: 13426

Communities for Clean Water

A Northern New Mexico Network

13 January 2017

By email to: Steven.Huddleson@state.nm.us, Jennifer.Hower@state.nm.us

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Re: Communities for Clean Water comments on Oct. 1, 2016 final draft permit DP-1132 and revised closure plan for Los Alamos National Laboratory Radioactive Liquid Waste Treatment Facility at Technical Area 50

Dear Steve and Jennifer:

Communities for Clean Water ("CCW") makes the following comments on the final draft of DP-1132 (November 15, 2016), incorporating by reference herein its earlier comments, including, but not limited to those concerning the changes made in the final draft allowing LANL a thirty-day (30) period for posting notices rather than the 7 (seven) day time period which had been agreed upon and was in the September draft:

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1. In this matter, the Environment Department ("NMED") seeks to issue a discharge permit ("DP-1132") under the New Mexico Water Quality Act (74-6-1 *et seq*. NMSA 1978) ("WQA") for the Radioactive Liquid Waste Treatment Facility ("RLWTF") at Los Alamos National Laboratory ("LANL") to the U.S. Department of Energy ("DOE") and Los Alamos National Security, LLC ("LANS"). For two principal reasons this discharge permit may not issue:

A. First, the RLWTF facility will not *discharge* any water or contaminants. Without a discharge, NMED has no authority to issue a discharge permit. 74-6-5(A), (I) NMSA 1978.

B. Second, the RLWTF is a *hazardous waste management facility*. Under 74-6-12(B) NMSA 1978, "[t]he 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 . . . "

2. Specifically, Section 74-6-5 states that the WQA applies only to a "discharge." Outfall 051 at the RLWTF issues no discharge. No discharge is planned. Therefore, the activities of the RLWTF are beyond the scope of the WQA.

3. The WQA expressly authorizes the Water Quality Control Commission ("WQCC") *only* to require "a permit for the discharge of any water contaminant." 74-6-5(A) NMSA 1978. Regulations define a "discharge plan" as a plan "for any discharge of effluent or leachate which may move directly or indirectly into ground water." 20.6.2.R NMAC. The pertinent portion of the regulations states that "no person shall cause or allow effluent or leachate to discharge so that it may move directly or indirectly into ground water" except pursuant to a discharge permit. 20.6.2.3104 NMAC (*emphasis supplied*).[1]

4. Thus, the WQA authorizes NMED to regulate a facility that makes a "discharge" by which a water contaminant is released to the environment so that it can move toward ground water. A transfer of water from one tank to another tank

[1] If NMED were actually concerned about leakage from the RLWTF facility, it might have required double lined pipes from the RLWTF to the Mechanical Evaporator System ("MES") or the Solar Evaporator Tank System ("SET"), but NMED refused to do so, because the treated water is considered "clean" – without water contamination. See draft permits exchanged between NMED, DOE/LANS, CCNS and Communities for Clean Water.

within a contained facility, after which the water and its contaminant remain isolated from the environment, does not meet this definition. The idea that a transfer of water from one storage tank to another storage tank or evaporation unit, or back again—an event that does not make a release into the environment and toward ground water even incrementally more likely—constitutes a "discharge" cannot be squared with the language of the WQA and its regulations.

5. Another theory is presented in NMED's memorandum dated December 2, 2016 concerning Discharge Permit DP-857 for LANL. It states that "Discharge permits are the appropriate mechanism for WWTFs [Waste Water Treatment Facilities] (such as the SWWS [Sanitary Waste Water System]) because the permits contemplate a failure of one or more of the mechanical systems (either in treatment or impoundment) that protect groundwater from contamination as a result of the discharge." *Id.* at 3.

6. The WQA does not authorize a permit for such a "possible" discharge. If the possibility of equipment "failure" required a discharge permit, then there would need to be a discharge permit for any pipe that connects a water tank to a power plant boiler, or to cooling towers, or to another treatment system, or to any other building. Obviously, any such pipe might leak.

7. But the WQA does not give NMED the discretionary authority to regulate a non-discharging facility, based upon someone's concern that it might leak. Here, LANL clearly has no plan to discharge any liquids from the RLWTF. NMED is not allowed to issue a discharge permit for a facility that does not discharge.

8. The issuance of an unauthorized discharge permit is not a harmless act. The WQA states that a facility that is subject to the Hazardous Waste Act, 74-4-1 *et seq.* NMSA 1978 ("HWA"), cannot be regulated by the WQA. 74-6-12(B) NMAC 1978. Therefore, issuance of a discharge permit under the WQA implies that NMED has determined that the facility cannot be subject to the HWA. To remove a facility wrongfully from the coverage of the HWA defeats the mandated scope of HWA regulation.

9. Further, a permit for a non-discharging facility is a futility. The term of a new discharge permit (like DP-1132) commences only with an actual discharge. The relevant portion of Section 74-6-5(I) NMSA 1978 states: "[T]he term of the permit shall commence on the date the discharge begins." *Id.* (*emphasis supplied*). *See also* 20.6.2.3109.H NMAC. Here, that will never happen, because Outfall 051 will have no discharge. DP-1132, upon issuance, would be a nullity and would

continue indefinitely to be a nullity. The New Mexico Legislature never intended NMED to spend its scarce resources to promulgate a nullity.

10. In addition, as noted, 74-6-12 NMSA 1978 states that the WQA does not apply to activities that are governed by the HWA:

> "B. 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 [Chapter 74, Article 4 NMSA 1978] . . . "

Id. at 12(B). Thus, Discharge Permit DP-1132 cannot be issued, because the RLWTF is subject to the HWA.

11. The Resource Conservation and Recovery Act ("RCRA") (42 U.S.C. § 6921 *et seq.*) contains federal statutory requirements as to the management of hazardous wastes. RCRA applies without regard to conflicting state statutes, because federal statutes are the supreme law of the land. (U.S. Const., Art. VI, Cl. 2).

12. Further, NMED represented to the U.S. Environmental Protection Agency ("EPA") that New Mexico's HWA program is "equivalent to, consistent with, and no less stringent than the federal program" under RCRA. EPA therefore authorized New Mexico under 42 U.S.C. § 6926(b) to operate the state's HWA program in lieu of RCRA. *See generally*, New Mexico: Final Authorization of State Hazardous Waste Management Program Revision, 72 Fed. Reg. 46165 (Aug. 17, 2007).

13. The HWA applies to any facility that treats, stores or disposes of hazardous waste. It requires the New Mexico Environmental Improvement Board ("EIB") to issue regulations as follows:

> 6. requiring each person owning or operating, or both, an existing facility or planning to construct a new facility for the treatment, storage or disposal of hazardous waste identified or listed under this subsection to have a permit issued pursuant to requirements established by the board; [and]
>
> 7. establishing procedures for the issuance, suspension, revocation and modification of permits issued under Paragraph (6) of this subsection,

> which rules shall provide for public notice, public comment and an opportunity for a hearing prior to the issuance, suspension, revocation or major modification of any permit unless otherwise provided in the Hazardous Waste Act[.]

74-4-4(A)(6), (7) NMSA 1978. Pursuant to the HWA, the EIB has issued hazardous waste management regulations. *See* 20.4.1 NMAC.

14. LANS/DOE concede 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 . . ." LANS/DOE have expressly stated that, "The RLWTF satisfies each of these conditions[.] The RLWTF [r]eceives and treats a small amount of hazardous wastewater[.]" LANS/DOE Comments, Dec. 12, 2013, Encl. 3 at 1. Moreover, LANS/DOE have told NMED that, "[A]ll units at the TA-50 RLWTF . . . have been characterized as a SWMU or AOC and are therefore subject to regulation under the [Consent Order]." LANS/DOE letter to [Jerry] Schoeppner, Head, Groundwater Quality Bureau, September 11, 2014.

Thus, LANS/DOE have determined that the RLWTF treats or stores hazardous waste. 40 C.F.R. §§ 264.90-101. As a facility that 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 must have a permit under RCRA or an authorized state program. 42 U.S.C. § 6925, 40 C.F.R. § 270.1(c).

15. LANS/DOE have heretofore avoided RCRA regulation by invoking a statutory exemption for discharges regulated under the National Pollutant Discharge Elimination System (42 U.S.C. § 6903(27)) ("NPDES") and a regulatory exemption for a "wastewater treatment unit" (40 C.F.R. §§ 260.10 (*Tank system, Wastewater treatment unit*), 264.1(g)(6)).

16. NMED must apply these exemptions, since 74-4-3.1 NMSA 1978 directs that "[n]othing in the Hazardous Waste Act shall be construed to apply to any activity or substance which is subject to the Federal Water Pollution Control Act, as amended . . . except to the extent that such application or regulation is not inconsistent with the requirements of such acts . . ."

17. Indeed, NMED has already done so in the final 2010 LANL HWA permit, where NMED states in Section 4.6 (see below) that the wastewater

treatment unit exemption depends upon the RLWTF discharging through a Clean Water Act outfall:

> 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. The Permittees shall not accept listed hazardous wastes as specified at 40 CFR Part 261 Subpart D at the RLWTF.

Id. at 86.

18. For more than six years since 2010, no discharges from Outfall 051 have occurred. No discharges are planned. A 2014 LANL report states: "Discharges from Outfall 051 decreased significantly after the mid-1980s and effectively ended in late 2010."[2] In late 2014 NMED reported to EPA Region 6 that Outfall 051 had not discharged since November 2010.[3] A LANL web site, NPDES Industrial Outfall Locations, states that "a mechanical evaporator was installed so no water has been discharged at Outfall 051 since November 2010."[4] The facts are set forth in detail in the Request to Terminate NPDES Permit #NM0028355 to Outfall 051 for the Radioactive Liquid Waste Treatment Facility (June 17, 2016), which is in the Record.

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[2] 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 the Request to Terminate NPDES Permit #NM0028355 to Outfall 051 for the Radioactive Liquid Waste Treatment Facility (June 17, 2016)(the "Request")).

[3] Letter, Yurdin to Dories with Inspection Report, at 4th page (August 5, 2014) (Ex. QQ to Request).

[4] LANL web site, NPDES Industrial Permit Outfall Locations, http://www.lanl.gov/community-environmental-stewardship (reviewed on Oct. 2, 2015) (Ex. RR to Request).

19. Without a "discharge," there can be no requirement for a NPDES permit, since the Clean Water Act regulates "the discharge of any pollutant, or combination of pollutants." 33 U.S.C. § 1342(a)(1). A "discharge" is "[a]ny addition of a 'pollutant' or combination of pollutants to 'waters of the United States' from any 'point source.'" 40 C.F.R. § 122.2.

20. An NPDES permit is only required for an actual discharge. *Waterkeeper Alliance, Inc. v. U.S. Environmental Protection Agency,* 399 F.3d 486, 505 (2d Cir. 2005), holds that

> in the absence of an actual addition of any pollutant to navigable waters from any point, there is no point source discharge, no statutory violation, no statutory obligation of point sources to comply with EPA regulations for point source discharges, and no statutory obligation of point sources to seek or obtain an NPDES permit in the first instance.

See also National Pork Producers Council v. U.S. Environmental Protection Agency, 635 F.3d 738, 750 (5th Cir. 2011) (rejecting another attempt by EPA to regulate facilities based upon a supposed "potential" discharge).

21. For a RCRA exemption, a "wastewater treatment unit" must be "subject to regulation under either section 402 or 307(b) of the Clean Water Act." *See* 40 C.F.R. § 260.10 (*Wastewater treatment unit*). Where there is no discharge, there is no requirement for a NPDES permit based on a discharge, and the facility has no exemption from RCRA. Thus, RCRA regulation is required. (See par. 14, above.).

22. Where RCRA regulation is required, the WQA does not apply. 74-6-12(B) NMSA 1978.

Conclusion:

23. Since RCRA—and in New Mexico the HWA—applies to the RLWTF, the WQA has no application, and NMED does not have jurisdiction to issue and/or regulate the RLWTF under a discharge permit. Therefore, this proceeding under the WQA must be dismissed, and a draft permit must be issued under the HWA.

Thank you for consideration of these and our previous unaddressed comments on the final draft DP-1132.

: 13433

Sincerely,

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cc: Environmental Protection Agency, Region 6
Jonathan M. Block, Esq.
Lindsay A. Lovejoy, Jr., Esq.

: 13434

: 13435

Huddleson, Steven, NMENV

From: jblock@nmelc.org
Sent: Tuesday, January 17, 2017 10:38 AM
To: Hower, Jennifer, NMENV
Cc: Lindsay Lovejoy; Huddleson, Steven, NMENV; 'Joni Arends'
Subject: RE: DP-1132; commments by CCW

Hello, Jennifer:
I apologize for not responding sooner. I'm in the middle of a post-trial brief in another matter. CCNS agrees with Mr. Lovejoy concerning the purpose of the comments. As you know from the past couple of years of meetings, it takes a while to get consensus from so many folks who have differing perspectives. The comments, which CCNS participated in framing, relate to the final permit with some changed conditions from the earlier "final" draft. This, CCNS felt, as did the folks Mr. Lovejoy represents in CCW, required a final letter commenting on the "new" final permit, and is, properly, part of the record of the pre-issuance meetings with the interested public.

Jon

-----Original Message-----
From: "Hower, Jennifer, NMENV" <Jennifer.Hower@state.nm.us>
Sent: Tuesday, January 17, 2017 10:25am
To: "Lindsay Lovejoy" <lindsay@lindsaylovejoy.com>
Cc: "Huddleson, Steven, NMENV" <Steven.Huddleson@state.nm.us>, "'Joni Arends'" <jarends@nuclearactive.org>, "'Jonathan Block'" <jblock@nmelc.org>
Subject: RE: DP-1132; commments by CCW

Thanks for the clarification, Lindsay.

From: Lindsay Lovejoy [mailto:lindsay@lindsaylovejoy.com]
Sent: Tuesday, January 17, 2017 10:20 AM
To: Hower, Jennifer, NMENV <Jennifer.Hower@state.nm.us>
Cc: Huddleson, Steven, NMENV <Steven.Huddleson@state.nm.us>; 'Joni Arends' <jarends@nuclearactive.org>; 'Jonathan Block' <jblock@nmelc.org>
Subject: RE: DP-1132; commments by CCW

Jennifer--
These comments respond to the drafts circulated in Oct. and Nov. CCW will look at what is circulated for public response and respond at that time.
Thank you,
--Lindsay

From: Hower, Jennifer, NMENV [mailto:Jennifer.Hower@state.nm.us]
Sent: Friday, January 13, 2017 7:21 PM
To: Lindsay Lovejoy

Cc: Huddleson, Steven, NMENV; 'Joni Arends'; 'Jonathan Block'
Subject: Re: DP-1132; commments by CCW

The PN-2 comment period hasn't started yet. Do you anticipate re-submitting these at that time?

Lindsay Lovejoy <lindsay@lindsaylovejoy.com> wrote:

Steve and Jennifer--
It's more appropriate to file with you a pdf version of the comments, which is attached.
Regards,
--Lindsay

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GROUND WATER
JAN 18 2017
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Date: JAN 18 2017
Symbol: EPC-DO-17-003
LA-UR: 16-29371
Locates Action No.: *NA*

Ms. Michelle Hunter, Chief
Ground Water Quality Bureau
New Mexico Environment Department
Harold Runnels Building, Room N2261
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, NM 87502

Dear Ms. Hunter:

Subject: **Discharge Plan DP-1132 Quarterly Report, Fourth Quarter 2016, TA-50 Radioactive Liquid Waste Treatment Facility**

This letter from the U.S. Department of Energy and Los Alamos National Security, LLC (DOE/LANS) is the fourth quarter 2016 Discharge Plan DP-1132 report for the Technical Area (TA)-50 Radioactive Liquid Waste Treatment Facility (RLWTF). Since the first quarter of 1999, DOE/LANS have provided the New Mexico Environment Department (NMED) with voluntary quarterly reports containing analytical results from effluent and groundwater monitoring.

During the fourth quarter of 2016, no effluent was discharged to either National Pollutant Discharge Elimination System (NPDES) Outfall 051 or to the solar evaporative tank system (SET) at TA-52; all effluent was evaporated on-site at the mechanical evaporator system (MES).

Quarterly Monitoring Results, Mortandad Canyon Alluvial Groundwater Wells

Table 1.0 presents the analytical results from sampling conducted at Mortandad Canyon alluvial well MCO-7 during the fourth quarter of 2016. No samples were collected from alluvial wells MCO-4B and MCO-6 because there was insufficient water in the wells for sampling. No sample was collected from alluvial well MCO-3 because the well was damaged beyond repair during a flood event in September 2013. A sample and duplicate sample from monitoring well MCO-7 were submitted to GEL Laboratories LLC for analysis. Analytical results from the sampling of intermediate and regional aquifer wells in Mortandad Canyon can be accessed online at the Intellus New Mexico environmental monitoring data web site (http://www.intellusnmdata.com).

TA-50 RLWTF Effluent Monitoring Results
No final weekly composite (FWC) samples were collected during the fourth quarter of 2016 because no effluent was discharged to Mortandad Canyon.

No final monthly composite (FMC) samples were collected during the fourth quarter of 2016 because no effluent was discharged to Mortandad Canyon.

Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at Karen.Armijo@nnsa.doe.gov, or Robert S. Beers by telephone at (505) 667-7969 or by email at bbeers@lanl.gov if you have questions regarding this report.

Sincerely,

Anthony R. Grieggs
Group Leader
Environmental Compliance Programs
Los Alamos National Security, LLC

Sincerely,

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

ARG:KEA:MTS:RSB/

Cy: Shelly Lemon, NMED/SWQB, Santa Fe, NM, (E-File)
John E. Kieling, NMED/HWB, Santa Fe, NM, (E-File)
Stephen M. Yanicak, NMED/DOE/OB, (E-File)
Jody M. Pugh, NA-LA, (E-File)
Karen E. Armijo, NA-LA, (E-File)
Craig S. Leasure, PADOPS, (E-File)
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Table 1.0. Mortandad Canyon Alluvial Well Sampling, 4th Quarter 2016.

Sampling Location	Sample Field Prep (F/UF)[1]	Sample Date	Perchlorate (µg/L)	NO_3+NO_2-N (mg/L)	TKN (mg/L)	NH3-N (mg/L)	TDS (mg/L)	F (mg/L)
MCO-3		Damaged[4]	Damaged[4]	Damaged[4]	Damaged[4]	Damaged[4]	Damaged[4]	Damaged[4]
MCO-4B	F	Dry[5]	Dry[5]	Dry[5]	Dry[5]	Dry[5]	Dry[5]	Dry[5]
MCO-6	F	Dry[5]	Dry[5]	Dry[5]	Dry[5]	Dry[5]	Dry[5]	Dry[5]
MCO-7	F	11/10/2016	6.20	0.74	0.10U	0.08	277	0.98
MCO-7 duplicate sample	F	11/10/2016	6.29	1.1	0.10U	0.07	264	1.1
NM WQCC 3103 Groundwater Standards			*NA*[2]	*10 mg/L*[3]	*NA*[2]	*NA*[2]	*1000 mg/L*	*1.6 mg/L*

Notes:

[1]F means the sample was filtered. UF means the sampled was not filtered.

[2]NA means that there is no NM WQCC 3103 standard for this analyte.

[3]The NM WQCC 3103 Groundwater Standard is for NO_3-N.

[4]Damaged means that the well was damaged beyond repair during a flood event in Mortandad Canyon in September 2013.

[5]Dry means there was not sufficient water for sampling.

J flag indicates an estimated value.

U flag means the result was less than the analytical laboratory's Method Detection Limit (MDL).

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JAN 18 2017
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Date: JAN 18 2017
Symbol: EPC-DO-17-007
LA-UR: 17-20013
Locates Action No.: *NA*

Ms. Michelle Hunter, Chief
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Harold Runnels Building, Room N2261
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Santa Fe, NM 87502

Dear Ms. Hunter:

Subject: **Filing of 90% Design Plans and Specifications, Radioactive Liquid Waste Treatment Facility Upgrade–Transuranic Liquid Waste Project, DP-1132**

In accordance with Section 20.6.2.1202 of the New Mexico Administrative Code, *Filing of Plans and Specifications—Sewerage Systems*, the U.S. Department of Energy and Los Alamos National Security, LLC (DOE/LANS) are submitting the 90% design plans and specifications (Enclosure 1–CD) for the Radioactive Liquid Waste Treatment Facility Upgrade–Transuranic Liquid Waste (RLWTF-TLW) Project at Technical Area (TA)-50. In December 2015 DOE/LANS provided the New Mexico Environment Department (NMED) with the 60% design plans and specifications for the RLWTF-TLW Project. The NMED responded to DOE/LANS request for comments on the 60% design on January 29, 2016. A copy of NMED's response letter is provided as Enclosure 2.

The RLWTF-TLW Project scope is to replace the existing transuranic liquid waste (TLW) treatment capability at Los Alamos National Laboratory. This project is a "like-for-like" replacement of the capability currently provided in RLWTF – Room 60, with the following exceptions:

- Equipment will be modernized per technological advances;
- Additional systems and equipment will be employed as needed to meet current orders, regulations, requirements, influent characteristics, etc.; and
- Facility and equipment sizing will be based on current projections of future capacity as opposed to the capacity available in the existing RLWTF.

The TLW process is comprised of the following three primary systems:

- Transuranic (TRU) Waste Influent Storage System;
- TRU Waste Treatment System; and
- TRU Secondary Waste treatment and Packaging System.

The TRU Waste Influent Storage System receives approximately 29,000 liters per year of TRU acid and caustic waste in approximately 400 liter batches of either acid or caustic liquid waste. It then transfers the waste to the TRU Waste Treatment System for treatment to remove radionuclides.

The TLW Waste Treatment System receives TRU waste from the TRU Waste Influent Storage System and provides primary treatment for removal of radioactive components. Treated water (product water) from TLW Waste Treatment System is transferred to the headworks of the Low-Level Waste Treatment System (LLW). The TRU Waste Treatment System also transfers the resulting secondary waste to the TRU Secondary Waste Treatment and Packaging System for secondary treatment and packaging for disposal. The TRU Secondary Waste Treatment and Packaging System collects, dewaters, and packages solids received from the tanks and equipment skids associated with the TRU Waste Treatment System. The RLWTF-TLW Project will be located at TA-50. The facility will consist of a single building.

Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at Karen.Armijo@nnsa.doe.gov, or Robert S. Beers by telephone at (505) 667-7969 or by email at bbeers@lanl.gov if you have questions regarding these plans and specifications.

