09270-84 (2d Quarter 2013) (July 25, 2013); AR 09577-84 (3d Quarter 2013) (Oct. 17, 2013); AR 09921-24 (4th Quarter 2013) (Jan. 21, 2014); AR 10193-203 (1st Quarter 2014) (Apr. 16, 2014)

15. LANL has reported that on June 18, 2019 the RLWTF released approximately 80,798 liters of “treated effluent” through Outfall 051. Monitoring Report, RLWTF, 2d Quarter 2019 (AR 14636-72) (July 22, 2019). The report states that no contaminants were present in excess of values stated in 20.6.2.3103 NMAC, so that the release did not require a WQA permit. *Id. See* 20.6.2.3105 NMAC. In addition, the RLWTF now has six 50,000-gallon tanks available to store effluent; thus, the release was not required to be made. Beers prefiled 2019 testimony, Slide 8 (WMRM tanks).

16. Since the jurisdiction of the WQA “does not apply to any activity or condition subject to the authority of the environmental improvement board pursuant to the Hazardous Waste Act” (NMSA 1978, § 74-6-12.B), LANL has previously asserted that the RLWTF is exempt from HWA regulation by the wastewater treatment unit exemption. *See* 42 U.S.C. § 6903(27) (“NPDES”); 40 C.F.R. §§ 260.10 (*Tank system, Wastewater treatment unit*), 264.1(g)(6); LANL Comments, AR 09769-864 (Dec. 12, 2013).

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(listed in 2018 AR); AR 10253-56 (2d Quarter 2014) (July 22, 2014); AR 12837-41 (3d Quarter 2014) (Oct. 27, 2014); AR 12921-24 (4th Quarter 2014) (Jan. 13, 2015); AR 12872-74 (1st Quarter 2015) (Apr. 23, 2015); AR 13239-42 (2d Quarter 2015) (July 28, 2015); AR 13255-58 (4th Quarter 2015) (Jan. 20, 2016); AR 13266-71 (1st Quarter 2016) (Apr. 28, 2016); AR 13413-16 (2d Quarter 2016) (July 28, 2016); AR 13417-20 (3d Quarter 2016) (Oct. 19, 2016); AR 13438-41 (4th Quarter 2017) (Jan. 18, 2017); AR 13476-79 (1st Quarter 2017) (Apr. 17, 2017); AR 13840-43 (3d Quarter 2017) (Oct. 30, 2017); AR 14112-16 (1st Quarter 2018) (May 1, 2018); AR 14122-23 (2d Quarter 2018) (July 27, 2018).

17. At the same time, Applicants have consistently stated that any discharge through Outfall 051 would be made only if the evaporation units were unavailable or capacity increased. Thus, discharges through Outfall 051 are contemplated—but *only* if both of the evaporation systems failed or influent capacity increased:

[Applicants] contemplate that discharges would be authorized “through an outfall (identified as Outfall 051) also regulated by [NPDES Permit No. NM0028355] issued by [EPA]. See Section V.C. of Draft DP-1132. Per LANL’s NPDES Permit renewal application, Outfall 051 is NPDES-permitted to allow the RLWTF to “maintain capacity to discharge should the [SET] and/or [MES] become unavailable due to maintenance, malfunction, and/or there is an increase in treatment capacity caused by changes to LANL scope/mission.”

DOE/LANS Exhibit 4, Form 2C, at 5, 2012 NPDES Permit Re-Application, Outfall 051, RLWTF, LA-UR-12-00359 (Feb. 2012). *See also* Request Ex. W, Form 2C, at 6-14; DOE/Triad Ex. 4, extract from 2012 NPDES Permit Re-Application; DOE/Triad Ex. 5, Preliminary Response to CCW public comments, at 2.

**2018 hearing testimony about future discharges:**

18. None of Applicants’ or NMED’s witnesses in the April 19, 2018 hearing stated that any *actual* discharges, whereby contaminated water, released from containment in the RLWTF, would move towards groundwater, were planned or expected from the RLWTF:

**2018 Testimony of Applicants’ witness, Robert S. Beers:**

19. Mr. Beers initially stated that “there would be three discharges regulated by DP-1132. Those are to the SET, the solar evaporation tank system; the MES,

mechanical evaporation system; and, third, NPDES Outfall 051 in Mortandad Canyon.” Tr. Apr. 19, 2018 at 70:25-71:14. However, on cross-examination Mr. Beers conceded that there has been no discharge from Outfall 051 since November 2010. Tr. Apr. 19, 2018 at 71; 72-73; 80-81. He added that, “[U]nlike the treated effluent to the MES and SET, discharges of treated effluent from Outfall 051 reach surface waters and indirectly, *have the potential to impact ground water.*” Tr. Apr. 19, 2018 at 93:7-10. (*Emphasis supplied.*) He testified that effluent directed to the MES or the SET does not normally reach surface water. Tr. Apr. 19, 2018 at 94-95; 95-96.

20. Mr. Beers said that LANL plans to discharge from Outfall 051 for “water tightness testing of the outfall line.” Tr. Apr. 19, 2018 at 71-72. However, Mr. Pullen stated that such testing would not be done with contaminated water. Tr. Apr. 19, 2018 at 211:13-19.

21. Mr. Beers confirmed that LANL intends to discharge to Outfall 051 only under certain conditions, namely: if the mechanical evaporator and the solar evaporation tank are both out of service, or where the RLWTF is receiving larger than expected volumes of influent and needs to discharge, or to demonstrate operational readiness. Tr. Apr. 19, 2018 at 74-75, 79, 101. The Applicants’ prefiled presentations did not mention “operational readiness.”

22. Mr. Beers acknowledged that LANL’s purpose in maintaining a federal CWA

permit for Outfall 051 is to maintain capacity to discharge should the MES and/or the SET become unavailable due to maintenance, malfunction, and/or if there is an increase in treatment capacity caused by changes to LANL's scope/mission. This is a purpose for seeking issuance of DP-1132. Tr. Apr. 19, 2018 at 101.

23. Mr. Beers urged that, even considering only "discharges" to the MES and SET, a WQA permit is needed because "it is the *potential* for a discharge to get to ground water that matters, regardless of intent." Tr. Apr. 19, 2018 at 110. (*Emphasis supplied.*) It is because of the *potential* for discharge that Mr. Beers advocated adoption of DP-1132. Tr. Apr. 19, 2018 at 110. He said that, when effluent is piped to the MES or the SET, it is a "discharge" under the WQA regulations, namely, a discharge of effluent or leachate which may move directly or indirectly into ground water, because "there is a potential for a failure of the containment system, in which case an unintended release could reach ground water." Tr. Apr. 19, 2018 at 112:19-22. He was speaking of a possible failure of the containment system in the MES or the SET. Tr. Apr. 19, 2018 at 112:25-113:14.

24. When Mr. Beers was asked about the probability of such a failure, counsel for LANL protested that it was *speculative*, and the Hearing Officer agreed. Tr. Apr. 19, 2018, at 113-14. Mr. Beers conceded that other LANL facilities have tanks and pipes that contain substances controlled under the WQA, and each of them "just sitting there has a potential discharge," but they do not all have discharge plans. Tr.



Apr. 19, 2018 at 114. Ultimately, Mr. Beers stated that NMED is proposing to issue DP-1132 for a *potential* discharge. Tr. Apr. 19, 2018 at 119.

**2018 Testimony of NMED’s witness, Stephen Pullen:**

25. In the 2018 hearing, Stephen Pullen of NMED confirmed that the SET has not begun operation and that, when the SET operates normally, effluent would not touch the ground. Tr. Apr. 19, 2018 at 205, 207-08. He also stated that, when the MES operates normally, water is evaporated and escapes in the vapor phase. Tr. Apr. 19, 2018 at 208. When asked whether he was confident that the MES, which turns water into steam, will send effluent to groundwater, Mr. Pullen said, “No. I am confident that it will not, because this permit exists to ensure that there are controls in place that it does not.” Tr. Apr. 19, 2018, at 209:9-11.

26. Mr. Pullen was asked about statements in his prepared testimony and in the draft permit that the RLWTF is currently discharging so that effluent may move into ground water, and at a place of withdrawal for present or reasonably foreseeable future use. Tr. Apr. 19, 2018 at 197-198. He admitted that the only so-called “discharges” currently occurring were releases to the MES and that discharges from Outfall 051 had taken place in the past. *Id.* He stated that it was “possible” that, when the permit is issued, discharges will be occurring at all three authorized locations, but he meant this in the sense that “anything is possible.” Tr. Apr. 19, 2018 at 201, 204. He stated that the paragraphs in DP-1132 which recite that

discharges are occurring will be true if a discharge goes to Outfall 051—but that has not been true since 2010. Tr. Apr. 19, 2018 at 204-05.

27. Mr. Pullen testified that the Applicants viewed Outfall 051 as an “option” for use in certain conditions. Tr. Apr. 19, 2018 at 211. He stated that Outfall 051 and “all of the discharge options are potential, and the permit will give the applicant the option to use any of them.” Tr. Apr. 19, 2018 at 212.

28. Likewise, Mr. Pullen testified that “[t]he *potential* for any of this effluent to move to ground water is the reason we permit the mechanical evaporator.” Tr. Apr. 19, 2018 at 208:14-16. (*Emphasis supplied.*) The same is true as to the SET. *Id.*, ll. 17 – 19. He stated that pumping effluent to the MES and its evaporation is a “discharge that *may* move to ground water, has the *potential* to move to ground water. So it is a discharge.” Tr. Apr. 19, 2018, at 208:24-209:1. (*Emphasis supplied.*) He explained that the basis for permitting the MES is a transfer of water that, possibly, may cause effluent to migrate to ground water:

A. I believe it is a transfer of water from a treatment system to some sort of a discharge point, be it evaporation or to an outfall. We consider that an actual—or some sort of a discharge that may cause effluent to migrate to groundwater.

Q. When you say “may,” you're just saying that it's not impossible; is that right?

A. That's right.

Tr. Apr. 19, 2018 at 209:18-25.

29. Pressed as to whether the release of steam by the MES is a “discharge of

effluent or leachate which may move directly or indirectly into ground water” (20.6.2.7.R NMAC), Mr. Pullen testified that the permit is based on the *possibility* of a failure of containment:

Q. But that's what's going on, it's an escape of steam at the present?

A. That's not what we're concerned about. We're concerned about wastewater transferring between the treatment units and the mechanical evaporator that may move directly or indirectly into groundwater.

Q. Wastewater, you said, transferring between treatment units?

A. Between the treatment unit and the discharge unit.

Q. Okay.

A. That may escape that piping system, a break in the pipe, that could drip for some period of time and migrate to groundwater.

Q. Are you aware of any such leak occurring now?

A. At the—at—associated with the Radioactive Liquid Waste Treatment Facility?

Q. Yes.

A. No, sir.

Tr. Apr. 19, 2018, at 215:21-216:15.

30. At the same time, Mr. Pullen conceded that the WQA does not authorize NMED to permit a “potential” discharge. Tr. Apr. 19, 2018, at 212:3-14.

**2019 hearing testimony about future discharges:**

31. In applying for DP-1132, Applicants have told NMED most recently that their purpose is to “maintain capacity to discharge should the [SET] and/or [MES] become unavailable due to maintenance, malfunction, and/or there is an increase in treatment capacity caused by changes to LANL scope/mission.” Triad/DOE Ex. 5 at 2. The same language appears in Triad/DOE Ex. 4.

**2019 Testimony by Applicants’ witness, Robert S. Beers:**

32. In the 2019 hearing, Mr. Beers stated that LANL plans to make what he called “discharges” to the MES and the SET. Tr. Nov. 14, 2019 at 43 (Beers). He stated that “we have both near-term and long-term plans to conduct routine discharges through Outfall 051.” Tr. Nov. 14, 2019 at 43:20-22 (Beers). But, for him, the term “discharges” included releases of water to contained units, such as the MES and SET. Tr. Nov. 14, 2019 at 52. He admitted that water directed to these units does not reach surface water and does not have the potential to reach ground water. Tr. Nov. 14, 2019 at 68:21-69:3.

33. Mr. Beers stated that the June 18, 2019 discharge through Outfall 051 was the only discharge that might reach ground water that the RLWTF had made since 2010. Tr. Nov. 14, 2019 at 63. He confirmed that he had previously testified that LANL intends to use Outfall 051 only when the evaporation units are under repair or the volume of effluent exceeds the capacity of the evaporation units. Tr. Nov. 14, 2019 at 63.

34. Mr. Beers added that operational readiness is another reason the facility might discharge. Tr. Nov. 14, 2019 at 63. However, neither Triad/DOE Ex. 4 nor Triad/DOE Ex. 5, which were filed with NMED in November 2019, well after the June 18, 2019 discharge, states that future discharges of treated water would take place for operational readiness purposes, and Mr. Beers agreed that no such discharge occurred in more than eight years from late 2010 through mid-2019. Tr.

Nov. 14, 2019 at 66-67.

35. Mr. Beers testified in 2019 that water directed to the MES or the SET has the “potential” to discharge, and that it is NMED’s position that such releases should be regulated under the WQA. Tr. Nov. 14, 2019 at 73-74. At the same time, he stated that an unplanned release from the MES is “highly unlikely.” Tr. Nov. 14, 2019 at 90:8-9.

**2019 Testimony by NMED’s witness, Stephen Pullen:**

36. Mr. Pullen discussed, as he had in 2018, the statements in his prepared testimony and in the draft permit that assert that the RLWTF is discharging into groundwater and that the groundwater is a present or future source of drinking water. He said that the SET had never received any water from the RLWTF. Tr. Nov. 14, 2019 at 209. He said that water received by the MES was boiled off, as from a “teakettle.” Tr. Nov. 14, 2019 at 209. It does not touch the ground. *Id.* 210. However, Mr. Pullen stated that the discharge to the MES may move indirectly into ground water, if there is a leak in the MES system. *Id.* But, he said, there is no leak and has not been a leak at any time since 2010. *Id.* 211-12. Asked how likely it is that water directed to the MES may reach groundwater, he said it is “highly unlikely.” *Id.* 212.

**Applicants’ representations about the intention to discharge:**

37. Mr. Pullen confirmed that the Ground Water Quality Bureau is concerned to

know of any discharges that may reach groundwater. *Id.* 213. He stated that this is one of the bases for requiring a notice of intent to discharge, which requires an estimate of the discharge quantity. *Id.* In addition, WQA regulations require a discharge plan to state the quantity and other factors about a discharge. *Id.* 20.6.2.3106.C(1) NMAC. Public notice of an application requires a statement of the quantity and volume of the discharge. Tr. Nov. 14, 2019 at 213-14. The Bureau wants to know the location and quantity of any intended discharge; this information bears upon the terms of a permit that the Bureau might propose. *Id.* 214.

38. Mr. Pullen testified that he had understood “from the inception” that the Applicants intend to use Outfall 051 when there is insufficient capacity at the other discharge locations, *i.e.*, the MES and the SET. *Id.* 214. He stated:

It’s been my understanding from the inception that the discharge through Outfall 051 was to satisfy any insufficient capacity situations at the other discharge points.

*Id.* 215:11-14.

39. Mr. Pullen stated he had learned in June 2019 that there was a discharge to test the operational capability of the system. When the discharge occurred, the MES was functioning; it was not unavailable for any reason. *Id.* 215-16.

40. Mr. Pullen was surprised to learn of the June 2019 discharge. *Id.* 216. He confirmed that he had been told by LANL or its contractors that there would be discharges from Outfall 051 when the other discharge locations were unavailable or

there was a lack of capacity. *Id.* 216-17. He now believes that the Applicants will discharge to Outfall 051 when they need the extra capacity or they need to test the system. This is different from his previous understanding. *Id.* 217.

**2019 hearing testimony about the dual-use facility:**

41. Testimony established that the discharges (so-called) to the MES and the SET were, as is indisputable, made via a location other than the permitted Outfall 051 or as otherwise authorized.

42. Mr. Pullen agreed that the RLWTF has been through several basic changes, *e.g.*, adoption of the Zero Liquid Discharge project, the solar evaporation tanks, the mechanical evaporation system—transforming it from a discharge facility to an evaporation facility—but that, throughout such changes, no one had stepped back and reviewed the legal basis for issuing a WQA permit for the RLWTF. *Id.* 207.

A. As far as the legal basis for this permit, I'm not aware of the Department making that kind of an evaluation, but that does not mean that it did not occur.

Q. If it happened, you don't know about it.

A. That's correct.

*Id.* 10-12.

43. Mr. Pullen stated that, in his work on DP-1132, he did not consider the language in Section 4.6 of the LANL HWA permit, conditioning application of the WWTU exemption to the RLWTF discharging only through a CWA outfall. *Id.* 222. Nor did he give any thought to the fact that loss of the WWTU exemption might

affect the availability of a WQA permit. *Id.* 223.

44. Mr. Pullen agreed that, in directing effluent for evaporation in the MES and the SET, LANL is releasing treated water through locations other than the CWA-permitted Outfall 051. *Id.*

### CONCLUSIONS OF LAW AND ARGUMENT

1. This case may appear to involve only the issuance of an environmental permit, but that is not the reality. This case concerns Applicants' demand for an environmental *exemption* from RCRA and the HWA. The issuance of a WQA permit is *only* allowed if the permitted facility is *not* regulated by the HWA. NMSA 1978, § 74-6-12.B. The HWA enforces federal law in New Mexico and preempts state regulation, such as the WQA. Thus, this proceeding directly raises the question whether the RLWTF is regulated by the HWA. Issuance of a WQA permit necessarily indicates NMED's determination that the RLWTF is *not* subject to the HWA, a conclusion that would block any future HWA regulation of the RLWTF.

2. Since the Applicants seek a permit under the WQA, it is their burden to present "testimony by and examination of the applicant or permittee proving the facts relied upon to justify the proposed discharge plan . . . and meeting the requirements of the regulations." § 20.6.2.3110.G NMAC.

3. NMED is a constituent agency under the WQA. Under the WQA, the "constituent agency has the burden of showing that each condition is reasonable and



necessary to ensure compliance with the [WQA] and applicable regulations, considering site-specific conditions.” NMSA 1978, § 74-6-5.D. Further, if the permit would violate any provision of the WQA, NMED “shall deny” the permit. NMSA 1978, § 74-6-5.E(2).

**There can be no WQA permit where there is no discharge:**

4. One matter to be proved is the intention to discharge: Fundamentally, the WQA authorizes the Water Quality Control Commission (“WQCC”) *only* to require “a permit *for the discharge of any water contaminant.*” (*Emphasis supplied.*) The statute states:

By regulation, the commission may require persons to obtain from a constituent agency designated by the commission a permit for the discharge of any water contaminant or for the disposal or reuse of septage or sludge.

NMSA 1978, § 74-6-5.A. Thus, WQA regulations only govern a *discharge*:

Unless otherwise provided by this Part, no person shall cause or allow *effluent* or *leachate* to discharge so that it may move directly or indirectly into ground water unless he is discharging pursuant to a discharge permit issued by the secretary.

20.6.2.3104 NMAC. (*Emphasis supplied.*)

5. The regulations state specifically that a discharge plan addresses the release of effluent or leachate “so that it may move directly or indirectly into ground water.”

20.6.2.3104 NMAC. (*Emphasis supplied.*) Regulations define a

R. “discharge plan” [as] a description of any operational, monitoring, contingency, and closure requirements and conditions for any discharge

of effluent or leachate which may move directly or indirectly into ground water[.]

20.6.2.7 NMAC. “Ground water” is further defined by regulation:

Z. “ground water” means interstitial water which occurs in saturated earth material and which is capable of entering a well in sufficient amounts to be utilized as a water supply[.]

*Id.* Thus, the WQA only applies to an actual “discharge” (not a “potential” discharge—which is the *absence* of a discharge) of a contaminant which may move toward ground water, and ground water is defined as “interstitial water which occurs in saturated earth material and which is capable of entering a well in sufficient amounts to be utilized as a water supply.” *Id.*

6. In contrast, the RLWTF is now a “zero-liquid-discharge” facility. Applicants have presented no plan, nor have they declared an intention, to release any water containing contaminants, and no such water will move toward water occurring in saturated earth material which is capable of entering a well in sufficient amounts to be utilized as a water supply. The WQA does not apply here.

7. NMED’s draft DP-1132 erroneously describes “discharge” in terms that far exceed the governing regulations:

G. Discharge- the intentional or unintentional release of an effluent or leachate which has the potential to move directly or indirectly into ground water or to be detrimental to human health, animal or plant life, or property, or unreasonably interfere with the public welfare or the use of property.

DP-1132 draft permit at 5 (July 19, 2019) (NMED Ex. 1).

8. In addition, NMED has erroneously included language in DP-1132, reciting the occurrence of a statutory “discharge” that is not actually occurring:

In issuing this Discharge Permit, NMED finds:

The Permittees are discharging effluent or leachate from the Facility so that such effluent or leachate may move directly or indirectly into ground water within the meaning of 20.6.2.3104 NMAC.