Sincerely,

Anthony R. Grieggs
Group Leader
Environmental Compliance Programs
Los Alamos National Security, LLC

Sincerely,

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

ARG:KEA:MTS:RSB/

Enclosure:

(1) Compact Disc (CD) containing the 90% Design Plans and Specifications, Radioactive Liquid Waste Treatment Facility Upgrade–Transuranic Liquid Waste Project
(2) NMED letter providing comments on the 60% design plans and specifications for the TLW Upgrade Project, January 29, 2016

Cy: Shelly Lemon, NMED/SWQB, Santa Fe, NM, (E-File)
John E. Kieling, NMED/HWB, Santa Fe, NM, (E-File)
Stephen M. Yanicak, NMED/DOE/OB, (E-File)
Jody M. Pugh, NA-LA, (E-File)
Karen E. Armijo, NA-LA, (E-File)
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Michael T. Brandt, ADESH, (E-File)
Terry J. Singell, PADWP, (E-File)
Allison Respess Drexel, PM1, (E-File)
Cindy L. Costa, PM1, (E-File)
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ENCLOSURE 1 (CD)
90% Design Plans and Specifications,
Radioactive Liquid Waste Treatment
Facility Upgrade–Transuranic Liquid
Waste Project

EPC-DO-17-007
LA-UR-17-20013
January 2017
UNCLASSIFIED

Los Alamos
NATIONAL LABORATORY
Los Alamos NM 87545

Discharge Permit DP-1132
TA-50 RLWTF

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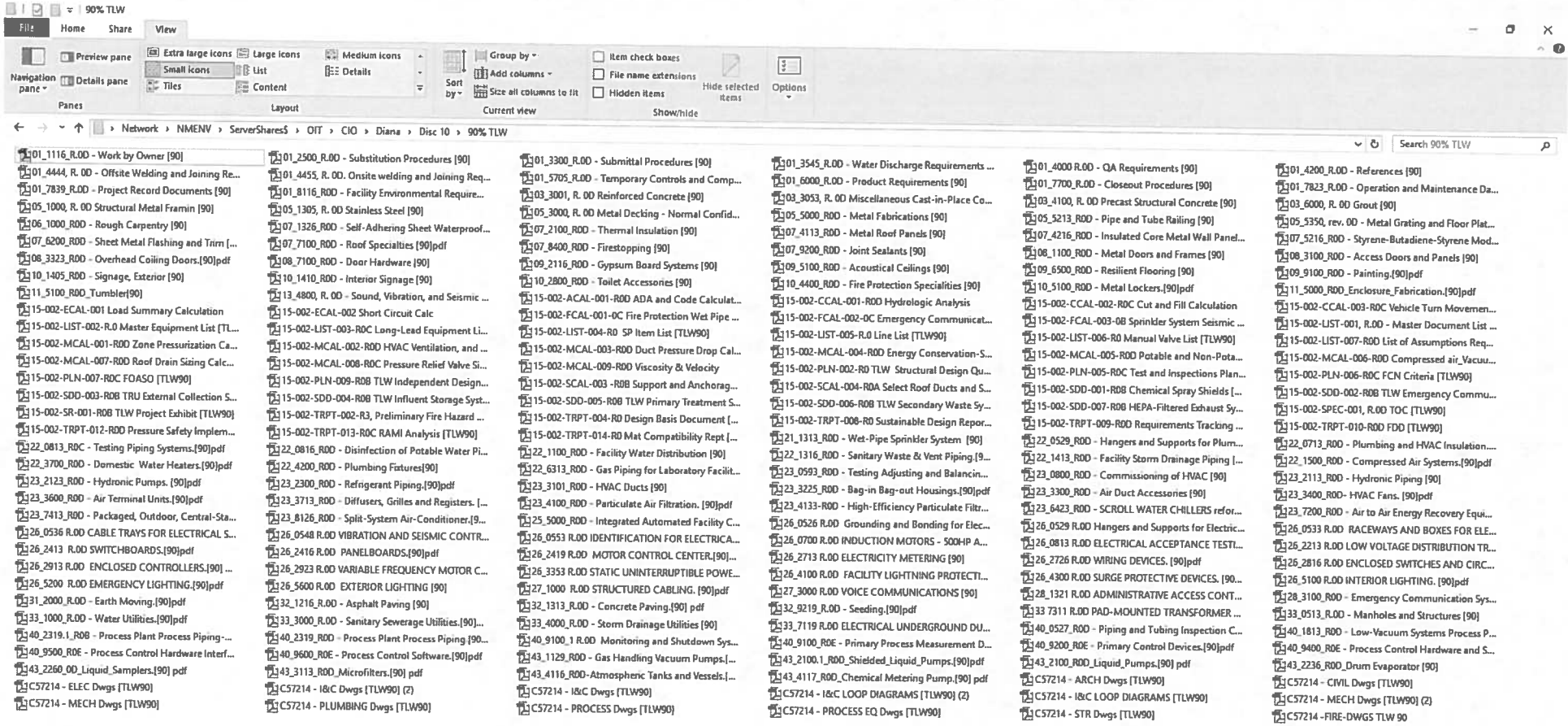
90% TLW
File
Home
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Preview pane
Details pane
Navigation pane
Extra large icons
Large icons
Medium icons
Small icons
List
Details
Tiles
Content
Panes
Layout
Sort by
Group by
Add columns
Size all columns to fit
Current view
Item check boxes
File name extensions
Hidden items
Hide selected items
Show/hide
Options
Network › NMENV › ServerShares$ › OIT › CIO › Diana › Disc 10 › 90% TLW
Search 90% TLW
01_1116_R.0D - Work by Owner [90]
01_2500_R.0D - Substitution Procedures [90]
01_3300_R.0D - Submittal Procedures [90]
01_3545_R.0D - Water Discharge Requirements ...
01_4000 R.0D - QA Requirements [90]
01_4200_R.0D - References [90]
01_4444, R. 0D - Offsite Welding and Joining Re...
01_4455, R. 0D. Onsite welding and Joining Req...
01_5705_R.0D - Temporary Controls and Comp...
01_6000_R.0D - Product Requirements [90]
01_7700_R.0D - Closeout Procedures [90]
01_7823_R.0D - Operation and Maintenance Da...
01_7839_R.0D - Project Record Documents [90]
01_8116_R0D - Facility Environmental Require...
03_3001, R. 0D Reinforced Concrete [90]
03_3053, R. 0D Miscellaneous Cast-in-Place Co...
03_4100, R. 0D Precast Structural Concrete [90]
03_6000, R. 0D Grout [90]
05_1000, R. 0D Structural Metal Framin [90]
05_1305, R. 0D Stainless Steel [90]
05_3000, R. 0D Metal Decking - Normal Confid...
05_5000_R0D - Metal Fabrications [90]
05_5213_R0D - Pipe and Tube Railing [90]
05_5350, rev. 0D - Metal Grating and Floor Plat...
06_1000_R0D - Rough Carpentry [90]
07_1326_R0D - Self-Adhering Sheet Waterproof...
07_2100_R0D - Thermal Insulation [90]
07_4113_R0D - Metal Roof Panels [90]
07_4216_R0D - Insulated Core Metal Wall Panel...
07_5216_R0D - Styrene-Butadiene-Styrene Mod...
07_6200_R0D - Sheet Metal Flashing and Trim [...
07_7100_R0D - Roof Specialties [90]pdf
07_8400_R0D - Firestopping [90]
07_9200_R0D - Joint Sealants [90]
08_1100_R0D - Metal Doors and Frames [90]
08_3100_R0D - Access Doors and Panels [90]
08_3323_R0D - Overhead Coiling Doors.[90]pdf
08_7100_R0D - Door Hardware [90]
09_2116_R0D - Gypsum Board Systems [90]
09_5100_R0D - Acoustical Ceilings [90]
09_6500_R0D - Resilient Flooring [90]
09_9100_R0D - Painting.[90]pdf
10_1405_R0D - Signage, Exterior [90]
10_1410_R0D - Interior Signage [90]
10_2800_R0D - Toilet Accessories [90]
10_4400_R0D - Fire Protection Specialities [90]
10_5100_R0D - Metal Lockers.[90]pdf
11_5000_R0D_Enclosure_Fabrication.[90]pdf
11_5100_R0D_Tumbler[90]
13_4800, R. 0D - Sound, Vibration, and Seismic ...
15-002-CCAL-001-R0D ADA and Code Calculat...
15-002-CCAL-001-R0D Hydrologic Analysis
15-002-CCAL-002-R0C Cut and Fill Calculation
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15-002-ECAL-001 Load Summary Calculation
15-002-ECAL-002 Short Circuit Calc
15-002-FCAL-001-0C Fire Protection Wet Pipe ...
15-002-FCAL-002-0C Emergency Communicat...
15-002-FCAL-003-08 Sprinkler System Seismic ...
15-002-LIST-001, R.0D - Master Document List ...
15-002-LIST-002-R.0 Master Equipment List [TL...
15-002-LIST-003-R0C Long-Lead Equipment Li...
15-002-LIST-004-R0 SP Item List [TLW90]
15-002-LIST-005-R.0 Line List [TLW90]
15-002-LIST-006-R0 Manual Valve List [TLW90]
15-002-LIST-007-R0D List of Assumptions Req...
15-002-MCAL-001-R0D Zone Pressurization Ca...
15-002-MCAL-002-R0D HVAC Ventilation, and ...
15-002-MCAL-003-R0D Duct Pressure Drop Cal...
15-002-MCAL-004-R0D Energy Conservation-S...
15-002-MCAL-005-R0D Potable and Non-Pota...
15-002-MCAL-006-R0D Compressed air_Vacuu...
15-002-MCAL-007-R0D Roof Drain Sizing Calc...
15-002-MCAL-008-R0C Pressure Relief Valve Si...
15-002-MCAL-009-R0D Viscosity & Velocity
15-002-PLN-002-R0 TLW Structural Design Qu...
15-002-PLN-005-R0C Test and Inspections Plan...
15-002-PLN-006-R0C FCN Criteria [TLW90]
15-002-PLN-007-R0C FOASO [TLW90]
15-002-PLN-009-R0B TLW Independent Design...
15-002-SCAL-003 -R0B Support and Anchorag...
15-002-SCAL-004-R0A Select Roof Ducts and S...
15-002-SDD-001-R0B Chemical Spray Shields [...
15-002-SDD-002-R0B TLW Emergency Commu...
15-002-SDD-003-R0B TRU External Collection S...
15-002-SDD-004-R0B TLW Influent Storage Syst...
15-002-SDD-005-R0B TLW Primary Treatment S...
15-002-SDD-006-R0B TLW Secondary Waste Sy...
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15-002-SPEC-001, R.0D TOC [TLW90]
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15-002-TRPT-002-R3, Preliminary Fire Hazard ...
15-002-TRPT-004-R0 Design Basis Document [...
15-002-TRPT-008-R0 Sustainable Design Repor...
15-002-TRPT-009-R0D Requirements Tracking ...
15-002-TRPT-010-R0D FDD [TLW90]
15-002-TRPT-012-R0D Pressure Safety Implem...
15-002-TRPT-013-R0C RAMI Analysis [TLW90]
15-002-TRPT-014-R0 Mat Compatibility Rept [...
21_1313_R0D - Wet-Pipe Sprinkler System [90]
22_0529_R0D - Hangers and Supports for Plum...
22_0713_R0D - Plumbing and HVAC Insulation....
22_0813_R0C - Testing Piping Systems.[90]pdf
22_0816_R0D - Disinfection of Potable Water Pi...
22_1100_R0D - Facility Water Distribution [90]
22_1316_R0D - Sanitary Waste & Vent Piping.[9...
22_1413_R0D - Facility Storm Drainage Piping [...
22_1500_R0D - Compressed Air Systems.[90]pdf
22_3700_R0D - Domestic Water Heaters.[90]pdf
22_4200_R0D - Plumbing Fixtures[90]
22_6313_R0D - Gas Piping for Laboratory Facilit...
23_0593_R0D - Testing Adjusting and Balancin...
23_0800_R0D - Commissioning of HVAC [90]
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23_3101_R0D - HVAC Ducts [90]
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23_3400_R0D- HVAC Fans. [90]pdf
23_3600_R0D - Air Terminal Units.[90]pdf
23_3713_R0D - Diffusers, Grilles and Registers. [...
23_4100_R0D - Particulate Air Filtration. [90]pdf
23_4133-R0D - High-Efficiency Particulate Filtr...
23_6423_R0D - SCROLL WATER CHILLERS refor...
23_7200_R0D - Air to Air Energy Recovery Equi...
23_7413_R0D - Packaged, Outdoor, Central-Sta...
23_8126_R0D - Split-System Air-Conditioner.[9...
25_5000_R0D - Integrated Automated Facility C...
26_0526 R.0D Grounding and Bonding for Elec...
26_0529 R.0D Hangers and Supports for Electric...
26_0533 R.0D RACEWAYS AND BOXES FOR ELE...
26_0536 R.0D CABLE TRAYS FOR ELECTRICAL S...
26_0548 R.0D VIBRATION AND SEISMIC CONTR...
26_0553 R.0D IDENTIFICATION FOR ELECTRICA...
26_0700 R.0D INDUCTION MOTORS - 500HP A...
26_0813 R.0D ELECTRICAL ACCEPTANCE TESTI...
26_2213 R.0D LOW VOLTAGE DISTRIBUTION TR...
26_2413 R.0D SWITCHBOARDS.[90]pdf
26_2416 R.0D PANELBOARDS.[90]pdf
26_2419 R.0D MOTOR CONTROL CENTER.[90]...
26_2713 R.0D ELECTRICITY METERING [90]
26_2726 R.0D WIRING DEVICES. [90]pdf
26_2816 R.0D ENCLOSED SWITCHES AND CIRC...
26_2913 R.0D ENCLOSED CONTROLLERS.[90] ...
26_2923 R.0D VARIABLE FREQUENCY MOTOR C...
26_3353 R.0D STATIC UNINTERRUPTIBLE POWE...
26_4100 R.0D FACILITY LIGHTNING PROTECTI...
26_4300 R.0D SURGE PROTECTIVE DEVICES. [90...
26_5100 R.0D INTERIOR LIGHTING. [90]pdf
26_5200 R.0D EMERGENCY LIGHTING.[90]pdf
26_5600 R.0D EXTERIOR LIGHTING [90]
27_1000 R.0D STRUCTURED CABLING. [90]pdf
27_3000 R.0D VOICE COMMUNICATIONS [90]
28_1321 R.0D ADMINISTRATIVE ACCESS CONT...
28_3100_R0D - Emergency Communication Sys...
31_2000_R.0D - Earth Moving.[90]pdf
32_1216_R.0D - Asphalt Paving [90]
32_1313_R.0D - Concrete Paving.[90] pdf
32_9219_R.0D - Seeding.[90]pdf
33 7311 R.0D PAD-MOUNTED TRANSFORMER ...
33_0513_R.0D - Manholes and Structures [90]
33_1000_R.0D - Water Utilities.[90]pdf
33_3000_R.0D - Sanitary Sewerage Utilities.[90]...
33_4000_R.0D - Storm Drainage Utilities [90]
33_7119 R.0D ELECTRICAL UNDERGROUND DU...
40_0527_R0D - Piping and Tubing Inspection C...
40_1813_R0D - Low-Vacuum Systems Process P...
40_2319.1_R08 - Process Plant Process Piping-...
40_2319_R0D - Process Plant Process Piping [90...
40_9100_1 R.0D Monitoring and Shutdown Sys...
40_9100_R0E - Primary Process Measurement D...
40_9200_R0E - Primary Control Devices.[90]pdf
40_9400_R0E - Process Control Hardware and S...
40_9500_R0E - Process Control Hardware Interf...
40_9600_R0E - Process Control Software.[90]pdf
43_1129_R0D - Gas Handling Vacuum Pumps.[...
43_2100.1_R0D_Shielded_Liquid_Pumps.[90]pdf
43_2100.1_R0D_Liquid_Pumps.[90] pdf
43_2236_R0D_Drum Evaporator [90]
43_2260_0D_Liquid_Samplers.[90] pdf
43_3113_R0D_Microfilters.[90] pdf
43_4116_R0D-Atmospheric Tanks and Vessels.[...
43_4117_R0D_Chemical Metering Pump.[90] pdf
C57214 - ELEC Dwgs [TLW90]
C57214 - I&C Dwgs [TLW90] (2)
C57214 - I&C Dwgs [TLW90]
C57214 - I&C LOOP DIAGRAMS [TLW90] (2)
C57214 - ARCH Dwgs [TLW90]
C57214 - CIVIL Dwgs [TLW90]
C57214 - MECH Dwgs [TLW90]
C57214 - PLUMBING Dwgs [TLW90]
C57214 - PROCESS Dwgs [TLW90]
C57214 - PROCESS EQ Dwgs [TLW90]
C57214 - I&C LOOP DIAGRAMS [TLW90]
C57214 - MECH Dwgs [TLW90] (2)
C57214 - STR Dwgs [TLW90]
C57214 -FIRE-DWGS TLW 90
198 items

ENCLOSURE 1

Compact Disc (CD) containing the 90% Design Plans and Specifications, Radioactive Liquid Waste Treatment Facility Upgrade–Transuranic Liquid Waste Project

ENV-DO-17-007

LA-UR-17-20013

Date: JAN 1 8 2017

: 13448

ENCLOSURE 2

NMED letter providing comments on the 60% design plans and specifications for the TLW Upgrade Project, January 29, 2016

ENV-DO-17-007

LA-UR-17-20013

Date: JAN 1 8 2017

: 13449

NEW MEXICO
ENVIRONMENT DEPARTMENT

Harold Runnels Building
1190 South St. Francis Drive (87505)
P.O. Box 5469, Santa Fe, New Mexico 87502-5469
Phone (505) 827-2900 Fax (505) 827-2965
www.env.nm.gov

SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lieutenant Governor

RYAN FLYNN
Cabinet Secretary

BUTCH TONGATE
Deputy Secretary

RECEIVED
FEB 05 2016

January 29, 2016

Alison M. Dorries, Division Leader
Environmental Protection Division
Los Alamos National Laboratory
P.O. Box 1663 MS K490
Los Alamos, New Mexico 87545-0001

RE: Comments on 60% Design Plans and Specifications Radioactive Liquid Waste Treatment Facility - Upgrade Project Transuranic Liquid Waste Project, DP-1132

Dear Ms. Dorries:

The New Mexico Environment Department, Ground Water Quality Bureau (GWQB) has received from the Department of Energy and Los Alamos National Security LLC (DOE/LANS) design documents for the Radioactive Liquid Waste Treatment Facility Upgrade Project (RLWTF UP) including:

- 60% design plans and specifications for the RLWTF UP at Technical Area (TA)-50, including supplemental information to discharge permit application DP-1132.

The DOE/LANS has requested comments from GWQB on the referenced plans and specifications. GWQB has reviewed the 60% plans and specifications for compliance with basic elements necessary for protection of groundwater quality. GWQB makes no comment regarding the design adequacy, compliance with applicable State, Federal, and local statute, code and requirements.

The review confirms that the design, construction specifications, proposed systems and calculations are generally appropriate, and include adequate safeguards to protect groundwater quality including secondary containment for in-service drums of ferric chloride, and structural integrity of sanitary sewer lines and their connections to manholes. While not a concern for ground water, the GWQB notes that the water quality acute criterion for chlorine in surface water is 19 ug/L, which needs to be taken into account if chlorinated water from disinfecting water

supply pipe is discharged to a surface water. Also, in Section 22 0816, 3.4 D, the word "chloride" should be "chlorine".

As a sealed engineering document, GWQB relies on the design engineer for the efficacy of the design to meet permit requirements. GWQB similarly relies on DOE/LANS to provide adequate construction oversight to ensure conformance with the design specifications. Construction of the facility prior to issuance of the final approved Discharge Permit will proceed at DOE/LANS own risk, should DOE/LANS decide to proceed with construction before GWQB issues the final permit.

The GWQB appreciates the opportunity to provide these comments on the proposed RLWTF Upgrade Project. Please contact me or Steven Huddleson at (505) 827-2936 if you have any questions.

Sincerely,

Michelle Hunter, Chief
Ground Water Quality Bureau

cc: Gene E. Turner, Los Alamos National Laboratory, P.O. Box 1663 MS K490
Los Alamos, New Mexico 87545-0001
John Kieling, Hazardous Waste Bureau (electronic copy)
Jim Chiasson, Construction Programs Bureau (electronic copy)
Steven Huddleson, Ground Water Quality Bureau (electronic copy)
Gerard Knutson, Ground Water Quality Bureau (electronic copy)
Bruce Yurdin, Surface Water Quality Bureau (electronic copy)
Jennifer Hower, Office of General Counsel (electronic copy)

: 13452

Los Alamos
NATIONAL LABORATORY
EST. 1943

Environmental Protection & Compliance Division
Compliance Programs (EPC-CP)
PO Box 1663, K490
Los Alamos, New Mexico 87545
(505) 667-0666

National Nuclear Security Administration
Los Alamos Field Office, A316
3747 West Jemez Road
Los Alamos, New Mexico, 87545
(505) 667-5105/Fax (505) 667-5948

Date: FEB 15 2017
Symbol: EPC-DO: 17-088
LA-UR: 17-20789
Locates Action No.: *N/A*

GROUND WATER
FEB 15 2017
BUREAU

Ms. Michelle Hunter, Bureau Chief
Ground Water Quality Bureau
New Mexico Environment Department
Harold Runnels Building, Room N2261
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, NM 87502

Subject: Filing of 100% Design Drawings, Radioactive Liquid Waste Treatment Facility, Sodium Hydroxide Chemical Feed System, DP-1132

Dear Ms. Hunter:

In accordance with Section 20.6.2.1202 of the New Mexico Administrative Code, the U.S. Department of Energy and Los Alamos National Security, LLC (DOE/LANS) are submitting the 100% design drawings (Enclosure 1) for installation of a Sodium Hydroxide (NaOH) chemical feed system at the Radioactive Liquid Waste Treatment Facility's Waste Management/Risk Mitigation (WMRM) facility. Additional information on the NaOH chemical feed system is provided below.

DOE/LANS are proposing to install a NaOH chemical feed system within the WMRM facility for pH adjustment of radioactive liquid waste influent. The NaOH storage tank will have a total capacity of 1,000 gallons. This system was part of the initial WMRM design but was de-scoped during construction.

The chemical feed system will add NaOH (25%) to two existing 50,000-gal influent storage tanks, RLW-TK-005 and RLW-TK-006. The feed system will allow for pH adjustment of stored influent using NaOH prior to transfer of its contents to the new Low-Level Waste Facility for treatment. Influent pH will be raised to between 8.0 and 8.5.

Room 2 of the WMRM facility will be used to house the chemical addition system's storage tank and associated pumps. The room currently contains two chemical storage tanks that were part of the original NaOH design. The tanks sit on grating and there is a low point in the NE corner for the Rm 2 for a sump pump. The scope of activities for the chemical feed design includes:

1. Seismic calculation for anchorage of storage tank.
2. Install a new chemical tank TK-002 for NaOH storage (NCR-032).
3. Installation of system fill, vent and distribution piping.
4. Associated instrumentation: storage tank level, overflow alarm, influent pH analysis, and chemical feed.
5. Chemical feed pumps.
6. Installation of sump pump and associated piping (chemical storage room has sump).
7. Electrical power for pumps and instrumentation.
8. Influent pH analysis of 2-ea influent storage tanks (RLW-TK-005 & 006)

The new NaOH chemical feed system will placed into service before the new Low Level Treatment Facility begins operations in CY2018.

Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at Karen.Armijo@nnsa.doe.gov, or Robert S. Beers by telephone at (505) 667-7969 or by email at bbeers@lanl.gov if you have questions regarding this information.

Sincerely,

Anthony R. Grieggs
Group Leader
Environmental Compliance Programs
Los Alamos National Security, LLC
Los Alamos National Laboratory

Sincerely,

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

ARG/KEA/MTS/RSB:eim: am

Enclosures: (1) NaOH chemical feed system design drawings

Copy: Shelly Lemon, NMED/SWQB, Santa Fe, NM, (E-File)
John E. Kieling, NMED/HWB, Santa Fe, NM, (E-File)
Stephen M. Yanicak, NMED/DOE/OB, (E-File)
Jody M. Pugh, NA-LA, (E-File)
Karen E. Armijo, NA-LA, (E-File)
Craig S. Leasure, PADOPS, (E-File)
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adesh-records@lanl.gov, (E-File)

ENCLOSURE 1

NaOH chemical feed system design drawings

EPC-DO: 17-088

LA-UR-17-20789

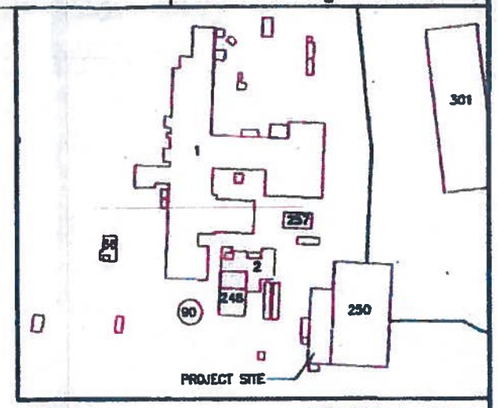
FEB 15 2017

Date:_____

: 13456

WMRM NaOH CHEMICAL FEED

BLDG 0250 TA-50



LOCATION PLAN
SCALE: NONE TA-50

LIST OF DRAWINGS

REV.	SKETCH NUMBER	DISCIPLINE SHEET	SKETCH TITLE
0	1	C-1	TITLE SHEET & LIST OF DRAWINGS
	2	M-1	DEMOLITION REQUIREMENTS
0	3	M-2	CHEMICAL TANK LAYOUT PLAN
0	4	M-3	NaOH SYSTEM PIPING -PLAN VIEW
0	5	M-4	CHEMICAL ROOM -ENLARGED VIEW
0	6	M-5	CHEMICAL ROOM - SOUTH WALL ELEVATION
0	7	M-6	ROOM 104 SOUTH WALL ELEVATION
0	8	M-7	CHEMICAL ROOM SUMP
0	9	M-8	RLW-TK-005 & 006 pH ANALYZER
0	10	M-9	PH ANALYZER ELEVATION & DETAILS
0	11	M-10	DESIGN DETAILS P.1
0	12	M-11	DESIGN DETAILS P.2
0	13	E-1	ELECTRICAL POWER PLAN -CHEMICAL ROOM
0	14	E-2	ELECTRICAL POWER PLAN -pH ANALYZER
0	15	E-3	PANEL SCHEDULES, PLC-250 REMOTE RACK LAYOUT

PROJECT DESIGN DATA

MANAGEMENT LEVEL ML-4
PERFORMANCE CATEGORY PC-1
IEBC ALTERATION LEVEL 2A
PIPING IS ASME B31.3 FLUID SERVICE CATEGORY NORMAL
CHEMICAL STORAGE TANK: API-STD-650

STATEMENT OF WORK

THE SCOPE OF THIS WORK INVOLVES REMOVAL OF TWO UNUSED STORAGE TANKS IN 50-0250-2 (CHEMICAL ROOM) AND INSTALLATION OF,

1. ONE 1,000-GAL CHEMICAL STORAGE TANK 50-0250-2 WITH NECESSARY FILL, VENT, OVERFLOW AND CHEMICAL DISTRIBUTION PIPING.
3. CHEMICAL PUMPING SKID SYSTEM.
4. CHEMICAL ROOM SUMP PUMP.
5. pH ANALYZER SYSTEM FOR RLW-TK-005 & 006.
6. ASSOCIATED INSTRUMENTATION & CONTROLS FOR NEWLY INSTALLED EQUIPMENT AND
7. NECESSARY ELECTRICAL MODIFICATION TO PROVIDE POWER TO NEWLY INSTALLED EQUIPMENT

DESIGN CRITERIA

THE CHEMICAL SUPPLY SYSTEM INSTALLED UNDER THIS DCF SHALL:

1. PROVIDE NaOH (24%) NECESSARY FOR THE pH ADJUSTMENT OF LOW-LEVEL RLW PRIOR TO TREATMENT AT 50-230. SYSTEM STORAGE CAPACITY SHOULD PROVIDE AN AMOUNT OF NaOH NECESSARY FOR THE pH ADJUSTMENT OF THE CURRENT ANTICIPATED ANNUAL INFLUENT FLOW TO THE RLWTF. INSTALLATION OF A 1,000-GAL CHEMICAL STORAGE TANK SATISFIES THIS GOAL.
2. ENEURE A DELIVERY RATE OF NaOH WHICH WILL REBULT IN A pH TREATMENT CYCLE OF UNDER FOUR-HOURS EACH TIME RLW-TF-005 OR RLW-TK-006 IS FULL (50,000-GAL/TANK) HISTORICAL DATA SHOWS THAT THE AMOUNT OF NaOH NECESSARY TO TREAT 50,000-GAL OF RLW IS APPROXIMATELY 32-GAL. NaOH DELIVERY PUMP HAVING A DELIVERY RATE > 16-GPH WILL ENSURE THIS CRITERIA IS MEET WHILE STILL ALLOWING TIME FOR BOTH MIXING AND SAMPLING DURING A TYPICAL pH TREATMENT CYCLE.
3. PROVIDE REAL-TIME pH MEASUREMENTS OF STORED INFLUENT DURING A pH TREATMENT CYCLE. THIS DESIGN INCLUDES pH PROBE, CIRCULATING PUMP AND PIPING THAT WILL DRAW INFLUENT FROM THE BOTTOMS OF RLW-TK-005 & RLW-TK-006 FOR SAMPLING (SAMPLE RETURN IS PIPED TO TOP OF RLW-TK-006)

PRODUCT OPTIONS AND SUBSTITUTIONS

"OR APPROVED EQUAL" IS ALWAYS IMPLIED AFTER A BRAND NAME, PATENTED PROCESS OR CATALOG NUMBER. THE CONTRACTOR MAY SUBSTITUTE ANY BRAND OR PROCESS APPROVED AS AN EQUAL BY THE SPECIFYING ARCHITECT/ENGINEER THROUGH THE SUBMITTAL PROCESS. THE ONLY EXCEPTION IS WHERE "NO SUBSTITUTION" IS SPECIFIED. SEE GENERAL PROVISION "MATERIAL AND WORKMANSHIP"

Signature 1/18/17 Date

RELEASED FOR PLANNING BY CM

NO	DATE	CLASS REV	DC	DESCRIPTION	DWN	DSGN	CHKD	SUB	APP
0				INITIAL ISSUE FOR DCF-16-50-0250-1531					

ENGINEERING SERVICES

WMRM NaOH CHEMICAL ADDITION

TITLE SHEET AND LIST OF DRAWINGS

TA-50 BLDG 0250

DRAWN
DESIGN
CHECKED
DATE 01-10-17

SUBMITTED R. STRICKFADEN

APPROVED FOR RELEASE C. DARVEVEDE

Los Alamos NATIONAL LABORATORY
PO Box 1663
Los Alamos, New Mexico 87545

SHEET SK-G1
1 OF 15

DC U REVIEWER C. DARVEVEDE DATE 17-JAN-17

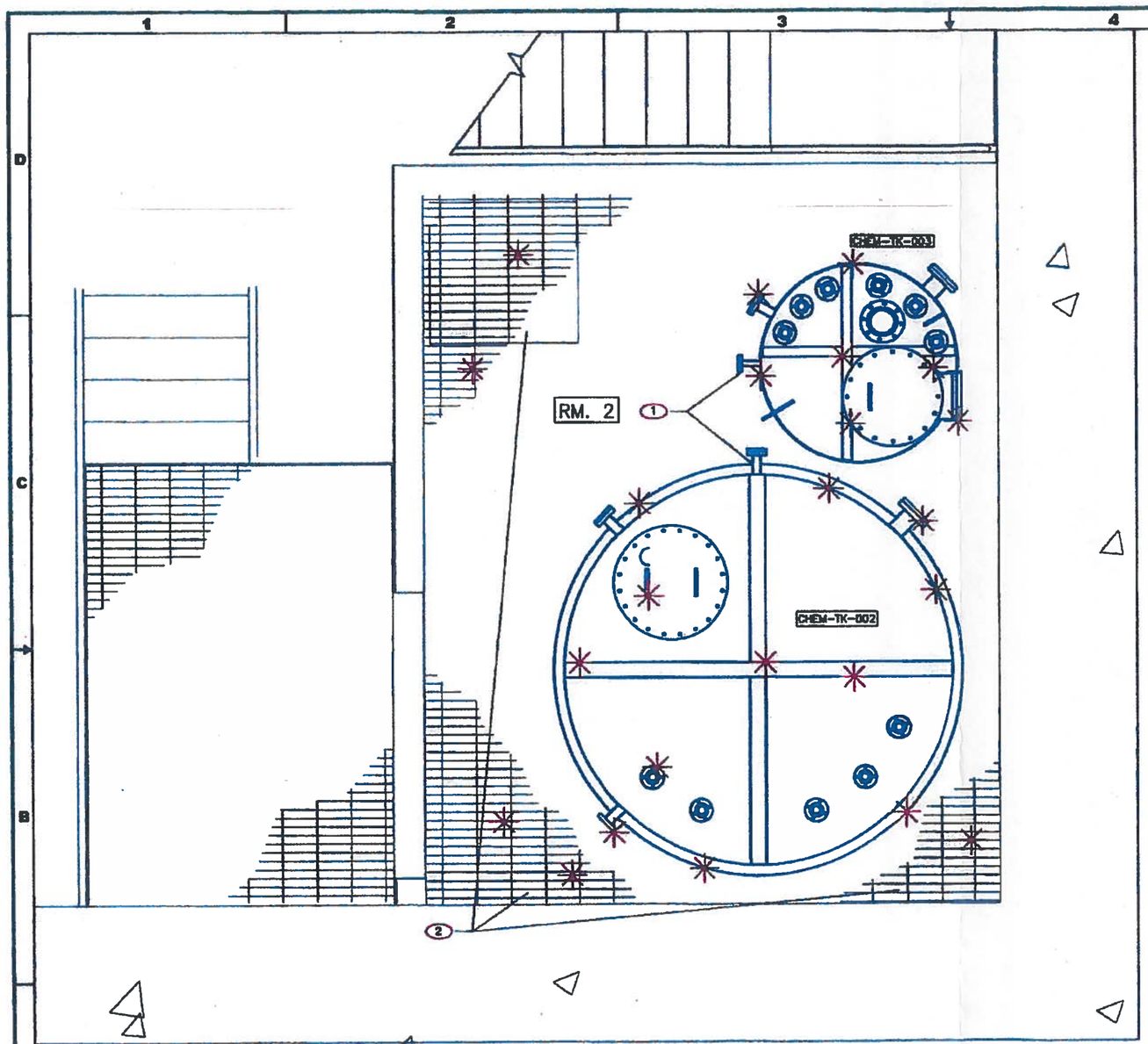
PROJECT ID N/A

DRAWING NO DCF-16-50-0250-1531-SK-1

REV 0

Plotted By: 115873 PM: Strickfaden 11, 2017
DCF-16-50-0250-1531 J = 10-17.DWG

COPY



DEMOLITION REQUIREMENTS
SCALE: NONE

GENERAL NOTES:

1. "OR APPROVED EQUAL" IS ALWAYS IMPLIED AFTER A BRAND NAME, PATENTED PROCESS OR CATALOG NUMBER. THE CONTRACTOR MAY SUBSTITUTE ANY BRAND OR PROCESS APPROVED EQUAL BY SPECIFYING ARCHITECT / ENGINEER. THE ONLY EXCEPTION IS WHERE "NO SUBSTITUTION" IS SPECIFIED
2. REFER TO BILL OF MATERIALS (BOM) IN REFERENCED DCF FOR MATERIAL CALLOUTS AND INSPECTION REQUIREMENTS
3. ALL ITEMS ML-4
4. ALL INSTALLATION SHALL CONFORM WITH LANL STANDARDS
5. FIELD VERIFY AND ADJUST DIMENSIONS IN ACCORDANCE WITH LANL STANDARDS
6. ALL FITTINGS AND PIPE JOINTS WELDED IAW B31.3 §328 REQUIREMENTS.

KEYED NOTES:

1. REMOVE TANKS CHEM-TK-002 & CHEM-TK-003. NOTE: IT WILL BE NECESSARY TO CUT CHEM-TK-002 INTO SECTION FOR REMOVAL.
2. REMOVE COMPLETELY ALL 1-1/2" X 1/4" BAR GRATING (35S-PSF) WITHIN CHEMICAL ROOM 2. REPLACE WITH 2" X 3/16" GRATING.

Signature 1/18/17 Date

RELEASED FOR PLANNING BY CM

NO	DATE	CLASS REV	DC	DESCRIPTION	DWN	DSGN	CHKD	SUB	APP
0				INITIAL ISSUE FOR DCF-16-50-0250-1531					

ENGINEERING SERVICES

WMRM NaOH CHEMICAL ADDITION

NaOH SYSTEM PIPING
DEMOLITION REQUIREMENTS

TA-50 BLDG 0250

SUBMITTED R. STRINGFIELD

APPROVED FOR RELEASE C. DeVEVERS

DRAWN R. STRINGFIELD
DESIGN R. STRINGFIELD
CHECKED C. DeVEVERS
DATE 1-10-17

Los Alamos NATIONAL LABORATORY
PO Box 1663 Los Alamos, New Mexico 87545

SHEET SK-M1
2 OF 15

DC U REVIEWER C. DeVEVERS DATE 12-JAN-17

PROJECT ID N/A
DRAWING NO DCF-16-50-0250-1531-SK-1
REV 0

Plotted By:118873 Plot Date:January 11, 2017
DCF-16-50-0250-1531_1-10-17.DWG

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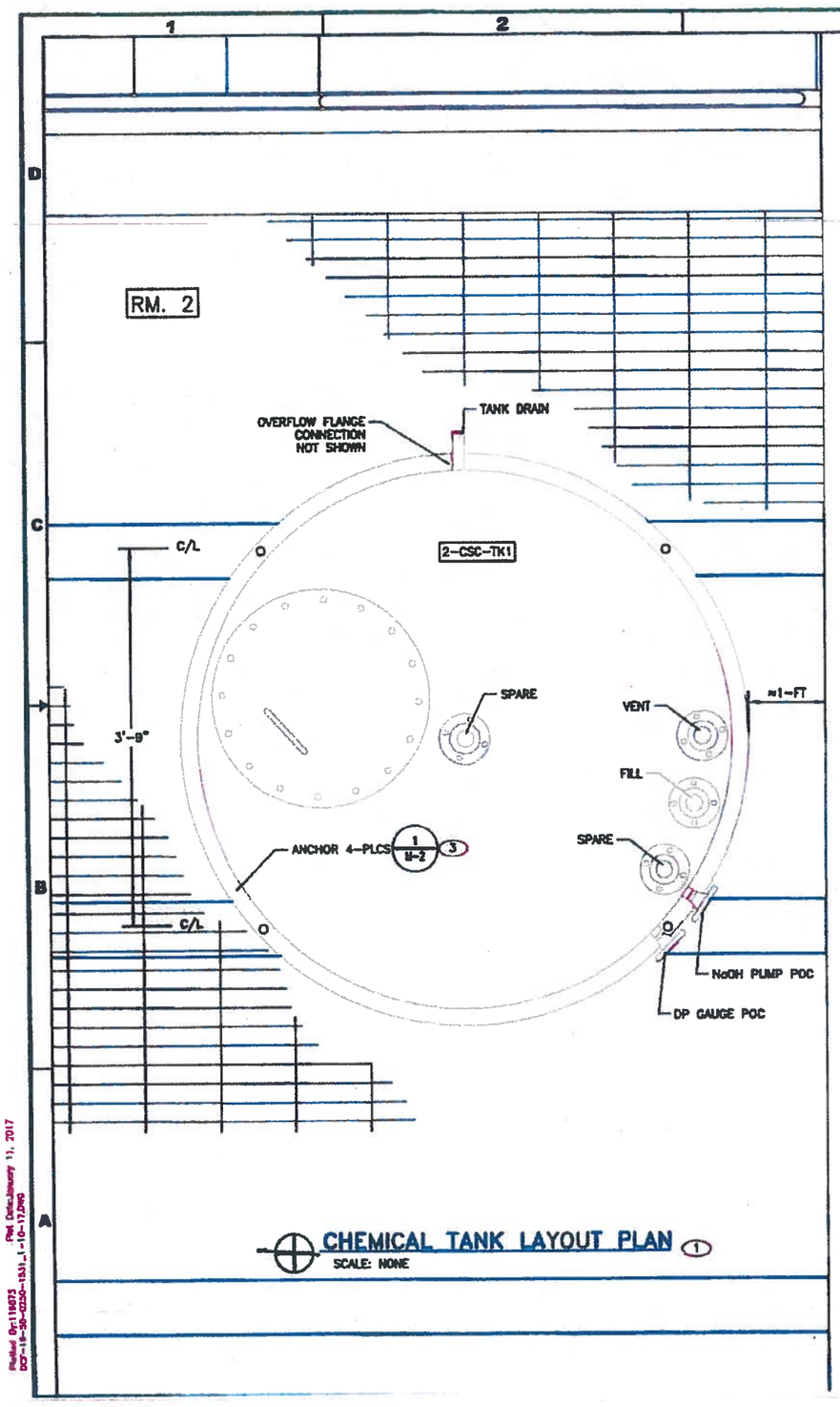

CHEMICAL TANK LAYOUT PLAN ①
SCALE: NONE

Plotted On:1/9/73 Plot Date:January 11, 2017
DCF-16-50-0250-1531-1-10-17.DWG

GENERAL NOTES:

1. "OR APPROVED EQUAL" IS ALWAYS IMPLIED AFTER A BRAND NAME, PATENTED PROCESS OR CATALOG NUMBER. THE CONTRACTOR MAY SUBSTITUTE ANY BRAND OR PROCESS APPROVED EQUAL BY SPECIFYING ARCHITECT / ENGINEER. THE ONLY EXCEPTION IS WHERE "NO SUBSTITUTION" IS SPECIFIED
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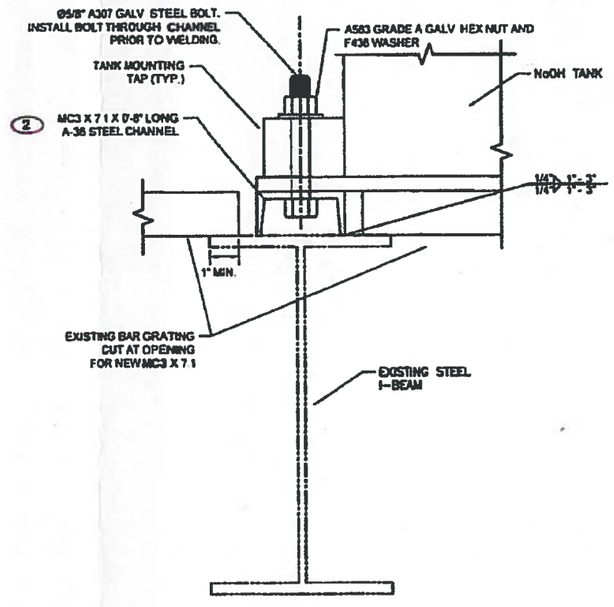
3. ALL ITEMS ML-4
4. ALL INSTALLATION SHALL CONFORM WITH LANL STANDARDS
5. FIELD VERIFY AND ADJUST DIMENSIONS IN ACCORDANCE WITH LANL STANDARDS

KEYED NOTES:

① CHEMICAL TANK POSITIONED AND ANCHORED TO I-BEAMS BELOW FLOOR GRATING. CENTER TANK BETWEEN TWO INDICATED I-BEAMS. APPX. 1-FT FROM SOUTH WALL W/ TANK DRAIN POINTING TO EAST WALL.

② CUT NEWLY INSTALLED GRATE AS NECESSARY TO ALLOW INSTALLATION OF A-36 CHANNEL FOR TANK ANCHORAGE.



1 M-2 DETAIL
SCALE: NONE

Signature 1/18/17 Date
RELEASED FOR PLANNING BY CM

NO	DATE	CLASS REV	DC	DESCRIPTION	DWN	DSGN	CHKD	SUB	APP
0				INITIAL ISSUE FOR DCF-16-50-0250-1531					

ENGINEERING SERVICES

WMRM NaOH CHEMICAL ADDITION

CHEMICAL TANK LAYOUT

TA-50 BLDG 0250

DRAWN R Strickfield
DESIGN R Strickfield
CHECKED C Dunivan
DATE 1-10-17
APPROVED FOR RELEASE C Dunivan

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PO Box 1663 Los Alamos, New Mexico 87545

SHEET SK-M2
3 OF 15

DC U REVIEWER C Dunivan DATE 17-JAN-17
PROJECT ID N/A
DRAWING NO DCF-16-50-0250-1531-SK-1
REV 0

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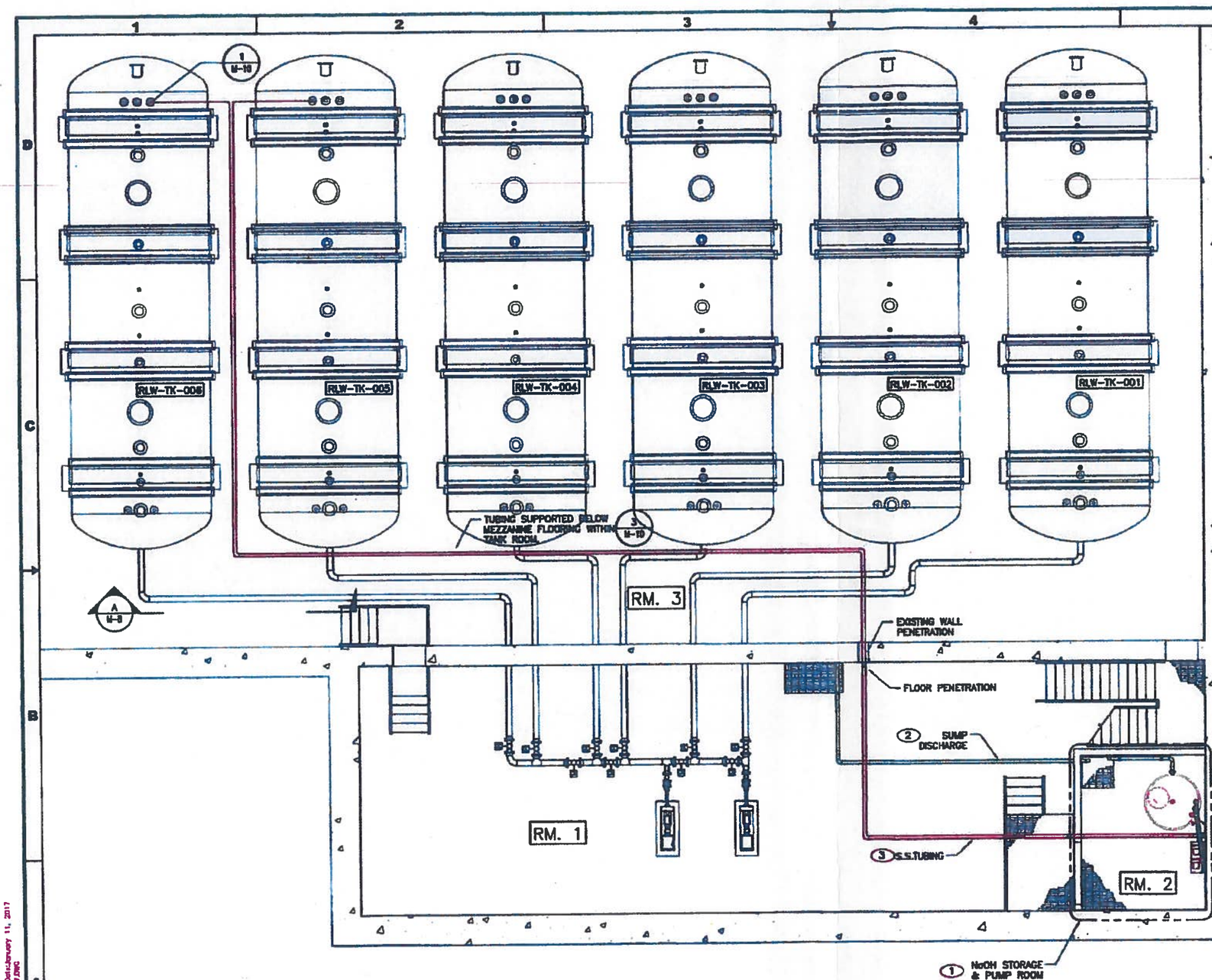

NaOH SYSTEM PIPING – PLAN VIEW
SCALE: NONE

GENERAL NOTES:

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3. ALL ITEMS ML-4
4. ALL INSTALLATION SHALL CONFORM WITH LANL STANDARDS
5. FIELD VERIFY AND ADJUST DIMENSIONS IN ACCORDANCE WITH LANL STANDARDS
6. ALL FITTINGS AND PIPE JOINTS WELDED IAW B31.3 §328 REQUIREMENTS.

KEYED NOTES:

1. NaOH (25%) STORAGE AND PUMP ROOM. INSTALL NEW STORAGE TANK, PUMPING SKID, SUMP PUMP, SYSTEM PIPING AND CONTROLS.
2. 1-1/2 INCH S.S. SUMP DISCHARGE PIPE. RUN PIPE UP FROM CHEMICAL ROOM SUMP OVERHEAD AND DOWN TO PUMP ROOM SUMP.
3. 1/2" S.S. TUBING (TWO RUNS) FIELD ROUTED FROM CHEMICAL ROOM SKIDS TO TOP EAST ENDS OF RLW-TK-005 AND RLW-TK-006. SKETCH SHOWS GENERAL ROUTING OF TUBING. DRILL FLOOR PENETRATION IN AREA SHOWN TO ROUTE TUBING FROM BASEMENT TO MEZZANINE LEVEL. CONTINUE ROUTING TUBING THRU EXISTING WALL PENETRATION INTO STORAGE TANK ROOM. FOLLOW SUPPORTS AND I-BEAMS TO EXTENT POSSIBLE FOR ATTACHMENT OF TUBING SUPPORTS. MAXIMUM DISTANCE BETWEEN SUPPORTS IS 6-FT.

1/18/17
Signature Date
RELEASED FOR PLANNING BY CM

NO	DATE	CLASS REV	DC	DESCRIPTION	DRWN	DSGN	CHKD	SUB	APP
0				INITIAL ISSUE FOR DCF: 16-50-0250-1531					

ENGINEERING SERVICES

WMRM NaOH CHEMICAL ADDITION	DRAWN R. STANSFIELD
NaOH SYSTEM PIPING PLAN VIEW	DESIGN R. STANSFIELD
	CHECKED C. SNEYERS
TA-50 BLDG 0250	DATE 1-10-17
SUBMITTED R. STANSFIELD	APPROVED FOR RELEASE C. SNEYERS
Los Alamos NATIONAL LABORATORY — PO Box 1663, Los Alamos, New Mexico 87545	SHEET SK-M3 4 OF 15
DC: U	REVIEWER: C. SNEYERS DATE: 1-10-17
PROJECT ID: N/A	DRAWING NO: DCF-16-50-0250-1531-SK-1 REV: 0

Plotted: Oct 18, 2017 Plot Date: January 11, 2017
DCF-16-50-0250-1531, 1=10-17.DWG

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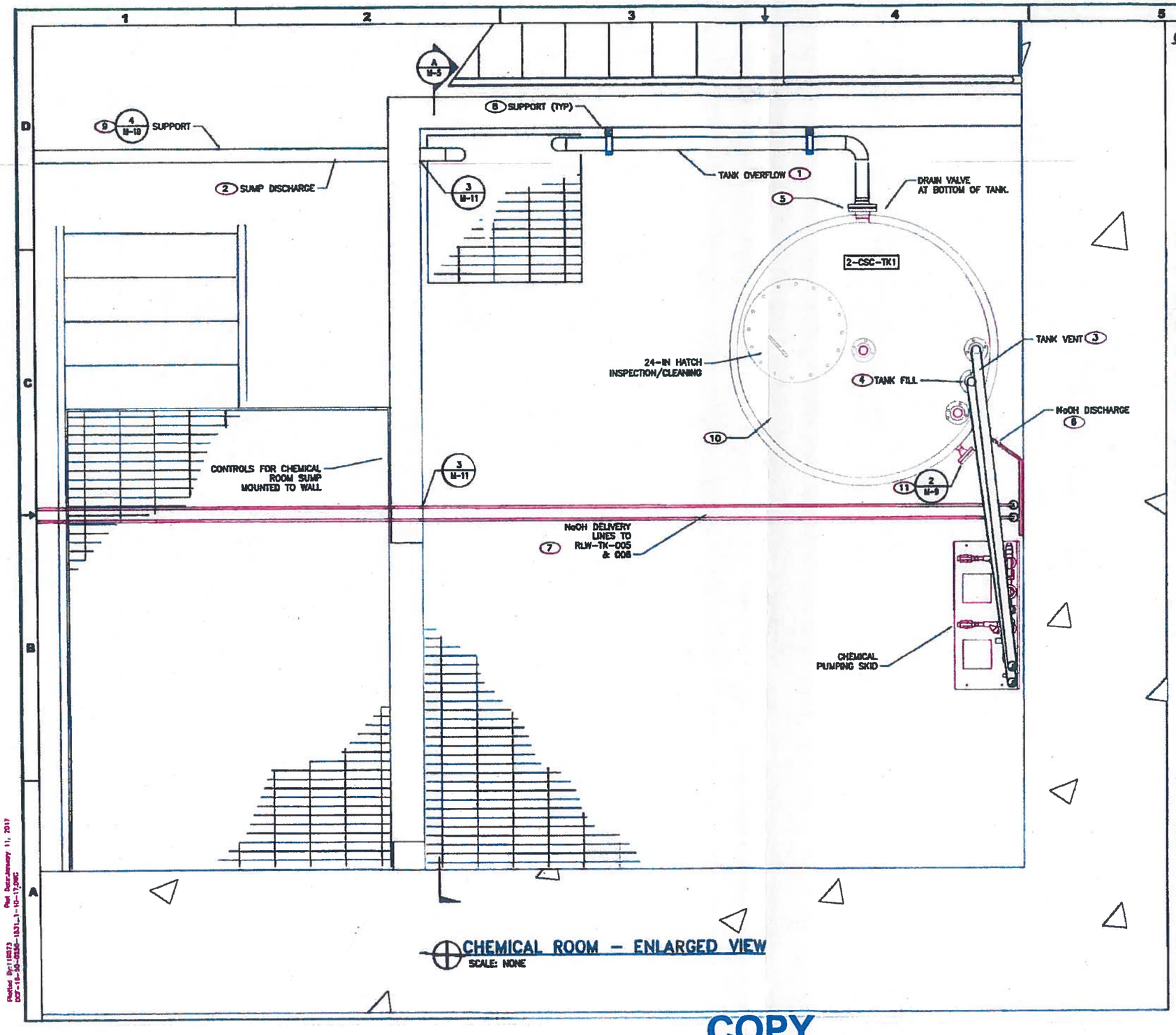

CHEMICAL ROOM – ENLARGED VIEW
SCALE: NONE

Plotted By: (15873) Plot Date: January 11, 2017
DCF-16-50-0250-1531_1-10-17.DWG

GENERAL NOTES:

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2. REFER TO BILL OF MATERIALS (BOM) IN REFERENCED DCF FOR MATERIAL CALLOUTS AND INSPECTION REQUIREMENTS
3. ALL ITEMS ML-4
4. ALL INSTALLATION SHALL CONFORM WITH LANL STANDARDS
5. FIELD VERIFY AND ADJUST DIMENSIONS IN ACCORDANCE WITH LANL STANDARDS
6. ALL FITTINGS AND PIPE JOINTS WELDED IAW B31.3 §328 REQUIREMENTS.