The Permittees are discharging effluent or leachate from the Facility so that such effluent or leachate may move into ground water of the State of New Mexico which has an existing concentration of 10,000 mg/L or less of total dissolved solids (TDS) within the meaning of 20.6.2.3101.A NMAC

The discharge from the Facility is within or into a place of withdrawal of ground water for present or reasonably foreseeable future use within the meaning of the WQA, NMSA 1978, § 74-6-5.E.3, and the WQCC Regulations at 20.6.2.3103 NMAC.

*Id.* 9.

9. The recitals that effluent or leachate is now being discharged are simply untrue and are refuted by, among other things, the consistent quarterly reports that show no such discharges. See Findings of Fact ¶ 14, *supra*.

10. Moreover, the draft DP-1132 contains an “authorization to discharge,” purportedly allowing Applicants to “discharge” contaminated water from one tank to another within the RLWTF:

The Permittees are authorized to discharge up to 40,000 gpd of low-level and transuranic radioactive industrial waste water using a series of treatment processes as described in Section V(D) of this Discharge Permit in accordance with the Conditions set forth in Section VI of this

## Discharge Permit.

The Permittees are authorized to discharge up to 40,000 gpd of treated waste water, in accordance with the Conditions set forth in Section VI of this Discharge Permit. Discharges shall be to either the Mechanical Evaporator System (MES), the synthetically lined Solar Evaporation Tank System (SET), or through an outfall (Identified as Outfall 051) also regulated by a National Pollutant Discharge Elimination System (NPDES) permit (Permit No. NM0028355) issued by the United States Environmental Protection Agency [20.6.2.3104 NMAC, 20.6.2.3106C NMAC, 20.6.2.3109.C NMAC].

*Id.* 9-10. These findings and authorizations are entirely inaccurate. Discharges of contaminants through Outfall 051 stopped in 2010 and are neither occurring nor planned. The “authorization” to make such discharges through Outfall 051 is meaningless, because Applicants have stated no intention to do so. The other “discharges” referred to are simply transfers among parts of the RLWTF, in which the water and any contaminants remain isolated from the environment. The idea that a transfer of water from one tank to another tank or evaporation unit in a contained facility, or back again—an action that makes no release of water to the environment or toward ground water even incrementally more likely—constitutes a “discharge” cannot be squared with the language of the WQA and its regulations.

11. Applicants recognize that a transfer to the evaporation units is no “discharge.” They have repeatedly told NMED that a groundwater discharge permit is not required for the SET, because “there is no reasonable probability that liquid contained in the evaporation tanks would move into groundwater.” AR 03655 (Sept.

28, 2007); *see also* AR 03704 (Nov. 1, 2007); AR 05217 (Aug. 11, 2011). Recitals about fantasy “discharges” are merely a fabricated predicate for an unlawful WQA permit.<sup>12</sup>

12. Nor does the occurrence of a discharge through Outfall 051 in June 2019 create the basis for a WQA permit. That type of discharge, purportedly for testing of operational readiness, is not referred to in any statements filed by the Applicants in seeking a permit. Rather, Applicants have filed, many months after the June 2019 discharge, statements declaring the circumstances they currently intend to discharge through Outfall 051:

Per LANL’s NPDES Permit renewal application, Outfall 051 is NPDES-permitted to allow the RLWTF to “maintain capacity to discharge should the [SET] and/or [MES] become unavailable due to maintenance, malfunction, and/or there is an increase in treatment capacity caused by changes to LANL scope/mission.”

Triad/DOE Ex. 4, Form 2C, pp. 5, 7, 2012 NPDES Permit Re-Application, Outfall 051 (Feb. 2012). *See also* Triad/DOE Ex. 2, Preliminary Response to CCW public

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<sup>12</sup> Indeed, the WQA makes it clear that management of water that is confined within a particular facility is not subject to the Water Quality Act. It denies application of the Act to water pollution that is “confined entirely within the boundaries of property within which the water pollution occurs when the water does not combine with other waters”:

C. The Water Quality Act does not authorize the commission to adopt any regulation with respect to any condition or quality of water if the water pollution and its effects are confined entirely within the boundaries of property within which the water pollution occurs when the water does not combine with other waters.

NMSA 1978, § 74-6-12.

comments of June 5, 2017, at 5.

13. Applicants’ and NMED’s technical experts have both testified that a shortage of capacity at the evaporation units, requiring resort to Outfall 051 for a discharge, is “highly unlikely.” Tr. Nov. 14, 2019, at 90, 212. Thus, the RLWTF must be regarded as operating pursuant to the “zero-liquid-discharge” protocol that has been LANL’s objective since 1998, and, as such, the RLWTF is ineligible for a WQA permit.

14. A WQA permit cannot be supported on the theory that a discharge through Outfall 051 is *possible*. The WQA does not authorize a permit based on a finding that a facility might *possibly* discharge, *e.g.*, from an accidental leak. Such regulation would make little sense. If the *possibility* of equipment failure called for a discharge permit, then NMED would need to issue a discharge permit for any pipe or tank that does—or might—contain water with contaminants. It is always *possible* that a pipe or tank might contain contaminants and might leak. But only a “discharge” may lawfully be regulated. NMED is not allowed to issue a discharge permit for a facility that does not discharge. NMSA 1978, § 74-6-5.A; *see also* § 20.6.2.3104 NMAC.

**No intention to discharge—no NPDES permit—no HWA exemption**

15. The Resource Conservation and Recovery Act, 42 U.S.C. § 6921 *et seq.* (“RCRA”), which is enforced in New Mexico by the HWA, looms large in this

proceeding. The Supreme Court has stressed the breadth and importance of federal RCRA regulation of hazardous waste:

RCRA is a comprehensive environmental statute that empowers EPA to regulate hazardous wastes from cradle to grave, in accordance with the rigorous safeguards and waste management procedures of Subtitle C, 42 U.S.C. §§ 6921-6934. . . . Under the relevant provisions of Subtitle C, EPA has promulgated standards governing hazardous waste generators and transporters, see 42 U.S.C. §§ 6922 and 6923, and owners and operators of hazardous waste treatment, storage, and disposal facilities (TSDF's), see § 6924. Pursuant to § 6922, EPA has directed hazardous waste generators to comply with handling, recordkeeping, storage, and monitoring requirements, see 40 CFR pt. 262 (1993). TSDF's, however, are subject to much more stringent regulation than either generators or transporters, including a 4- to 5-year permitting process, see 42 U.S.C. § 6925; 40 CFR pt. 270 (1993); U.S. Environmental Protection Agency Office of Solid Waste and Emergency Response, *The Nation's Hazardous Waste Management Program at a Crossroads, The RCRA Implementation Study 49-50* (July 1990), burdensome financial assurance requirements, stringent design and location standards, and, perhaps most onerous of all, responsibility to take corrective action for releases of hazardous substances and to ensure safe closure of each facility, see 42 U.S.C. § 6924; 40 CFR pt. 264 (1993).

*Chicago v. EDF*, 511 U.S. 328, 331-32 (1994). Therein, the Supreme Court emphasized that courts must uphold the declared statutory purpose of RCRA and reject supposed exemptions that are not clearly mandated by statute:

In light of that difference, and given the statute's express declaration of national policy that “waste that is . . . generated should be treated, stored, or disposed of so as to minimize the present and future threat to human health and the environment,” 42 U.S.C. § 6902(b), we cannot interpret the statute to permit MWC ash sufficiently toxic to qualify as hazardous to be disposed of in ordinary landfills.

*Id.* at 335. Thus, RCRA exemptions cannot be read to belie the fundamental purpose

of the statute.

16. RCRA calls for significantly more intensive environmental scrutiny and regulation than the WQA. The RCRA permitting process entails public notice and a public hearing. § 20.4.1.901 NMAC. This public process is required before beginning construction or operation of a facility. 40 C.F.R. § 270.10(f). Further, detailed RCRA regulations specify the configuration and operation of treatment and storage tanks for hazardous wastes, of which the RLWTF has many (See Citizens' Ex. 1-1 through 4-10), including requirements for double containment design, and the engineering certifications required before tank systems may be used for hazardous wastes. 40 C.F.R. §§ 264.190-99, 270.16; 51 Fed. Reg. 25422 (July 14, 1986). In addition, a RCRA facility cannot be constructed without demonstrating compliance with the seismic standard—a question that has weighed heavily on the construction of other nearby LANL facilities. 40 C.F.R. §§ 264.18(a), 270.14(b)(11); Tr., Nov. 14, 2019 at 176-77 (Arends). Further, RCRA imposes stringent requirements for groundwater monitoring, corrective action and closure and post-closure of hazardous waste facilities. See 40 C.F.R. §§ 264.90-101, 264.110-20, 264.197. The RLWTF has not been scrutinized for compliance with these requirements. Some are clearly not met; *e.g.*, the long pipeline connecting the RLWTF proper with the SET is not double-lined; there has been no effort to show compliance with the seismic standard.



17. It is undisputed that the RLWTF manages (*i.e.*, stores and treats) wastes that are hazardous within the definition of RCRA, which is enforced in New Mexico by the HWA. LANL concedes that the RLWTF will “receive and treat or store an influent wastewater which is hazardous waste as defined in 40 C.F.R. § 261.3[.]” (Comments, Dec. 12, 2013, Encl. 3 at 1) (AR 09794). LANL has expressly stated that, “The RLWTF satisfies each of these conditions[.] The RLWTF receives and treats a small amount of hazardous wastewater[.]” *Id.* Moreover, LANL has told NMED that, “[A]ll units at the TA-50 RLWTF . . . have been characterized as a SWMU [Solid Waste Management Unit] or AOC [Area of Concern] and are therefore subject to regulation under the [HWA Consent Order].” AR at 12732 (LANL letter to [Jerry] Schoeppner, Head, Groundwater Quality Bureau (Sept. 11, 2014)).

18. Since it receives, stores, and treats wastes which contain hazardous constituents and constitute “solid waste” and “hazardous waste” under RCRA, 42 U.S.C. § 6903(5), (27), the RLWTF would normally need a permit under RCRA or an authorized state program, such as the HWA. 42 U.S.C. § 6925, 40 C.F.R. § 270.1(c). But no WQA permit can be issued unless the RLWTF is exempt from the HWA, because “The Water Quality Act does not apply to any activity or condition subject to the authority of the environmental improvement board pursuant to the Hazardous Waste Act[.]” NMSA 1978, § 74-6-12.B.

19. Neither Applicants nor NMED has made any effort to establish an exemption from the HWA, despite the self-evident issue of preemption of the WQA. Applicants seek to exclude any discussion of the subject. Tr., Nov. 14, 2019 at 58-59. Applicants object to “questions that relate to the Hazardous Waste Act, the hazardous waste permitting history associated with this facility, the RCRA, the federal RCRA, and issues that relate to the wastewater treatment exemption.” *Id.* 59. Thus, Applicants have presented no evidence on this key issue, which is part of their burden. Nor has NMED supported any exemption.

20. LANL has previously claimed that the RLWTF is exempt as a “wastewater treatment unit.” 42 U.S.C. § 6903(27); 40 C.F.R. § 260.10 (*Tank system; Wastewater treatment unit*); § 264.1(g)(6). See LANL Comments (AR 09794) (Dec. 12, 2013). The applicable regulation states:

A wastewater treatment unit is a device which:

(1) Is part of a wastewater treatment facility that is subject to regulation under either section 402 or 307(b) of the Clean Water Act; and

(2) Receives and treats or stores an influent wastewater that is a hazardous waste as defined in § 261.3 of this chapter, or that generates and accumulates a wastewater treatment sludge that is a hazardous waste as defined in § 261.3 of this chapter, or treats or stores a wastewater treatment sludge which is a hazardous waste as defined in § 261.3 of this chapter; and

(3) Meets the definition of tank or tank system in § 260.10 of this chapter.

40 C.F.R. § 260.10. The definitions of tank and tank system, incorporated into the

definition of WWTU, are as follows:

Tank means a stationary device, designed to contain an accumulation of hazardous waste which is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide structural support.

Tank system means a hazardous waste storage or treatment tank and its associated ancillary equipment and containment system.

40 C.F.R. §260.10. These regulations are adopted in New Mexico. 20.4.1.100 NMAC.

21. Thus, for this exemption, the facility must be a “tank system” and be “subject to regulation under Section 402 of the Clean Water Act.”<sup>13</sup> But a facility is not subject to CWA § 402 permitting where there is no discharge. The CWA applies only to a “discharge of any pollutant, or combination of pollutants.” 33 U.S.C. § 1342(a)(1). A discharge is defined as “[a]ny addition of a ‘pollutant’ or combination

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<sup>13</sup> The WWTU exemption depends on whether the unit comes within the statutory language of the Clean Water Act, 33 U.S.C. § 1342: “This phrase includes all facilities that are subject to NPDES permits[.] It is sufficient that the facility be subject to the requirements of the Clean Water Act.” RO 11020, Letter, J.P. Lehman to Richard C. Boynton, July 31, 1981.

Note also that Applicants need to establish all the elements of the WWTU exemption, which include the application of the “tank system” definition, which requires a structure that has independent integrity. *Beazer East, Inc. v. U.S. EPA*, 963 F.2d 603, 608-10 (3d Cir. 1992); *see also* EPA Memorandum, M.H. Shapiro to A.M. Davis (May 12, 1994), Clarification of the regulatory status of a refinery ditch system (RO 13669).

CCNS has contested the validity of the NPDES permit issued by EPA in 2014 with respect to Outfall 051. That challenge is currently on review before the Tenth Circuit, *CCNS v. U.S. EPA*, No. 18-9542. In the meantime the permit is undergoing a five-year renewal, in which similar challenges are anticipated. Thus, the issue of the current NPDES permit’s validity must be considered disputed and unresolved.

of pollutants to ‘waters of the United States’ from any ‘point source.’” 40 C.F.R. § 122.2. Where there is no intent to discharge, there is no basis for a CWA permit. *Waterkeeper Alliance, Inc. v. U.S. EPA*, 399 F.3d 486, 505 (2d Cir. 2005); *National Pork Producers Council v. U.S. EPA*, 635 F.3d 738, 750 (5th Cir. 2011). Here, there is no intent to discharge; there is no basis for a CWA permit; thus, there can be no WWTU exemption.

22. EPA has stated specifically that the WWTU exemption *does not apply* where there is no discharge from the facility:

A final clarification of this exemption concerns an on-site wastewater treatment facility that has no discharge to surface water. As previously stated in 45 FR 76078 (November 17, 1980), the wastewater treatment unit exemption is intended to cover only tank systems that are part of a wastewater treatment facility that (1) produces a treated wastewater effluent which is discharged into surface waters or into a POTW sewer system and therefore is subject to the NPDES or pretreatment requirements of the Clean Water Act, or (2) produces no treated wastewater effluent as a direct result of such requirements. *This exemption is not intended to apply to wastewater treatment units that are not required to obtain an NPDES permit because they do not discharge treated effluent.*

53 Fed. Reg. 34079, ¶ 2 (Sept. 2, 1988). (*Emphasis supplied.*)

23. LANL reconstructed the RLWTF specifically to attain zero liquid discharge. Applicants have stated to EPA (and also in this proceeding) that it now has no need, and no intention, to discharge contaminants from the RLWTF, unless its evaporation equipment is unavailable—which both experts agree is a “highly unlikely” occurrence. Tr. Nov. 14, 2019 at 90, 212. Such a non-discharging facility “[is] not

required to obtain an NPDES permit” and is ineligible for the WWTU exemption.

**The RLWTF is a dual-use facility, ineligible for the WWTU exemption.**

24. Even if the Applicants intended to discharge some waste water through Outfall 051, and even if EPA were to grant the RLWTF a CWA discharge permit, there would be no WWTU exemption, because the RLWTF is a “dual use” facility.

25. EPA in 1988 explained that the WWTU exemption does not apply to a facility that, in addition to treating waste water for discharge through a CWA outfall, is also used to manage waste water that is disposed of by means unregulated by the CWA:

EPA intends that this exemption apply to any tank system that manages hazardous wastewater and is dedicated for use with an on-site wastewater treatment facility. However, if a tank system, in addition to being used in conjunction with an on-site wastewater treatment facility, is used on a routine or occasional basis to store or treat a hazardous wastewater prior to shipment off-site for treatment, storage, or disposal, it is not covered by this exemption. Unless the tank system qualifies for some other exemption, it would be subject to the revised standards for hazardous waste tank systems.

53 Fed. Reg. at 34079, par. 2 (Sept. 2, 1988).

26. EPA has stated that the requirement that a tank system be “dedicated” to exempt wastewater treatment is not met when a facility at *some times* releases hazardous waste waters through a NPDES-licensed outfall and, at *other times* disposes of hazardous waste water by means that are not regulated under the CWA. Recall that a “wastewater treatment unit” is a tank system that discharges through a CWA outfall. 40 CFR § 260.10. Thus, when EPA refers to “wastewater treatment,”

it is referring to treatment in a tank system that discharges through a CWA outfall. EPA has further emphasized that the requirement that the system be “dedicated for use with an on-site wastewater treatment facility” is not satisfied where a tank system is used, in part, to direct discharges to a CWA outfall and, in part, for other purposes:

That is, in order to satisfy the WWTU exemption, a tank must be dedicated solely for on-site wastewater treatment at all times and for no other purpose. EPA believes that the preamble language is clear on this point. *EPA did not intend the WWTU exemption to apply in situations involving “dual use” of a tank (when a tank is concurrently used for wastewater treatment and for another purpose). Nor did EPA intend for the exemption to apply in situations, such as the one your letter describes, involving “alternating use” of a tank.*

Letter, E.A. Cosworth, Acting Director, Office of Solid Waste, to S. Pendleton, RO 14262, April 1998. (*Emphasis supplied.*)<sup>14</sup>

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<sup>14</sup> This opinion letter has been cited in recent EPA briefing and must be considered authoritative. *See, e.g.*, Complainants’ Reply Brief on a Motion for Partial Accelerated Decision, citing *In re Chemsolv, Inc.*, 2011 EPA Admin. Enforce. LEXIS 33581 at 5 (Dec. 22, 2011). Numerous EPA releases state that the WWTU exemption does not apply where wastewaters are shipped “off-site.” S.K. Lowrance to T.A. Hopkins (Aug. 15, 1990) (RO 11551); D. Bussard to J.C. Mulligan (June 1, 1990); RCRA/Super-fund Hotline Monthly Summary (Oct. 1988) (RO 13226); RCRA/Superfund Hotline Monthly Summary (July 1988) (RO 13203); Hazardous Waste Tank System Standards to Ancillary Equipment and Exempted Elementary (Jan. 27, 1988) (RO 13126); Wastewater Treatment and Elementary Neutralization Units Exemption (Dec. 21, 1987) (RO 13112). EPA has explained that a reference to shipment “off-site” means shipment of wastewater out of a system that is permitted by EPA under the CWA to another, non-EPA-regulated, system—one which is therefore outside the exemption:

EPA’s position revolves around whether or not a facility is subject to sections 307(b) or 402 of the CWA. The underlying assumption used in justifying the wastewater treatment unit exemption was that tanks used to handle hazardous wastewater at these facilities would be provided with EPA oversight under the Clean Water Act, thereby ensuring no significant decrease in environmental control afforded at these facilities. We understand that using

27. Here, Mr. Pullen expressly confirmed that the RLWTF, as now configured, diverts hazardous wastewater for disposal in systems that are not regulated by the CWA. Tr. Nov. 14, 2019 at 223. These are the MES and the SET, and they are not regulated or even mentioned in the current CWA permit. Request Ex. SS (Aug. 12, 2014).

28. The required basis for a WWTU exemption is clear. If it be claimed that the requirement is ambiguous, EPA, as the issuing agency, is entitled to deference in its interpretation. *See Kisor v. Wilkie*, \_\_\_ U.S. \_\_\_, 139 S.Ct. 2400, 2411 (2019) (judicial deference to the agency’s construction of its own regulation). Since the WWTU exemption clearly does not apply to the RLWTF, the facility is subject to the HWA, and the WQA cannot apply.

29. Simply put, during this multiyear DP-1132 permitting proceeding, the RLWTF has been transformed from a discharging facility to an evaporation facility,

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the terms “on-site” and “off-site” may have represented a confusing way to explain this concept, and wish to further clarify our long-standing intent regarding the scope of the exemption. . .

The concern that lead [*sic*] to the “on-site”, “off-site” distinction in the September 2, 1988 notice was that many wastewater treatment facilities are not actually being subjected to NPDES regulatory requirements. If they are unregulated by the NPDES program, it would be inappropriate to exempt them from RCRA regulation.