KEYED NOTES:

1. CONNECT 3-IN LINE AT INDICATED FLANGE FOR TANK OVERFLOW. RUN PIPING HORIZONTAL ALONG EAST WALL TO ROOM SUMP.
2. RUN 1-1/2 INCH PIPE FROM CHEMICAL ROOM SUMP OVERHEAD THRU GYPSUM WALL TO BASEMENT SUMP.
3. TANK VENT. CONNECT 2-INCH LINE AT INDICATED FLANGE. RUN PIPING UP TO MEZZANINE LEVEL AND OUT BUILDING ROOF.
4. TANK FILL. CONNECT 2-INCH LINE AT INDICATED FLANGE RUN PINING UP TO MEZZANINE FLOOR. FILL LINE EXITS BUILDING AT SOUTH WALL.
5. DRAIN LINE W/ VALVE LOCATED BOTTOM OF TANK BELOW OVERFLOW. SEE ELEVATION DRAWING FOR DETAILS.
6. NaOH TANK DISCHARGE AT BOTTOM OF TANK. TUBING RUNS TO SUCTION SIDE OF CHEMICAL SKID PUMPS.
7. FIELD ROUTE 2-EA NaOH DELIVERY LINES (1/2" 316 S.S. TUBE) FROM PUMPING SKID TO RLW-TK-005 & RLW-TK-006. UNLESS OTHERWISE NOTED, ALL TUBING JOINED WITH ORBITAL WELD.
8. SUPPORT USING PIPE CLAMP AND STRUT ATTACHED TO WALL (TYP.)
9. SUPPORT PIPE FROM CEILING TRUSSES USING CLEVIS STYLE HANGER.
10. NaOH STORAGE TANK API-650, 1,000-GAL NOMINAL CAPACITY.
11. DP GAUGE LEVEL INDICATOR ATTACHED TO LOWER FLANGE W/ ISOLATION VALVE (NOT SHOWN THIS PAGE). REFER TO DETAIL.

Signature 1/18/17 Date

RELEASED FOR PLANNING BY CM

NO	DATE	CLASS REV	DC	DESCRIPTION	DWN	DSGN	CHKD	SUB	APP
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ENGINEERING SERVICES

WMRM NaOH CHEMICAL ADDITION

CHEMICAL ROOM ENLARGED VIEW

TA-50 BLDG 0250

DRAWN R STRINGFIELD
DESIGN R STRINGFIELD
CHECKED C DeNEVERS
DATE 1-10-17

SUBMITTED R STRINGFIELD
APPROVED FOR RELEASE C DeNEVERS

Los Alamos NATIONAL LABORATORY
P.O. Box 1663 Los Alamos, New Mexico 87545

SHEET SK-M4
5 OF 15

D.C. U
REVIEWER C DeNEVERS
DATE 1-10-17

PROJECT ID N/A
DRAWING NO DCF-16-50-0250-1531-SK-1
REV 0

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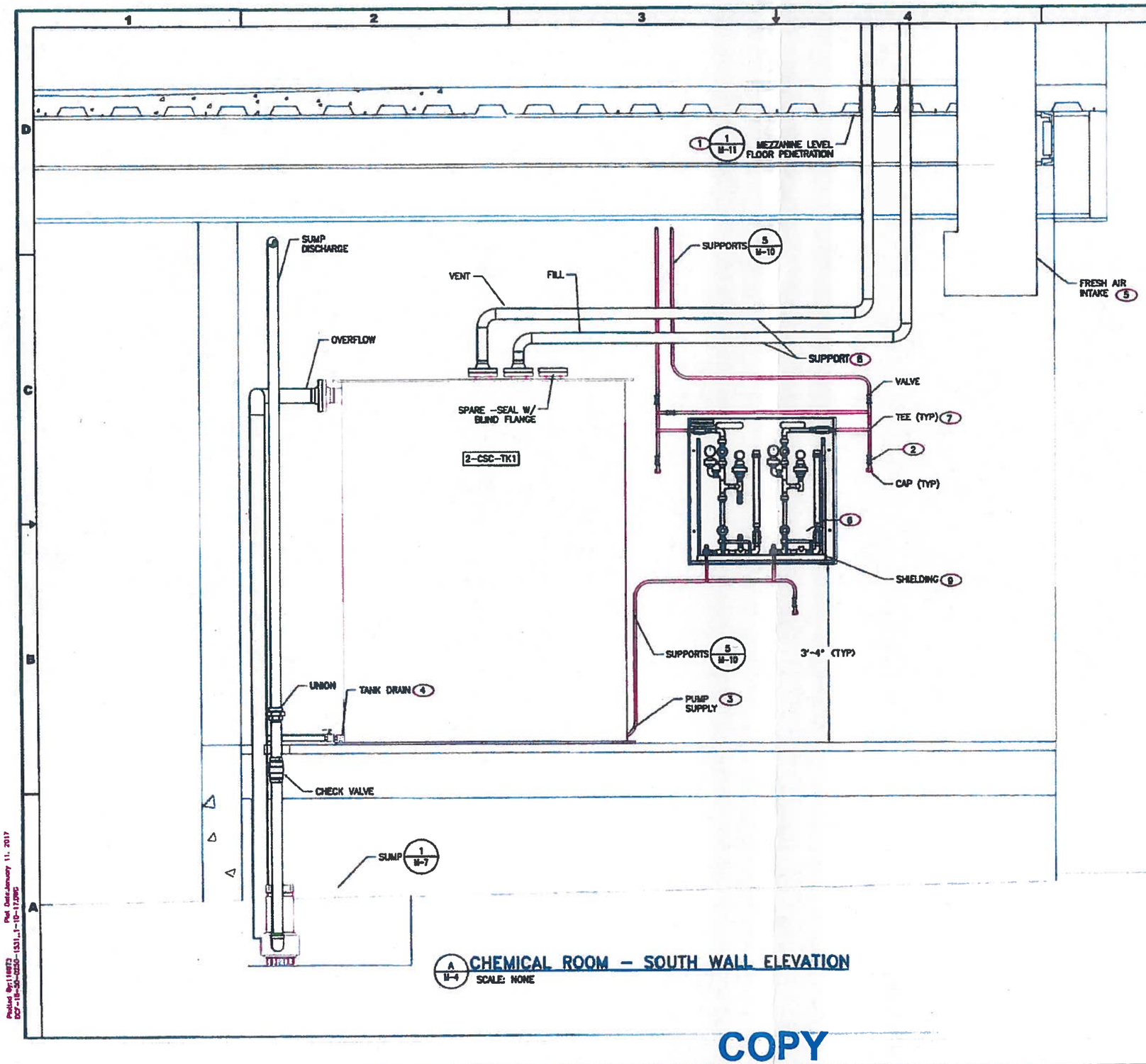

A M-4 CHEMICAL ROOM – SOUTH WALL ELEVATION
SCALE: NONE

GENERAL NOTES:

1. "OR APPROVED EQUAL" IS ALWAYS IMPLIED AFTER A BRAND NAME, PATENTED PROCESS OR CATALOG NUMBER. THE CONTRACTOR MAY SUBSTITUTE ANY BRAND OR PROCESS APPROVED EQUAL BY SPECIFYING ARCHITECT / ENGINEER. THE ONLY EXCEPTION IS WHERE "NO SUBSTITUTION" IS SPECIFIED
2. REFER TO BILL OF MATERIALS (BOM) IN REFERENCED DCF FOR MATERIAL CALLOUTS AND INSPECTION REQUIREMENTS
3. ALL ITEMS ML-4
4. ALL INSTALLATION SHALL CONFORM WITH LANL STANDARDS
5. FIELD VERIFY AND ADJUST DIMENSIONS IN ACCORDANCE WITH LANL STANDARDS
6. ALL FITTINGS AND PIPE JOINTS WELDED IAW B31.3 §328 REQUIREMENTS.

KEYED NOTES:

1. USE EXISTING MEZZANINE LEVEL FLOOR PENETRATIONS FOR TANK FILL AND VENT LINES. SLEEVE AND SEAL ALL PENETRATIONS PER DETAIL.
2. VALVE W/ CAP FOR SYSTEM DRAIN AND FLUSHING OPERATIONS. TYP. 3-PLCS.
3. NaOH PUMP SUCTION LINE CONNECTS TO BALL VALVE AT BOTTOM OF TANK.
4. TANK DRAIN W/ VALVE. RUN DRAIN LINE ALONG FLOOR TO ROOM SUMP. THREADED PIPE/FITTINGS.
5. ROOM VENTILATION INSTALLED AS PART OF FACILITIES ORIGINAL CONSTRUCTION MEETS NFPA REQUIREMENTS OF 1-CFM/FT^2 FOR CHEMICAL STORAGE ROOM. EXHAUST DUCTING NOT SHOWN FOR CLARITY.
6. SKID PUMP, 2-EA (NOT SHOWN) 600-GPD / 30-PSIG PTFE & S.S. CONSTRUCTION.
7. USE SWAGELOK TEES AS NEEDED FOR LAYOUT OF PUMP SKID SUPPLY AND DISCHARGE TUBING.
8. PROVIDE SUPPORTS FOR HORIZONTAL SECTIONS OF FILL AND VENT LINES.
9. PROVIDE CLEAR PLASTIC SHIELDING BOX TO ENCLOSE PUMP SKID.

Signature 1/18/17 Date

RELEASED FOR PLANNING BY CM

NO	DATE	CLASS REV	DC	DESCRIPTION	DWN	DSGN	CHKD	SUB	APP
0				INITIAL ISSUE FOR DCF 16-EM0250-1531					

ENGINEERING SERVICES

WMRM NaOH CHEMICAL ADDITION

CHEMICAL ROOM
SOUTH WALL ELEVATION

TA-50 BLDG 0250

DRAWN R STRINGFIELD
DESIGN R STRINGFIELD
CHECKED C DaNEVES
DATE 1-18-17

SUBMITTED R STRINGFIELD
APPROVED FOR RELEASE C DaNEVES

Los Alamos NATIONAL LABORATORY
PO Box 1663
Los Alamos, New Mexico 87545

SHEET SK-M5
6 OF 15

D.C. U
PROJECT ID N/A
DRAWING NO DCF-16-50-0250-1531-SK-1
REV 0

Plotted By: 118872
DCF-16-50-0250-1531_1-10-17.DWG
Plot Date: January 11, 2017

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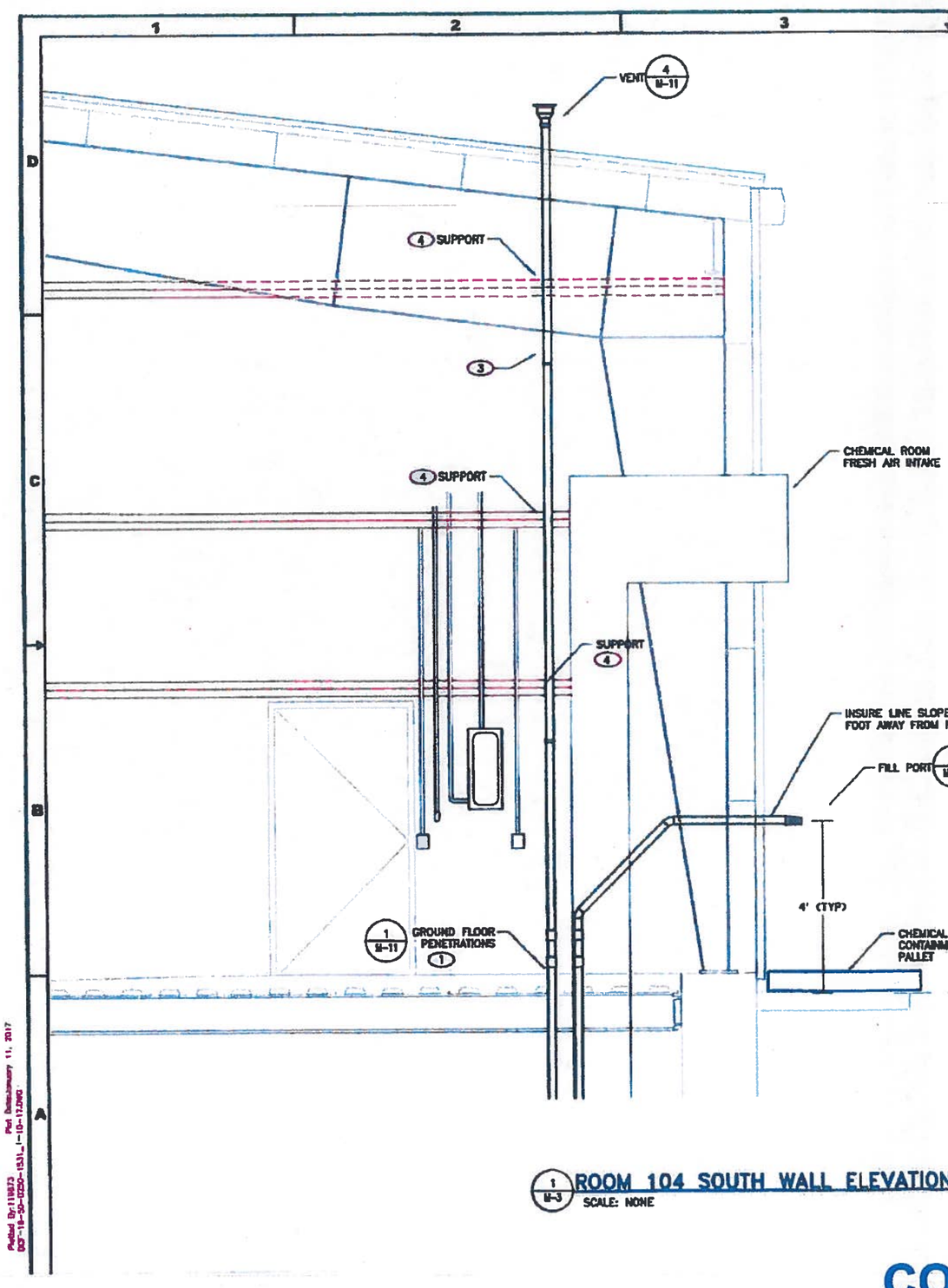

1/M-3 ROOM 104 SOUTH WALL ELEVATION
SCALE: NONE

Plotted By: 119823 Plot Date: January 11, 2017
DCF-16-50-0250-1531_1-10-17.DWG

GENERAL NOTES:

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4. ALL INSTALLATION SHALL CONFORM WITH LANL STANDARDS
5. FIELD VERIFY AND ADJUST DIMENSIONS IN ACCORDANCE WITH LANL STANDARDS
6. ALL FITTINGS AND PIPE JOINTS WELDED IAW B31.3 §328 REQUIREMENTS.

KEYED NOTES:

1. DRILL FLOOR PENETRATIONS THIS GENERAL AREA. USE PIPE FITTINGS AS NECESSARY TO ROUTE VENT AND FILL PIPING ALONG SOUTH WALL; WEST OF EXISTING OBSTRUCTIONS.
2. NaOH FILL PORT EXITS BUILDING AT SOUTH WEST CORNER. THREAD FILL LINE FOR ATTACHMENT OF 2-INCH TYPE D CAMLOCK FITTING AND CAP.
3. CONTINUE RUNNING VENT PIPE ALONG SOUTH WALL AND THRU ROOF. THREAD VENT PIPE FOR ATTACHMENT OF PRESSURE-VACUUM VENT.
4. SUPPORT VENT PIPE FROM BUILDING STRUCTURE AT LOCATIONS SHOWN.

Signature 1/18/17 Date
RELEASED FOR PLANNING BY CM

NO	DATE	CLASS REV	DC	DESCRIPTION	DWN	DSGN	CHKD	SUB	APP
0				INITIAL ISSUE FOR DCF-16-50-0250-1531					

ENGINEERING SERVICES

WMRM NaOH CHEMICAL ADDITION

ROOM 104
SOUTH WALL ELEVATION

TA-50 BLDG 0250

DRAWN R STRINGFIELD
DESIGN R STRINGFIELD
CHECKED C DANEVERS
DATE 1-10-17

SUBMITTED R STRINGFIELD
APPROVED FOR RELEASE C DANEVERS

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SHEET SK-M6
7 OF 15

DC U
REVIEWER C DANEVERS
DATE 1/18/17

PROJECT ID N/A
DRAWING NO DCF-16-50-0250-1531-SK-1
REV 0

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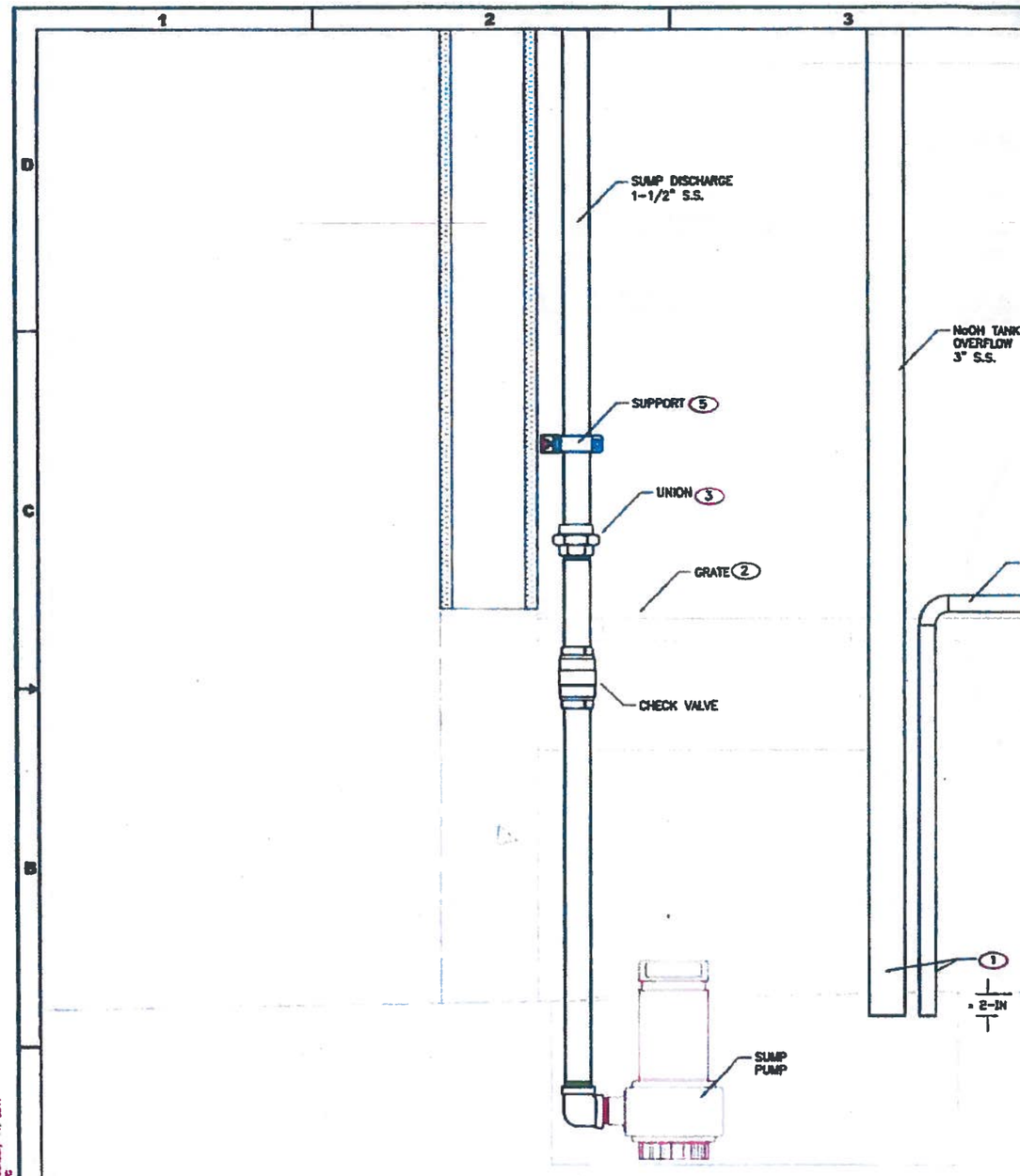

1 / M-5 CHEMICAL ROOM SUMP
SCALE: NONE

GENERAL NOTES:

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6. ALL FITTINGS AND PIPE JOINTS WELDED IAW B31.3 §328 REQUIREMENTS.

KEYED NOTES:

(1) ROUTE TANK OVERFLOW AND DRAIN LINES INTO SUMP. TERMINATE PIPES APPX. 2-INCHES BELOW FLOOR LEVEL.

(2) CHEMICAL ROOM FLOOR GRATE. CUT OPENINGS AS NECESSARY TO ACCOMMODATE SUMP PIPING.

(3) UNION LOCATED ABOVE FLOOR GRATE. PIPING CONTINUES UP THRU GYPSUM WALL AND OVERHEAD TO PUMP ROOM SUMP.

(4) NOT USED.

(5) SUPPORT VERTICAL PIPING TO WALL USING PIPE CLAMP AND STRUT.

Signature 1/18/17 Date

RELEASED FOR PLANNING BY CM

NO	DATE	CLASS REV	DC	DESCRIPTION	DWN	DSGN	CHKD	SUB	APP
0				INITIAL ISSUE FOR DCF-16-50-0250-1531					

ENGINEERING SERVICES

CHEMICAL ROOM SUMP

CHEMICAL ROOM SUMP

TA-50 BLDG 0250

DRAWN R STRINGFIELD
DESIGN R STRINGFIELD
CHECKED C DeNEVERS
DATE 1-18-17

SUBMITTED R STRINGFIELD
APPROVED FOR RELEASE C DeNEVERS

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PO Box 1663 Los Alamos, New Mexico 87545

SHEET SK-M7
8 OF 15

DC U REVIEWER C DeNEVERS DATE 1-18-17

PROJECT ID N/A
DRAWING NO DCP-16-50-0250-1531-SK-1
REV 0

Plotted By:116873 Plot Date:January 11, 2017
DCP-16-50-0250-1531_1-10-17.DWG

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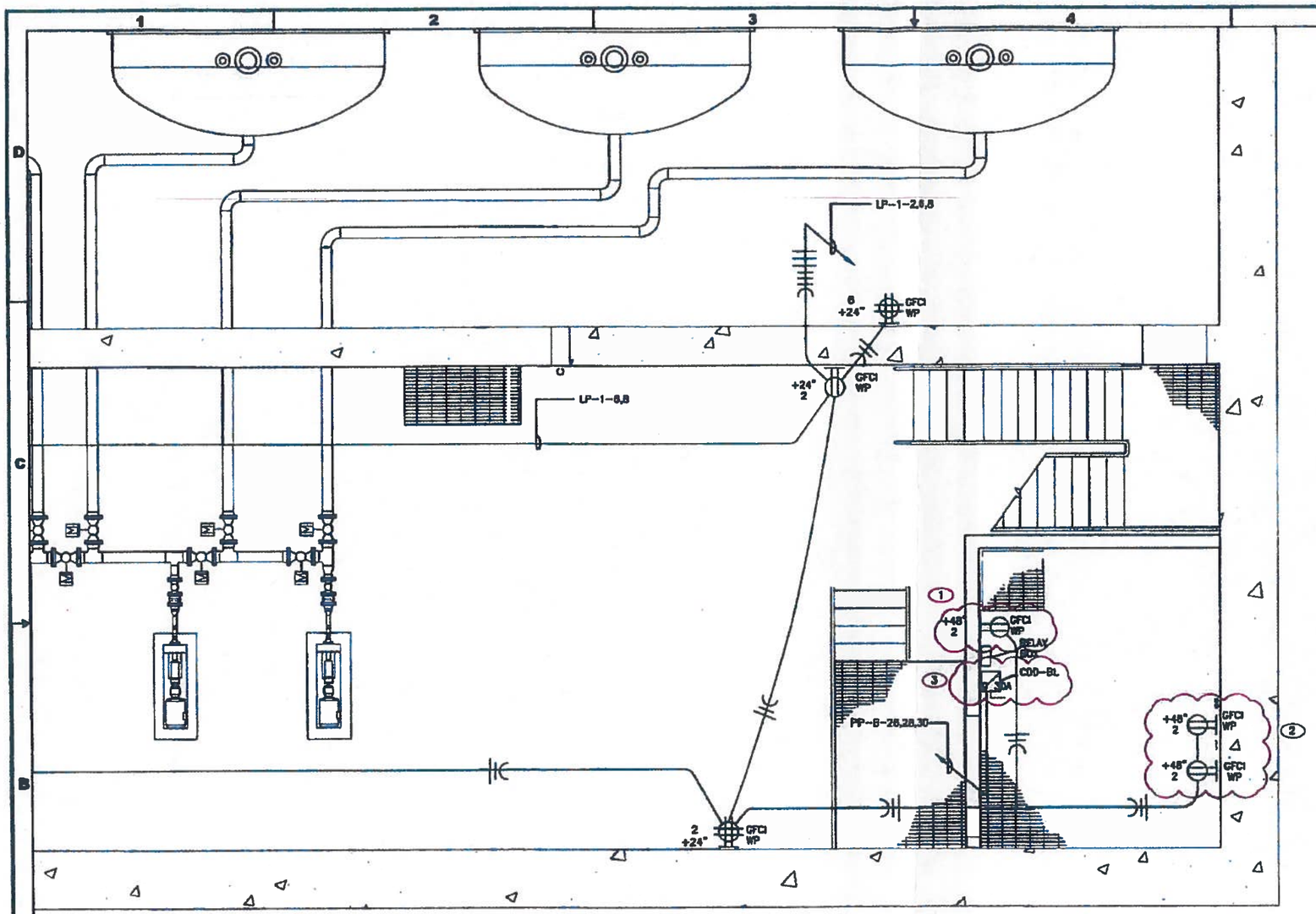

GENERAL NOTES:

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5. FIELD VERIFY AND ADJUST DIMENSIONS IN ACCORDANCE WITH LANL STANDARDS

KEYED NOTES:

(1) INSTALL 15A DUPLEX RECEPTACLE NEXT TO RELAY BOX. USE 3/4" OR BETTER EMC AND 2 #12 AWG CONDUCTORS WITH #12 AWG GROUND FROM LP-1 CKT 2 RECEPTACLE SHOWN. FIELD ROUTE CONDUIT

(2) INSTALL TWO 15A SIMPLEX RECEPTACLES NEXT TO CHEMICAL FEED PUMPS. USE 3/4" OR BETTER EMC AND 2 #12 AWG CONDUCTORS WITH #12 AWG GROUND FROM LP-1 CKT 2 RECEPTACLE SHOWN. FIELD ROUTE CONDUIT. EACH RECEPTACLE BOX WILL BE A DOUBLE GANG BOX WITH A 15A LIGHT SWITCH ON THE HOT LEG TO A SINGLE 15A RECEPTACLE DEDICATED TO EACH PUMP.