Letter, D. Bussard, Acting Director, WMD, to J.C. Mulligan (June 1, 1990) (FaxBack# 11519). Here, the construction and operation of the MES and SET evaporation equipment are not regulated by EPA under the CWA. These units are not even mentioned in the NPDES permit. Request Ex. SS (Aug. 12, 2014). The operations of the RLWTF clearly result in most hazardous wastewater being diverted to the unregulated evaporation units. Therefore, the WWTU exemption has no application to the RLWTF.

and, so doing, has lost its eligibility for a CWA (or a WQA) permit and has become subject to the permitting requirements of RCRA and HWA.<sup>15</sup>

30. Applicants and NMED must respect the limitations of CWA permitting and the WWTU exemption under RCRA. RCRA, as a congressional enactment, is the supreme law of the land. U.S. Const., Art. VI, Cl. 2. Further, NMED has represented to EPA that New Mexico's HWA program is "equivalent to, consistent with, and no less stringent than the federal program" under RCRA. *See generally*, New Mexico: Final Authorization of State Hazardous Waste Management Program Revision, 72 Fed. Reg. 46165 (Aug. 17, 2007). EPA therefore authorized New Mexico under 42 U.S.C. § 6926(b) to operate the State's HWA program in lieu of RCRA. *Id.* When EPA has approved a state program, the state regulations have the force of federal law. 42 U.S.C. § 6926(d). NMED, having adopted EPA's RCRA regulations, must

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<sup>15</sup> Moreover, the proposed WQA permit would be a nullity, because under the WQA it would not become effective until there is a discharge, *i.e.*, never. The WQA authorizes "a permit for the discharge of any water contaminant," NMSA 1978, § 74-6-5.A, and it specifies that "the term of the permit shall commence *on the date the discharge begins.*" NMSA 1978, § 74-6-5(I). (*Emphasis supplied.*) Regulations contain the same terms. § 20.6.2.3109.H NMAC. Since the permit term starts only with an *actual* discharge, a permit to a non-discharging facility never comes into effect. Here, Outfall 051 will indefinitely have 'zero liquid discharge', *i.e.*, no discharge at all. *See generally: Request to Terminate NPDES Permit #NM0028355 as to Outfall 051 for the Radioactive Liquid Waste Treatment Facility* (filed with the U.S. EPA Region 6 Regional Administrator on June 20, 2016) ("Request"). DP-1132, upon issuance, will be a nullity, and it will continue indefinitely to be a nullity. When a permit is not in effect, it cannot be enforced. *State v. Villa*, 2003-NMCA-142, 134 N.M. 679, 82 P.3d 46, *aff'd in part, rev'd in part on other grounds*, 2004-NMSC-931, 136 N.M. 367, 98 P.3d 1017. Citizens respectfully submit that the Legislature did not assign NMED the task of promulgating a nullity.



follow the federal law and regulations, including the terms of the WWTU exemption and EPA interpretations, in applying the HWA. No WQA permit may be issued.

**Contradictory agency positions cannot be sustained**

31. NMED itself has publicly stated, applying EPA's explanation regarding a "dual-use" facility, that the RLWTF has *no exemption* from HWA regulation unless all treated waste water is disposed of through Outfall 051. LANL HWA permit, § 4.6. Furthermore, in litigation that the United States commenced to challenge, *inter alia*, § 4.6 of the LANL HWA permit, *United States v. Curry*, No. 1-10-CV-01251 (D.N.M.), the United States alleged that the RLWTF enjoys the WWTU exemption (Complaint ¶ 38) (Dec. 29, 2010), and NMED *denied* the allegation (First Amended Answer ¶ 38) (Feb. 14, 2011). Further, NMED stated in its Counterclaim that the exemption is unavailable because the RLWTF is a dual-use facility:

Because DOE and LANS [predecessor to Triad] have managed the effluent from the Treatment Facility by means other than discharging it through the NPDES-permitted outfall, the Treatment Facility is *no longer subject to the wastewater treatment unit exemption* under the hazardous waste management regulations [40 C.F.R. § 264.1(g)(6)].

Counterclaim ¶ 32. (*Emphasis supplied.*)

32. Under the current RLWTF configuration, most of the treated wastewater is disposed of through the MES and, under proposed DP-1132, may also be disposed of through the SET. Neither of these units is regulated by, or even mentioned in, the CWA permit. NMED takes the position in the LANL HWA permit and the pending

litigation with the federal government that the RLWTF has *no WWTU exemption*, meaning that DP-1132 may not issue.

33. But NMED in *this* proceeding asserts that DP-1132 *should* issue, supporting the asserted WWTU exemption. The positions taken by NMED in the two proceedings are directly contradictory. The difference has not been explained, and it could not be explained.

34. NMED must explain its decisions to enable appellate review. *See, e.g., Atlixco Coalition v. Maggiore*, 1998-NMCA-134, ¶ 19, 125 N.M. 786, 965 P.2d 370. An administrative agency that changes its position on a relevant issue, without offering an explanation for the change, is not entitled to credence:

A ‘settled course of behavior embodies the agency's informed judgment that, by pursuing that course, it will carry out the policies committed to it by Congress. There is, then, at least a presumption that those policies will be carried out best if the settled rule is adhered to.’” *Atchison, T. & S. F. R. Co. v. Wichita Bd. of Trade*, 412 U.S. 800, 807-808 (1973). Accordingly, an agency changing its course by rescinding a rule is obligated to supply a reasoned analysis for the change beyond that which may be required when an agency does not act in the first instance.

*Motor Vehicle Manufacturers Association v. State Farm Mutual Automobile Insurance Co.*, 463 U.S. 29, 41-42 (1983). Thus, an agency “may not, for example, depart from a prior policy sub silentio or simply disregard rules that are still on the books. . . . And, of course, the agency must show that there are good reasons for the new policy.” *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009).

Consequently, “[a]n agency must provide a detailed justification for reversing course and adopting a policy that ‘rests upon factual findings that contradict those which underlay its prior policy.’ *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009).” *Indigenous Environmental Network v. U.S. Dept. of State*, No. CV-17-29-GF-BMM (D. Mont., Nov. 8, 2018) (slip op. at 31).

35. New Mexico courts follow the principle that an agency’s unexplained reversal of position cannot be credited:

Courts generally show little deference to an agency's interpretation of its own statute when the interpretation is an unexplained reversal of a previous interpretation or consistent practice. *See INS v. Cardoza-Fonseca*, 480 U.S. 421, 446 n.30, 94 L. Ed. 2d 434, 107 S. Ct. 1207 (1987); *Atchison, T & S.F. Ry. v. Wichita Bd. of Trade*, 412 U.S. 800, 808, 37 L. Ed. 2d 350, 93 S. Ct. 2367 (1973) (agency has "duty to explain its departure from prior norms"). *See generally Thomas Jefferson Univ.*, 114 S. Ct. at 2388-89; 114 S. Ct. at 2392 n.3 (Thomas, J., dissenting).

*High Ridge Hinkle Joint Venture v. City of Albuquerque*, 1994-NMCA-139, ¶ 45, 119 N.M. 29, 888 P.2d 475.

36. Here, NMED *simultaneously* advances opposite interpretations of the WWTU exemption. Clearly, if an agency may not *change* its position without explaining its reasoning, *a fortiori*, it may not insist simultaneously on opposite positions on a relevant matter. *Mining Energy, Inc. v. Director, OWCP*, 391 F.3d 571, 574 n. 1 (4th Cir. 2004). NMED cannot justify asserting that the RLWTF (a) does not qualify for the WWTU exemption and (b) qualifies for the WWTU exemption—without

violating the arbitrary and capricious standard. Indeed, Mr. Pullen testified that, to his knowledge, no one at NMED even considered the problem. (Tr., Nov. 14, 2019 at 207). Such a position should not be advanced by this Department.

### **Misrepresentation**

37. Based on the June 2019 discharge, one might argue that the Applicants' intention as to discharges has changed from that expressed in 2018, so that the Applicants may now intend to discharge both when the evaporation units are insufficient or unavailable, and for purposes of supposed "operational readiness," *i.e.*, practice runs. See Tr., Nov. 14, 2019 at 215 (Pullen). It must be recalled that no "operational readiness" discharges were deemed necessary from 2010 through 2018, and in 2019 only one was made. *Id.* 212.

38. A party's intentions as to discharges are clearly material. Mr. Pullen so stated (*Id.* 213-14), and it is plainly pertinent information that must be obtained by NMED. The Applicants' submissions to NMED, including its prepared testimony for the 2019 hearing, have not referred to operational readiness as a circumstance triggering an intention to discharge. *See* Triad/DOE Ex. 4, 5.

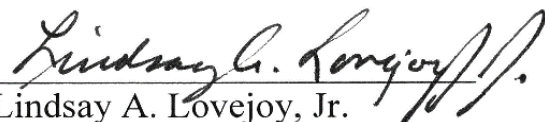
39. If the Applicants' intention to discharge has silently been changed to include the asserted need for "operational readiness," and that circumstance has not been expressed on the Record for NMED to consider, the situation would be one of misrepresentation of material facts, and it would be necessary to dismiss the

proceeding under NMSA 1978, § 74-6-5.E(4)(a). *See Summers v. New Mexico Water Quality Control Commission*, 2011-NMCA-097, 150 N.M. 694, 265 P.2d 745.

## CONCLUSION

This proceeding is purely an attempt to obtain for the RLWTF an unlawful immunity from HWA regulation. NMED should not surrender to Applicants' demands for such undeserved privilege. RCRA, and the HWA, which enforces RCRA, have the force of federal law. It is not for NMED to construct obstacles to the congressionally-mandated application of federal hazardous waste laws to a facility that admittedly treats and stores hazardous waste and is required under RCRA to adhere to stringent regulations in the handling of such dangerous substances. The permit should be denied, and this proceeding should be dismissed.

Respectfully submitted this 10th day of January 2020:

BY:   
Lindsay A. Lovejoy, Jr.  
Attorney at law  
3600 Cerrillos Road, Unit 1001A  
Santa Fe, NM 87507  
(505) 983-1800  
lindsay@lindsaylovejoy.com

/s/ \_\_\_\_\_  
Douglas Meiklejohn  
New Mexico Environmental Law Center  
1405 Luisa Street, Ste. 5  
Santa Fe, NM 87505  
(505) 629-4742

[dmeiklejohn@nmelc.org](mailto:dmeiklejohn@nmelc.org)

*Counsel for Citizens*

## CERTIFICATE OF SERVICE

I hereby certify that on this 10th day of January 2020 I caused the foregoing *Citizens' Proposed Findings of Fact, Conclusions of Law and Final Argument* to be electronically served on the parties listed below by email and filed with the Administrator of Boards and Commissions.

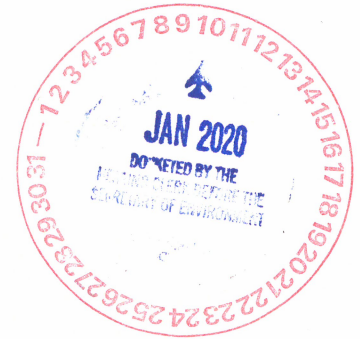
Mr. Stuart R. Butzier and Ms. Christina C. Sheehan  
Modrall Sperling Roehl Harris & Sisk, PA  
123 E. Marcy Street, Ste. 201  
Santa Fe, New Mexico 87501  
sbutzier@modrall.com  
[ccs@modrall.com](mailto:ccs@modrall.com)

Ms. Susan L. McMichael  
Office of Laboratory Counsel/MS A187  
Los Alamos National Laboratory  
P.O. Box 1663  
Los Alamos, New Mexico 87545-0001  
[smcmichael@lanl.gov](mailto:smcmichael@lanl.gov)

Silas R. DeRoma, Site Counsel,  
U.S. Department of Energy/NNSA  
3734 West Jemez Road/MS-A316  
Los Alamos, New Mexico 87544  
[silas.deroma@nnsa.doe.gov](mailto:silas.deroma@nnsa.doe.gov)  
*Triad National Security, LLC, and U.S. Department of Energy/NNSA*

Mr. John Verheul, Assistant General Counsel,  
New Mexico Environment Department  
121 Tijeras Avenue, NE, Suite 1000  
Albuquerque, New Mexico 87102  
[john.verheul@state.nm.us](mailto:john.verheul@state.nm.us)  
*Counsel for the New Mexico Environment Department*

BY:   
Lindsay A. Lovejoy, Jr.



**STATE OF NEW MEXICO  
BEFORE THE SECRETARY OF ENVIRONMENT**

**IN THE MATTER OF PROPOSED DISCHARGE  
PERMIT DP-1132 FOR THE RADIOACTIVE  
LIQUID WASTE TREATMENT FACILITY AT  
LOS ALAMOS NATIONAL LABORATORY,  
LOS ALAMOS, NEW MEXICO**

**No. GWB 19-24(P)**

**THE UNITED STATES DEPARTMENT OF ENERGY AND  
TRIAD NATIONAL SECURITY, LLC's CLOSING ARGUMENT,  
PROPOSED FINDINGS OF FACT, AND CONCLUSIONS OF LAW**

**Introduction**

Applicants the United States Department of Energy (“DOE”) and Triad National Security, Inc. (“Triad”) (collectively “DOE/Triad”), in accordance with 20.6.2.3110(I) NMAC, 20.1.4.500(B)(4) NMAC, and the Hearing Officer’s Order Establishing Post-Hearing Schedule, entered December 6, 2019, hereby respectfully submit this post-hearing submission in this matter arising under the Water Quality Act (“WQA”) and associated discharge permitting program regulations adopted by the Water Quality Control Commission (“WQCC”). The record herein, including the compelling expert testimony of the witnesses offered by Triad/DOE and the New Mexico Environment Department (“NMED”), fully supports issuance of the draft discharge permit (“DP-1132”) put forward by NMED. Part I of this submission contains DOE/Triad’s Closing Position Statement that NMED has ample authority and substantive and procedural bases to issue DP-1132 for the Radioactive Liquid Waste Treatment Facility (“RLWTF”) at Los Alamos National Laboratory (“LANL”). Part II contains DOE/Triad’s proposed Findings of Fact (“FOF”), together with citations to the evidentiary support for each proposed finding. Part III contains DOE/Triad’s proposed Conclusions of Law (“COL”), together with cross-references to the relevant FOFs and/or citations to any evidentiary underpinnings for each conclusion. Citations to



pertinent legal sources in this submission that either make the identified conclusions material or otherwise support the conclusions are provided. DOE/Triad's Closing Position Statement and proposed FOFs and COLs are offered in support of issuance of DP-1132.

## **I. TRIAD/DOE'S CLOSING POSITION STATEMENT**

DOE/Triad and NMED all supported the issuance of DP-1132 with qualified and admitted experts who, together with the record herein, established the substantive and procedural bases for the permit. No party or interested member of the public in the November 14, 2019 hearing offered expert witness testimony to challenge the specific provisions or conditions contained in NMED's draft permit that was the subject of the public notice and hearing. Four citizen groups participated jointly as a single party with counsel in the hearing itself, Concerned Citizens for Nuclear Safety, Tewa Women United, Honor Our Pueblo Existence, and the New Mexico Acequia Association (collectively, "Citizens"). Other interested persons and groups submitted comments asserting perceived deficiencies in certain permit provisions and procedural steps. No party or other interested person or group presented expert technical testimony in opposition to any specific permit condition or provision of draft DP-1132. Rather, Citizens' lone witness, Joni Arends, offered a historical perspective on various aspects of the facility and her opinion that the RLWTF should be regulated under the federal Resource Conservation and Recovery Act ("RCRA"). In addition, various interested members of the public offered oral testimony and/or written comments leading up to, during and/or following the hearing and prior to the close of the hearing record by the Hearing Officer herein.

### **A. Pertinent Standards to Be Applied in This Discharge Permit Proceeding**

DOE/Triad, as the applicants, have the burden of proof that the permit, DP-1132, should be issued under 20.1.4.400.A(1) NMAC. Under the same regulation, "[a]ny person who contends

that a permit condition is inadequate, improper or invalid, or who proposes to include a permit condition shall have the burden of going forward to present an affirmative case on the challenged condition,” and if (and only if) that burden of going forward is met, “[NMED] has the burden of proof for a challenged condition . . . .” *Id.* Triad/DOE respectfully submit they met their burden of proof that DP-1132 should be issued. Further, no party or person met their burden of proof to challenge specific permit conditions.

**B. Triad/DOE Met Its Burden of Proof that the DP-1132 Should Be Issued**

Triad/DOE presented three qualified expert witnesses who were admitted by the Hearing Officer as technical experts herein, who had been timely identified in Triad/DOE’s Statement of Intent to Present Technical Testimony, and who provided credible and thorough testimony that was consistent with the testimony each of the three witnesses had provided in the earlier permit hearing on DP-1132 that occurred in April of 2018.<sup>1</sup> The testimony, which also was consistent with and bolstered by the testimony of NMED witness Steve Pullen, amply supports the detailed FOFs and COLs offered by Triad/DOE herein.

Mr. Robert Beers, a twenty-four year veteran of LANL with broad environmental project management, regulatory compliance and permit management expertise and experience, including discharge permit management responsibilities, provided advance written expert testimony and live testimony in support of issuing DP-1132. He provided an overview of the RLWTF and relevant operations at that facility, including the three discharge pathways identified in DP-1132. He

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<sup>1</sup> In his cross-examination of Triad/DOE expert Robert Beers, counsel for Citizens insinuated that Mr. Beers had not in the earlier hearing offered as one of the reasons justifying including Outfall 051 as one of the discharge locations authorized by DP-1132 the taking of steps to ensure “readiness” for discharge through Outfall 051. Tr. p. 63, lines 12-25, p. 64, lines 1-6 (hereinafter, the form of such references will be Tr. 63:12-64:6). Counsel’s insinuation was resoundingly dispelled on re-direct, however, when Mr. Beers was invited to read a passage from the earlier transcript of hearing wherein Mr. Beers clearly had testified about the need to ensure “readiness” for discharges through Outfall 051. Tr. 82: 2-23.

discussed the permit application for DP-1132 and the regulatory background for permit issuance. His testimony included an overview of the requirements of DP-1132, including the discharges that were previously authorized by DP-1132 when it was originally issued in August 2018, and that would be authorized should the permit be issued again. He testified regarding the standards applicable to the RLWTF's treated effluent, the requirements for the operational plan, monitoring requirements, contingency plan provisions and the closure plan for the RLWTF. Mr. Beers also testified in response to public comments and changes to DP-1132 that in some cases were prompted by citizen groups, or to update DP-1132 based on actions taken since DP-1132 was originally issued.

Mr. Danny Katzman, who worked at LANL from 1998 to 2018 where he served as the lead scientist and Technical Program Manager for the Associate Directorate for Environmental Management, as group leader for LANL's Environmental Investigations Group, and as program manager for LANL's Water Stewardship Program, also provided advance written expert testimony and live testimony in support of issuing DP-1132. He provided an introduction to the hydrogeological setting at LANL and the groundwater monitoring applicable to DP-1132. Mr. Katzman described in detail the monitoring requirements of DP-1132 in relation to each of the three discharge points contemplated by the permit, including Outfall 051, the Mechanical Evaporation System ("MES"), and the Solar Evaporation Tank ("SET"). He testified about the groundwater monitoring wells required by DP-1132, including the adequacy of the monitoring wells, and frequency and suite of monitoring. Mr. Katzman also offered testimony regarding DP-1132's requirements for detecting and addressing releases.

Ms. Karen Armijo, a physical scientist and environmental manager for DOE's National Nuclear Security Administration, with oversight responsibility for DOE's environmental

compliance programs and performance at LANL, also provided advance written expert testimony and live testimony in support of issuing DP-1132. She addressed certain public comments received on DP-1132's signage requirements in the vicinity of the RLWTF and the staffing of LANL's Emergency Operations Center ("EOC"). Ms. Armijo explained why the proposed signage requirements are appropriate and reasonable. She also testified about certain DOE restrictions regarding the staffing of the EOC, and explained that the EOC interfaces and coordinates with the Pueblo of San Ildefonso and others in the planning and preparation of emergency services for which tribal involvement is warranted.

In sum, Triad/DOE's witnesses amply supported issuance of DP-1132 in the form in which it was originally proposed, as modified to update the permit. In addition to meeting the applicants' burden of proof, the thorough and credible testimony of Triad/DOE's witnesses was further supported by NMED's experienced witness, Mr. Steve Pullen. Mr. Pullen testified that DOE/Triad met all applicable regulatory requirements and that DP-1132 should be issued.

**C. The Citizens' Expert Testimony Did Not Challenge Specific Conditions**

Citizens presented only one witness, Ms. Joni Arends, an attorney, who offered testimony about her longstanding involvement with permitting issues involving various LANL facilities. She offered opinions about how the RLWTF should be regulated and additional suggestions relating to protections she felt would be warranted in the permitting of the RLWTF, based partly on technical testimony (including, for example, on seismology) for which she was neither offered, admitted nor qualified as an expert. Rather than focus on Draft DP-1132 or the groundwater permitting program, most of Ms. Arends' testimony related to her support for the Citizens' Motion to Dismiss. *See* Motion to Dismiss DP-1132 Proceeding (filed 10/8/19). Ms. Arends did not specifically offer criticisms of particular conditions in DP-1132 or new facts that were relevant or

material to the Motion to Dismiss; instead, she offered her opinion that the RLWTF would be better regulated as a hazardous waste facility using the RCRA and New Mexico's Hazardous Waste Act as opposed to the Water Quality Act's ("WQA") groundwater permitting program that was the subject of the hearing.