(3) INSTALL NEW COMBINATION DISCONNECT/STARTER WITH 30A SWITCH AND NEMA SIZE 0 STARTER TO POWER SUMP PUMP IN CHEMICAL FEED ROOM. LABEL AND DESIGNATE AS CDD-BL. POWER USING 3 WIRE PLUS GROUND CABLE TRAY RATED #12 AWG CABLE. USE 3/4" EMC OR BETTER TO CABLE TRAY AND FIELD ROUTE TO PP-B CKT 28.

Signature Date

RELEASED FOR PLANNING BY CM

ELECTRICAL POWER PLAN -CHEMICAL ROOM

SCALE: NONE

NO	DATE	CLASS REV	DC	DESCRIPTION	DWN	DSGN	CHKD	SUB	APP
0				INITIAL ISSUE FOR DCF-16-50-0250-1531					

ENGINEERING SERVICES

WMRM NaOH CHEMICAL ADDITION

ELECTRICAL POWER PLAN
CHEMICAL ROOM

TA-50 BLDG 0250

DRAWN KPC
DESIGN AC
CHECKED CDJ
DATE 1-10-17

SUBMITTED R. STRICKFADEN APPROVED FOR RELEASE C. DAHEVERS

Los Alamos NATIONAL LABORATORY
PO Box 1663
Los Alamos, New Mexico 87545

SHEET SK-E1
13 OF 15

D C U REVIEWER C. DAHEVERS DATE 1-10-17

PROJECT ID N/A
DRAWING NO DCF-16-50-0250-1531-SK-1
REV 0

Plotted On: 1/10/17 Plot Date: January 11, 2017
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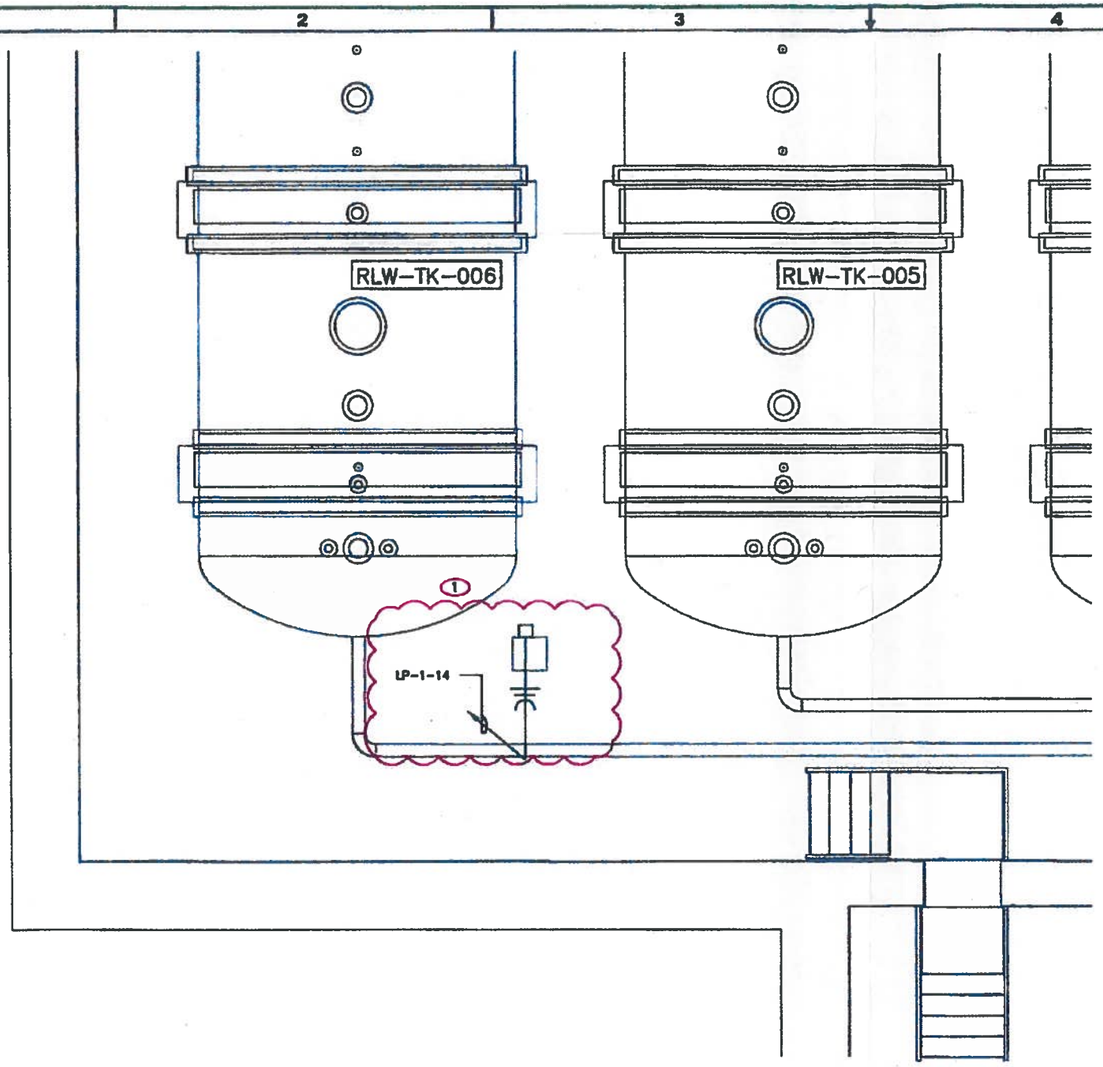

ELECTRICAL POWER PLAN –pH ANALYZER
SCALE: NONE

GENERAL NOTES:

1. "OR APPROVED EQUAL" IS ALWAYS IMPLIED AFTER A BRAND NAME, PATENTED PROCESS OR CATALOG NUMBER. THE CONTRACTOR MAY SUBSTITUTE ANY BRAND OR PROCESS APPROVED EQUAL BY SPECIFYING ARCHITECT / ENGINEER. THE ONLY EXCEPTION IS WHERE "NO SUBSTITUTION" IS SPECIFIED
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3. ALL ITEMS MIL-4
4. ALL INSTALLATION SHALL CONFORM WITH LANL STANDARDS
5. FIELD VERIFY AND ADJUST DIMENSIONS IN ACCORDANCE WITH LANL STANDARDS

KEYED NOTES:

(1) INSTALL EATON MST01AH STARTER SWITCH WITH MSH2-5A OVERLOAD INSTALLED ON COLUMN EAST OF SAFETY SHOWER. WIRE TO pH METER MOTOR. USE 3/4" OR BETTER IMC AND 2 #12 AWG CONDUCTORS WITH #12 AWG GROUND CABLE RATED CONDUCTORS FROM BREAKER LP-1 CKT 12 AS SHOWN. FIELD ROUTE CONDUIT AND USE CABLE TRAY WHERE AVAILABLE.

1/18/17
Signature Date
RELEASED FOR PLANNING BY CM

NO	DATE	CLASS REV	QC	DESCRIPTION	DWN	DSGN	CHKD	SUB	APP
0				INITIAL ISSUE FOR DCF-16-50-0250-1531					

ENGINEERING SERVICES

WMRM NaOH CHEMICAL ADDITION

ELECTRICAL POWER PLAN
pH ANALYZER

TA-50 BLDG 0250

DRAWN R. CARR
DESIGN R. CARR
CHECKED C. DeVEVERS
DATE 1-10-17

SUBMITTED R. STANSFIELD
APPROVED FOR RELEASE C. DeVEVERS

Los Alamos NATIONAL LABORATORY
PO Box 1663, Los Alamos, New Mexico 87545

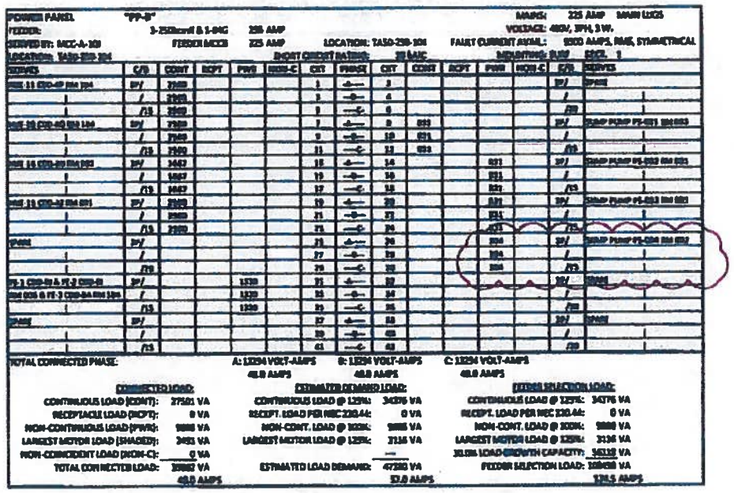
SHEET SK-E2
14 OF 15

QC: U REVIEWER C. DeVEVERS DATE 12-20-17

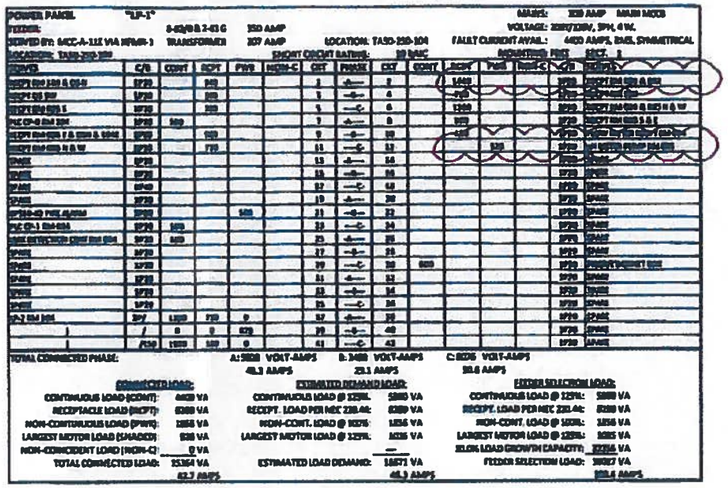
PROJECT ID N/A
DRAWING NO DCF-16-50-0250-1531-SK-1
REV 0

Plotted By: 118873 Plot Date: January 11, 2017
DCF-16-50-0250-1531-1-10-17.DWG

COPY



PP-B



LP-1

GENERAL NOTES:

1. "OR APPROVED EQUAL" IS ALWAYS IMPLIED AFTER A BRAND NAME, PATENTED PROCESS OR CATALOG NUMBER. THE CONTRACTOR MAY SUBSTITUTE ANY BRAND OR PROCESS APPROVED EQUAL BY SPECIFYING ARCHITECT / ENGINEER. THE ONLY EXCEPTION IS WHERE "NO SUBSTITUTION" IS SPECIFIED
2. REFER TO BILL OF MATERIALS (BOM) IN REFERENCED DCF FOR MATERIAL CALLOUTS AND INSPECTION REQUIREMENTS
3. ALL ITEMS ML-4
4. ALL INSTALLATION SHALL CONFORM WITH LANL STANDARDS
5. FIELD VERIFY AND ADJUST DIMENSIONS IN ACCORDANCE WITH LANL STANDARDS

KEYED NOTES:

(1) INSTALL NEW COMBINATION DISCONNECT/STARTER POWERING PS-004 IN ROOM 002 (¾ HP) TO PP-B CKT 28.

(2) INSTALL NEW RECEPTACLES TO CKT 2 AS SHOWN ON SKETCH E-1

(3) INSTALL pH METER PUMP STARTER SWITCH AND MOTOR TO CKT 12 AS SHOWN ON SKETCH E-2

(4) NEW 4-20mA 1756-IF16 CARD TO BE ADDED TO SLOT 8. TWO NEW ANALOG INPUT TRANSMITTERS WILL BE ADDED TO CHANNELS 0 AND 1.

(5) REMAINDER OF NEW POINTS TO TAKE UP EXISTING SPARE CHANNELS

PANEL SCHEDULES

CHANNEL	SLOT 0 (5)	SLOT 1 (5)	SLOT 2	SLOT 3 (5)	SLOT 4	SLOT 5	SLOT 6	SLOT 7	SLOT 8 (4)	SLOT 9
	1756-IB16	1756-IB16	1756-OW16I	1756-OW16I	SPARE	SPARE	SPARE	SPARE	NEW 1756-IF16	1756 EN2T
0	MX5A_ON	VE_051_CLOSED	MX5A_ON-X	RELAY_TEST	SPARE	SPARE	SPARE	SPARE	DPT-001	NA
1	MX5B_ON	VE_051_OPEN	MX5B_ON-X	SMP4_ON-X	SPARE	SPARE	SPARE	SPARE	AIT-001	NA
2	MX5C_ON	VE_005_CLOSED	MX5C_ON-X	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	NA
3	MX6A_ON	VE_005_OPEN	MX6A_ON-X	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	NA
4	MX6B_ON	VE_050_CLOSED	MX6B_ON-X	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	NA
5	MX6C_ON	VE_050_OPEN	MX6C_ON-X	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	NA
6	SMP1_ON	VE_010_CLOSED	VE_051_OPEN-X	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	NA
7	SMP3_ON	VE_010_OPEN	VE_051_CLOSE-X	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	NA
8	INF_LEAK_ALARM	VE_011_CLOSED	VE_005_OPEN-X	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	NA
9	EFF_LEAK_ALARM	VE_011_OPEN	VE_005_CLOSE-X	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	NA
10	HS-HAND	LSL-1	VE_050_OPEN-X	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	NA
11	HS-AUTO	LSH-2	VE_050_CLOSE-X	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	NA
12	SPARE	SMP4_ON	VE_010_OPEN-X	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	NA
13	SPARE	SPARE	VE_010_CLOSE-X	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	NA
14	SPARE	SPARE	VE_011_OPEN-X	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	NA
15	SPARE	SPARE	VE_011_CLOSE-X	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	NA

PLC-250 REMOTE RACK LAYOUT

Signature Date 1/12/18

RELEASED FOR PLANNING BY CM

NO	DATE	CLASS REV	DC	DESCRIPTION	DWN	DSGN	CHKD	SUB	APP
0				INITIAL ISSUE FOR DCF-18-50-0250-1531					

ENGINEERING SERVICES

WMRM NaOH CHEMICAL ADDITION

PANEL SCHEDULES
PLC-250 REMOTE RACK LAYOUT

TA-50 BLDG 0250

DRAWN K. CARLSON
DESIGN K. CARLSON
CHECKED C. DAVIES
DATE 1-10-17

SUBMITTED R. STRICKFIELD
APPROVED FOR RELEASE C. DAVIES

Los Alamos NATIONAL LABORATORY
PO Box 1663 Los Alamos, New Mexico 87545

SHEET SK-E3
15 OF 15

DC: U
REVIEWER C. DAVIES
DATE: 12-27-17

PROJECT ID N/A
DRAWING NO DCF-18-50-0250-1531-SK-1
REV 0

Packet Pg.119572 – Print Date/January 11, 2017
DCF-18-50-0250-1531-1-10-17.DWG

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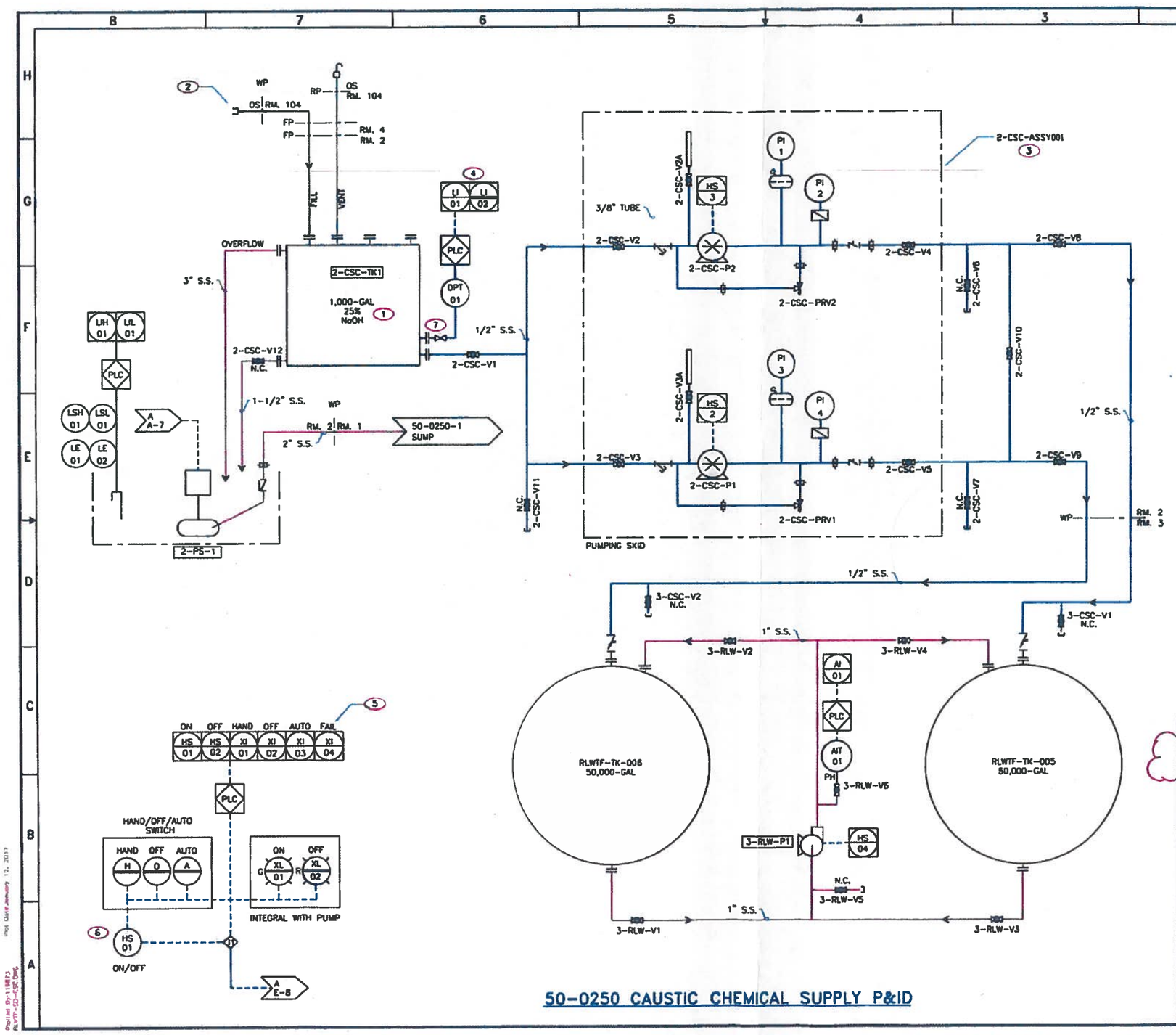

GENERAL NOTES

1. LANL PRESSURE SYSTEM I.D. TBD.
2. GOVERNING CODE FOR 50-0250 NaOH SYSTEM: ASME B31.3 CATEGORY NORMAL; LANL FLUID SERVICE -FS2.

KEYED NOTES

1. 1,000-GAL (API-650) 316 S.S. NaOH STORAGE TANK
2. FILL PORT LOCATED SW CORNER 50-0250.
3. NaOH CHEMICAL SKID W/ 600-GPD PUMPS.
4. LI01 IS AT THE CONSOLE AND LI02 IS AT THE CHEMICAL FILL STATION OUTSIDE.
5. XI04 FAILURE OF THE SUMP PUMP IS DETERMINED BY A REQUEST TO RUN, BUT THE PUMP DOES NOT RUN
6. IF PUMP IS IN HAND, THE CONSOLE CANNOT OPERATE THE SUMP PUMP.
7. BLOCK AND BLEED VALVE.

Signature 1/18/17 Date

RELEASED FOR PLANNING BY CM

0	1/9/16	U	CCD	DCF-16-50-0250-1531	RWS RWS CCD BWP CCD
NO.	DATE	CLASS REQ	ORIG	DESCRIPTION	ORIG DSGN DRWG CLAS APP

RADIOACTIVE LIQUID WASTE TREATMENT FACILITY

RLWTF ES-55

RLWTF SUPPORT DRAWING
50-0250 CAUSTIC CHEMICAL SUPPLY

DRAWN R. STRINGFIELD
CSE R. STRINGFIELD
CHECKED D. STEWART
DATE 12-12-16

BLDG 250 TA-50

SUBMITTED RANDAL W. STRINGFIELD

APPROVED FOR RELEASE CLARK DANIELS

Los Alamos NATIONAL LABORATORY PO Box 1663 Los Alamos, New Mexico 87545

SHEET M-6000

1 OF 1

CLASSIFICATION U REVIEWER JOHN C DEL SIGNORE DATE

DRAWING NO. RLWTF-SD-CSC REV 0

50-0250 CAUSTIC CHEMICAL SUPPLY P&ID

Plotted By: 113873
RLWTF-SD-CSC.DWG
Plot Date: January 12, 2017

COPY

13472

: 13473

NEW MEXICO
ENVIRONMENT DEPARTMENT

Harold Runnels Building
1190 South St. Francis Drive (87505)
P.O. Box 5469, Santa Fe, New Mexico 87502-5469
Phone (505) 827-2900 Fax (505) 827-2965
www.env.nm.gov

SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lieutenant Governor

BUTCH TONGATE
Cabinet Secretary

J.C. BORREGO
Deputy Secretary

March 13, 2017

Karen E. Armijo, NNSA
Anthony R. Grieggs, LANS
Los Alamos National Laboratory
P.O. Box 1663 MS K497
Los Alamos, New Mexico 87545-0001

RE: NMED Comments on 100% Design Specifications: Sodium Hydroxide Chemical Feed System, DP-1132

Dear Ms. Armijo and Mr. Grieggs:

The New Mexico Environment Department, Ground Water Quality Bureau (GWQB) has received from the Department of Energy and Los Alamos National Security LLC (DOE/LANS) design documents for the Sodium Hydroxide Chemical Feed System including:

> 100% design plans and specifications for a chemical feed system to be installed in the Waste Management/Risk Mitigation facility associated with the Radioactive Liquid Waste Treatment Facility (TA-52). The plans fulfill the requirements of NMAC Section 20.6.2.1202.

GWQB has reviewed the 100% submittals provided as supplemental information to DP-1132 for compliance with basic elements necessary for protection of groundwater quality. GWQB makes no comment regarding the design adequacy or compliance with other applicable State, Federal, and local statutes, codes, and requirements.

The review confirms that the design, construction specifications, proposed systems, and calculations are generally appropriate, and include adequate safeguards to protect groundwater quality including secondary containment, structural integrity, capacities, appropriate materials, and leak detection systems (as appropriate). As a signed engineering document, GWQB relies on the design engineer for the efficacy of the design to meet permit requirements. GWQB similarly relies on DOE/LANS to provide adequate construction oversight to ensure conformance with the design specifications. Construction of the chemical feed system prior to issuance of the final approved Discharge Permit will proceed at the risk of DOE/LANS, should DOE/LANS decide to proceed before GWQB issues the final permit.

GWQB appreciates the opportunity to provide these comments to the proposed improvements. Please contact me, or Steven Huddleson at (505) 827-2936 if you have any questions.

Sincerely,

Michelle Hunter, Chief
Ground Water Quality Bureau

Cc: John Kieling, Chief Hazardous Waste Bureau
Judi Kahl, Acting Chief Construction Programs Bureau
Shelly Lemon, Acting Chief Surface Water Quality Bureau
Jennifer Hower, Office of General Counsel

: 13476

Environmental Protection & Compliance Division
Los Alamos National Laboratory
PO Box 1663, K490
Los Alamos, New Mexico 87545
(505) 667-2211

National Nuclear Security Administration
Los Alamos Field Office
3747 West Jemez Road, A316
Los Alamos, New Mexico, 87545
(505) 667-5105/Fax (505) 667-5948

Date: APR 17 2017
Symbol: EPC-DO: 17-150
LA-UR: 17-22693
Locates Action No.: *NA*

GROUND WATER
APR 21 2017
BUREAU

Ms. Michelle Hunter, Chief
Ground Water Quality Bureau
New Mexico Environment Department
Harold Runnels Building, Room N2261
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, NM 87502

Subject: **Discharge Plan DP-1132 Quarterly Report, First Quarter 2017, TA-50 Radioactive Liquid Waste Treatment Facility**

Dear Ms. Hunter:

This letter from the U.S. Department of Energy and Los Alamos National Security, LLC (DOE/LANS) is the first quarter 2017 Discharge Plan DP-1132 report for the Technical Area (TA)-50 Radioactive Liquid Waste Treatment Facility (RLWTF). Since the first quarter of 1999, DOE/LANS have provided the New Mexico Environment Department (NMED) with voluntary quarterly reports containing analytical results from effluent and groundwater monitoring.