To the extent Ms. Arends' testimony related to the Citizens' Motion to Dismiss, which the Hearing Officer denied without prejudice, Triad/DOE and NMED filed responses which are fully incorporated herein by this reference. *See* Order Denying Motion to Dismiss (filed 11/7/19); Triad National Security, LLC and the United States Department of Energy's Response to Motion to Dismiss DP-1132 Proceeding (filed 10/23/19); New Mexico Environment Department's Response in Opposition to Motion to Dismiss (filed 10/23/19). While Ms. Arends offered no new relevant or material facts going to the issues raised by Citizens' Motion to Dismiss, Triad/DOE submit that their witnesses, and the witnesses offered by NMED, only served to further confirm the rejection of Citizens' positions. Accordingly, Triad/DOE offer appropriate findings of fact and conclusions of law on the issues in Parts II and III herein.

#### **D. Triad/DOE Responses to Public Comments**

In September 2019, members of the public submitted comments during the public comment period and requested a hearing. Following the November 14, 2019 hearing on draft DP-1132, the Hearing Officer left the hearing record open until November 18, 2019 in order to allow members of the public to submit written comments on the proposed discharge permit. Apart from form letters which raised an issue already addressed above in Part I.C of this post-hearing submission,<sup>2</sup>

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<sup>2</sup> The vast majority of the post-hearing comments that oppose issuance of DP-1132 consisted of form letters essentially advancing the same legal theory offered by the Citizens Motion to Dismiss that RLWTF's discharges should not be regulated under the Water Quality Act and the WQCC's corresponding groundwater discharge permitting program regulations. As discussed above under Part I.C, Triad/DOE and NMED responded to the Citizens' Motion to Dismiss, and those responses have been incorporated herein. For that reason, no attempt is made here to separately address the form letters. Apart from those form

two commenters, Citizens for Alternatives to Radioactive Dumping (“CARD”) and Mark DeVolder, raised questions and/or issues relating to DP-1132 and the means used to inform the public about DP-1132 and their opportunities to participate in the November hearing. The pre-hearing and post-hearing comments are addressed here.

### **1. Comments Raising Public Participation Issues**

Public comments were offered on September 23, 2019, during the pre-hearing comment period, by Amigos Bravos and Citizens. *See* AR 14836-14854. On November 17, 2019, CARD submitted comments to the Hearing Officer that addressed a number of purported issues with draft DP-1132. CARD’s comments are delineated in specific categories of issues concerning the “public process” for DP-1132. *See* AR 14917-15118. These categories relate to NMED’s Public Involvement Plan (“PIP”), NMED’s Public Notice 2 (“PN-2”) for DP-1132, the hearing notice for the November 14, 2019 public hearing for DP-1132, and the Fact Sheet for DP-1132. As set forth below, the public comments expressing concerns relating to public participation are misguided, are the result of incorrect analysis and misinformation, and are addressed in the administrative and hearing record.

#### **a. DP-1132 PIP**

First, comments of CARD and Citizens essentially allege that the NMED arbitrarily and capriciously used a four (4) mile radius in the DP-1132 PIP as the limits of where it looked to analyze the affected community. This is simply not the case. NMED’s Public Participation Policy

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letters, the only post-hearing public comments came from two sources, one of which participated in the live hearing. The other did not, and instead merely provided post-hearing comments in writing four days after the live hearing. First, Ms. Deborah Reade of the Citizens for Alternatives to Radioactive Dumping (“CARD”) on November 18, 2019 e-mailed a letter dated November 17, 2019 that largely raised procedural arguments relating to perceived insufficiencies of notices to the public and related policies and information provided to the public relating to DP-1132. Second, Mr. Mark DeVolder made oral public comments during the hearing and then submitted post-hearing comments in two e-mails dated November 15, 2019 that were largely in the form of multiple questions relating to the SET and MES, respectively.

(Policy 07-13), included herewith as Enclosure 3, provides a specific process for preliminary screening to identify areas/populations for which additional consideration, analysis or outreach is necessary. Under this policy provision, the Bureaus are to conduct a preliminary screening using the EPA EJSCREEN tool with the following parameters:

- (a) Number of households within a four (4) mile radius (set as a “buffer” in EJSCREEN) from the geographic center of the facility or proposed facility;
- (b) The per capita income for the population within a four (4) mile radius compared to the per capita income for the U.S.;
- (c) Percent of minority population and percent of population by race within a four (4) mile radius;
- (d) The percent of Linguistically Isolated Households (a demographic indicator in EJSCREEN) by language for the population within a (4) mile radius; and,
- (e) The percent or population within a four (4) mile radios by the ability to speak English

Further, NMED’s Policy 07-13, which is reiterated on page four of the DP-1132 PIP, further provides that if a “Bureau determines that it requires additional information after analyzing the EJSCREEN results, the Bureau may seek out additional sources such as the U.S. Census Bureau website, or NMED’s EJ Mapping Tool.” Under this policy provision, a Bureau is to reflect on the information it obtains from the EJSCREEN and determine if further investigation is necessary.

Following NMED’s Policy 07-13, the DP-1132 PIP indicates that the GWQB not only used the EJSCREEN, but reviewed U.S. Census Bureau data and recognized that the facility is of *statewide* significance. PIP page 5. With this recognition, the GQWB’s DP-1132 PIP includes “Element-5,” which sets forth the detailed action and outreach activities with the affected public that includes notifying Indian Tribes, Pueblos and Nations, including the Pueblo of San Ildefonso and the Pueblo of Santa Clara. PIP, page 6. Indeed, contrary to CARD’s intimation that these stakeholder groups were not provided the notice, these groups were indeed contacted and provided the notice that is set forth in the DP-1132 PIP. AR 17173-17177.

CARD's November 17, 2019 comment letter suggests that the radius the NMED should have considered for the DP-1132 PIP should have been a thirty (30) mile radius and not a four (4) mile radius. Under CARD's reasoning, the preliminary screening radius should be expanded until it captures a sufficiently diverse community to meet CARD's standards. This backwards reasoning is not justified in CARD's comments and would render the exercise of preliminarily using a radius to identify affected communities pointless; the analysis would turn on setting a screening radius based upon where diverse communities are located, rather than preliminarily analyzing whether there are diverse communities within the applicable radius. If anything, it is CARD's formulation that would be arbitrary and capricious, not the approach taken by NMED.

CARD further raises issues with the DP-1132 PIP regarding accommodations for low English proficiency ("LEP") and disabled individuals. CARD's comments, however, highlight non-issues, as no one asked for accommodation. Additionally, the DP-1132 PN-2 and public hearing notice, as explained in detail *infra*, include detailed information regarding language assistance for LEP speakers and hearing-impaired callers.

**b. DP-1132 PN-2 and Hearing Notice**

Aside from commenting on the DP-1132 PIP, CARD's November 17, 2019 post-hearing comments raise a number of purported issues with NMED's public notices, including the PN-2 and the hearing notice. Contrary to CARD's statements, however, the public notices for DP-1132 are not defective and meet all of the pertinent regulatory requirements for public notices. The PN-2 notice requirement, 20.6.2.3108.M NMAC, provides for a 30-day public comment period to begin on the date of publication of the PN-2 in a newspaper, which allows the public, among other things, the opportunity to request a hearing. The hearing notice requirement, 20.6.2.3108.N



NMAC, provides that notice of the hearing should be given 30-days prior to the hearing. Both of these requirements were met, as set forth more fully below.

Despite CARD's assertions, NMED's PN-2 for DP-1132, published August 23, 2019, in fact is complete and accurate. First, as demonstrated by AR 14717-18 (English version of PN-2) and 14733 (Spanish version of the PN-2), the public notice included statements regarding language assistance. Specifically, the PN-2 stated:

If you are a non-English speaker, do not speak English well, or if you have a disability, you may contact the NMED Permit Contact to request assistance, an interpreter, or an auxiliary aid in order to learn more about a Discharge Permit or the permitting process, or to participate in activities associated with the permitting process...

AR 14717. This statement was translated to Spanish at AR 14733. Additionally, contrary to CARD's assertion, the PN-2 included a brief description of the procedures to be followed by the Secretary in making a final determination, as required by 20.6.2.3108.K(1) NMAC (which CARD incorrectly cites as 20.6.2.3108.I NMAC). At AR 14733, the PN-2 provides that "after the administrative record for a permitting action is complete and all required information is available, NMED will approve, approve with conditions, or disapprove the Permit based on the administrative record." Additionally, the PN-2, at AR 14723, includes a hyperlink to the Fact Sheet for DP-1132, which contains a detailed description of the procedures to be followed by the Secretary in making a final determination. *See* AR 14623.

As CARD recognizes, the PN-2 includes a description of the activities leading to the discharge, contact information, location of the discharge, depth to affected groundwater and TDS, which is the information that is required by 20.6.2.3108.F and 20.6.2.3108.K NMAC. There is no regulatory requirement for NMED to include in a PN-2 a list of contaminants or types of contaminants that a discharge could contain. Despite the lack of such a requirement, the PN-2 for draft DP-1132 includes that information by providing a direct link to the discharge permit, which

sets forth the list of contaminants that a discharge could contain. *See* AR 14723. Accordingly, despite CARD's misguided view that the PN-2 had shortcomings, the PN-2 actually went beyond what the regulations require to provide exactly the information CARD complained was left out.

CARD's comments go on to raise incorrect allegations regarding the adequacy of the separate hearing notice for the DP-1132 hearing that was published after the PN-2 was published. CARD raises a number of issues regarding the hearing notice's discussion of how comments are to be received. First, CARD alleges that written statements or statements of interest are accepted during the 30-day pre-hearing period and until the hearing is closed, which was not included in the hearing notice. In fact, 20.6.2.3108.M NMAC provides for a 30-day public comment period to begin on the date of publication of the PN-2 in a newspaper, which allows the public, among other things, the opportunity to request a hearing. Further, 20.6.2.3108.N NMAC provides that notice of the hearing should be given 30-days prior to the hearing. It does not provide that the 30-day period is a comment period as CARD suggests. The regulatory requirements for PN-2 notices and hearing notices differ in that regard. There is no regulatory provision that suggests, as CARD's comments do, that written comments or statements of interest will be accepted during the 30-day pre-hearing period even though, as a practical matter, Triad/NMED have no doubt that NMED would accept them and not ignore them. The hearing notice provides that "any member of the public may attend the hearing and present non-technical testimony, orally or in writing...." *See* NMED Exhibit 4. The hearing notice thus directs members of the public to attend the hearing in order to submit oral or written comments. It additionally provides instructions for how to file documents with the Hearing Clerk and how to serve documents on NMED. It is worth noting that, while not required by regulation, individuals did submit written comments in advance of the

hearing that are included in the administrative record, and are available for consideration in the permit approval process.

CARD's comment letter goes on to raise an issue regarding what it suggests was an apparent inconsistent statement concerning whether the proposed discharge will meet all numerical groundwater standards identified in 20.6.2 NMAC. This issue, however, merely arises from CARD having referenced the wrong version of the PN-2. NMED issued a PN-2 for DP-1132 on July 19, 2019, which contained the statement CARD notes in its comments. *See* AR 14612. NMED prepared a corrected version of the PN-2 for draft DP-1132 correcting a number of errors, including the statement identified by CARD, and reissued it on August 23, 2019. *See* AR 14723. The August 23, 2019 PN-2's description of the proposed discharge is identical to that contained in the hearing notice.

Finally, contrary to CARD's contentions, the hearing notice included almost identical language to that found in the PN-2 concerning how members of the public can request language assistance. The differences in the language were that the hearing notice included the specific name of the NMED permit contact and included information on how members of the public can submit written requests for assistance. CARD apparently overlooked the language it asserted was missing.

**c. Draft DP-1132 Fact Sheet**

CARD's comments include a litany of complaints regarding the sufficiency of the Fact Sheet NMED prepared for draft DP-1132. In addition, Citizens in a September 23, 2019 submission offered a redlined version of the Fact Sheet that interjected similar issues. *See* AR 14826-14835. CARD apparently did not review the administrative record prior to filing its comments or it would have located that which it complains is absent from the record, *i.e.*, the DP-1132 Fact Sheet translated in Spanish. *See* AR 14628-14635. CARD's comments include two

and a half pages concerning the alleged lack of information provided in the Fact Sheet. CARD's comments are baseless. Not only does the Fact Sheet comply with the regulatory requirements for a Fact Sheet, but NMED made the draft permit available for anyone who wanted to review it for more detailed information than was contained in the summary.

As provided in 20.6.2.3108.I NMAC, NMED is to prepare a fact sheet for every draft permit for a discharge at a federal facility that is to include: (1) the information in Paragraphs 1 - 4 of Subsection F of 20.6.2.3108 NMAC; (2) the information in Subsection J of 20.6.2.3108 NMAC; and (3) a *brief* summary of the basis for the draft permit conditions, including references to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record. The DP-1132 Fact Sheet meets all the requirements of 20.6.2.3108.I NMAC, and includes a brief summary of the basis for the draft permit conditions at pages 4-7 of the DP-1132 Fact Sheet. *See* AR 14624-14627.

In short, CARD's and Citizens' procedural comments are entirely misplaced. They are premised upon misinterpretations of the applicable regulatory requirements, misreadings of the pertinent public notice materials, or incomplete recognitions of what is actually reflected in the record. Their comments may be appropriately disregarded.

## **2. DeVolder Comments**

In offering two sets of comments—or, more accurately, posing numerous questions—in relation to the SET and MES, respectively, Mr. DeVolder made no apparent attempt to limit his comments to the central purpose of the public hearing, namely whether to issue DP-1132 for the RLWTF. As a result, many of his comments and questions raise points that are well beyond the scope of the hearing and are essentially irrelevant for purposes of the hearing.

Notwithstanding the broad-ranging scope of Mr. DeVolder's post-hearing comments, Triad/DOE reviewed his comments in detail to determine the extent to which the issues raised in fact relate, directly or indirectly, to DP-1132. That review is summarized below, and is offered in more detail in the enclosed tables labeled as Enclosures 1 and 2. The tables are numbered in accordance with Mr. DeVolder's two separate emails dated November 15, 2019. *See* AR 14899-14910, 15158-15166.

As detailed more fully in Enclosures 1 and 2, many of his comments are directly addressed either by conditions in DP-1132, or by designs, plans and specifications submitted as part of Triad/DOE's application process, which are included in the Administrative Record for this proceeding. For example, DP-1132 Conditions and/or Triad/DOE's designs, plans or specifications located in the record specifically address Mr. DeVolder's comments relating to:

- The depth of the SET tank, which is specified in the record at AR 08028
- The freeboard in the SET, which is regulated by DP-1132 Conditions 11 and 15
- Fencing at the SET, which is addressed by Condition 5 and at AR 08021
- Animal access issues, which are addressed by Condition 5 and at AR 08028-29
- Tank bottom slope of the SET, which is addressed at AR 08025
- Use of a sump at the bottom of the SET, which is addressed at AR 08025
- SET tank draining procedure, which is addressed at AR 08063-72
- Suction line usage in draining SET tank, which is addressed at AR 08063-72
- Use of screening with suction line, which is addressed at AR 08063-72
- Use of a pump to drain tank, which is addressed at AR 08072
- Settled solids issues, which are addressed by the requirements of Condition 10
- Interstitial leak monitoring at the SET, which is addressed at AR 08033

- Monitoring instrumentation issues, which are addressed by DP-1132 Condition 7
- Corrective actions for detected leaks, which are addressed by Condition 12
- Liner composition, thickness, and installation, which is addressed at AR 08033
- Leak instrumentation and pump protection, which is addressed at AR 08072
- Detection of high water levels in SET tank, which is addressed by Condition 11
- SET perimeter signage, which is addressed by Condition 6
- Chemical constituent tracking, which is addressed by Condition 28
- General geotechnical information, which is addressed at AR 08030
- Concrete basin and joint integrity, which is addressed at AR 08024 and 08032
- MES evaporator type, configuration, capacity, which is addressed at AR 14392
- Handling of separated solids, which is addressed at AR 14387
- Diagramming of process flow (“PFD”), addressed by Condition 1 and AR 14387
- Identification of chemicals used in treatment, addressed by the Condition 1 reports
- Streams being evaporated, which is addressed by the PFD in the Condition 1 report
- Definition of MES, which is provided in DP-1132 Condition V.D
- Specifics on the MES containment vessel, addressed at AR 080300-308
- Whether the MES is on a concrete pad, which is addressed at AR 080300

*See Enclosures 1 and 2.*

In addition, numerous other issues Mr. DeVolder asks about are within the scope of DP-1132’s general requirements in Conditions 5 (restricting entry and use of fencing), 10-11 (inspections), 13 (maintain function and structural integrity at all times), 14 (loss of structural integrity) and/or 19 (requirement of qualified personnel). These include, for example, questions from Mr. DeVolder about:

- Maintaining sufficient freeboard
- Blowing of vegetation into and out of open SET tank
- Maintenance for weed control
- Access of, and risks to, animals, humans and vehicles
- Control of wind-borne, floating and settling debris
- Whether netting is needed for any reason
- Protections relating to pumps
- Availability of spare parts
- Structures maintenance and repair
- Security and access issues
- Cleaning and maintenance of evaporator instrumentation
- Service life of equipment
- Failures of equipment

Still other comments raised by Mr. DeVolder are well beyond the scope of this discharge permitting proceeding. *See* Enclosures 1 and 2.

### **3. Other Comments Relating to DP-1132 Itself**

In one of the September 23, 2019 comment letters, Citizens requested a hearing and identified the same basic issues that were identified by CCW in comments dated June 5, 2017.<sup>3</sup> As indicated by the advance written testimony of Triad/DOE witness Robert Beers, responses to those issues were set forth in the memorandum that was included with Mr. Beers' testimony as Triad/DOE Exhibit 5. To address those issues raised by Citizens and CCW, Triad/DOE incorporates by reference here the memorandum accompanying Mr. Beers' advance written

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<sup>3</sup> *See* AR 13495-13761.

testimony. In addition, the Citizens' September 23, 2019 comment letter raises issues raised in Citizens' Motion to Dismiss that the Hearing Officer denied without prejudice prior to the hearing. To that extent, the issues are addressed above in Part I.C and by the Motion to Dismiss responses.

**E. Applicants and NMED Met Their Burdens; The Opponents of Issuance Did Not**

In this case, as established through DOE/Triad's three admitted experts, and as further demonstrated by the FOFs and COLs set forth and supported in Parts II and III herein, DOE and Triad clearly established that DP-1132 should be issued and not denied. Meanwhile, Citizens and other interested participants failed to meet their burden of going forward on any specific permit condition, because they offered no technical witnesses and presented no affirmative case offering to include a permit condition or challenging a permit condition as inadequate, improper or invalid. Even if Citizens or other interested participants did meet the burden of going forward under 20.1.4.400.A(1) NMAC, however, NMED met the ultimate burden of proof—through its own admitted expert and those offered by DOE/Triad—that the conditions of NMED's draft DP-1132 are adequate, proper and valid.

**II. PROPOSED FINDINGS OF FACT**

**A. The Radioactive Liquid Waste Treatment Facility**

1. The Radioactive Liquid Waste Treatment Facility ("RLWTF") is a wastewater treatment facility that supports Los Alamos National Laboratories' ("LANL") programs by treating radioactive liquid waste wastewaters received from technical areas throughout the laboratory. NMED Exhibit 3, p. 4; DOE/Triad Exhibit 1, p. 4.

2. The RLWTF has an influent collection and storage system, a main treatment process for low-level radioactive waste ("RLW"), a process for treating transuranic radioactive



liquid waste, and a secondary treatment process for waste streams from both the low-level and transuranic treatment processes. NMED Exhibit 3, p. 6; DOE/Triad Exhibit 1, p. 4.

3. The RLWTF is situated within the interior of the LANL boundary and is located within the LANL security perimeter, which limits LANL access to badge holders. Tr. 150:18-151:1; DOE/Triad Exhibit 14, p. 3.

4. The RLWTF consists of (a) an underground collection system that conveys RLW to a Technical Area (“TA”) 50 from generators at LANL; (b) structures at TA-50, (c) Evaporation Tank (“SET”) at TA-52. The primary RLWTF structure at the TA-50 is Building 50-01; it houses primary and secondary processes for the treatment of low-level RLW, process storage tanks, and facility support functions. Rooms 60 and 60A in Building 50-01 house treatment processes for transuranic RLW. TA-50 structures located adjacent to Building 50-01 and associated with the RLWTF primarily provide for additional RLW storage. NMED Exhibit 3, p. 4.

**B. Draft Discharge Permit 1132**

5. Draft DP-1132 is a forward-looking permit, it does not purport to address pre-existing groundwater conditions, and only addresses potential new releases from the permitted facility. NMED Exhibit 1, p. 37-38; NMED Exhibit 3, p. 44-46; DOE/Triad Exhibit 9, p. 38-39; DOE/Triad Exhibit 11, p. 12-13.

6. Draft DP-1132 authorizes the discharge of treated effluent to three locations: (1) to a natural gas-fired mechanical evaporator that receives treated effluent for evaporation, referred to as the Mechanical Evaporator System (“MES”), (2) to the synthetically lined Solar Evaporation Tank System, referred to as the “SET”, (3) and through Outfall 051 that is the subject of a NPDES Permit issued by Region 6 of the United States Environmental Protection Agency (Permit

#NM0028355). Tr. 28:10-16; NMED Exhibit 1, p. 8-9; NMED Exhibit 5, p. 5; DOE/Triad Exhibit 1, p. 5; DOE/Triad Exhibit 9, p. 8-9.