During the first quarter of 2017, no effluent was discharged to either National Pollutant Discharge Elimination System (NPDES) Outfall 051 or to the solar evaporative tank system (SET) at TA-52; all effluent was evaporated on-site at the mechanical evaporator system (MES).

Quarterly Monitoring Results, Mortandad Canyon Alluvial Groundwater Wells

Table 1.0 presents the analytical results from sampling conducted at Mortandad Canyon alluvial wells MCO-6 and MCO-7 during the first quarter of 2017. No samples were collected from alluvial well MCO-4B because there was insufficient water in the wells for sampling. No sample was collected from alluvial well MCO-3 because the well was damaged beyond repair during a flood event in September 2013. Samples, including duplicate sample from monitoring well MCO-7, were submitted to GEL Laboratories LLC for analysis. Analytical results from the sampling of intermediate and regional aquifer wells in Mortandad Canyon can be accessed online at the Intellus New Mexico environmental monitoring data web site (http://www.intellusnmdata.com).

TA-50 RLWTF Effluent Monitoring Results
No final weekly composite (FWC) samples were collected during the first quarter of 2017 because no effluent was discharged to Mortandad Canyon.

No final monthly composite (FMC) samples were collected during the first quarter of 2017 because no effluent was discharged to Mortandad Canyon.

Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at Karen.Armijo@nnsa.doe.gov, or Robert S. Beers by telephone at (505) 667-7969 or by email at bbeers@lanl.gov if you have questions regarding this report.

Sincerely,

Anthony R. Grieggs
Group Leader

Sincerely,

Karen E. Armijo
Permitting and Compliance Program Manager

ARG/KEA/MTS/RSB: eim:am

Copy: Shelly Lemon, NMED/SWQB, Santa Fe, NM, (E-File)
John E. Kieling, NMED/HWB, Santa Fe, NM, (E-File)
Stephen M. Yanicak, NMED/DOE/OB, (E-File)
Jody M. Pugh, NA-LA, (E-File)
Karen E. Armijo, NA-LA, (E-File)
Craig S. Leasure, PADOPS, (E-File)
William R. Mairson, PADOPS, (E-File)
Michael T. Brandt, ADESH, (E-File)
Raeanna Sharp-Geiger, ADESH, (E-File)
Randal S. Johnson, DESHF-TA55, (E-File)
Hugh A. McGovern, ADNHHO, (E-File)
John C. Del Signore, TA-55-RLW, (E-File)
Michael T. Saladen, EPC-CP, (E-File)
Robert S. Beers, EPC-CP, (E-File)
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locatesteam@lanl.gov, (E-File)
epc-correspondence@lanl.gov, (E-File)
adesh-records@lanl.gov , (E-File)

Table 1.0. Mortandad Canyon Alluvial Well Sampling, 1st Quarter 2017.

Sampling Location	Sample Field Prep (F/UF)[1]	Sample Date	Perchlorate (µg/L)	NO_3+NO_2-N (mg/L)	TKN (mg/L)	NH3-N (mg/L)	TDS (mg/L)	F (mg/L)
MCO-3		Damaged[4]	Damaged[4]	Damaged[4]	Damaged[4]	Damaged[4]	Damaged[4]	Damaged[4]
MCO-4B	F	Dry[5]	Dry[5]	Dry[5]	Dry[5]	Dry[5]	Dry[5]	Dry[5]
MCO-6	F	2/17/2017	4.3	0.69	0.12	0.03	340	0.86
MCO-7	F	2/14/2017	7.1	0.84	0.17[6]	0.08	339	0.89
MCO-7 duplicate sample	F	2/14/2017	6.9	0.86	0.10	0.03	374	0.90
NM WQCC 3103 Groundwater Standards			*NA*[2]	*10 mg/L*[3]	*NA*[2]	*NA*[2]	*1000 mg/L*	*1.6 mg/L*

Notes:

[1]F means the sample was filtered. UF means the sampled was not filtered.

[2]NA means that there is no NM WQCC 3103 standard for this analyte.

[3]The NM WQCC 3103 Groundwater Standard is for NO_3-N.

[4]Damaged means that the well was damaged beyond repair during a flood event in Mortandad Canyon in September 2013.

[5]Dry means there was not sufficient water for sampling.

[6]Sample was not filtered.

J flag indicates an estimated value.

U flag means the result was less than the analytical laboratory's Method Detection Limit (MDL).

Notice is hereby given pursuant to 20.6.2.3108.H NMAC, the following Groundwater Discharge Permit applications have been proposed for approval. To request additional information or to obtain a copy of a draft permit, contact the Ground Water Quality Bureau in Santa Fe at (505) 827-2900. Draft permits may also be viewed on-line at https://www.env.nm.gov/gwb/NMED-GWQB-PublicNotice.htm

NOTE – If viewing by WEB - Click on facility name to review a copy of the draft permit.

DP #	Facility/Applicant	Closest City	County	Notice	NMED Permit Contact
674	SAS Dairy Albin Smith Owner SAS Dairy 506 State Rd. 467 Clovis, NM 88101 Enviro-Ag Engineering, Inc. Stuart Joy, P.E. 203 E. Main St. Artesia, NM 88210	Clovis	Curry	DP-674 – SAS Dairy: Albin Smith, Owner, proposes to renew and modify the Discharge Permit for the discharge of up to 40,000 gallons per day (gpd) from the production area of a dairy facility to a treatment and disposal system. Wastewater flows to a concrete sump and is pumped through a passive solids separator to a synthetically lined wastewater impoundment system for storage prior to transfer to a synthetically lined combination wastewater/stormwater impoundment at Arrowhead Dairy, managed under DP-1553. The modification consists of the transfer of up to 40,000 gpd to Arrowhead Dairy and changes to reflect the amendments to 20.6.6 NMAC. Potential contaminants associated with this type of discharge include nitrogen compounds. The facility is located at 506 State Rd. 467, approximately 10 miles southwest of Clovis, in Section 1, T01N, R35E, Curry County. Groundwater beneath the site is at a depth of approximately 219 feet and had a pre-discharge total dissolved solids concentration of approximately 320 milligrams per liter.	Matthew Smith Matthew.Smith3@state.nm.us
1553	Arrowhead Dairy Albin Smith Owner Arrowhead Dairy 506 State Rd. 467 Clovis, NM 88101	Clovis	Curry	DP-1553 – Arrowhead Dairy: Albin Smith, Owner, proposes to renew and modify the Discharge Permit for the discharge of up to 85,000 gallons per day (gpd) from the production area of a dairy facility to a treatment and disposal system. Wastewater flows to a passive solids separator to a synthetically lined wastewater impoundment before flowing into a combination wastewater/stormwater	Matthew Smith Matthew.Smith3@state.nm.us

	Enviro-Ag Engineering, Inc. Stuart Joy, P.E. 203 E. Main Street. Artesia, NM 88210			impoundment for storage prior to land application. The permittee proposes to receive up to 40,000 gpd of additional agricultural wastewater from SAS Dairy managed under DP-674. Wastewater from both facilities is comingled and land applied by center pivot irrigation to up to 500 acres of irrigated cropland under cultivation. The modification consists of an increase in the maximum daily discharge from 70,000 gpd to 85,000 gpd, an increase in land application area from 375 acres to 500 acres, and changes to reflect the amendments to 20.6.6 NMAC. Potential contaminants associated with this type of discharge include nitrogen compounds. The facility is located at 1763 CR 6, 10 miles southwest of Clovis, in Sections 1 and 2, T01N, R35E, Curry County. Groundwater beneath the site is at a depth of approximately 206 feet and had a pre-discharge total dissolved solids concentration of approximately 765 milligrams per liter.	
1281	West Mesa/Santa Teresa Wastewater Treatment Facility Brent Westmoreland Executive Director Camino Real Regional Utility Authority 4950 McNutt Rd. Sunland Park, NM 88063	Santa Teresa	Doña Ana	DP-1281 - West Mesa/Santa Teresa Wastewater Treatment Facility: Brent Westmoreland, Executive Director, proposes to modify the Discharge Permit for the discharge of up to 450,000 gallons per day (gpd) of treated wastewater from a wastewater treatment facility. Treated wastewater is stored in two synthetically-lined impoundments and then discharged to three surface disposal areas totaling 48.7 acres. Up to 50,000 gpd of treated wastewater may be discharged to a leachfield on an emergency basis. The modification consists of an increase in the maximum daily discharge volume from 300,000 gpd to 450,000 gpd and an increase in surface disposal acreage from 11.5 to 48.7 acres. Potential contaminants associated with this type of discharge include nitrogen compounds. The facility is located at 4770 Pete Domenici Hwy, approximately 2.5 miles southwest of Santa Teresa, in Section 30, T28S, R03E, Doña Ana County. Groundwater beneath the site is at a depth	Gerald Knutson Gerald.Knutson@state.nm.us

13182

				of approximately 315 feet and has a total dissolved solids concentration ranging from 500 to 1,000 milligrams per liter.	
1620	Hobbs Generating Station Rob Hanna, First Reserve Asset Manger Lea Power Partners, LLC. One Lafayette Place Greenwich, CT 06830	Hobbs	Lea	DP-1620, Hobbs Generating Station: Lea Power Partners, LLC. proposes to renew the Discharge Permit for the discharge of up to 5 million gallons per month, or 165,000 gallons per day, on an annual average, of evaporative cooler blowdown, boiler blowdown, reverse osmosis reject, and filter backwash to two double synthetically-lined storage impoundments then to approximately 58.62 acres of cropland under cultivation and/or native vegetation. Potential contaminants associated with this type of discharge include nitrogen compounds and metals. The facility is located at latitude 32.7283° North, longitude 103.3099° West, on North Maddox Road, approximately 10 miles northwest of Hobbs, in Section 25, T18S, R36E, Lea County. Groundwater beneath the site is at a depth of approximately 50 feet and has a total dissolved solids concentration of approximately 340 milligrams per liter.	Kathryn Hayden Kathryn.Hayden@state.nm.us
1132	The Radioactive Liquid Waste Treatment Facility John C. Bretzke Division Leader Environmental Protection & Compliance Division Los Alamos National Security LLC PO Box 1663, K491 Los Alamos, NM 87545	Los Alamos	Los Alamos	DP-1132 - The Radioactive Liquid Waste Treatment Facility (RLWTF) is a wastewater treatment facility that is authorized to discharge up to 40,000 gallons per day (gpd) and consists of a collection, storage, treatment, and disposal system (including the Waste Management Risk Mitigation Facility or 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 facility is	Steve Huddleson Steven.Huddleson@state.nm.us Kathryn Hayden Kathryn.Hayden@state.nm.us

	Karen E. Armijo Permitting and Compliance Program Manager National Nuclear Security Administration Los Alamos Field Office U.S. Department of Energy 3747 West Jemez Road Los Alamos, NM 87545			located within Los Alamos National Laboratory, approximately 1.5 miles south of Los Alamos, New Mexico, in Sections 16, 17, 20, 21, and 22, T19N, R06E, Los Alamos County. Groundwater 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 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.WW NMAC.	
1769	New Mexico State University Agricultural Science Center at Tucumcari Glen Haubold Assistant Vice President Office of Facilities and Services New Mexico State University PO Box 30001 MSC 3545 Las Cruces, NM 88003-3545	Tucumcari	Quay	DP-1769, New Mexico State University Agricultural Science Center at Tucumcari, Glen Haubold, Assistant Vice President, Office of Facilities and Services, proposes to discharge up to 720,000 gallons per day (gpd) of reclaimed domestic wastewater received from the City of Tucumcari Wastewater Treatment Facility (WWTF). Reclaimed wastewater is discharged to a 464-acre area for spray, drip, or flood irrigation of cultivated cropland, ornamental landscapes and grounds, and improved/native pastures for conducting science based agricultural investigation on crops and conditions and associated non-research uses. Additionally, the permittee is authorized to discharge up to 465 gpd of domestic wastewater from the facility buildings to a septic tank/leachfield system for treatment and disposal. The discharge contains water contaminants which may be elevated above the standards of Section 20.6.2.3103 NMAC and/or the presence of toxic pollutants as defined in Subsection WW of 20.6.2.7 NMAC. The facility is located at 6502 Quay Road, AM.5, Tucumcari, New Mexico, 88401, approximately 3 miles northeast of Tucumcari, in Sections 6 and 7, Township 11N, Range 31E, and Section 1, Township 11N, Range 30E, Quay County. Ground water most likely to be affected is at a depth of approximately 36 – 84 feet and has a	Kellie Jones Kellie.Jones@state.nm.us

				total dissolved solids concentration of approximately 490 to 1,300 milligrams per liter.	
1313	Desertview Dairy Anthony Ekren, Permitting and Compliance Riverview, LLP 26406 470th Ave. Morris, MN 56267 Stuart Joy, P.E. Enviro-Ag Engineering, Inc. 203 E Main St. Artesia, NM 88210	Texico	Roosevelt	DP-1313 - Desertview Dairy: Anthony Ekren, Member, - dba Riverview Dairy, LLP, proposes to renew and modify the Discharge Permit for the discharge of up to 230,000 gallons per day (gpd) of agricultural wastewater from the production area of a dairy facility to a treatment and disposal system. Wastewater is pumped through a screen solids separator and drains to a two-cell synthetically lined impoundment system for storage prior to land application. Wastewater is land applied by center pivot irrigation to up to 660 acres of irrigated cropland under cultivation. The modification consists of an increase in the maximum daily discharge from 40,000 gpd to 230,000 gpd, an increase in the acreage of the land application area from 187.5 acres to 660 acres, and a change in the location of the discharge which includes the addition of fields in the land application area. Potential contaminants associated with this type of discharge include nitrogen compounds. The facility is located at 012 North Roosevelt Road A, approximately 9 miles south of Texico, in Sections 3 and 4, T1S, R37E, and Sections 33 and 34, T1N, R37E, Roosevelt County. Groundwater beneath the site is at a depth of approximately 230 feet and had a pre-discharge total dissolved solids concentration of approximately 370 milligrams per liter.	Sarah M. Ogden Sarah.Ogden@state.nm.us
563	A & M Dairy, LLC Pedram Ghoreishi Owner A&M Dairy, LLC PO Box 591 Veguita, NM 87062	Veguita	Socorro	DP-563 – A & M Dairy, LLC: Pedram Ghoreishi, Owner, proposes to renew the Discharge Permit for the discharge of 4,200 gallons per day of agricultural wastewater from the production area of a dairy facility to a treatment and disposal system. Wastewater flows to a clay-lined combination wastewater/stormwater impoundment for disposal by evaporation. Potential contaminants associated with this type of discharge include nitrogen	Marc Bonem Marc.Bonem@state.nm.us

	Stuart Joy, P.E. Consultant Enviro-Ag Engineering, Inc. 203 East Main Street Artesia, NM 88210			compounds. The facility is located at 125 Carlos Martinez Rd., approximately 2 miles south of Veguita, in Section 29, T03N, R02E, Socorro County. Groundwater beneath the site is at a depth of approximately 63 feet and had a pre-discharge total dissolved solids concentration of approximately 300 milligrams per liter.	
1477	HAW Farms, LLC John Woelber, Owner HAW Farms, LLC P.O. Box 909 Belen, NM 87002 Stuart Joy, P.E. Consultant Enviro-Ag Engineering, Inc. 203 East Main St. Artesia, NM 88210	Veguita	Socorro	DP-1477 – HAW Farms, LLC: John Woelber, Owner, proposes to renew and modify the Discharge Permit for the discharge of up to 20,000 gallons per day (gpd) of agricultural wastewater from the production area of a dairy facility to a treatment and disposal system. Wastewater is pumped to a passive two-cell concrete solids separator and then flows to two synthetically lined combination wastewater/stormwater impoundments in series for disposal by evaporation. The modification consists of an increase in maximum daily discharge from 13,838 gpd to 20,000 gpd, and changes to reflect the amendments to 20.6.6 NMAC. Potential contaminants associated with this type of discharge include nitrogen compounds. The facility is located at #5 Military Hwy, approximately 8 miles east of Veguita, in Section 16, T03N, R03E, Socorro County. Groundwater beneath the site is at a depth of approximately 366 feet and had a pre-discharge total dissolved solids concentration of approximately 600 milligrams per liter.	Gary Westerfield Gary.Westerfield@state.nm.us

Prior to ruling on any proposed Discharge Permit or its modification, the New Mexico Environment Department (NMED) will allow thirty days after the date of publication of this notice to receive written comments and during which time a public hearing may be requested by any interested person, including the applicant. Requests for public hearing shall be in writing and shall set forth the reasons why a hearing should be held. A hearing will be held if NMED determines that there is substantial public interest. Comments or requests for hearing should be submitted to the Ground Water Quality Bureau at PO Box 5469, Santa Fe, NM 87502-5469.

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https://www.env.nm.gov/gwb/NMED-GWQB-PublicNotice.htm

13487

RLWTF P.43

Notice is hereby given pursuant to 20.6.2.3108.H NMAC, the following Groundwater Discharge Permit applications have been proposed for approval. To request additional information or to obtain a copy of a draft permit, contact the Ground Water Quality Bureau in Santa Fe at (505) 827-2900. Draft permits may also be viewed on-line at https://www.env.nm.gov/gwb/NMED-GWQB-PublicNotice.htm

NOTE – If viewing by WEB - Click on facility name to review a copy of the draft permit.

DP #	Facility/Applicant	Closest City	County	Notice	NMED Permit Contact
674	SAS Dairy Albin Smith Owner SAS Dairy 506 State Rd. 467 Clovis, NM 88101 Enviro-Ag Engineering, Inc. Stuart Joy, P.E. 203 E. Main St. Artesia, NM 88210	Clovis	Curry	DP-674 – SAS Dairy: Albin Smith, Owner, proposes to renew and modify the Discharge Permit for the discharge of up to 40,000 gallons per day (gpd) from the production area of a dairy facility to a treatment and disposal system. Wastewater flows to a concrete sump and is pumped through a passive solids separator to a synthetically lined wastewater impoundment system for storage prior to transfer to a synthetically lined combination wastewater/stormwater impoundment at Arrowhead Dairy, managed under DP-1553. The modification consists of the transfer of up to 40,000 gpd to Arrowhead Dairy and changes to reflect the amendments to 20.6.6 NMAC. Potential contaminants associated with this type of discharge include nitrogen compounds. The facility is located at 506 State Rd. 467, approximately 10 miles southwest of Clovis, in Section 1, T01N, R35E, Curry County. Groundwater beneath the site is at a depth of approximately 219 feet and had a pre-discharge total dissolved solids concentration of approximately 320 milligrams per liter.	Matthew Smith Matthew.Smith3@state.nm.us
1553	Arrowhead Dairy Albin Smith Owner Arrowhead Dairy 506 State Rd. 467 Clovis, NM 88101	Clovis	Curry	DP-1553 – Arrowhead Dairy: Albin Smith, Owner, proposes to renew and modify the Discharge Permit for the discharge of up to 85,000 gallons per day (gpd) from the production area of a dairy facility to a treatment and disposal system. Wastewater flows to a passive solids separator to a synthetically lined wastewater impoundment before flowing into a combination wastewater/stormwater	Matthew Smith Matthew.Smith3@state.nm.us

8816..1388

	Enviro-Ag Engineering, Inc. Stuart Joy, P.E. 203 E. Main Street. Artesia, NM 88210			impoundment for storage prior to land application. The permittee proposes to receive up to 40,000 gpd of additional agricultural wastewater from SAS Dairy managed under DP-674. Wastewater from both facilities is comingled and land applied by center pivot irrigation to up to 500 acres of irrigated cropland under cultivation. The modification consists of an increase in the maximum daily discharge from 70,000 gpd to 85,000 gpd, an increase in land application area from 375 acres to 500 acres, and changes to reflect the amendments to 20.6.6 NMAC. Potential contaminants associated with this type of discharge include nitrogen compounds. The facility is located at 1763 CR 6, 10 miles southwest of Clovis, in Sections 1 and 2, T01N, R35E, Curry County. Groundwater beneath the site is at a depth of approximately 206 feet and had a pre-discharge total dissolved solids concentration of approximately 765 milligrams per liter.	
1281	West Mesa/Santa Teresa Wastewater Treatment Facility Brent Westmoreland Executive Director Camino Real Regional Utility Authority 4950 McNutt Rd. Sunland Park, NM 88063	Santa Teresa	Doña Ana	DP-1281 - West Mesa/Santa Teresa Wastewater Treatment Facility: Brent Westmoreland, Executive Director, proposes to modify the Discharge Permit for the discharge of up to 450,000 gallons per day (gpd) of treated wastewater from a wastewater treatment facility. Treated wastewater is stored in two synthetically-lined impoundments and then discharged to three surface disposal areas totaling 48.7 acres. Up to 50,000 gpd of treated wastewater may be discharged to a leachfield on an emergency basis. The modification consists of an increase in the maximum daily discharge volume from 300,000 gpd to 450,000 gpd and an increase in surface disposal acreage from 11.5 to 48.7 acres. Potential contaminants associated with this type of discharge include nitrogen compounds. The facility is located at 4770 Pete Domenici Hwy, approximately 2.5 miles southwest of Santa Teresa, in Section 30, T28S, R03E, Doña Ana County. Groundwater beneath the site is at a depth	Gerald Knutson Gerald.Knutson@state.nm.us

				of approximately 315 feet and has a total dissolved solids concentration ranging from 500 to 1,000 milligrams per liter.	
1620	Hobbs Generating Station Rob Hanna, First Reserve Asset Manger Lea Power Partners, LLC. One Lafayette Place Greenwich, CT 06830	Hobbs	Lea	DP-1620, Hobbs Generating Station: Lea Power Partners, LLC. proposes to renew the Discharge Permit for the discharge of up to 5 million gallons per month, or 165,000 gallons per day, on an annual average, of evaporative cooler blowdown, boiler blowdown, reverse osmosis reject, and filter backwash to two double synthetically-lined storage impoundments then to approximately 58.62 acres of cropland under cultivation and/or native vegetation. Potential contaminants associated with this type of discharge include nitrogen compounds and metals. The facility is located at latitude 32.7283° North, longitude 103.3099° West, on North Maddox Road, approximately 10 miles northwest of Hobbs, in Section 25, T18S, R36E, Lea County. Groundwater beneath the site is at a depth of approximately 50 feet and has a total dissolved solids concentration of approximately 340 milligrams per liter.	Kathryn Hayden Kathryn.Hayden@state.nm.us
1132	The Radioactive Liquid Waste Treatment Facility John C. Bretzke Division Leader Environmental Protection & Compliance Division Los Alamos National Security LLC PO Box 1663, K491 Los Alamos, NM 87545	Los Alamos	Los Alamos	DP-1132 - The Radioactive Liquid Waste Treatment Facility (RLWTF) is a wastewater treatment facility that is authorized to discharge up to 40,000 gallons per day (gpd) and consists of a collection, storage, treatment, and disposal system (including the Waste Management Risk Mitigation Facility or 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 facility is	Steve Huddleson Steven.Huddleson@state.nm.us Kathryn Hayden Kathryn.Hayden@state.nm.us

	Karen E. Armijo Permitting and Compliance Program Manager National Nuclear Security Administration Los Alamos Field Office U.S. Department of Energy 3747 West Jemez Road Los Alamos, NM 87545			located within Los Alamos National Laboratory, approximately 1.5 miles south of Los Alamos, New Mexico, in Sections 16, 17, 20, 21, and 22, T19N, R06E, Los Alamos County. Groundwater 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 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.WW NMAC.	
1769	New Mexico State University Agricultural Science Center at Tucumcari Glen Haubold Assistant Vice President Office of Facilities and Services New Mexico State University PO Box 30001 MSC 3545 Las Cruces, NM 88003-3545	Tucumcari	Quay	DP-1769, New Mexico State University Agricultural Science Center at Tucumcari, Glen Haubold, Assistant Vice President, Office of Facilities and Services, proposes to discharge up to 720,000 gallons per day (gpd) of reclaimed domestic wastewater received from the City of Tucumcari Wastewater Treatment Facility (WWTF). Reclaimed wastewater is discharged to a 464-acre area for spray, drip, or flood irrigation of cultivated cropland, ornamental landscapes and grounds, and improved/native pastures for conducting science based agricultural investigation on crops and conditions and associated non-research uses. Additionally, the permittee is authorized to discharge up to 465 gpd of domestic wastewater from the facility buildings to a septic tank/leachfield system for treatment and disposal. The discharge contains water contaminants which may be elevated above the standards of Section 20.6.2.3103 NMAC and/or the presence of toxic pollutants as defined in Subsection WW of 20.6.2.7 NMAC. The facility is located at 6502 Quay Road, AM.5, Tucumcari, New Mexico, 88401, approximately 3 miles northeast of Tucumcari, in Sections 6 and 7, Township 11N, Range 31E, and Section 1, Township 11N, Range 30E, Quay County. Ground water most likely to be affected is at a depth of approximately 36 – 84 feet and has a	Kellie Jones Kellie.Jones@state.nm.us

				total dissolved solids concentration of approximately 490 to 1,300 milligrams per liter.	
1313	Desertview Dairy Anthony Ekren, Permitting and Compliance Riverview, LLP 26406 470th Ave. Morris, MN 56267 Stuart Joy, P.E. Enviro-Ag Engineering, Inc. 203 E Main St. Artesia, NM 88210	Texico	Roosevelt	DP-1313 - Desertview Dairy: Anthony Ekren, Member, - dba Riverview Dairy, LLP, proposes to renew and modify the Discharge Permit for the discharge of up to 230,000 gallons per day (gpd) of agricultural wastewater from the production area of a dairy facility to a treatment and disposal system. Wastewater is pumped through a screen solids separator and drains to a two-cell synthetically lined impoundment system for storage prior to land application. Wastewater is land applied by center pivot irrigation to up to 660 acres of irrigated cropland under cultivation. The modification consists of an increase in the maximum daily discharge from 40,000 gpd to 230,000 gpd, an increase in the acreage of the land application area from 187.5 acres to 660 acres, and a change in the location of the discharge which includes the addition of fields in the land application area. Potential contaminants associated with this type of discharge include nitrogen compounds. The facility is located at 012 North Roosevelt Road A, approximately 9 miles south of Texico, in Sections 3 and 4, T1S, R37E, and Sections 33 and 34, T1N, R37E, Roosevelt County. Groundwater beneath the site is at a depth of approximately 230 feet and had a pre-discharge total dissolved solids concentration of approximately 370 milligrams per liter.	Sarah M. Ogden Sarah.Ogden@state.nm.us
563	A & M Dairy, LLC Pedram Ghoreishi Owner A&M Dairy, LLC PO Box 591 Veguita, NM 87062	Veguita	Socorro	DP-563 – A & M Dairy, LLC: Pedram Ghoreishi, Owner, proposes to renew the Discharge Permit for the discharge of 4,200 gallons per day of agricultural wastewater from the production area of a dairy facility to a treatment and disposal system. Wastewater flows to a clay-lined combination wastewater/stormwater impoundment for disposal by evaporation. Potential contaminants associated with this type of discharge include nitrogen	Marc Bonem Marc.Bonem@state.nm.us

	Stuart Joy, P.E. Consultant Enviro-Ag Engineering, Inc. 203 East Main Street Artesia, NM 88210			compounds. The facility is located at 125 Carlos Martinez Rd., approximately 2 miles south of Veguita, in Section 29, T03N, R02E, Socorro County. Groundwater beneath the site is at a depth of approximately 63 feet and had a pre-discharge total dissolved solids concentration of approximately 300 milligrams per liter.	
1477	HAW Farms, LLC John Woelber, Owner HAW Farms, LLC P.O. Box 909 Belen, NM 87002 Stuart Joy, P.E. Consultant Enviro-Ag Engineering, Inc. 203 East Main St. Artesia, NM 88210	Veguita	Socorro	DP-1477 – HAW Farms, LLC: John Woelber, Owner, proposes to renew and modify the Discharge Permit for the discharge of up to 20,000 gallons per day (gpd) of agricultural wastewater from the production area of a dairy facility to a treatment and disposal system. Wastewater is pumped to a passive two-cell concrete solids separator and then flows to two synthetically lined combination wastewater/stormwater impoundments in series for disposal by evaporation. The modification consists of an increase in maximum daily discharge from 13,838 gpd to 20,000 gpd, and changes to reflect the amendments to 20.6.6 NMAC. Potential contaminants associated with this type of discharge include nitrogen compounds. The facility is located at #5 Military Hwy, approximately 8 miles east of Veguita, in Section 16, T03N, R03E, Socorro County. Groundwater beneath the site is at a depth of approximately 366 feet and had a pre-discharge total dissolved solids concentration of approximately 600 milligrams per liter.	Gary Westerfield Gary.Westerfield@state.nm.us

Prior to ruling on any proposed Discharge Permit or its modification, the New Mexico Environment Department (NMED) will allow thirty days after the date of publication of this notice to receive written comments and during which time a public hearing may be requested by any interested person, including the applicant. Requests for public hearing shall be in writing and shall set forth the reasons why a hearing should be held. A hearing will be held if NMED determines that there is substantial public interest. Comments or requests for hearing should be submitted to the Ground Water Quality Bureau at PO Box 5469, Santa Fe, NM 87502-5469.