7. On June 18, 2019, following a period of doing water tightness testing on the line that went to Outfall 051, Applicants discharged 80,798 liters of treated effluent through Outfall 051. Tr. 43:17-44:15. LANL has both near-term and long-term plans to conduct routine discharges from Outfall 051. Tr. 43:19-22.

8. The MES was installed and became operational in 2010, and LANL fully intends to continue discharging to the MES. Tr. 30:5-8, 43:1-11.

9. The SET has not been placed into service since it was constructed, but LANL fully intends to discharge to the SET. Tr. 29:5-7, 43:12-16.

10. DP-1132 would authorize DOE/Triad to treat and discharge up to 40,000 gallons per day of treated RLW consisting of low-level and transuranic RLW produced through activities at LANL. NMED Exhibit 1, p. 9; NMED Exhibit 3, p. 5; DOE/Triad Exhibit 9, p. 9-10.

11. Draft DP-1132 establishes effluent standards that must be met to ensure protection against discharges and potential releases that may, directly or indirectly, reach groundwater regulated by the WQCC under the Water Quality Act and the regulations adopted under the Act. NMED Exhibit 1, p. 21-24; NMED Exhibit 3, p. 2-3; DOE/Triad Exhibit 1, p. 5-7; DOE/Triad Exhibit 9, p. 21-23.

12. Discharges authorized by DP-1132 shall not exceed the effluent quality limits specified in permit condition 16 (for discharges through NPDES Outfall 051) and 17 (for discharges through the MES & SET). Tr. 35:7-10; NMED Exhibit 1, p.21-24; NMED Exhibit 3, p. 2-3; DOE/Triad Exhibit 1, p. 5-7; DOE/Triad Exhibit 9, p. 21-23

13. Draft DP-1132 sets forth requirements for an operational plan, monitoring and reporting, contingency plans and a closure plan, which are each designed to ensure protection of groundwater and compliance with regulatory requirements. NMED Exhibit 1, p. 11-44; DOE/Triad Exhibit 1, p. 7-12; DOE/Triad Exhibit 9, p.11-44.

14. The Operation Plan in Section VI.A of Draft DP-1132 contains 22<sup>4</sup> conditions with specific requirements for the operation and maintenance of the units identified in the permit. The Operational Plan requirements include testing of, and demonstrations for, various systems intended to convey, treat, store or dispose of liquid or semi-liquid waste streams to ensure that they are not leaking; corrective actions to be taken to repair or permanently cease operation of a system in the event successful demonstrations cannot be made; annual update requirements; communicating with and obtaining NMED approval for proposed changes to the existing facility; entry restrictions and signage; secondary containment verifications and certifications of leak detection systems; inspection, maintenance, measurement, containment and calibration requirements; and corrective action and emergency response procedures and personnel qualifications and requirements. NMED Exhibit 1, p. 11-28; DOE/Triad Exhibit 1, p. 7-8; DOE/Triad Exhibit 9, p.11-28.

15. The Operational Plan includes a requirement that signage be posted in English and Spanish. NMED Exhibit 1, p. 15; DOE/Triad Exhibit 9, p. 15; DOE/Triad Exhibit 14, p. 3.

16. The Operational Plan also includes standards for emergency response procedures, including a written summary of the emergency response procedures that are to be submitted to

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<sup>4</sup> DOE/Triad agree with NMED's proposal that the final version of DP-1132 should retain the condition numbers of the original draft permit, with the removal of the language associated with requirements that Applicants completed during the permits' interim active period (August 28, 2018-June 18, 2019), and replace that language with the word "reserved." For example, the Operational Plan will include all of the original 22 conditions of Draft DP-1132, one of which DOE/Triad has already completed, specifically Condition IV. 7. Verification of Secondary Containment. In this example, NMED and DOE/Triad concur that Condition IV.7 Verification of Secondary Containment should still be identified in the final version of DP-1132, but the requirements of that condition should be replaced in the final version with "reserved." Tr. 195:15-21.

NMED within one hundred and twenty (120) days of the effective date of the permit, but does not dictate emergency response procedures or designate seats on the Emergency Operations Center. NMED Exhibit 1, p. 26-27; DOE/Triad Exhibit 9, p. 26-27; DOE/Triad Exhibit 14, p. 4.

17. DP-1132 contains Monitoring and Reporting Requirements that prescribe in detail how data on both water quality and quantity are reported to NMED. NMED Exhibit 1, p. 28-38. These conditions include prescribed methods for conducting sampling and analysis; monitoring reporting requirements to NMED; the requirement to maintain current written and electronic waste-tracking data; the installation of a soil moisture monitoring system; and monitoring well replacements, construction, quarterly monitoring and analysis, yearly monitoring and analysis. NMED Exhibit 1, p.28-38; DOE/Triad Exhibit 1, p. 8-9; DOE/Triad Exhibit 9, p. 28-39.

18. Draft DP-1132 sets forth contingency plans to mitigate damages, provide notifications and take corrective actions in the event of spill or unauthorized release. NMED Exhibit 1, p. 38-39. This includes a requirement for DOE/Triad to notify NMED within 24-hours of a spill or unauthorized release, sets forth requirements for DOE/Triad to submit corrective action plans to address any failure and sets forth conditions for implementing such plans. NMED Exhibit 1, p. 38-39; DOE/Triad Exhibit 1, p. 9; DOE/Triad Exhibit 9, p. 39-40.

19. Draft DP-1132 includes specific closure plan requirements for how each unit and system at the RLWTF will be closed; actions to be taken to decommission, demolish, and remove each unit, system or other structure; actions and controls that will be implemented during closure to prevent the release of water contaminants into the environment; methods to be used for decontamination of the site and decontamination of equipment used during closure; action that will be taken to reclaim the site; monitoring, maintenance and repair controls that will be implemented after closure; a groundwater monitoring plan to detect water contaminants that might move directly

or indirectly into groundwater after closure; methods that will be used to characterize waste after closure; actions that will be taken to investigate and characterize the potential impact to soil and groundwater from the system, facility or individual unit; methods that will be used to remove, transport, treat, recycle, and dispose of all wastes generated during closure; and a detailed schedule for closure and remove of units and systems. NMED Exhibit 1, p. 39-43; DOE/Triad Exhibit 1, p. 9-11; DOE/Triad Exhibit 9, p. 40-44.

20. Draft DP-1132 requires flow meters for the effluent lines to the SET, MES and Outfall 051 to be calibrated to “plus or minus 5 percent of actual flow, as measured under field conditions,” and requires the influent line to the RLWTF to be calibrated “plus or minus 10 percent of actual flow, as measured under field conditions.” NMED Exhibit 1, p. 28; DOE/Triad Exhibit 5, p. 5; DOE/Triad Exhibit 9, p. 28.

21. As required by DP-1132, during the interim effective period of DP-1132 (August 28, 2018- June 18, 2019), Triad completed installation of two new alluvial groundwater monitoring wells in the canyon downgradient of Outfall 051, which will allow LANL to detect any unpermitted releases from Outfall 051. Tr. 126: 1-21; NMED Exhibit 1, p. 34; DOE/Triad Exhibit 9, p. 34; DOE/Triad Exhibit 11, p. 7.

22. The two new alluvial groundwater monitoring wells were subject to and approved by NMED, and were constructed in accordance with NMED’s guidelines. NMED Exhibit 1, p. 34; DOE/Triad Exhibit 11, p. 11.

23. The two new alluvial groundwater monitoring wells will be sampled quarterly for total kjedahl nitrogen, nitrate, total dissolved solids, chloride, perchlorate and fluoride and will be sampled annually for a full suite of constituents that includes organic compounds, metals,

radioactivity and general inorganic compounds. Tr. 128:4-14; NMED Exhibit 1, p. 35-37; DOE/Triad Exhibit 9, p. 36-37; DOE/Triad Exhibit 11, p. 7, 11.

24. Draft DP-1132 requires monitoring at a perched-intermediate downgradient monitoring well, MCOI-6, which will allow LANL to detect any unpermitted releases from Outfall 051. Tr. 126:22-127:14; NMED Exhibit 1, p. 35-37; DOE/Triad Exhibit 11, p. 8, 11; DOE/Triad Exhibit 9, p. 36-37.

25. Draft DP-1132 requires groundwater monitoring for the MES through the use of four regional groundwater monitoring wells, R-1, R-14, R-46 and R-60, located downgradient of the facility. Tr. 127:15-25; NMED Exhibit 1, p. 35-37; DOE/Triad Exhibit 11, p. 7,11; DOE/Triad Exhibit 9, p. 36-37.

26. Existing monitoring wells are all constructed in accordance with NMED construction and design guidelines, which include monitoring well attributes such as well diameter, well materials, and the type and width of construction materials surrounding the wells. Tr.128: 16-17; DOE/Triad Exhibit 11, p. 11.

27. The installation of two new alluvial groundwater monitoring wells in the canyon downgradient of Outfall 051, will allow LANL to detect any unpermitted releases from Outfall 051. Tr.126: 5-21; NMED Exhibit 1, p. 34; DOE/Triad Exhibit 11, p. 7; DOE/Triad Exhibit 9, p. 34.

28. The regional groundwater monitoring wells will be sampled annually for a full suite of constituents that include a large list of organic compounds, metals, radioactivity and general inorganic compounds, including perchlorate. Tr. 128:4-14; NMED Exhibit 1, p. 35-37; DOE/Triad Exhibit 11, p. 11; DOE/Triad Exhibit 9, p. 35-37.

29. Triad submitted and fulfilled a work plan that proposed a moisture monitoring approach for monitoring potential leaks beneath the SET. Tr. 29:16-30:4, 49:25-50:3; NMED Exhibit 1, p. 31-32; NMED Exhibit 3, p. 10; DOE/Triad Exhibit 1, p. 14; DOE/Triad Exhibit 7 p. 4; DOE/Triad Exhibit 9, p. 32.

30. Draft DP-1132 sets forth requirements and conditions for any future exceedance from non-compliant releases in Condition 37. NMED Exhibit 1, p. 37-38; DOE/Triad Exhibit 9, p. 38; DOE/Triad Exhibit 11, p. 12-13.

31. Draft DP-1132 includes extensive engineering and administrative controls to prevent unplanned releases. Tr. 48:8-50:22, 197:20-198:13.

### **C. Discharge Permit 1132 History**

32. Construction began on the RLWTF in July 1961, and the processing of RLW began in June 1963. NMED Exhibit 3, p. 6; Tr. 27: 5-9.

33. On April 3, 1996 the NMED requested and DOE and Los Alamos National Security (“LANS”) (predecessor in interest to Triad) submitted an application for a discharge permit on August 19, 1996. AR 00016-00018; Tr. 27: 10-16; NMED Exhibit 3, p. 6; DOE/Triad Exhibit 1, p. 3.

34. In November 2011, NMED requested a new, updated permit application, which LANS provided to NMED on February 16, 2012 with an amendment to the application submitted August 10, 2012. AR 05259-05260; 05336-08003, 08096-08097, 08134-08151, 08268-08313, 08314-08315, 08335-08336; Tr. 27: 17-21; NMED Exhibit 4, p. 6-7.

35. On March 2, 2012, NMED issued an administrative completeness determination for the permit application. AR 08202-08214.

36. DOE/LANS submitted supplemental information to the 2012 permit application on June 3, 2016. AR 13272-13355; NMED Exhibit 3, p. 6; DOE/Triad Exhibit 1, p. 3.

37. From 2014-2017 DOE/LANS continued to provide supplemental information to the 2012 permit application to NMED. AR 12679-12682, 23968-12723, 12731-12751, 13259-13260, 13442-13472, 13782-13786, 13883-13890, 13893-13897.

38. DOE/LANS 2012 permit application is the application that led to the issuance of Draft DP-1132, which is the subject of this hearing. NMED Exhibit 3, p. 6-7.

39. NMED's public notice associated with draft DP-1132 occurred at three stages of the permitting process: the notification of NMED's receipt of the 2012 discharge permit application (public notice 1, or PN-1), the notification of availability of a draft discharge permit for public comment and for request for public hearing (public notice 2, or PN-2), and the notification that a hearing is to occur (hearing notice). AR 08108-08133, AR 09449-09450; 13481-13494, 14031-14051; Tr. 199:22-200:15; NMED Exhibit 3, p. 7.

40. As a result of NGO participation in the permitting process, a number of changes were made to DP-1132. Tr. 31:18-33:17.

41. NMED issued the first public notice in association with the 2012 DOE/LANS application in March of 2012. AR 08108-08113; Tr. 28:3-6, 199:25.

42. A public hearing was held on the issuance of DP-1132 on April 19, 2018. Based on that hearing, the Secretary approved a final Discharge Permit, which was dated August 29, 2018. Tr. 28:1-2; NMED Exhibit 3, p. 7; AR 15900-16168.

43. On June 18, 2019, the Water Quality Control Commission vacated the Secretary's Order approving DP-1132 and remanded the matter to NMED for a new hearing with a newly appointed hearing officer. NMED Exhibit 3, p. 7-8.



44. NMED issued a second public notice in association with the 2012 DOE/LANS application six separate times: in August 2013, November 2013, May 2017, March 2018, July 19, 2019, and August 23, 2019. AR 09449-09450; 13481-13494; 14045; 14611-14615; 14717-14746; NMED Exhibit 3, p. 8.

45. NMED issued the hearing notice on October 3, 2019, with the final notice occurring on October 11, 2019. NMED Exhibit 3, p. 8-9; NMED Exhibit 4.

46. NMED's public notice occurred in various forms including newspaper ads, mail-outs, emails to interested parties, and posting of the notices on the NMED's Ground Water Quality Bureau's web page. AR 08108-08133; AR 09449-09450; 13481-13494; 14031-14051; 14611-14615; 14717-14746; 17174-17175; Tr. 200:16-25.

47. Following the August 29, 2018 Order of the Secretary and issuance of DP-1132 and prior to the June 18, 2019 WQCC Order, NMED edited DP-1132 to correct a difference between the discharge permit presented at the April 19, 2018 hearing and the permit issued on August 29, 2018. The edit corrected an error in the August 29, 2018 permit, changing the period of time the Permittee has to post documents voluntarily submitted to NMED on the LANL Electronic Public Reading Room from seven to thirty days. NMED Exhibit 1, p. 46; NMED Exhibit 3, p. 9; DOE/Triad Exhibit 7, p. 2.

48. Following the August 29, 2018 Order of the Secretary and issuance of DP-1132 and prior to the June 18, 2019 WQCC Order, numerous activities took place during the time DP-1132 was in effect, which necessitate a change to the draft DP-1132 presented as NMED Exhibit 1. Tr. 33:18-35:10; 194:6-196:17; NMED Exhibit 3, page 9; DOE/Triad Exhibit 1, p. 12-17; DOE/Triad Exhibit 7; DOE/Triad Exhibit 9.

49. On September 12, 2018 the Applicants submitted a transfer notice for the Discharge Permit notifying the Department that effective November 1, 2018, Triad National Security, LLC replaces LANS as the co-permittee under DP-1132. The Discharge Permit should be altered to replace all references to LANS with Triad. NMED Exhibit 3, p. 9; DOE/Triad Exhibit 7, p. 1; DOE/Triad Exhibit 9.

50. On October 31, 2018, the Applicants submitted a request for extension of time to complete SET pipeline water tightness testing. The request addresses the Condition 8 requirement to perform the testing within 180 days of the effective date of the Discharge Permit. For good cause shown, NMED approved the request in correspondence dated November 13, 2018. Condition 8 requires changed language to reflect the Applicants' proposed schedule change. NMED Exhibit 3, p. 9-10; DOE/Triad Exhibit 7, p. 1; DOE/Triad Exhibit 9.

51. On October 31, 2018 the Applicants submitted a Workplan for the design of a soil moisture monitoring system for the SET in accordance with Condition 30. In a letter dated January 30, 2019, the Department approved the Soil Moisture Monitoring System Workplan. Condition 30 requires changed language to reflect the Applicants' submittal of the Workplan. NMED Exhibit 3, p. 10; DOE/Triad Exhibit 7, p. 4; DOE/Triad Exhibit 9.

52. On November 19, 2018 the Applicants submitted a workplan for the installation of two alluvial groundwater monitoring wells in accordance with Condition 33. In a letter dated January 30, 2019, the Department approved the Alluvial Monitoring Wells Workplan. On September 3, 2019 the Applicants submitted the associated construction and lithologic logs for the alluvial monitoring wells. On September 19, 2019 the Applicants submitted the associated well completion report for the alluvial monitoring wells. Condition 33 has been fulfilled and may be

removed from the Discharge Permit. NMED Exhibit 3, p. 10; DOE/Triad Exhibit 7, p. 4; DOE/Triad Exhibit 9.

53. On December 4, 2018 the Applicants submitted workplans in accordance with Condition 41 for the stabilization of one 100,000-gallon steel influent tank and Clarifier #1, i.e., units that have ceased operation. In a letter dated December 27, 2018 the Department approved the workplans. NMED Exhibit 3, p. 10; DOE/Triad Exhibit 9.

54. On December 18, 2018 the Applicants submitted a summary of emergency response procedures applicable to the RLWTF in accordance with Condition 20. Condition 20 requires changed language to reflect the Applicants' submittal of the procedures. NMED Exhibit 3, p. 10; DOE/Triad Exhibit 7, p. 3; DOE/Triad Exhibit 9.

55. On December 21, 2018, WQCC amendments to the Ground and Surface Water Regulations (20.6.2 NMAC) became effective. The amendments include changes to the groundwater numerical standards at 20.6.2.3103 NMAC and the addition of several regulated contaminants. Furthermore, 13 additional contaminants were added to the list of "toxic pollutants" at 20.6.2.7.T NMAC. Conditions 16 and 17 require numerous changes to reflect the amended regulations. NMED Exhibit 3, p. 11; DOE/Triad Exhibit 7, p.1-3; DOE/Triad Exhibit 8; DOE/Triad Exhibit 9.

56. On January 25, 2019 the Applicants submitted workplans in accordance with Condition 41 for the stabilization of four units; Clarifier #2, Gravity Filter, WM2-North/South Tank, and a 75,000 gallon tank. In a letter dated April 25, 2019, the Department approved the workplans. NMED Exhibit 3, p. 11; DOE/Triad Exhibit 9.

57. On February 4, 2019, NMED performed an inspection of the RLWTF. The inspection consisted of a visual evaluation of the major structures of the RLWTF and verification that the SET was not being utilized. NMED Exhibit 3, p. 11.

58. On April 9, 2019 the Applicants submitted written confirmation that flow meters were installed at four location in accordance with Condition 21. Furthermore, the Applicants confirmed that the four associated flow meters were calibrated in accordance with Condition 22. Condition 21 requires changed language to reflect the Applicants' installation of the meters. Condition 22 requires changed language to reflect the Applicants' initial calibration of the meters. NMED Exhibit 3, p. 11, DOE/Triad Exhibit 7, p. 3,4; DOE/Triad Exhibit 9.

59. On June 3, 2019 the Applicants submitted documentation verifying that all units intended to convey, store, treat, or dispose of untreated liquid or semi-liquid waste streams meet the requirements of secondary containment in accordance with Condition 7. Condition 7 has been fulfilled and may be removed from the Discharge Permit. NMED Exhibit 3, p. 11; DOE/Triad Exhibit 7, p. 2; DOE/Triad Exhibit 9.

60. A complete list of all edits and revisions to draft DP-1132 that are warranted as a result of actions DOE/Triad took following the August 29, 2018 Order of the Secretary and issuance of DP-1132 and prior to the June 18, 2019 WQCC Order are included as DOE/Triad Exhibit 7. Tr. 38:14-23.

**D. Public Hearing on Draft Discharge Permit 1132**

61. A public hearing on DP-1132 was held on November 14, 2019, beginning at 9:00 AM at Fuller Lodge, 2132 Central Avenue, Los Alamos, New Mexico 87544. Tr. 1:17-21.

62. At the public hearing NMED, DOE/Triad, and the Citizens entered appearances. Tr. 12:19-13:23.

63. At the public hearing, DOE/Triad, Citizens and NMED offered technical testimony. Tr. 21:1-94:9, 114:21-135:25, 136:4-158:5, 158:11-189:25, 190:9-227:6-21.

64. DOE/LANS's first witness, Robert S. Beers, is an environmental professional who works as a consultant for Triad National Security. Mr. Beers has been responsible for leading preparation of the permit application materials that resulted in the issuance of Draft DP-1132, and he served as LANS's principal point of contact with NMED for regulatory compliance with the Water Quality Act ("WQA") and the Water Quality Control Commission's ("WQCC") regulations under the WQA. Tr. p. 21:21-22:7. His résumé was admitted as DOE/Triad Exhibit 2.

65. At the public hearing, Mr. Beers testified as to permit history for DP-1132, the coverage of the draft permit and how the permit conditions are protective of the environment and of groundwater within the State of New Mexico. Tr. 23:25-51:3; DOE/Triad Exhibit 1; DOE/Triad Exhibit 7; DOE/Triad Exhibit 9.