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: 13495

Communities for Clean Water

June 5, 2017

Ms. Kathryn Hayden, Environmental Scientist
Ground Water Quality Bureau
P.O. Box 5469
Santa Fe, NM 87502-5469
By email to: Kathryn.Hayden@state.nm.us
cc: Michelle.Hunter@state.nm.us

RE: Comments and hearing request on DP-1132

Dear Ms. Hayden:

As you know, Communities for Clean Water ("CCW") has been actively participating in the process of arriving at a valid and protective permit for the Radioactive Liquid Waste Treatment Facility ("RLWTF") at the Los Alamos National Laboratory ("LANL") since December 2013. *See* comment letters and requests for hearing provided in PDF along with this letter.[1] A description of each constituent organization of CCW has been provided in the initial comment letters, and that information is incorporated herein by reference.[2] Despite significant good faith participation in an attempt to arrive at a final permit that our constituent organizations and members are satisfied is adequate to assure public health, safety, and protection of the environment, a number of unresolved issues remain upon which a hearing is requested. In this regard, we refer you to the comments and hearing requests we have incorporated herein by reference which we also identify by attachment number and filing date in the list below. This list shows remaining issues along with our suggestion for potential resolution, which could obviate a hearing. Pursuant to 74-6-5(G) NMSA 1978 and 20.6.2.3108(K) NMAC, we request a public hearing on these issues:

1. CCW has contended since its initial comments that the RLWTF, as, in LANL's words, "a zero liquid discharge" facility, is not properly regulated under the New Mexico Water Quality Act and implementing regulations. *See* **Attachment 15**, CCW Letter to

[1] *See generally* **Attachments 1 to 15** which detail the resolved and continuing issues that CCW has with DP-1132.

[2] Membership in CCW's constituent organizations totals approximately 4,000 people who live downwind and downstream of the emissions from operations at LANL.

NMED re DP-1132 (January 13, 2017); see also **Attachments 1, 2**, and **14a,** Comments and Requests for Hearing Letter to NMED re DP-1132 (December 6, 2013); Comments and Requests for Hearing to NMED re DP-1132 (December 12, 2013);[3] Cover letter, exhibit list, and petition to rescind NPDES permit for the RLWTF (June 17, 2016). CCW requests a hearing on this issue. CCW notes that it may not be necessary to hold a hearing if the Environment Department specifically stipulates in writing on the record that: (a) the RLWTF has not made any discharges since at least late 2011; (b) the RLWTF is a "zero liquid discharge" facility and no liquid discharges are anticipated from this facility; (c) the new RLWTF Low-Level Radioactive Waste Water ("RLW") Treatment System facility adjacent to the current RLWTF will likewise be a "zero liquid discharge facility"; and (d) once operating, no liquid discharges are anticipated to take place from the new RLWTF RLW facility.[4]

2. It is objectionable to have a permit apply to "subsequent replacement systems," which have not undergone the required public notice, comment and hearing under the Resource Conservation and Recovery Act ("RCRA") and the New Mexico Hazardous Waste Act ("NMHWA"). The new RLW facility, absent an exemption from RCRA/NMHWA, is subject to the NMED facility-wide hazardous waste permit for LANL. NMED notes that LANL constructs the building at its own risk. *See* **Attachment 16**, NMED letter to LANL (October 3, 2014). According to the letter, LANL submitted plans and specifications to NMED for review. NMED did not provide written approval. NMED made no comment regarding "the adequacy of the design, compliance with applicable State, Federal, local statute, code and requirements." Furthermore, there was no permit then in place for the new facility, nor would one be effective as there was not (and is no) discharge planned. Thus, NMED had no authority to review the "subsequent replacement systems" plans and specifications. DP-1132 Condition 3 requires "prior written approval by NMED" before implementing "any expansion, process modification, or alternation of a system or unit that could constitute a discharge permit modification (as defined in 20.6.2.7.P NMAC) of the intended function, design or capacity of any of the systems, units or components of the Facility's collection, treatment or disposal systems." Building a new facility would require a Class 3 permit modification under RCRA/NMHWA and requires advance public notice, comments and public hearing on request. A non-discharging facility that is not subject to a National Pollutant Discharge Elimination System ("NPDES") permit is covered under the RCRA/NMHWA permit.

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[3] Voluminous documents already in the possession of NMED that were referenced in the January 13, 2017 letter have been omitted from the attached PDF here.

[4] DP-1132 strains to justify a discharge permit ("DP") for a non-discharging facility, incorporating, e.g., elastic "discharge" definition, false "findings" that the facility is discharging, needless "authorization to discharge." *See generally* the issue and documents referenced above.

3. During discussions of DP-1132, LANL committed to working with CCW members to produce multi-language signage warning people to keep out of areas downstream of the RLWTF, but LANL has had no subsequent communication with CCW regarding the signage, despite the fact that CCW submitted draft copies of such signs. *See* **Attachment 7** (copy of email with attached copies of proposed signage).

4. Based upon discussions of DP-1132, LANL needs to include representatives of potentially affected Pueblos in emergency incident planning and provide designated seats within the LANL Emergency Operations Center for Pueblo representatives during preparation drills and actual emergencies.

5. Despite CCW's provision of information concerning current standard industry practices for calibration and sensitivity of monitoring equipment, DP-1132 fails to require monitoring equipment accurate to current industry standards.

6. Despite discussions and provisions of ample documentation on this issue, DP-1132 allows groundwater monitoring to be conducted with defective shallow, intermediate and regional wells.

7. In the final version of DP-1132, at LANL's request, NMED unilaterally changed the time for posting its submittals to NMED to the LANL Electronic Public Reading Room from seven (7) days to thirty (30) days. LANL's change effectively eliminates public notice about the 30-day comment period. *See* Condition 42 (Closure Plan Amendments and Modifications). Moreover, the DP allows public review and comment on proposed amendments to the closure plan "30 days after the submittal." This means the public will likely only learn of a comment opportunity after it expires. *See* DP-1132 Condition 42.

8. The DP-1132 Closure Plan fails to state that closure and post-closure care will take place under the NMED Hazardous Waste Permit for LANL. *See* Sec. VII.A.2 of the 2016 NMED Consent Order for LANL (requiring this).

9. Even if closure would take place under the Consent Order, closure is deferred and there is no proposed schedule provided in the DP-1132 Closure Plan.

10. The DP-1132 Closure Plan is limited to the low-level radioactive liquid waste treatment facility. LANL omitted to provide closure plans for the transuranic treatment facilities, component systems and "replacement" facilities.

11. The DP-1132 Closure Plan provides no performance standards that LANL must meet in order for NMED to assess whether LANL has met the standards so as to warrant closure. For example, it appears that underground pipe sections may be left in

place, yet there is no justification provided for doing so, and no basis provided for assessing the safety of such a decision. *See* Attachment 14b (performance standards).

12. The DP-1132 Closure Plan provides limited provisions for ground water monitoring; significantly, there is continued reliance on defective wells for monitoring purposes as noted above in ¶ 6.

13. The DP-1132 Closure Plan does not include required continued monitoring, sampling and reporting of contaminants of concern, e.g., perchlorates and radionuclides.

The above listed issues include (1) violations of federal and state law; (2) matters of public health and safety in the operation and ultimate clean-up of the RLWTF and any new "replacement" facilities built to handle the functions of the RLWTF after closure; and (3) inadequate public notice likely violating due process through a denuded posting submittal requirement for the LANL's Electronic Public Reading Room. Resolution of these issues is of substantial interest to the interested members of the public represented by Communities for Clean Water. For that reason, we request a public hearing on all of the above listed unresolved issues.

Sincerely,

Communities for Clean Water

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: 13500

LIST OF ATTACHMENTS

Attachment 1 CCW-TWU-Comments & Hrg Request DP-1132 RLWTF 2013-12-06

Attachment 2 DP1132 Comments Tewa Women and CCW 2013-12-12

Attachment 3 CCW Gilkeson & Sanchez Response to LANL DP1132 Comments 2014-01-26

Attachment 4 CCW RLWTF Comments 2014-10-24

Attachment 5 Rev1 CCW RLWTF Comments 2014-10-27

Attachment 6 CCW Gilkeson Sanchez Remaining Issues 2014-12-03

Attachment 7 Email with attachments re signage 2014-12-08

Attachment 8 CCW Ltr to NMED 2015-06-01

Attachment 9 Email string CCW NMED LANL re delayed postings to EPRR 2015-06-08

Attachment 10 Email plus CCW re 8-31- S Draft DP-1132 and LANL GW report 2015-09-14

Attachment 11 CCW DP-1132 memo to NMED 2015-09-14

Attachment 12 CCW DP-1132 comments 2015-11-23

Attachment 13 CCW Comments DP-1132 draft 2016-08-29

Attachment 14a CCNS Ltr to Region 6-Ex List-Petition to Rescind RLWTF NPDES 8-29-16

Attachment 14b Ex. B to CCW 8-29 Comments - Closure Performance Standards 8-29-16

Attachment 14c Ex. C to CCW 8-29 Comments-Mtg Note DP-1132 Closure Plan 2016-08-30

Attachment 15 CCW Comments to NMED re DP-1132 2017-01-13

Attachment 16 NMED Ltr LANL re RLWTF-Upgrade Plan Plans & Specs 2014-10-3

: 13501

Communities for Clean Water

A Northern New Mexico Network

December 6, 2013

Mr. Jerry Schoeppner, Bureau Chief
Ms. Jennifer Fullam, Environmental Scientist
Ground Water Quality Bureau
New Mexico Environment Department
P.O. Box 5469
Santa Fe, NM 87502-5469
Via email to: Jerry.Schoeppner@state.nm.us
Jennifer.Fullam@state.nm.us

Re: Comments and Hearing Request of the *Communities for Clean Water*, *Tewa Women United* and three individuals on the proposed permit DP-1132 for the Radioactive Liquid Waste Treatment Facility ("RLWTF") at Los Alamos National Laboratory

Dear Mr. Schoeppner and Ms. Fullam:

Following below are the first set of Comments and the Hearing Request of *Communities for Clean Water* ("CCW"), *Tewa Women United* ("TWU") and individuals *Kathy WanPovi Sanchez*, *J. Gilbert Sanchez* and *Robert H. Gilkeson*, *Independent Registered Geologist*, as referenced above. We will submit a second set of Comments before the close of the public comment period on December 12, 2013.

Our Comments and Hearing Request are introduced by a section entitled "Background Information" which provides a brief description of the history and composition of CCW, TWU, and the individual commenters, so that your agency and the Secretary-Designate understand the basis and existence of the substantial public interest in the RLWTF permit. In the event that final terms of the permit cannot be negotiated by the commenters, your agency and Los Alamos National Laboratory ("LANL"), there is substantial public interest sufficient to warrant a public hearing--and we specifically request that a public hearing be held.

Additionally, we have divided our comments into two other sections: general and specific permit comments. The general comments raise long-standing issues in relation to the issuance of this permit. The specific comments address what we view as necessary, substantive changes in the permit.

I. BACKGROUND INFORMATION

A. Organizations and Persons Commenting and Requesting A Hearing;

1. CCW, Tewa Women United and Kathy WanPovi Sanchez, J. Gilbert Sanchez and Robert H. Gilkeson.

CCW is a network of non-governmental organizations comprised of *Amigos Bravos, Concerned Citizens for Nuclear Safety* (CCNS), *Honor Our Pueblo Existence* (H.O.P.E.). *Tewa Women United* and individuals, Kathy WanPovi Sanchez, J. Gilbert Sanchez and Robert H. Gilkeson, Independent Registered Geologist, join CCW in submitting this first set of comments. Collectively, our members live downwind and downstream of LANL and are concerned about the discharge of up to 40,000 gallons per day of effluent from Technical Area 50 ("TA-50") into Mortandad Canyon and the evaporation of radioactive tritium and other pollutants into the atmosphere, the subject of the draft permit. The members of CCW and TWU, along with the individuals, represent a significant number of persons who are interested in the determinations on this permit.

CCW History. After the catastrophic Cerro Grande fire in 2000, Concerned Citizens for Nuclear Safety (CCNS) became alarmed about the transport of toxic materials off the LANL site into the Río Grande watershed. CCNS organized a conference that summer that drew over 450 participants. Amigos Bravos joined the effort in 2003, investigating stormwater discharges at LANL. The *Embudo Valley Environmental Monitoring Group*, which investigated downwind LANL impacts to their watershed, began collaborating in 2005. *Honor Our Pueblo Existence* (H.O.P.E.), a Pueblo Nation community-based organization, later joined the effort with a particular concern for the cultural impacts of LANL toxics. These groups formed the core that in early 2006 became *CCW*.

Starting in 2006, *CCW* pursued two independent, but related activities: (a) a campaign to prevent migration of LANL toxics to the Rio Grande watershed; and (b) an outreach campaign directed at impacted communities, the media, and public officials. CCW began questioning the adequacy of LANL's Environmental Management ("EM"). When it became clear that LANL's EM activities were inadequate and not likely to improve, members of CCW joined with other community-based organizations, including *TWU* and individuals, Kathy WanPovi Sanchez and J. Gilbert Sanchez, in March 2008 to file a Clean Water Act citizen complaint against United States Department of Energy ("DOE") and LANL for wide-ranging and chronic stormwater-related violations. Filing the lawsuit won *CCW* an invitation in late 2009 to participate in LANL's first Individual Stormwater Permit ("ISP"), issued by the Environmental Protection Agency ("EPA"). When the draft ISP failed to provide enough assurances, *CCW* filed an administrative appeal with the EPA, which led to another year of negotiations. In 2010, EPA approved what they have said is one of the strongest individual stormwater permits in the country.

With many of the stormwater issues resolved in the ISP, the litigation was settled in April 2011, after two years of negotiation resolved many of the remaining issues, especially providing for greater public input and financial support for technical experts to support that public input.

In order to protect public health, welfare, safety and the environment, the goals of *CCW* are to:

- Create a broad community-based movement.
- Protect precious water resources from contamination now and for the benefit of future generations.
- Hold local, state and federal regulators accountable to use their regulatory and enforcement powers and fulfill their public trust responsibilities.
- Hold LANL and those degrading the environment accountable for water contamination.
- Ensure the highest possible level of clean up at contaminated sites.

Tewa Women United ("TWU") History. TWU is a collective intertribal women's voice in the Tewa homelands of Northern New Mexico. The name Tewa Women United comes from the Tewa words *wi don gi mu* which translates to "we are one."

TWU was started in 1989 as a support group for women concerned with the traumatic effects of colonization leading to issues including alcoholism, suicide, terricide, environmental violence and domestic and sexual violence. In the safe space women created, we transformed and empowered one another through critical analysis and the embracing and re-affirming of our cultural identity.

In 2001 TWU transitioned from an informal, all volunteer group to a formal 501(c)3 non-profit organization.

Tewa Women United was incorporated for educational, social and benevolent purposes, specifically for the ending of all forms of violence against Native Women and girls, Mother Earth and to promote peace in New Mexico.

The Vision of TWU. Sovereignty is living the truth from the heart. TWU's vision is embodied in the Tewa words *wo watsi* the breath of our work. In other words, our path of life follows us into daily work.

The Mission of TWU. The mission of TWU is to provide safe spaces of Indigenous women to uncover the power, strength and skills they possess to become positive forces for social change in their families and communities.

Kathy Wanpovi Sanchez resides at the Pueblo de San Ildefonso. She is not representing the Pueblo de San Ildefonso in this matter. She is a fourth generation potter of the Julian and Maria Martinez family lineage. She has had direct contact with her great grandmother, Maria. The oral tradition wisdom and life narratives transmitted to her go back a very long, long time. What she refers to as sacred is where Los Alamos National Laboratory is located. It is her ancestral homeland. It is a sacred place that holds the present and ancestral energy of being.

J. Gilbert Sanchez resides at the Pueblo de San Ildefonso. He is a former Governor of the Pueblo. He created the Pueblo's Environmental Protection, Cultural Preservation and Land Management Offices. He served as Director of the Los Alamos Pueblos Project. In this matter, he does not represent the Pueblo de San Ildefonso. He sat on the State and Tribal Working Group at the Department of Energy Secretarial level for 12 years and on the Board of Scientific Counselors as a Community Representative for over 12 years.

Robert H. Gilkeson, Independent Registered Geologist, is a former contractor at LANL, specializing in the Environmental Remediation Programs and Groundwater Protection Programs. He was a research scientist at the University of Illinois for 17 years. Over the past decade, he has provided *pro bono* technical expertise to CCW, TWU and the individuals Kathy WanPovi Sanchez and J. Gilbert Sanchez about the seismic, groundwater protection and waste remediation issues at LANL.

B. The Permit History And Need For Additional Time And Documents.

1. The Permit First Drafted In the 1990s. NMED first released a draft permit for public comment in the mid-1990s. CCNS, through its staffer, Susan Diane, asked for a public hearing. There were delays, until 2005, when NMED released a draft permit for public comment. On August 4, 2005 Amigos Bravos, represented by the New Mexico Environmental Law Center, submitted comments and requested a public hearing. Letter to William C. Olson, NMED, from Attorney Douglas Meiklejohn (August 4, 2005), attached hereto as Exhibit 'A'.

For the third time, the public provides these public comments. We appreciate that NMED provided a 90-day public comment period given the amount of public interest in the RLWTF. We incorporate our previous comments by reference in order to demonstrate the longstanding significant public interest in this permit.

2. Requests for extension of time to submit comments and obtain necessary background documents have been denied. We made a request to NMED for an extension of time to submit these comments due to the October 2013 federal government shutdown, which was denied. Further, we have requested data and documents from the Permittees and the EPA, which responses have been incomplete. Additional effort was required to obtain the needed information in order to provided informed comments to NMED. On November 27, 2013 we filed Freedom of Information Act requests with the DOE and EPA in order to obtain data and additional information from both the DOE/LANL and EPA about tritium emissions from both evaporation units. If there are additional delays in obtaining the data and documents, we request the opportunity to provide additional comments following the completion of the comment period on December 12, 2013. We believe additional time should be provided.

II. GENERAL COMMENTS ON THE PERMIT.

A. Introduction: Acknowledging Our Government's Occupation and Pollution of Sacred Places. We begin by acknowledging the sacred place where the discharges are occurring. LANL is discharging into the ground and making emissions into the air in the Sacred Mountains of the Pueblo Peoples who were told by the U.S. Government that the Pajarito Plateau would be used for a short time and then it would be returned to the People. The Plateau has been used, and projected for use, by the U.S. Government for at least the next 50 years. One hundred and twenty years is not a short amount of time.

1. Section 43. Need for Closure and Post-Closure Plans for TA-50 Now – Not 180 Days Following the Issuance of the Permit. NMED must require the DOE and LANL (the "Permittees") to provide the closure and post-closure plans for the RLWTF as part of their application for groundwater discharge permit DP-1132. *See* 20.6.2.3107(A)(11) NMAC (closure plan required that will "prevent the exceedance [water quality] standards . . . in ground water or abate such contamination"). The draft permit allows for DOE and LANL to submit the closure plans 180 days following the issuance of the permit. This creates a situation that places both the public and NMED at a distinct disadvantage and creates a substantially increased cost of the permitting process at a time when state resources are scarce. Both the public and the Ground Water Quality Bureau need to see both the plans for operation and closure of the 50-year old facility now in order for the agency to craft an appropriate permit and the public to provide informed public comments. By bifurcating the permitting process from the closure process there will have to be two permit proceedings which will cost NMED and the public time, resources and money. By including the closure and post closure plans with the permit – as required -- both public and agency resources are appropriately conserved and a higher level of informed decision-making can be achieved. That is a benefit to NMED, and the public it serves. Moreover, requiring the closure plan before the time of

permit issuance will also conserve federal tax dollars, as LANL, a federally funded facility, will only have to undergo one ground water permitting process for the RLWTF.

DOE and LANL have already had more than ample time to prepare the closure and post-closure plan for this facility. A draft of discharge permit DP-1132 was issued in 1995 and on June 10, 2005. In response to the draft permits, public comments were submitted that raised the requirement for the inclusion of a closure and post-closure plan. Seventeen years and eight years of notice is more than a reasonable amount of time for LANL to fulfill the legal requirement that it provide its closure and post closure plans with its permit application for the RLWTF.

Please carefully consider this conservative approach to the permitting of TA-50 in which all sides save money and time. The Ground Water Quality Bureau should require DOE/LANL/LANS to submit the closure and post closure plans for agency review now and before issuance of a revised permit.

2. We note that the Outfall 051 discharge pipe is surrounded by the Los Alamos County drinking water wells. NMED states in the draft permit:

> 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 [Water Quality Act], NMSA 1978, § 74-6-5.E.3, and the [Water Quality Control Commission] Regulations at 20.6.2.3103 NMAC. Section IV. Findings, p. 9.

Los Alamos County residents rely upon the regional aquifer for 100 percent of their drinking water. The ground water of TA-50 is a present and future source of drinking water: a place of withdrawal of ground water for present and reasonably foreseeable future use within the meaning of the Water Quality Act, *id.* at , § 74-6-5.E.3 and Water Quality Control Commission Regulations at 20.6.2.3103 NMAC. We have a special concern about protecting the present and future use of the drinking water supply as required by the New Mexico Water Quality Act (WQA) and regulations adopted pursuant to the WQA.

At issue are numerous radioactive and other hazardous contaminants that have been, and continue to be, discharged by LANL into Mortandad Canyon. These pollutants – including known carcinogens – are migrating into the regional aquifer. Besides the detrimental effects of such discharges on human and environment health, it is feared that some of these pollutants will enter the drinking water supply of Los Alamos and communities downstream of LANL.

3. **LANL has several reports going back to the 1970s of its studies on the need and efficacy of turning the RLWTF into a "zero discharge" facility.**[1] In its application, as well previous studies of the RLWTF, LANL points to the fact that its discharges from the facility are already extremely minimal. Given the data that LANL has provided, it is questionable as to whether this facility should receive an NPDES permit or should be permitted as a RCRA hazardous waste processing facility. NMED in consultation with Region 6 of the EPA should make a determination regarding the correct regulatory fit, given the fact that there are minimal discharges and the facility has the capacity to be a "zero discharge" facility according to the applicant. Were the facility equipped with an emergency storage tank capable of holding a day of maximum capacity discharge plus necessary "freeboard", it would be able to operate without discharging under an NPDES permit.

The draft permit states:

> 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 WW NMAC. Section III, page 8.

We fully support NMED having reserved, in the permit, 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 WW NMAC is present. *See id.* Additionally, the permit should reference and provide as an

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[1] Collins, K., Rife, J., Rae, S. and Hanson, S., "Los Alamos National Pollution Discharge Elimination System Permit Compliance and Outfall Reduction Strategy," LA-UR-07-8312 (December 20, 2007) ("Collins *et al.*"). See, for example, zero discharge project described at 3-6; description of declining output from facility at 7-16 to 7-17.