66. DOE/Triad's second witness, Danny Katzman, is a groundwater remediation manager for Sealaska Technical Services. Mr. Katzman previously served as lead scientist for the Environmental Management Division at LANL, where he provided technical oversight over LANL's groundwater program—specifically for oversight of groundwater monitoring wells installation, monitoring and remediation. Tr. 114:18-115:15. His résumé was admitted as DOE/Triad Exhibit 12.

67. At the public hearing, Mr. Katzman testified that DP-1132 is protective of New Mexico's groundwater resources. Specifically, he offered testimony regarding DP-1132's proposed groundwater monitoring at LANL; the complex hydrogeologic setting at LANL; the adequacy of the proposed groundwater monitoring under DP-1132; the quality of the groundwater

monitoring wells to be used for groundwater monitoring under DP-1132; and the pre-existing conditions at LANL. Tr. 116:13-129:12; DOE/Triad Exhibit 11.

68. DOE/Triad's third witness, Karen Armijo, is a physical scientist at the National Nuclear Security Administration where she oversees environmental compliance programs for water quality management and hazardous and radiological waste management. She also provides contract oversight of Triad's performance on environmental compliance. Tr. 136:16-137:24. Her résumé was admitted as DOE/Triad Exhibit 15.

69. Ms. Armijo testified concerning comments received on Draft DP-1132 regarding signage in the vicinity of the RLWTF and the staffing of LANL's Emergency Operations Center. She explained why the signage requirements of DP-1132 are adequate based on where the RLWTF is located within the LANL boundary. Ms. Armijo further explained how DOE restrictions regarding staffing to the EOC implicate who can serve on the EOC, and how the current proposed composition of the EOC is adequate. Tr. 144:5-146:16; DOE/Triad Exhibit 14, p. 3-4.

70. NMED's technical expert witness was Mr. Stephen Pullen, the Section Manager of the Pollution Prevention Section of the Ground Water Quality Bureau of NMED. Mr. Pullen testified as to the technical need for the discharge permit and how the proposed discharge permit is protective of groundwater. He expressed his support of issuance of the proposed discharge permit DP-1132. Tr. 190:9-204:5; NMED Exhibit 3.

71. The Citizens presented Ms. Joni Arends as a technical expert. Ms. Arends offered a historical perspective on various aspects of the facility and other testimony and opinions more or less relating to the overall permitting regime for the RLWTF. Tr. 158:11-180:16

72. At the hearing, Citizens and members of the public cross-examined the Applicants' and NMED's witnesses. Tr. 51:25-81:20, 89:3-90:11, 129:20-135:23, 147:3-157:24, 204:17-226:5

73. Citizens' cross-examination and re-cross examination of Mr. Beers and Mr. Pullen largely attempted to illicit admissions that there was not a discharge at the RLWTF and that the facility should be subject to regulation under RCRA. Tr. 57:22-80:2, 89:3-90:12.

74. On cross-examination and redirect examination, Mr. Beers testified regarding the history of discharges at the RLWTF, the current discharges at the RLWTF, and the planned and potential discharges at the RLWTF following permit issuance. Tr. 57:22-80:2; 82:3-88:19.

75. On cross-examination, Mr. Pullen testified regarding the history of discharges at the RLWTF, the current discharges at the RLWTF, and the discharges that would be authorized at the RLWTF following permit issuance. Tr. 204:17-222:1.

76. At the hearing Emily Arasim, Mark DeVolder, Alexa Jaramillo, Kathy Wan Povi Sanchez, and Terra Hite made public comment. Tr. 92:3-113:5, 227:10-228:12.

77. At the hearing, the Hearing Officer kept the hearing record open for written comment until Monday, November 18, 2019. Tr. 229:5-8.

78. Forty seven (47) individuals submitted post-hearing written comments. AR 14897-15188.

### **III. PROPOSED CONCLUSIONS OF LAW**

1. Pursuant to the WQA, the WQCC "may require persons to obtain from a constituent agency designed by the commission a permit for the discharge of any water contaminant." NMSA 1978, §74-5-5(A).

2. The implementing regulations of the WQA are the New Mexico Ground and Surface Water Protection Regulations ("Regulations"), 20.6.2 NMAC.

3. The WQCC has adopted regulations stating that “no person shall cause or allow effluent or leachate to discharge so that it may move directly or indirectly into ground water unless he is discharging pursuant to a discharge permit issued by the secretary.” 20.6.2.3104 NMAC.

4. The RLWTF has previously, is currently, and will in the future discharge water such that a discharge permit is required under the Regulations. DOE/Triad’s Response to Citizens’ Motion to Dismiss (filed October 23, 2019), FOF Nos. 33-35, 65, 37, 74, 75.

5. The NMED is charged by the Regulations with evaluating applications for discharge permits, and recommending approval or disapproval by the Secretary. 20.6.2.3018 NMAC.

6. The activities described as occurring or planned by DOE/Triad require a discharge permit, to be evaluated by the NMED. 20.6.2.3104 and 20.6.2.3108 NMAC; FOF Nos. 6-11, 32-35, 65, 70, 74, 75.

7. The draft DP-1132 for DOE/Triad’s RLWTF and the evidence in this case have demonstrated that neither a hazard to public health nor any undue risk to property will result from issuance of DP-1132 for the activities and discharges that are occurring or planned by DOE/Triad. 20.6.2.3109.A NMAC; FOF Nos. 11-31, 65, 67, 70.

8. Ground water with TDS of 10,000 mg/l or less will not be adversely affected by the issuance of DP-1132 as requested by DOE/Triad and proposed by NMED. 20.6.2.3109.B NMAC; FOF Nos. 11-31, 65, 67, 70.

9. Approval and issuance of DP-1132 will not result in either concentrations that are in excess of Section 3103 standards or the presence of any toxic pollutant at any place of withdrawal of water for present or reasonably foreseeable future use. 20.6.2.3109.B NMAC; FOF No. 11-31, 65, 67, 70.



10. No effluent or nitrogen in effluent will enter the subsurface from any surface impoundment as a result of issuance of DP-1132 as requested by DOE/Triad or proposed by NMED. 20.6.2.3109.C NMAC; FOF Nos. 11-31, 65, 67, 70.

11. The draft DP-1132 includes provisions for representative sampling of water as well as adequate flow monitoring so that the amount being discharged to below the surface of the ground can be determined. 20.6.2.3109.D NMAC; FOF Nos. 11, 12, 17, 20-28, 31, 65, 37, 70.

12. The signage requirements in the draft DP-1132 are adequate under the Regulations, and there is no need to require that all signage be translated to Tewa as the RLWTF is entirely within the LANL boundary and does not share a boundary with the Pueblo of San Ildefonso. FOF Nos. 15, 69.

13. There is no need under the Regulations to set forth specific requirements for who should be a part of the LANL EOC that are different from what DOE itself provides for. FOF Nos. 16, 69.

14. All other requirements of Part 2 of the WQCC's regulations have been met, including but not limited to the discharge permit application requirements in Section 3106, all requirements of NMED under Section 3107, and the public notice and participation requirements in Section 3108. 20.6.2.3109.E NMAC; FOF Nos. 11-31, 33-46.

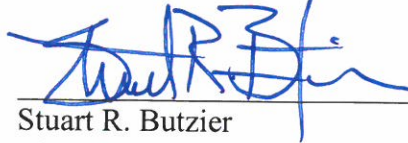
15. DOE/Triad's discharge permit application for DP-1132 complied with the requirements of NMSA 1978, §74-6-5 and 20.6.2.3100-3109 NMAC. FOF Nos. 11-31, 33-46, 61, 65, 67, 69, 70.

### **Conclusion**

For all of the foregoing reasons, and for reasons amply illuminated in the Hearing and Administrative Record, DOE/Triad respectfully requests that its proposed Findings of Fact and

Conclusions of Law be adopted, and that DP-1132 be issued to incorporate necessary changes identified in DOE/Triad Exhibit 7 and as reflected in DOE/Triad Exhibit 9 (with the change noted by Bob Beers at Tr. 39:20-40:5 and Steve Pullen at Tr. 195:12-196:17).

Respectfully submitted,

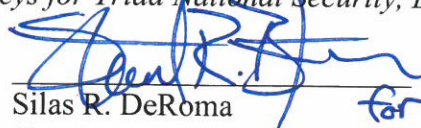


Stuart R. Butzier  
Christina C. Sheehan  
Modrall Sperling Roehl Harris & Sisk, P.A.  
Post Office Box 9318  
Santa Fe, New Mexico 87504-9318  
Telephone: 505.983.2020  
stuart.butzier@modrall.com  
christina.sheehan@modrall.com

and

Susan L. McMichael  
Office of Laboratory Counsel  
Los Alamos National Laboratory  
PO Box 1663  
MS A187  
Los Alamos, NM 87545-0001  
Telephone: 505.667.2073  
smcmichael@lanl.gov

*Attorneys for Triad National Security, LLC*



Silas R. DeRoma for  
Site Counsel  
U.S. Department of Energy  
National Nuclear Security Administration  
Los Alamos Site Office  
3747 W. Jemez Rd.  
Los Alamos, NM 87544  
Telephone: 505.667.4668  
Silas.DeRoma@nnsa.doe.gov

*Attorney for the U.S. Department of Energy*

**CERTIFICATE OF SERVICE**

I hereby certify that on January 10, 2019, a copy of the foregoing was hand-delivered to the following:

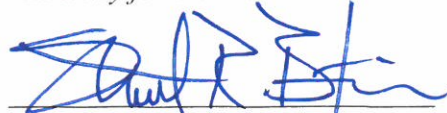
Cody Barnes  
Hearing Clerk  
New Mexico Environment Department  
1190 Saint Francis Drive, Suite S-2103  
Santa Fe, NM 87502

and served via electronic and U.S. mail to the following:

John Verheul  
New Mexico Environment Department  
Office of General Counsel  
1190 St. Francis Drive, Suite N-4050  
Santa Fe, NM 87505  
[john.verheul@state.nm.us](mailto:john.verheul@state.nm.us)  
*Attorney for New Mexico Environment  
Department, Ground Water Quality Bureau*

Lindsay A. Lovejoy Jr., Attorney  
3600 Cerrillos Rd., Unit 1001 A  
Santa Fe, NM 87507  
[lindsay@lindsaylovejoy.com](mailto:lindsay@lindsaylovejoy.com)  
*Attorney for Citizens*

Jonathan M. Block  
Charles deSaillan  
Eric D. Jantz  
Douglas Meiklejohn  
Jamie Park  
New Mexico Environmental Law Center  
1405 Luisa Street, Ste. 5  
Santa Fe, NM 87505  
(505)989-9022  
[jblock@nmelc.org](mailto:jblock@nmelc.org)  
[cdesaillan@nmelc.org](mailto:cdesaillan@nmelc.org)  
[ejantz@nmelc.org](mailto:ejantz@nmelc.org)  
[dmeiklejohn@nmelc.org](mailto:dmeiklejohn@nmelc.org)  
[jpark@nmelc.org](mailto:jpark@nmelc.org)  
*Attorney for Citizens*

  
Stuart R. Butzier

Question(s) and Comment(s) of Mr. DeVolder Relating to the MES Facility	Observation(s) of Triad National Security, LLC in Response
<p>1. The type and configuration of the evaporator is unknown. It is not known if a single-effect / single-stage evaporator system or a multiple effect evaporator system will be used. It is not known if the evaporator has a circulation pump or some type of natural gas-fired heat exchanger. It is not known if the evaporator is a thin-film type with mechanical wipers to remove accumulated solids.</p>	<p>Draft DP-1132 and supplemental information submitted to NMED identify the effluent evaporator as follows:</p> <ul style="list-style-type: none"> <li>Treated water is heated using natural gas in a 4.5 million BTU/hr low NOx gas burner that can evaporate up to 400 gal. of water/hour. The unit is constructed of stainless steel with secondary containment (Hypalon).</li> </ul> <p>See DP-1132 Permit Application, Administrative Record: Bates #14392.</p>
<p>2. It is not known how any solids might be separated from the evaporator effluent or how any separated solids might be handled further downstream.</p>	<p>Draft DP-1132 does not identify a secondary waste stream from the MES.</p> <p>See DP-1132 Permit Application, Administrative Record: Bates #14387.</p>
<p>3. A Process Flow Diagram (PFD) and/or Piping and Instrumentation Diagram (P&amp;ID) was not provided during the DP-1132 hearing. A PFD typically contains information on inlet and outlet stream characteristics to / from the evaporator such as flow rate (minimum, average, and maximum) composition of stream (minimum, average, and maximum weight or concentration of various constituents), and temperature (minimum, average, and maximum). It is assumed that the evaporator operates at ambient pressure and is not provided with vacuum-type features. The characteristics of the product or effluent discharged from the evaporator are unknown. It is not known if the effluent stream contains evaporated solids, dissolved solids, etc. This makes any analysis of the evaporator system an exercise in speculation.</p>	<p>(1) Draft DP-1132 Condition No. 1, Annual Update, required an updated process flow diagram (PFD) in the report submitted by Triad on Jan 31, 2019. See DP-1132 Administrative Record: Bates #14387.</p> <p>(2) Draft DP-1132 and the DP-1132 application do not contain a Piping and Instrumentation Diagram (P&amp;ID); no P&amp;ID was required by NMED.</p> <p>See also Item #2 above and Item #4 below.</p>
<p>4. It is not known if any additional chemicals are added to the influent prior to being sent to the evaporator or reverse osmosis system (for example, addition of acid or caustic to adjust pH).</p>	<p>Draft DP-1132 Condition No. 1, Annual Update, required an updated description of the RLWTF treatment systems in the report submitted by Triad on Jan 31, 2019; the report contains information on chemicals used during treatment. See DP-1132 Administrative Record: Bates #14390.</p>
<p>5. It is not known exactly which stream is being evaporated (the influent stream from the Waste Mitigation R____ M____ (WMRM) tanks, an accumulated stream from the reverse osmosis system, or a flush stream from the reverse osmosis unit).</p>	<p>Draft DP-1132 Condition No. 1, Annual Update, requires an updated process flow diagram (PFD) in the report submitted by Triad on Jan 31, 2019.</p> <p>See DP-1132 Permit Application, Administrative Record: Bates #14387.</p>
<p>6. A P&amp;ID was not provided; therefore, any operating characteristics such as pressure or temperature are unknown. Any definition of instrumentation is also</p>	<p>Draft DP-1132 and the DP-1132 application do not contain a Piping and Instrumentation Diagram (P&amp;ID); no P&amp;ID was required by NMED. The</p>

<p>unknown. It may be assumed that evaporators may contain some type of temperature control and level control (high level / low level alarms).</p>	<p>engineered design and operating characteristics of the evaporator and related instrumentation are not direct subjects of the groundwater permitting regime.</p>
<p>7. The configuration of the evaporator is unknown. The size and capacity of the evaporator as well as the weight of evaporator components was not defined. The composition of the evaporator shell (perhaps stainless steel or some other alloy) is unknown. What is known is that the evaporator shell or evaporator heat exchanger (and pump if used) must be able to withstand temperatures created by a natural gas-fired heating system.</p>	<p>Draft DP-1132 and supplemental information submitted to NMED specify the effluent evaporator as follows:</p> <ul style="list-style-type: none"> <li>• Treated water is heated using natural gas in a 4.5 million BTU/hr low NOx gas burner that can evaporate up to 400 gal. of water/hour. The unit is constructed of stainless steel with secondary containment (Hypalon).</li> </ul> <p>See DP-1132 Permit Application, Administrative Record: Bates #14392.</p>
<p>8. Evaporator systems which operate at elevated temperatures and contain acidic or caustic effluents or dissolved solid effluents are potentially subject corrosion, leakage, and external radioactive contamination. Fouling (solids accumulation) on internal evaporator surfaces (particularly heat exchanger surfaces) may occur. It is unknown how such surfaces are cleaned and maintained for reasonable evaporator operation / efficiency.</p>	<p>Maintenance of the MES is conducted routinely in accordance with Draft DP-1132:</p> <ul style="list-style-type: none"> <li>• Condition No. 13: Maintain function and structural integrity of the MES at all times.</li> </ul> <p>The engineered design and operating characteristics of the evaporator and related instrumentation are not direct subjects of the groundwater permitting regime.</p>
<p>9. It is not known if evaporator instrumentation is subject to corrosion, fouling, etc. The accumulation of solids on thermowells (containers for temperature instrumentation) may result in erroneous operating temperature readings.</p>	<p>Maintenance of the MES is conducted routinely in accordance with Draft DP-1132:</p> <ul style="list-style-type: none"> <li>• Condition No. 13: Maintain function and structural integrity of the MES at all times.</li> </ul> <p>The engineered design and operating characteristics of the evaporator and related instrumentation are not direct subjects of the groundwater permitting regime.</p>
<p>10. The natural-gas heating system was not defined during the DP-1132 hearing. Typically, natural gas systems are provided with a pressure regulator, an automatic shutoff valve, a tee in the line which permits external venting of natural gas venting to the atmosphere via an automatic vent valve, and another automatic vent valve (that is, a double block and bleed arrangement).</p>	<p>The MES is defined in Draft DP-1132, Condition No. V.D., as a unit using natural gas for mechanical evaporation. The natural gas system feeding the MES was designed and installed per applicable state, federal regulations and engineering standards. The engineered design and operating characteristics of the evaporator and related instrumentation are not direct subjects of the groundwater permitting regime.</p>
<p>11. There was no discussion in the DP-1132 hearing about evaporator maintenance or equipment required for maintenance (for example, cranes or lifts).</p>	<p>Draft DP-1132 does not address the type of equipment used to maintain and repair the MES. See also Item #9 above.</p>

<p>12. No information was provided on the service life of evaporator equipment and what is required for evaporator equipment replacement.</p>	<p>Draft DP-1132 does not address the service life of evaporator equipment. See also Item #9 above.</p>
<p>13. In the event of a budgetary shortfall at LANL, no discussion was provided about operating evaporator equipment beyond its useful service life.</p>	<p>Draft DP-1132 does not address hypothetical budgetary shortfalls. Noncompliance with Draft DP-1132 Condition 13 is not an option.</p>
<p>14. It is not known if the evaporator is provided with some type of entrainment separator, High Efficiency Particulate Air or HEPA filter, and a vent to the interior of the tent-like structure.</p>	<p>Draft DP-1132 does not address the matter of entrainment separators or HEPA filtration. The engineered design and operating characteristics of the evaporator and related instrumentation are not direct subjects of the groundwater permitting regime.</p>
<p>15. A photograph shown in Mr. Beers' DP-1132 hearing presentation showed a tent-like structure supported by a tubular metal frame. (Note: It is not known if tent-like structure is being used for secondary containment or there is some other type of secondary containment around the evaporator which could not be seen in the photograph.)</p>	<p>The primary containment vessel is an above-grade, stainless steel feed tank; a Hypalon liner over an asphalt pad provides secondary containment.</p> <p>See DP-1132 Permit Application, Administrative Record: Bates #08300-08308.</p>
<p>16. It is not known if the tent-like enclosure is considered a confined space.</p>	<p>Draft DP-1132 does not identify the tent-like enclosure as a confined space, nor is the question of whether it is a confined space addressed by the groundwater permitting regime.</p>
<p>17. It is not known where the evaporator (and any pumps, heat exchangers, instrumentation, etc.) are located within the tent-like structure.</p>	<p>Draft DP-1132, Condition No. V.D. identifies the location of the MES as within structure TA-50-0257.</p>
<p>18. It is not known if instrumentation inside the tent-like enclosure is monitored locally or remotely. Do personnel have to access the tent-like enclosure to monitor evaporator performance?</p>	<p>Draft DP-1132 does not identify the location of the MES monitoring instrumentation. The engineered design and operating characteristics of the evaporator and related instrumentation are not direct subjects of the groundwater permitting regime.</p>
<p>19. Tours (for NMED personnel) were provided of the RLWTF facilities, but no data on the configuration of the MES was forthcoming from any NMED personnel who went on those tours. It is not known if there were restrictions on dissemination of classified or UCNI-type information. Alternately, there may have been restrictions due to dissemination of confidential / propriety</p>	<p>NMED inspections of the RLWTF, post MES installation, were conducted in 2011, 2012, 2014, and 2019; no inspection findings were recorded by NMED regarding the MES.</p>

information protected by equipment vendors so that it could not be made available to the Public.	See Draft DP-1132 Administrative Record: #05224, #08120, #12724, and #14480.
20. It is not known if the tent-like structure is simply an environmental boundary to protect workers from external environmental conditions.	Draft DP-1132 does not address the specific design or function of the tent-like structure. Worker protections are not addressed under the groundwater permitting regime.
21. It is not known if the tent-like structure serves as a chemical barrier (including Category I chemicals or suspected carcinogens) and / or radioactive contamination barrier.	Draft DP-1132 does not address the specific design or function of the tent-like structure. Worker protections are not addressed under the groundwater permitting regime.
22. It is not known if the tent-like structure is sealed.	Draft DP-1132 does not address the specific design or function of the tent-like structure.
23. It is not known if the tent-like structure is provided with an airlock.	Draft DP-1132 does not address airlock provisions at the tent-like structure.
24. It is not known if access to the tent-like structure requires the wearing of anti-contamination clothing (anti-c's) and where donning and doffing of such personal protective equipment (PPE) might be accomplished.	Draft DP-1132 does not address PPE requirements at the MES. Worker protections are not addressed under the groundwater permitting regime.
25. It is not known what kind of radiological monitoring equipment is provided or where it is located.	Draft DP-1132 does not address radiological monitoring at the MES.
26. It is unknown why the MES was not located in a more robust structure equipped airlocks, facilities for with donning / doffing anti-contamination personal protective clothing (anti-c's) and other personal protective equipment (PPE) such as respirators and self-contained breathing apparatus (SCBA) units, and active ventilation features (that is, fans, high efficiency particulate air or HEPA filters, ventilation control instrumentation).	This comment is unrelated to Draft DP-1132. The engineered design and operating characteristics of the evaporator and related instrumentation are not direct subjects of the groundwater permitting regime. Worker protections likewise are not addressed under the groundwater permitting regime.
27. The tent-like structure is supported by a tubular frame. It would appear from the photograph in Mr. Beers' DP-1132 presentation that there are tabs which support the tentlike structure. It is not known if the tabs and tubular	Draft DP-1132 does not address the specific design or function of the tent-like structure. The engineered design and operating characteristics of the

frame can support the 30 pound per square foot snow loading typically required for most LANL / DOE facilities.	evaporator and related instrumentation are not direct subjects of the groundwater permitting regime.
28. The composition of the tent-like structure is not known	Draft DP-1132 does not address the specific design or function of the tent-like structure.
29. It is not known if the tent-like structure is positioned on a concrete pad or an asphalt pad. (Note: If the tent-like structure is composed of polyvinyl chloride or PVC it could potentially react with asphaltic material and breach (chemical incompatibility). This could potentially result in the release airborne chemical and radioactive materials to the environment during either operation or maintenance activities.	The MES as located on an asphalt pad.  See DP-1132 Permit Application, Administrative Record: Bates #08300-08308.
30. It is not known if the tent-like structure is equipment with some type of integral filter to admit air to the natural gas-fired heating system.	Draft DP-1132 does not address air filtration at the MES. The engineered design and operating characteristics of the evaporator and related instrumentation are not direct subjects of the groundwater permitting regime.
31. It is not known if a filter on the tent-like structure could plug causing any of the following: depleted oxygen content which could have an adverse effect on workers, incomplete combustion of natural gas, decreased evaporator operating temperature, collapse and / or implosion of the tent-like structure, and / or tearing / leakage of the tentlike structure. (Note: A natural gas-fired system and operations / maintenance personnel may both compete for oxygen in the tent-like enclosure. If this is the case, SCBAs may be a requirement instead of respirators.)	Draft DP-1132 contains specific requirements for notification to NMED and the initiation of corrective actions following an emergency, loss of containment, damage to structural integrity, and spill or unauthorized release.  See Draft DP-1132 Conditions Nos. 12 (Containment), 14 (Loss of Structural Integrity), 20 (Emergency Response), and 38 (Spill or Unauthorized Release).
32. It is unknown how the discharge of hot natural gas combustion gas out of the tent-like structure is accomplished or how any discharge feature is sealed.	Draft DP-1132 does not address the specific design or function of the tent-like structure. The engineered design and operating characteristics of the evaporator and related instrumentation are not direct subjects of the groundwater permitting regime.
33. It is not known how the natural gas supply line double block and bleed vent penetrates the tent-like structure or how that penetration is sealed. (Note: It is unknown if the entire double block and bleed system is located external to the tent-like structure.)	Draft DP-1132 does not address the specific design or function of the tent-like structure. The engineered design and operating characteristics of the evaporator and related instrumentation are not direct subjects of the groundwater permitting regime.
34. It is unknown if an external vent penetration is provided from the evaporator (entrainment separator or HEPA filter) to the outside of the tent-like structure.	Draft DP-1132 does not address the specific design or function of the tent-like structure. The engineered design and operating characteristics of the evaporator and related instrumentation are not direct subjects of the groundwater permitting regime.



35. It is unknown if an evaporator vent penetration in the tent-like structure is sealed.	Draft DP-1132 does not address the specific design or function of the tent-like structure.
36. The positioning of the evaporator, natural gas fired heating system, pump (if any) is not known. Therefore, it is not possible to determine if the evaporator system components could cause ignition of the tent-like structure due to radiant and / or convective heat transfer. (Note: I do not know if there is any kind of fire suppression system inside the tent-like structure. There is a new type of fire suppression system on the market which generates a water mist. The system is a vast improvement over Halon-type fire suppression systems or carbon dioxide fire suppression systems because the water mist does not degrade the oxygen concentration necessary for personnel to breath and permits personnel to evacuate from the scene of a fire. In this case, it would be the interior of the tent-like structure.)	Draft DP-1132 contains specific requirements for notification to NMED and the initiation of corrective actions following an emergency, loss of containment, damage to structural integrity, and spill or unauthorized release. See Draft DP-1132 Conditions Nos. 12 (Containment), 14 (Loss of Structural Integrity), 20 (Emergency Response), and 38 (Spill or Unauthorized Release).
37. It is not known if the evaporator vessel provided is with any kind of pressure relief valve, pressure safety valve / rupture disk.	This level of engineering detail is not present in the DP-1132 application, Draft DP-1132, or required by NMED.
38. It is not known if a discharge line from a pressure relief valve / pressure safety valve / rupture disk on the evaporator vents to the interior of the tent-like structure or exterior of the tent-like structure.	This level of engineering detail is not present in the DP-1132 application, Draft DP-1132, or required by NMED.
39. It is not known how a pressure relief valve / pressure safety valve / rupture disk discharge line which penetrates the tent-like structure is sealed.	This level of engineering detail is not present in the DP-1132 application, Draft DP-1132, or required by NMED.
40. It is not known if a pressurized release from a discharge line from a pressure relief valve / pressure safety valve / rupture disk discharge line could result in internal overpressurization of the tent-like structure. (Note: This assumes that the discharge line vents within the tent-like structure.)	This level of engineering detail is not present in the DP-1132 application, Draft DP-1132, or required by NMED.
41. It is not known what the consequences will be if chemically- or radiologically contaminated liquid from the evaporator is discharged from a pressure relief valve / pressure safety valve / rupture disk discharge line to the atmosphere. (Note: This assumes that the discharge line vents to the exterior of the tent-like structure.)	Draft DP-1132 contains specific requirements for notification to NMED and the initiation of corrective actions following an emergency, loss of containment, damage to structural integrity, and spill or unauthorized release. See Draft DP-1132 Conditions Nos. 12 (Containment), 14 (Loss of Structural Integrity), 20 (Emergency Response), and 38 (Spill or Unauthorized Release).

<p>42. It is not known how the tent-like structure will withstand the combined effects of natural gas-fired heating inside of the structure, temperature cycling (hot and cold ambient temperatures outside the structure, and exposure to sunlight (ultraviolet light).</p>	<p>Draft DP-1132 does not address the specific design or function of the tent-like structure.</p>
<p>43. Surveillance of the tent-like structure for cracks, leaks, etc. was not defined.</p>	<p>Maintenance of the MES is conducted routinely in accordance with Draft DP-1132:</p> <ul style="list-style-type: none"> <li>• Condition No. 13: Maintain function and structural integrity of the MES at all times.</li> </ul>
<p>44. No information was provided on soil conditions for the concrete pad / asphalt pad which supports the tent-like structure, evaporator, ancillary equipment, and secondary containment.</p>	<p>This level of engineering detail is not present in the DP-1132 application, Draft DP-1132, or required by NMED.</p>
<p>45. No quality assurance information (for example, design mix, reinforcing bar information, concrete strength, etc.) was provided the concrete pad which supports the tent-like structure. Alternately, no information was provided for the asphalt which supports the tent-like structure.</p>	<p>This level of engineering detail is not present in the DP-1132 application, Draft DP-1132, or required by NMED.</p>
<p>46. There was no discussion of how a hypothetical organic and inorganic waste stream would be processed through a reverse osmosis system and / or the evaporator.</p>	<p>Draft DP-1132 does not address hypothetical waste streams processed by the RO treatment unit and the MES.</p> <p>Draft DP-1132 requires the tracking of waste streams entering the RLWTF through Condition No. 28, Waste Tracking.</p>
<p>47. There was no discussion about the potential for a hypothetical waste stream containing organics and inorganics flowing to the RLWTF and being concentrated in the evaporator.</p>	<p>Draft DP-1132 does not address hypothetical waste streams processed by the RO treatment unit and concentrated in the MES.</p> <p>Draft DP-1132 requires the tracking of waste streams entering the RLWTF through Condition No. 28, Waste Tracking.</p>

Question(s) or Comment(s) of Mr. DeVolder Relating to the SET Facility	Observation(s) of Triad National Security, LLC in Response
1. The depth of the tank is unknown (Note: This becomes important if a person, animal, or airborne debris fall or migrate into the tank.)	The depth of the SET is specified in the DP-1132 Permit Application, SET Plans & Specifications: Administrative Record: Bates #08028.
2. The freeboard in the tank (that is, the height from maximum water level to the top of the tank) is unknown. (Note: This becomes important as various operating conditions and, emergency conditions potentially change the height of liquid in the tank. Precipitation such as rain and snow can add to the liquid level in the open-air tank. Wind can create waves in the tank and potentially result in spillage outside the tank (perhaps during high liquid-level situations encountered during emergency conditions. In addition, there may be seismically-induced wave issues / sloshing issues which could result in spillage of tank contents outside the tank.)	The SET freeboard is regulated by two conditions in Draft DP-1132: <ul style="list-style-type: none"> <li>• Condition No 15: Specifies what freeboard must be maintained.</li> <li>• Condition No. 11: Requires inspection of open units containing liquid daily to ensure capacity is not exceeded.</li> </ul>
3. Why isn't the tank covered or mostly covered with vent holes to permit the release of evaporated water vapor to the environment?	The SET was designed and engineered as an uncovered tank to enhance solar evaporation, and NMED has not required that the SET be covered.
4. Can vegetation blow into the tank because it is open to the environment?	The accumulation of wind-blown solids in the SET is inhibited or addressed by meeting four regulatory conditions in Draft DP-1132: <ul style="list-style-type: none"> <li>• Condition No. 5. Restricting Entry: Permittees shall restrict entry into the active portions of the facility (except 051). A perimeter fence restricts access and blocks the entry of vegetation.</li> <li>• Condition No. 10: Inspect and measure the thickness of solids in the SET annually.</li> <li>• Condition No. 11: Inspect open units containing liquid daily to ensure capacity is not exceeded.</li> <li>• Condition No 15: Maintain 2-ft of freeboard.</li> </ul>
5. Can vegetation be blown out of the tank and spread contamination to the environment?	The discharge of wind-blown solids from the SET is inhibited or addressed by four regulatory conditions in Draft DP-1132: <ul style="list-style-type: none"> <li>• Condition No. 10: Inspect and measure the thickness of solids in the SET annually.</li> <li>• Condition No. 11: Inspect open units containing liquid daily to ensure capacity is not exceeded.</li> <li>• Condition No. 15: Maintain 2-ft of freeboard.</li> <li>• Condition No. 5: Perimeter fence.</li> </ul>

<p>6. Is any kind of fencing provided to keep vegetation out of the tank?</p>	<p>A chain link fence surrounds the SET. The fence is practically useful in a number of respects and complies with a condition in Draft DP-1132:</p> <ul style="list-style-type: none"> <li>• Condition No. 5. Restricting Entry: Permittees shall restrict entry into the active portions of the facility (except 051) by unauthorized persons, wildlife or livestock.</li> </ul> <p>See DP-1132 Permit Application, Plans &amp; Specifications, Administrative Record: Bates #08021.</p>
<p>7. Is there any kind maintenance provided for weed control?</p>	<p>Weed control around the SET is a component of routine maintenance required by Draft DP-1132:</p> <ul style="list-style-type: none"> <li>• Condition No. 13: Maintain function and structural integrity of the SET at all times.</li> </ul>
<p>8. Can weed-control cuttings get into the tank?</p>	<p>See Item #4 above.</p>
<p>9. Can animals (for example, rodents, deer, birds) get into the tank because it is open to the environment?</p>	<p>A chain link fence surrounds the SET. The fence is practically useful in a number of respects and complies with Draft DP-1132:</p> <ul style="list-style-type: none"> <li>• Condition No. 5. Restricting Entry: Permittees shall restrict entry into the active portions of the facility (except 051) by unauthorized persons, wildlife or livestock.</li> </ul> <p>The perimeter chain link fence is a barrier for large animals attempting to enter the tank. For small animals (e.g., rodents), the SET contains 15 animal egress ramps to provide an escape route.</p> <p>See DP-1132 Permit Application, Plans &amp; Specifications, Administrative Record: Bates #08028-08029.</p>
<p>10. Can animals drown and remain in the tank?</p>	<p>Animals that drown in the SET would be identified during routine maintenance and removed in accordance with Draft DP-1132:</p> <ul style="list-style-type: none"> <li>• Condition No. 13: Maintain function and structural integrity of the SET at all times.</li> </ul>
<p>11. Can burrowing or other types of animals get into the tank and then spread contamination outside of the tank to the environment?</p>	<p>Draft DP-1132 does not specifically address the fate of animals that may enter and leave the SET, nor the hypothetical premise of this question regarding contamination, and animal movement is not part of the groundwater regime.</p>

<p>12. Can a person fall into the tank and drown?</p>	<p>Draft DP-1132 does not address an accident by LANL employees working at the SET, nor is assurance of employee safety a part of the groundwater regime in question.</p>
<p>13. Is a two-person rule followed by all personnel visiting the tank when it is full of liquid? (Note: Because the depth of liquid in the tank is not known, it is not known if there is a requirement for personnel visiting the tank to know how to swim. It is not known if fall protection features need to be provided or a flotation device / life preserver needs to be worn by personnel.)</p>	<p>Draft DP-1132 does not contain rules regarding personnel visiting the SET, nor are assurance of employee safety procedures a part of the groundwater regime in question.</p>
<p>14. If a LANL employee or a contractor falls into the tank or reaches into the tank without appropriate Personal Protection Equipment (for example, gloves), what protective features are provided (for example, emergency response team / ERT personnel, first aid kit, telephone / cell phone / two-way radio, appropriate communications reception in all locations around the tank).</p>	<p>Draft DP-1132 does not specify protective features for employees/contractors working at or visiting the SET, nor are assurance of employee safety procedures a part of the groundwater regime in question.</p>
<p>15. Can wind-borne debris (Styrofoam, paper, candy wrappers, etc.) get into the tank?</p>	<p>See Item #4 above.</p>
<p>16. Can floating debris accumulated in the tank become airborne and be blown out of the tank spreading contamination outside the tank?</p>	<p>See Item #5 above.</p>
<p>17. Is there any kind of netting to prevent wind-born debris from getting into or out of the tank?</p>	<p>Draft DP-1132 does not require netting at the SET.</p>
<p>18. Is there any kind of fencing in close proximity of the tank to exclude animals, vegetation, and wind-born debris while still allowing maintenance access (that is, tank / liner replacement repair? (Note: it is unknown how much room / space is necessary adjacent to the tank to permit liner replacement.)</p>	<p>See Item #6 above.</p>
<p>19. Can birds get into the tank and then fly out of the tank spreading contamination to the environment?</p>	<p>Draft DP-1132 does not address the matter of birds entering and leaving the SET, nor the hypothetical premise of this question regarding contamination, and bird movement and access is not part of the groundwater regime.</p>

20. Is the bottom of the tank sloped to permit complete drainage for maintenance purposes?	The bottom (floor) of SET is sloped to the centerline and to mid-tank sumps for enhanced leak detection monitoring.  See DP-1132 Permit Application, Plans & Specifications, Administrative Record: Bates #08025-08034.
21. Is there some type of sump in the bottom of the tank?	See Item #20 above.
22. How is the tank drained?	A 6" suction pipe with 6" Flowmatic Foot Valve is connected to the suction line for each cell.  See DP-1132 Permit Application, Plans & Specifications, Administrative Record: Bates #08063.
23. Is there a drain pipe at the bottom of the tank (gravity drain) or is there a suction line which extends down into the tank from grade level?	See Item #22 above.
24. If a suction line is utilized is it provided with a suction screen to exclude debris?	The Flowmatic Foot Valve referenced in Item #22 is screened.
25. If the suction line is provided with a suction screen, how is suction line inlet / screen cleaned if it becomes clogged with debris? (Note: Debris might include vegetation, weed-control cuttings, dead animals, cardboard, paper, rocks, soil, etc.)	Cleaning of the suction screen is conducted as routine maintenance in accordance with Draft DP-1132: <ul style="list-style-type: none"> <li>• Condition No. 13: Maintain function and structural integrity of the SET at all times.</li> </ul>
26. Is a pump used to drain the tank?	Transfer pump is located in the SET pump house (TA-52-0182).  See DP-1132 Permit Application, Plans & Specifications, Administrative Record: Bates #08072.
27. Is secondary containment (spill pan) provided for a pump if a pump is used?	This level of engineering detail was not captured in the design drawings or required by NMED.
28. If a pump (and secondary containment) is used, are both properly secured (seismically secured)?	This level of engineering detail was not captured in the design drawings or required by NMED.

29. If a pump is serviced (for example, seal or part replacement), can contaminated water be released outside the tank?	This level of engineering detail was not captured in the design drawings or required by NMED.
30. Can the contents of a pump freeze and crack the pump?	Transfer pump is located in a heated pump house (TA-52-0182).  See DP-1132 Permit Application, Plans & Specifications, Administrative Record: Bates #08072.
31. Are spare parts available for the pump?	Equipment is maintained in accordance with Draft DP-1132: <ul style="list-style-type: none"> <li>• Condition No. 13: Maintain function and structural integrity of the SET at all times.</li> </ul>
32. Are there provisions for a truck to pump out (suction out) the contents of the tank?	A "T" on the transfer line for a truck connection was provided.  See DP-1132 Permit Application, Plans & Specifications, Administrative Record: Bates #08063.
33. Can maintenance equipment (for example, a motor vehicle, truck, or crane) be inadvertently driven into the tank?	Draft DP-1132 does not address vehicle and/or equipment accidents at the SET, nor is employee safety a part of the groundwater regime. The SET is surrounded by a perimeter chain link fence.
34. Are there bollards or other features which prevent a vehicle from inadvertently entering the tank.	A perimeter chain link fence surrounds the SET.  See DP-1132 Permit Application, Plans & Specifications, Administrative Record: Bates #08021
35. How are floating / submerged debris removed from the tank (for example, nets with cables, nets on poles, etc.)?	This level of operational detail was not specified in Draft DP-1132 or required by NMED. See Item #4 above and #37 below.
36. Is there a concrete pad for removing and collecting debris from the tank?	This level of operational detail was not specified in Draft DP-1132 or required by NMED.
37. How are debris (for example, foreign material like Styrofoam cups, paper, cardboard boxes, candy wrappers, plastic sheeting, CAUTION tape, vegetation, dead animals) handled after removal from the tank to prevent the spread of contamination to the environment.	Debris that accumulates in the SET will be removed and managed in accordance with an NMED-approved settled solids removal and disposal plan required by Draft DP-1132 Condition No. 10.

<p>38. What is the composition of the tank liners?</p>	<p>High-density polyethylene (HDPE).</p> <p>See DP-1132 Permit Application, Plans &amp; Specifications, Administrative Record: Bates #08033.</p>
<p>39. Is there any potential that the expansion strip material in the concrete tank basin could chemically react with the liner material (that is, a chemical incompatibility issue) and result in a leak to the environment? (Note: Polyvinyl Chloride can adversely react with asphaltic materials over time.)</p>	<p>This level of engineering detail was not specified in Draft DP-1132 or required by NMED. See also ##55 through 60 below.</p>
<p>40. Are both tank double-thickness tank liners (that is, primary containment and secondary containment) made of the same material?</p>	<p>Both the primary and secondary liners are made of HDPE.</p> <p>See DP-1132 Permit Application, Plans &amp; Specifications, Administrative Record: Bates #08033.</p>
<p>41. If both liners are made from the same material, is there a potential for a common-cause failure? (Note: A common cause failure means that both the primary confinement and the secondary could fail in the same way and possibly at the same time. To avoid common-cause failures, different materials and/or engineered configurations with differing failure modes may be utilized).</p>	<p>This level of engineering detail was not specified in Draft DP-1132 or required by NMED. See also ##55 through 60 below.</p>
<p>42. What is the projected service life of the liners?</p>	<p>This level of engineering detail was not specified in Draft DP-1132 or required by NMED.</p>
<p>43. Was the vendor who provided the liner made aware of the complete spectrum of chemicals and radionuclides which would be present in the water contained by the tank liner?</p>	<p>This level of engineering detail was not specified in Draft DP-1132 or required by NMED.</p>
<p>44. Did the vendor who provided the liner provide any kind of warranty for the liner?</p>	<p>This level of detail was not specified in Draft DP-1132 or required by NMED.</p>
<p>45. What type of quality assurance information is available on the integrity of the liner(s) (that is, material composition, liner thickness, sealing of seams, handling pre-cautions, installation requirements, rework or repair of the liner during construction)?</p>	<p>Installation of the liners conformed to the manufacturers and installers standards and specifications.</p> <p>See DP-1132 Permit Application, Plans &amp; Specifications, Administrative Record: Bates #08033.</p>



46. Is each liner a one-piece configuration or is each liner fabricated and sealed in place within the concrete basin (that is, a built-up assembly)?	This level of engineering detail was not specified in Draft DP-1132 or required by NMED. See #45 above.
47. Are there vendor requirements / procedures available governing the installation of the liners?	This level of engineering detail was not specified in Draft DP-1132 or required by NMED. See #45 above.
48. Can any kind of debris, sharp-edge machinery, sampling equipment, etc. result in a breach of the liner(s).	Draft DP-1132 Condition No. 10, Settled Solids, requires a settled solids removal and disposal plan be approved by NMED prior to implementation. The plan must identify a method for the removal of solids that is protective of the structural integrity of the liner.
49. It is not known what security features have been provided (fences, locked access / egress locations, signs) to exclude the general LANL population from the tank area.	A perimeter chain link fence surrounds the SET.  See DP-1132 Permit Application, Plans & Specifications, Administrative Record: Bates #08021
50. Could LANL employees or contractor personnel throw rocks or coins into the tank for fun (that is, horseplay)?	Draft DP-1132 does not address horseplay by LANL workers, nor is employee behavior a part of the groundwater permitting regime.
51. Could a disgruntled LANL employee, LANL employee not following procedures, or contractor personnel damage the tank liner and/or instrumentation monitoring system?	Draft DP-1132 does not address actions taken by disgruntled LANL workers, nor is employee behavior a part of the groundwater permitting regime.
52. If the liner system is damaged and LANL has insufficient funding to make repairs due a budgetary shortfall, what happens (contingency plans)?	Draft DP-1132 does not address the consequences of hypothetical scenarios regarding funding, but noncompliance with Condition 13 relating to maintenance is not an option.
53. Given that the liners will be exposed to chemical and radioactive contamination (that is, an “undefined” current and future spectrum of both chemicals and radionuclides), will either the chemical or radioactive materials degrade the integrity of the liners over time?	Draft DP-1132 does not address the matter of liner degradation over time, nor the hypothetical premise of this comment.
54. Has or will LANL perform any advanced aging tests on samples of the liner materials to determine when a liner failure might occur?	Draft DP-1132 does not require advanced aging tests of the liners. See also Items 55 through 60 below.

<p>55. What is the configuration of the interstitial leak monitoring system between the liners? (Note: It is not known if the interstitial monitoring system consists of continuous sensor features / sensor material in all locations between both liners or is a system of sensors distributed in a pre-determined number of locations.)</p>	<p>The configuration of the leak detection systems is as follows:</p> <ol style="list-style-type: none"> <li>1. Primary membrane (60 mil HDPE)</li> <li>2. GEONET</li> <li>3. Leak Detection Tape</li> <li>4. Secondary membrane (40 mil HDPE)</li> <li>5. GEOTEXTILE</li> <li>6. Reinforced concrete floor</li> </ol> <p>See DP-1132 Permit Application, Plans &amp; Specifications, Administrative Record: Bates #08033.</p>
<p>56. What are the failure modes for the monitoring instrumentation (for example, the pathway from the sensors to the instrumentation, cables, plugs connectors, the monitoring instrumentation, etc.)?</p>	<p>In accordance with Draft DP-1132, Condition No. 7, Verification of Secondary Containment, the SET must meet the requirements of secondary containment as defined in Draft DP-1132. Accordingly, the SET is required to be equipped with a leak detection system that is designed to detect the failure of the primary liner.</p>
<p>57. How are the tank liner monitoring instrumentation systems operated, calibrated, maintained, etc.</p>	<p>Equipment at the SET is maintained in accordance with Draft DP-1132:</p> <ul style="list-style-type: none"> <li>• Condition No. 13: Maintain function and structural integrity of the SET at all times.</li> </ul>
<p>58. Is the monitoring instrumentation local or remote? (Note: If a failure occurs, is a local signal provided at the instrument monitoring location or is there a remote indication in the RLWTF Control Room?)</p>	<p>In accordance with Draft DP-1132, Condition No. 7, Verification of Secondary Containment, the SET must meet the requirements of secondary containment as defined in Draft DP-1132. Accordingly, the SET is required to be equipped with a leak detection system that is designed to detect the failure of the primary liner.</p>
<p>59. If a failure occurs in the liners as shown by the instrumentation, how long will it take to remedy the problem (that is, a failure in instrumentation sensor / cabling / instrumentation monitor or remote instrumentation interface in the RLWTF Control Room)?</p>	<p>In accordance with Draft DP-1132 Condition No. 12, Containment, the RLWTF must take immediate corrective actions if a failure of the SET liners occurs.</p>
<p>60. How is the leak detection instrumentation protected (ruggedized instrumentation enclosure) from heat, cold, dust, moisture, wind, precipitation – rain and snow, rodents, and insects?</p>	<p>Leak detection instrumentation is located within the pump house (TA-52-0182).</p> <p>See DP-1132 Permit Application, Plans &amp; Specifications, Administrative Record: Bates #08072.</p>

61. It is not known if there is level instrumentation (high level) provided for the tank.	Pursuant to Draft DP-1132 Condition No. 11, Facility Inspections, monitoring of the SET tank water level is conducted daily, and maintenance of a minimum freeboard is addressed by Condition 15.
62. The failure modes for any level instrumentation provided are not known.	Draft DP-1132 does not require level instrumentation for the SET. See also #61 above.
63. It is not known how the setpoint on any level or high-level instrumentation would adjusted to accommodate changes in operating conditions or emergency situations.	Draft DP-1132 does not require level instrumentation for the SET. See also #61 above.
64. The procedures governing the operation and maintenance of the SET were not discussed in any detail during the DP-1132 hearing. The extent of training for LANL employees and contractor employees (that is, operators, maintenance personnel, engineering personnel, supervisory personnel, visitors, etc.) working or visiting the SET were not discussed in any detail during the DP-1132 hearing. The efficacy of both the procedures and the training are unknown.	Draft DP-1132 Condition No. 19, Personnel Qualifications, requires qualified personnel operate the SET. Other conditions of Draft DP-1132 address various operational and maintenance aspects of the SET as discussed above.
65. There may be a perception that the risks associated with the SET are low because of the low levels of chemical and radioactive contamination present in the contaminated water. However, appropriate precautions should be taken as they would be in any kind of nuclear facility. For example, are there signs around the perimeter of the tank which indicate CHEMICALLY / RADIOACTIVELY CONTMINATED WATER – NOT POTABLE WATER – DO NOT DRINK.	Draft DP-1132 Condition No. 6, Signage, requires the posting of signs on gates and perimeter fences at the SET containing the following language in English and Spanish:  DANGER – UNAUTHORIZED PERSONNEL KEEP OUT
66. Is there a full set of Hazard Communication Information available (for example, Material Safety Data Sheets / MSDS’s for all chemical constituents potentially present in the contaminated water and as well as information on radionuclides present)?	Draft DP-1132 Condition No. 28, Waste Tracking, requires the RLWTF to maintain written records of all waste streams conveyed to the facility including, at a minimum, information on the chemical constituents present.
67. Although general geotechnical information was provided during the DP-1132 hearing, there was a lack of specific report information provided on soil conditions found immediately below the concrete basin. For a sub-surface (below-grade) basin, soil must have required excavation, relocation and/or removal by heavy construction equipment. Prior to such work, soil surveys	The SET was constructed over 6” of base coarse and a compacted subgrade.  See DP-1132 Permit Application, Plans & Specifications, Administrative Record: Bates #08030.

<p>were most likely completed to establish integrity of the soil in and around the proposed construction site. During construction, any kind of soil anomaly (including unusual geological features, abandoned facility systems, pre-existing structural foundations or other buried materials) would typically be reported. Tuff which is present in areas around TA-35, TA-50, and TA-55 is by nature a brittle and porous material. Tuff formations may include fractures, crevices, sink holes and related features which might be uncovered during excavation and/or construction activities. Any issues would require some type of remediation during the construction effort and prior to any concrete placement. No such report information was provided during the DP-1132 hearing?</p>	
<p>68. What quality assurance /integrity information is available on the concrete basin (for example, concrete mix information, data on the reinforcing bar used, thickness of the concrete, concrete strength, smoothness of concrete, any rework required, presence of sharp edges on concrete, data on expansion strip material, photographs, daily construction reports, etc.)</p>	<p>Concrete used in the construction of the SET complied with all American Concrete Institute Standards with a cured strength of 4000 psi.</p> <p>See DP-1132 Permit Application, Plans &amp; Specifications, Administrative Record: Bates #08024.</p>
<p>69. What is the composition and configuration of the expansion joints in the concrete basin?</p>	<p>Expansion joints in the SET floor were sealed with a joint sealer.</p> <p>See DP-1132 Permit Application, Plans &amp; Specifications, Administrative Record: Bates #08032.</p>
<p>70. The tank was tested with water which did not have any chemical and/or radiological content. This was a reasonable practice to prepare for introduction of chemically- and radiologically-contaminated water.</p>	<p>Yes. The test was a water tightness test to determine whether there would be leaks, and employing water that did not have contaminants was a reasonable practice.</p>
<p>71. The Rocky Flats Plant also had contaminated liquid ponds. Those facilities leaked and contaminated downstream sources of drinking water utilized by nearby communities. This forced communities such as Broomfield to find other sources of drinking water.</p>	<p>This comment is not applicable to the SET, but see Items ##55 through 60 above.</p>



## NEW MEXICO ENVIRONMENT DEPARTMENT

### Office of the Secretary

#### POLICY 07-13

- SUBJECT:** Public Participation
- PURPOSE:** To provide guidance and direction for the proper and appropriate public participation opportunities related to New Mexico Environment Department ("NMED" or the "Department") activities (e.g., permitting, corrective action) and proceedings. This policy is in addition to any applicable procedures required by State statute or regulation.
- POLICY:** NMED shall provide proper and appropriate public participation opportunities related to NMED's actions and proceedings.
- REVISIONS:** New Policy.
- APPLICABILITY:** All NMED programs and employees shall comply with this policy.
- REFERENCES:** United States Environmental Protection Agency ("EPA"), EJSCREEN website ([www.epa.gov/ejscreen](http://www.epa.gov/ejscreen)); New York State Department of Environmental Conservation ("NYSDEC") DEC Policy, CP-29 *Environmental Justice and Permitting (March 9, 2003)*; NYSDEC *Tips for Preparing a Public Participation Plan*; EPA Office of Environmental Justice ("OEJ"), *The Model Plan for Public Participation*, Public Participation and Accountability Subcommittee of the National Environmental Justice Advisory Council (November 1996). 40 C.F.R. Parts 5 and 7; Title VI of the Civil Rights Act of 1964; and section 13 of the Federal Water Pollution Control Act Amendments of 1972, Public Law 92-500; Public Participation Guidance for EPA Assistance Recipients: <https://www.gpo.gov/fdsys/pkg/FR-2006-03-21/pdf/06-2691.pdf>; EPA Limited English Proficiency Guidance: <https://www.gpo.gov/fdsys/pkg/FR-2004-06-25/pdf/04-14464.pdf>.
- CONTENTS:**
1. Summary
  2. Definitions
  3. Preliminary Screening
  4. Development of Public Involvement Plan

**Public Participation**

- 5. Training
- 6. Discipline

APPROVAL: Butch Tongate DATE: 2/6/18  
Butch Tongate  
Cabinet Secretary

## Public Participation

### 1. SUMMARY

This policy provides guidance for ensuring that public participation opportunities related to NMED activities and proceedings are adequate based upon the specific circumstances and are in accordance with Title VI of the Civil Rights Act of 1964, 42 U.S.C. § 2000d to 2000d-7 and the EPA regulations at 40 C.F.R. Parts 5 and 7. The policy is written to assist NMED staff, the regulated community and the public in understanding requirements related to public participation.

This policy will support the involvement of all people in NMED's activities and proceedings by further educating NMED staff on the topics of federal civil rights requirements, environmental justice and public participation; by providing opportunities for public participation above and beyond NMED's statutorily mandated public participation requirements; by highlighting the provision of adequate public access to NMED permitting information; and by further incorporating federal civil rights and environmental justice concerns into NMED's permitting and other associated processes.

### 2. DEFINITIONS

For purposes of this policy, the following definitions shall apply.

A. **Census block group** means a unit for the U.S. Census used for reporting. Census block groups generally contain between 250 and 500 housing units.

B. **Environmental justice** means the fair treatment and meaningful involvement of all people regardless of race, color, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

C. **Limited-English Proficient ("LEP") individual** means an individual who does not speak English as their primary language and who has a limited ability to read, speak, write, or understand English, and whom therefore may be entitled to language assistance with respect to a particular type of service, benefit, or encounter.

D. **Low-income community** means a census block group, or contiguous area with multiple census block groups, having a low-income population equal to or greater than 23.59% of the total population.

E. **Low-income population** means a population having an annual income that is less than the poverty threshold. For purposes of this policy, poverty thresholds are established by the U.S. Census Bureau.

F. **Minority community** means a census block group, or contiguous area with multiple census block groups, having a minority population equal to or greater than 51.1% in an urban area and 33.8% in a rural area of the total population.

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G. **Minority population** means a population that is identified or recognized by the U.S. Census Bureau as Hispanic, African-American or Black, Asian and Pacific Islander or American Indian.

H. **Person with Disabilities** means any person who has a physical or mental impairment that substantially limits one or more major life activities; has a record of such impairment; or is regarded as having such an impairment.

I. **Potential environmental justice area** means a minority or low-income community that may bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

J. **Rural area** means territory, population, and housing units that are not classified as an urban area. See definition for 'urban area' below. For purposes of this policy, rural area classifications are established by the U.S. Census Bureau.

K. **Urban area** means all territory, population, and housing units located in urbanized areas and in places of 2,500 or more inhabitants outside of an urbanized area. An urbanized area is a continuously built-up area with a population of 50,000 or more. For purposes of this policy, urban area classifications are established by the U.S. Census Bureau.

### 3. PRELIMINARY SCREENING

In an effort to ensure the proper enhancement of public outreach, NMED Bureaus must perform a preliminary screening to identify areas/populations for which additional consideration, analysis or outreach is necessary. EPA's "EJSCREEN" is an environmental justice mapping and screening tool that provides a nationally consistent dataset and approach for combining environmental and demographic indicators. EJSCREEN allows users to access high-resolution environmental and demographic information for locations in the United States, and compare their selected locations to the rest of the state, EPA region, or the nation. The tool shall be used to help with preliminary determinations about whether or not minority and/or low-income populations are potentially impacted by the Department's activity or proceeding, whether there are existing environmental issues or to identify whether there is a combination of environmental and demographic indicators that is greater than usual.

#### A. Methodology for Preliminary Screening

Each Bureau shall conduct a preliminary screening using the EPA EJSCREEN tool for facility locations where public participation is required for the specific activity (e.g., permitting) or proceeding. The EJSCREEN report that provides the most advantageous information is the 2011-2015 ACS (American Community Survey) Report. Please see Attachment 1 for the User Guide for EJSCREEN 2016 (or as updated) for instructions on how to conduct preliminary screenings. Unless otherwise indicated (e.g., if it is determined that the default radius is impractical), Bureaus shall use the following parameters as a starting point for the preliminary screening:



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- a. Number of households within a four (4) mile radius<sup>1</sup> (set as a “buffer” in EJSCREEN) from the geographic center of the facility or proposed facility;
- b. The per capita income for the population within a four (4) mile radius compared to the per capita income for the U.S.;
- c. Percent of minority population and percent of population by race within a four (4) mile radius;
- d. The percent of Linguistically Isolated Households (a demographic indicator in EJSCREEN) by language for the population within a four (4) mile radius; and,
- e. The percent or population within a four (4) mile radius by ability to speak English.

If a Bureau determines that it requires additional information after analyzing the EJSCREEN results, the Bureau may seek out additional data sources such as the U.S. Census Bureau website, or NMED’s EJ Mapping Tool.<sup>2</sup> Please note that in some instances, after consultation with the appropriate Bureau Chief and Division Director, enhanced public outreach may be required regardless of the results of the preliminary screening. Because of New Mexico’s vast and varied topography and populations, the above parameters are subject to revision, as the EJSCREEN 2016 tool reveals its effectiveness through implementation in the state.

### B. Results of Preliminary Screening

Upon compiling the results of the preliminary screening, such results will be used, and included in, a Public Involvement Plan (PIP), which will be mandatory for each NMED activity requiring public participation. It is recommended that the EJSCREEN report produced during the preliminary screening be directly included in the PIP. If the results indicate that language services will be necessary due to Limited English Proficient populations, the requirements of NMED’s Limited-English Proficiency Policy (07-11) shall be incorporated into the required PIP.

## **4. DEVELOPMENT OF PUBLIC INVOLVEMENT PLAN (PIP)**

Each Bureau shall develop a PIP for each activity requiring public participation (e.g., permitting actions, water quality surveys, rulemakings, etc.). A PIP template can be found as Attachment 2 to this policy. Each Bureau shall follow its own statutory or regulatory public notice requirement(s). If statutory or regulatory requirements for a particular activity would make a PIP impractical (e.g., a quick approval timeframe, such as air quality relocation applications), then Bureaus should note in writing such special circumstances. In such instances where a PIP is deemed to be impractical due to statutory or regulatory requirements, the four factor LEP assessment should still be completed, and documented in writing, and the extent to which LEP services are necessary for the activity should be determined.<sup>3</sup> The PIP

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<sup>1</sup> If an activity or proceeding is related to a facility that is located in an urban area, or is proposed to be located in an urban area, it may be more representative of the community to be captured if a one (1) mile radius is applied.

<sup>2</sup> <https://www.census.gov/>; <https://gis.web.env.nm.gov/oem/?map=ejmt>

<sup>3</sup> See NMED LEP Policy and Procedure 07-11, Sections 3.0-6.0.

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shall be made available online and in hardcopy in an easily accessible location in the community analyzed. In addition to the required content, the PIP will include NMED contact information so that community members, members of the public, interested parties and regulated entities can provide comments on the PIP. Such comments will be reviewed by Bureau staff and appropriate amendments to the PIP will be made as necessary. Every PIP shall be reviewed and approved by the appropriate Bureau Chief before issuance. The PIP is a "living" document and can be amended, if deemed necessary, by the implementing Bureau. For example, the PIP could be amended based upon feedback from the public or if the Bureau identifies a problem in executing the PIP.

The PIP shall include, at a minimum, the following elements<sup>4</sup>:

- a. An overview of the Bureau's plan of action for addressing the community's needs and concerns;
- b. A description of the community/stakeholder groups (including demographics, history, and background). This section should include the results of the preliminary screening per Section 4 above;
- c. A contact list of Bureau staff with phone numbers and email addresses to allow the public to communicate with the Bureau via phone or email;
- d. A detailed plan of action (outreach activities) the Bureau will take to reach the affected public. Examples include: posting locations of information, informational meetings and availability of information (e.g., online, hard copies);
- e. A contingency plan for unexpected events (e.g., power outage at a meeting location or inclement weather);
- f. Location(s) where public meetings will be held, if appropriate. Consideration should be given to availability and schedules of public transportation as well as state and federal holidays (e.g., Christmas, Thanksgiving, New Years, 4<sup>th</sup> of July);
- g. Contact information (i.e., the NMED Non-Discrimination Coordinator) for obtaining language assistance services for LEP persons, including, translation of documents and/or interpreters for meetings and for obtaining services for persons with disabilities;
- h. In many cases, formal notification in local newspapers and on the radio is mandatory pursuant to statutory and regulatory requirements. The PIP shall identify in which periodicals, and in which sections (e.g., Legal, Classified,

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<sup>4</sup> See Title VI Public Involvement Guidance for EPA Assistance Recipients Administering Environmental Permitting Programs, 71 Fed. Reg. 14,207, 14,211 (March 21, 2006).

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Display), Public Notices will be posted as well as which radio stations will be used.

If a LEP community is identified through the preliminary screening, the Bureau must attempt to use a periodical and/or radio station capable of using the same language. For example, if a LEP community is identified where the primary language is Spanish, the Bureau must attempt to utilize a Spanish-only newspaper or radio station to publish and broadcast the Public Notice.

- i. Location of the information repository (physical address or web address, as applicable), if appropriate.

Additional requirements may be identified as part of the Limited-English Proficiency Policy (07-11) and/or the Non-Employee Disability Accessibility and Outreach Policy (07-10). Such requirements shall be incorporated into the PIP.

## **5. TRAINING**

All NMED employees shall be required to attend training on this policy. Such training shall occur no later than 120 days after the first signing of this policy. Subsequent trainings will occur at regular intervals, as determined by the NMED's Non-Discrimination Coordinator, including:

- a. When substantive changes are made to the policy;
- b. When new employees begin employment with NMED; and
- c. At three year intervals for all NMED employees.

Such training shall be provided by the Non-Discrimination Coordinator and the Office of General Counsel.

## **6. DISCIPLINE**

Any employee who fails to comply in good faith with the terms and provisions of this policy may face disciplinary consequences up to and including dismissal (Please see NMED Policy 02-71, Disciplinary Action).