Moreover, this is not a new consideration for LANL. The Collins *et al.* report states that, "Zero liquid discharge of effluent was considered in 1977 with the proposed construction of 14 acres of evaporative ponds on Sigma Mesa." *Id.* at 7-17. Furthermore, a "1998 a report entitled *Elimination of Liquid Discharge to the Environment from the TA-50 Radioactive Liquid Waste Treatment Facility* (Moss et al., 1998) again recommended zero discharge of effluent from the TA-50 RLWTF. In 2003, a new working group was formed and completed a second report. These two reports provide the basis for the current Zero Liquid Discharge (ZLD) Project which is scheduled as a design/build project for FY08 or FY09." at 7-17. See also the Collins report recommendations which support the notion that the current facility should, by now, be a zero-discharge facility. Recommendations at 7-17 through 7-20; 8-3 to 8-4, and, at 8-4 to 8-5, see "Recommendations for FY08 Scope to Implement the NPDES Permit Compliance and Outfall Reduction Strategy."

Of course, were LANL to actually implement the recommendations of its scientists and technicians over the last thirty six (36) years, it would be seeking a RCRA permit for the hazardous waste treatment facility rather than relying upon discharging, as needed, its toxic, radioactive wastes into the human and natural environment.

appendix the information LANL provided to EPA concerning air emissions of tritium from the evaporation units. While we recognize that the permitting is being done under the Water Quality Act by the Ground Water Quality Bureau, LANL has long recognized that the use of the evaporation units triggers the need for air quality approvals from EPA and the state of New Mexico. [2]

III. COMMENTS ADDRESSED TO SPECIFIC PORTIONS OF THE PERMIT.

A. Specific Portions Of The Permit Need To Be Changed.

1. Section I. Acronyms, Definitions and Tables, at page 4. COMMENT: Reference to and the standard for Total Residual Chlorine (TRC) was removed **is not present in?** from the acronym list, definitions and Tables. TRC should have an effluent limit and be required for sampling, analysis and reporting under this permit.

2. Section II. Definitions, at page 5. COMMENT (1) The definition of 'calibration' should appear in the Definitions section of the permit; (2) "Practice of Engineering" does not appear in the definitions section--unless it is reinstated, the definition of 'Record Drawings' should include the statement that the official record of the actual as-built conditions of the completed construction "are certified and bear the seal and signature of a Professional Engineer licensed to practice engineering in the State of New Mexico."

3. Section II.BB. Definition of Total Polychlorinated Biphenyls (PCBs), at page 7. COMMENT: The EPA stormwater permit for LANL requires that the Permittees use Method 1668 Revision A, or the most current revisions of the Congener Method, for PCB analysis. *See* Part I.C, footnote (*4). This is also a requirement of the industrial surface water NPDES permits. For purposes of analytic consistency, NMED should require the use of Method 1668 Revision A for PCB analyses done under the draft RLWTF permit.

Additionally, the permit should be corrected to reference Method 1668C *Chlorinated*

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[2] *Id.* at 2-9 ("[E]missions from mechanical evaporators and evaporation ponds must be addressed when evaluating options for permit compliance and outfall reduction"); also at 5-1, LANL anticipated that NMED would impose requirements, under it ground water permitting of the evaporation facilities that are more comprehensive than the current permit requirements ("Evaporation basins or tanks may require Groundwater Discharge Permits that specify design items such as liner materials, lining requirements, monitoring, recordkeeping, operation and maintenance requirements, and performance standards") (emphasis added).

Biphenyl Congeners in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS in §IV.B.19.[3]

4. Section III. Introduction, at page 8. COMMENT: The first paragraph should include language that the permit is for operations at Los Alamos National Laboratory (LANL).

5. Section V.D. Authorization to Discharge, at page 10. COMMENT: (a) Influent Collection System conveyance lines should be double walled; (b) the type of gas used in the Mechanical Evaporator System should be disclosed in the permit; (c) the Solar Evaporative Tank System should not be a "unsealed subgrade concrete structure" rather is should be sealed, especially considering that the leak detection is a single rather than a double leak detection system.

6. Section VI.A.3(g) Submittal of Plans and Specifications, at page 13. COMMENT: The same concern regarding DOE Standard 1020-2012 applies here. The Standard requires that all facilities meet seismic qualification. Given that DOE requirement and that the terminus of the Guaje Mountain Fault is in the area of TA-50/TA-55, the permit should require that the RLWTF be in compliance with all federal regulations, including DOE seismic qualification under Standard 1020-2102.

7. Section VI.A.3(j). Submittal of Plans and Specifications, at page 13. COMMENT: This provision, at either j or k, should include requiring installation of a camera as part of the detecting the failure of either primary or secondary containment or the presence of a release.

8. Section VI.A.6. Signs, at page 14. COMMENT: *Honor Our Pueblo Existence* requested the provision of warning signs in Tewa in the NMED Hazardous Waste Permit for LANL. *See §2.5.1 of the Hazardous Water Permit.* In this permit, LANL and NMED should be required to contact Santa Clara Pueblo, as well as the other three Accord Pueblos, about what type of signs each Pueblo requires and put those requirements in the permit.

9. Section VI.A.8. Water Tightness Testing, at page 15. COMMENT: There is no human health and safety benefit in allowing an infiltration or infiltration rate of up to 50 gallons per mile per consecutive 24-hour period. No regulation allows such an excess amount of leakage and there is no lawful justification for doing so. The permit should be changed to disallow this level of leakage. Moreover, it is inconsistent with the permit requirements at Section 30, Water-Tightness, which require leak testing in every

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[3] Colljns *et al.*, "Los Alamos National Pollution Discharge Elimination System Permit Compliance and Outfall Reduction Strategy," *id.*, acknowledged the need to use (and recommended) this methodology. *See* 7-20, 7-22.

piping segment rather than a calculation of the average rate of leakage. A maximum for leakage should be specified "as low as reasonably achievable" (ALARA) with some threshold that will be protective of human health.

10. Section VI.A.9. Settled Solids, at page 16. COMMENT: This section should specify where the settled solids will be measured. It is unclear whether measurements will be taken at the Solar Evaporative Tank (SET) System and/or the Mechanical Evaporator System (MES). The permit should explain the depth of the SETs in "Section V. Authorization to Discharge," at page 9.

11. Section VI.A.10.b. Facility Inspections, at page 17. COMMENT: The term for inspection (weekly, monthly) of "visual portions of all synthetic liners used to store or dispose of liquids or semi-liquids" should be stated in the permit. Moreover, as the terms of inspection are stated for other portions of the facility, it is inconsistent for the permit to fail to specify terms of inspection for all portions of the facility.

12. Table 1. Effluent Quality Limits for Discharges to Outfall 051, at page 19: COMMENT: Effluent limits for perchlorate are nearly three times as high as in the draft 2005 permit and nearly twice the current California standard. The limitations for perchlorate should be about one tenth of those in Table 1. Moreover, in 2006, LANL published a graph in a briefing paper written by the Nuclear Waste and Infrastructure Services Division, Radioactive Liquid Waste Group, "Radioactive Liquid Waste Treatment Facility, Los Alamos National Laboratory, TA-50" (May 17, 2006). The graph shows that, excepting a single spike in a three-month period, perchlorate, close to the end of 2004, had been reduced to near zero. Surely, in 2013, LANL should be able to reduce its perchlorate discharge to at least the California standard, if not to zero.

13. Table 1. Effluent Quality Limits for Discharges to Outfall 051, at page 19. COMMENT: The 2005 draft permit had a permit limit of .00077 mg/L for mercury. The current draft has a limit of .0022 mg/L for mercury. If anything the limit today should be more, not less stringent and protective of occupational and public health and safety than it was eight (8) years ago.

14. Table 1. Effluent Quality Limits for Discharges to Outfall 051, at page 19. COMMENT: The 2005 draft had a zinc effluent limit of 4.37 mg/L. Again, the current revised draft permit has a less protective, less stringent limit set at 10 mg/L. The current limitation should be more protective of occupational and public health and safety than that proposed eight (8) years ago. The limits set in the revised draft permit should be at least as protective as they were before, absent some scientific justification for setting less protective and stringent limits.

15. Table 1. Effluent Quality Limits for Discharges to Outfall 051, at page 20. COMMENT: The limit for "Radioactivity" is higher than parties to the draft

permit wanted in 2005. It is currently set at 30 pCi/L. That limit should be 15 pCi/L. Given the technological advances in remediation technologies since the 2005 draft permit, it is reasonable and achievable--and properly protective of public health and safety--to limit tritium emissions to 15 pCi/L in this permit as part of the radioactivity limits in this permit. The briefing paper cited above also contains a graph showing that LANL, between January 2004 and September 2004 had reduced the amount of radioactive material discharged to the environment to near zero. Surely, in 2013, it is not unreasonable for LANL to accept a limit of 15 pCi/L for Radioactivity.

16. Tables 1 and 2. Effluent Quality Limits for Discharges to Outfall 051 and Effluent Quality Limits for Discharges to the MES and SET, at pages 19-21.
COMMENT: In the 2005 draft permit there was a tritium limit of 20 nCi/L. There is no tritium limit in this current draft permit, despite the fact that Los Alamos National Security, LLC, ("LANS") stated that it was intending to achieve "zero discharge" for tritium. Again, both the goal of "zero discharge" and, in the event that goal is not achieved, a tritium limit of 20 nCi/L should be inserted into the permit in order to be adequately protective of occupational and public health and safety. Tritium evaporation capabilities at LANL have, theoretically, been enhanced as part of the plan to achieve a "zero discharge" RLWTF. For this purpose, LANL now has both a "synthetically lined Solar Evaporative Tank system (SET)" and the Mechanical Evaporator System (MES) at TA-52. Given the additional facility for tritium evaporation, there should be limits in this permit that are consistent with LANL's supplemental treatment equipment for tritium. There should also be a deadline in the permit for the Permittees to achieve "zero discharge" given that LANL has been working on this since the 1970s.[4]

17. Section VI.A.13. Effluent Limits: Outfall 051, at page 20.
COMMENT: There is no justification for the permit providing that "constituents that are subject to effective and enforceable limitations under NPDES Permit NM0028355 for discharges to Outfall 051, that are lower than the effluent limits under this Discharge Permit are exempt." The permit should be consistent with state and federal law in the level of protection of water quality and human health and safety. This requires using language in the permit that specifies the more protective standard (be it state or federal) as the one applying to any and all discharges.

18. Section VI.A.17. Installation of Flow Meters, at page 22.
COMMENT: Considering the public has been waiting for almost two decades for this permit and that LANL has been working on making the existing facility a zero discharge facility since 1977, CCNS requests that the Permittees be required to install the flow meters within 30 days of the effective date of the GWDP. It is outrageous to provide six additional months after the effectiveness date of the permit for the implementation of

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[4] *Supra* note 1 (discussing the history of LANL studies recommending that the RLWTF be a "zero discharge" facility and indicating the capacity to achieve that objective).

flow metering within the RLWTF.

19. Section VI.A.18. Calibration of Flow Meters, at page 23. COMMENT: The calibration of flow meters should also be done within 30 days of the effective date of the permit as flow meter calibration is not very difficult to perform. Additionally, there is no engineering justification for a calibration rate of plus or minus 10% of actual flow when the standard is plus or minus 5%.

20. Section VI.B. 24.b. Waste Tracking, at page 26. COMMENT: Regardless of whatever lag time there may be between approval and conveyance of waste to TA-50, it is important to know when the waste stream is conveyed as well as when it was approved. The permit should be changed to clearly state when the waste stream is conveyed as well as when it was approved.

21. Section VI.B.25. Effluent Sampling, at page 26. COMMENT: The permit should require sampling for PCBs at Outfall 051, the MES and SET in the monthly and quarterly sampling events. *See* 20.6.2.3103 (A)(15) and 20.6.2.7.WW (39), NMAC (requirements for monitoring and limitations on PCBs in discharges). The type of discharge expected from the MES and SET should be specified so the reason for a quarterly sampling requirement is readily apparent. In addition, there should be a specification of the flow path for such discharges.

22. Section VI.C.29. Containment, at page 30. COMMENT: The language in the paragraph at the end of this section with respect to "long-term actions" to maintain the integrity of the secondary containment raises concerns. The nature, extent and limitations on what constitutes appropriate actions should be specified in the permit. The permit should require any proposal be noticed to the public for comment as well as the opportunity to request a public meeting, and that any proposal be posted promptly on LANL's Electronic Public Reading Room--not at the end of the process as the permit appears to allow.

23. Section VI.C.32. Damage to Structural Integrity, at page 33. COMMENT: This section should include a requirement for the Permittees to provide NMED with an oral 24-hour notice about any significant damage to the structural integrity of any unit or system.

24. Section VI.D.41. Cessation of Operation of Specific Units, at page 40. COMMENT: The permit needs to include the workplan for stabilization of five units that are required to be closed within 60 days of the effective date of the permit.

25. Section VI.D.42. Stabilization of Individual Units and Systems, at page 40. COMMENT: This section should include the pipes that have been used to move waste from TA-50 to the TA-53 evaporation tanks or similar structures.

We plan to submit, as noted above, additional comments supplementing the above as part of our Comments and Request for Public Hearing on the RLWTF permit.

We thank you for your careful consideration of these comments and our request for a hearing on this permit.

Respectfully submitted:

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Counsel for Communities for Clean Water, Tewa Women, Kathy WanPovi Sanchez, J. Gilbert Sanchez and Robert H. Gilkeson

NEW MEXICO
ENVIRONMENTAL LAW CENTER

AUG 4 2005

August 4, 2005

William C. Olson
Bureau Chief
Ground Water Bureau
New Mexico Environment Department
1190 St. Francis Drive
Santa Fe, New Mexico

Hand delivered

Re: Application of the U.S. Department of Energy and the University of California for renewal of discharge permit DP-1132 for the Radioactive Liquid Waste Treatment Facility at Los Alamos National Laboratory

Dear Bill:

I write as counsel for Amigos Bravos to request a public hearing and to comment on the draft discharge permit DP-1132 issued by the Ground Water Bureau of the New Mexico Environment Department on April 11, 2005 and re-issued on June 10, 2005.

Introduction

The Ground Water Bureau ("the Bureau") of the New Mexico Environment Department ("NMED") indicated in its April 11, 2005 notice of issuance, and its June 10, 2005 notice of re-issuance, of the draft of discharge permit DP-1132 that it proposes to issue DP-1132 to the U.S. Department of Energy ("DOE") and the University of California ("the University") for the Los Alamos National Laboratory Radioactive Liquid Waste Treatment Facility at Technical Area 50 ("the Facility") within the Los Alamos National Laboratory ("LANL"). The June tenth re-issuance notice stated that public comments and requests for a public hearing must be submitted on or before August 4, 2005.

This request for a public hearing and these comments are submitted by Amigos Bravos, a non-profit community based organization that is concerned about the impacts of the Facility on ground and surface water in New Mexico. Amigos Bravos appreciates the effort by the Bureau to address the discharges from the Facility. Amigos Bravos also appreciates this opportunity to be involved in the Bureau's consideration of the issues presented by those discharges. This request for a public hearing and these comments are submitted pursuant to the New Mexico Water Quality Act and the New Mexico Water Quality Control Commission Regulations.

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Request for public hearing

Amigos Bravos' request for a public hearing should be granted for two reasons. First there is significant public interest in this proposed discharge permit. Second, there are significant issues that must be addressed before the discharge permit is issued in final form.

The New Mexico Water Quality Act and its implementing regulations provide for public hearings

The New Mexico Water Quality Act, NMSA 1978 §§ 74-6-1 et seq. ("the Act") provides that the Water Quality Control Commission ("WQCC") shall adopt regulations providing for notice to the public of applications for permits under the Act. NMSA 1978 § 74-6-5 F. That section also provides that no ruling on an application for a permit shall be made without opportunity for a public hearing at which all interested persons have the chance to present their views and arguments, and to cross examine witnesses provided by other parties. Id.

The Water Quality Control Commission Regulations ("the Regulations") adopted to implement these provisions indicate that the NMED shall conduct a public hearing or meeting if the Secretary determines that there is significant public interest. NMAC 20.6.2.4108 D. There is significant public interest in the proposed discharge permit that is the subject of this proceeding.

This request is made by the board of directors, the staff, and the members of Amigos Bravos, a community based non-profit organization. The mission of Amigos Bravos includes an emphasis on protection of the Rio Grande watershed, and Amigos Bravos has a particular interest in this proceeding. Moreover, Amigos Bravos' extensive membership includes many members who live down stream and down gradient from LANL and who are therefore at risk from contamination discharged by the Facility that is the subject of proposed discharge permit DP-1132.

Amigos Bravos' mission and strategic plan call for addressing contamination from LANL

The mission of Amigos Bravos includes several specific goals. These are 1) to return New Mexico's rivers and the Rio Grande watershed to drinkable quality wherever possible, and to contact quality everywhere else; 2) to see that natural flows are maintained and where those flows have been disrupted by human intervention, to see that they are

regulated to protect and reclaim the river ecosystem by improving natural flows, and 3) to preserve and restore the native riparian and riverine biodiversity. Amigos Bravos supports the environmentally sound, sustainable traditional ways of life of indigenous cultures and holds that environmental justice and social justice go hand in hand.

Amigos Bravos' Board of Directors adopted the Amigos Bravos Strategic Plan in July 2004. That Strategic Plan identifies the use of state and federal regulatory processes to stop ground and surface pollution migrating from LANL facilities as a key component of Amigos Bravos' work, particularly the organization's work to protect and restore water quality and quantity in White Rock Canyon.

Amigos Bravos believes that state ground water discharge permits provide the public with a unique opportunity to work with the State, and the polluting facility, to develop the best possible protection for ground water in both the short term and after closeout of the facility. By preventing additional pollution from being released, and by requiring clean up of historic releases, the public's right to clean water will be protected. The proposed issuance of discharge permit DP-1132 to LANL provides Amigos Bravos with an opportunity to serve New Mexico's citizens by protecting the state's future drinking water resources while furthering its mission.

Amigos Bravos' extensive membership includes a substantial number of people who may be affected by contamination from the Facility.

Amigos Bravos' membership of more than 1,600 people reflects the geography of its constituency, with about 80 percent residing in-state. Within New Mexico, a substantial number of the members live in Los Alamos, Santa Fe, and Albuquerque. Because contaminants discharged by the Facility may reach ground water, the Amigos Bravos members who live in Los Alamos are at risk from contamination discharged by that Facility. Since discharges from that Facility also have the potential to reach the Rio Grande, Amigos Bravos members in Santa Fe and Albuquerque are at risk from contamination released by that Facility. There are therefore a substantial number of Amigos Bravos members who may be affected by discharges governed by proposed discharge permit DP-1132.

On the basis of the interests of Amigos Bravos' membership alone, there is significant public interest in the proposed discharge plan DP-1132. Moreover, Amigos Bravos is not the only organization that is requesting a public hearing concerning proposed discharge plan DP-1132. A similar request is being made by Concerned Citizens for Nuclear Safety, a non-profit organization based in Santa Fe that has a long standing interest in the operations of the LANL, and whose request is backed by that group's Board of Directors, Staff, and membership.

There is therefore significant public interest in the draft DP-1132 and the NMED Secretary should grant this and other requests for a public hearing.

Comments on the draft DP-1132

These comments are divided into the following categories: comments on the impacts of discharges from the Facility, questions about the need to discharge from the Facility and the alternatives to discharging from the Facility, comments on effluent limits, information that is needed in order to evaluate the impacts of the discharges from the Facility, comments concerning the wastes that are taken into and processed in the Facility, joint and several liability among the permittees for obligations under the permit, comments and questions about the treatment and disposal of non-liquid wastes generated at the facility, comments on the monitoring measures called for by the draft discharge permit, comments concerning the provision of monitoring and other data to members of the public, comments on the proposed closure plan for the Facility, comments on the need for a financial assurance for the discharge permit, comments on the relationship of DP-1132 to the Compliance Order on Consent entered into between the NMED, the DOE, and the University on March 1, 2005 ("the Compliance Order"), and comments on the retention of records by the permittees.

These comments are not meant to address all issues that exist or may arise with respect to the proposed discharge permit. Amigos Bravos reserves the right to raise other issues in other contexts, including negotiations and a public hearing, concerning the proposed permit.

Discharges from the Facility have the potential to impact ground water and down gradient surface water.

The potential for contaminants from Technical Area 50, where the Facility is located, to reach the Rio Grande was documented by George Rice in *New Mexico's Right to Know: The Potential for Groundwater Contaminants from Los Alamos National Laboratory to Reach the Rio Grande*, Prepared for Concerned Citizens for Nuclear Safety, Second Technical Report July 2004 ("the Rice Report"). As that report indicates, there are pathways by which the contaminants released from this and other LANL facilities can travel through ground and surface water between LANL and the Rio Grande. Rice Report, 34-35.

The discharge permit should require that LANL evaluate alternatives to discharges from the Facility.

The Regulations provide that the NMED may require information that may be necessary to demonstrate that a discharge will not result in an exceedence of standards at any place where water may be withdrawn now or in the reasonably foreseeable future. NMAC §20.6.2.3106.C(7). Because contaminants discharged from the Facility may cause such an exceedence of standards in ground or surface water that is down gradient and down stream from the Facility, the proposed discharge plan should require LANL to evaluate whether discharges from the Facility are necessary.

Elimination or minimization of discharges from the Facility could be accomplished through advanced treatment technologies which could render any potential discharges free of contaminants and available for re-use by LANL. Even if an evaluation demonstrates that discharges are necessary, the discharge permit should mandate that LANL recycle water treated in the Facility to the maximum extent possible.

The discharge permit's effluent limits should be revised.

The effluent limit for gross alpha particle activity in the draft discharge permit is 30 pCi/L (draft discharge permit, Introduction), but that is twice the U.S. Environmental Protection Agency's drinking water standard of 15 pCi/L. The discharge permit's limit should be reduced to be consistent with that drinking water standard. In addition, the effluent limit for perchlorate is 4ug/L (*Id.*) even though LANL claims that the Facility has reduced perchlorate concentrations to less than 1 ug/L. The discharge permit should reflect the lower concentration that LANL has stated is being achieved. The discharge permit also should set limits on discharges of volatile organic compounds and semi-volatile organic compounds.

The Bureau needs more information before it can properly evaluate discharges from the Facility.

The Bureau does not have adequate information about the impact of past discharges from the Facility on surface and ground water in Mortandad Canyon and further down gradient to be able to determine accurately the effects that discharges from the Facility will have. Studies are needed to determine where discharges from the Facility travel and what their effect is on the existing contamination in the ground water and soil. For these and other reasons, DP-1132 should include flexibility that allows for appropriate modification of the permit as information becomes available, particularly through the investigations called for by the Compliance Order. Any modifications that are proposed should be considered in a process that includes public involvement. *See* NMAC §20.6.2.3108.A.

The Bureau also lacks necessary information about the wastes being treated at the Facility. For example, the Bureau should know whether it would be possible to separate waste that includes radionuclides from waste that does not prior to shipment or transfer of the waste to the Facility. The Bureau also should know whether waste containing radionuclides can be separated from waste that does not contain radionuclides prior to discharge of the waste from the Facility. In addition, the Bureau needs to know the chemistry of each of the effluent streams to be treated. This should include information on total and dissolved concentrations of all constituents regulated by the WQCC. It also should include information on the chemistry of waters that receive discharges from the Facility. If waters at other LANL technical areas receive discharges from the Facility, the Bureau should know the chemistry of those waters as well as their depth.

DP-1132 should set forth requirements concerning the wastes that are transported to the Facility and processed there.

It is appropriate to include in the draft permit the provision that restricts the facilities that may pump liquid waste to TA-50 through the Radioactive Liquid Waste Collection System (RLWCS) via double encased pipe or transport liquid waste to TA-50 by truck. The permit also should specify that any modification of this provision should require approval by the Bureau after a process involving input from the public.

The discharge permit should specify joint and several liability among the permittees.

The proposed discharge permit is addressed to DOE and the University, but it does not indicate which of those entities is responsible for what actions under the permit. In order to make clear that each of the permittees is responsible for everything called for by the permit, it should specify that the two parties are jointly and severally liable for all of the actions to be performed under the permit.

The discharge plan should address the nature, treatment, and disposal of non-liquid wastes that are generated at Facility.

In order to insure that non-liquid wastes that are generated at the Facility do not cause exceedances of standards elsewhere, the discharge permit should specify the treatment process at Technical Area 53 for evaporator distillate and reverse osmosis permeate that do not meet the criteria for discharge to Mortandad Canyon. The permit also should specify whether further treatment is required if these wastes do not meet the criteria for discharge at Technical Area 53, and should indicate where these wastes are treated and disposed.

In addition, the discharge permit should address solids removed from the primary clarifier and TUF unit, which are referred to in Operational Plan Condition No. 1, as well as the management of solids generated by treatment and proposed to be disposed of at Technical Area 54. The discharge permit also should cover containment of these wastes, whether there is a contingency plan for them, and what, if any, risk their storage and disposal pose to ground or surface water. The same considerations should be addressed for evaporator bottoms that are used in connection with Operation Plan Condition No. 3.

The discharge permit also should address these issues for the other wastes described in Operational Plan Condition No. 3. The discharge permit should include management plans and treatment for sludges, scale and other solids generated by treatment processes at Technical Area 50, such as clarifier underflow, filtration wastes, reverse osmosis concentrates, pipe scale, etc. These wastes are likely to include radionuclides, metals and organics removed from treated waste streams, and the discharge permit should provide for their management and disposal so that they do not cause ground water contamination.

The discharge plan should include additional provisions relating to monitoring and reporting.

The draft discharge permit's provisions on Monitoring, Reporting, and Other Requirements mandate monitoring of effluent quality for each effluent batch (Monitoring, Reporting, and Other Requirements, ¶13), but indicates that results must be reported only on a quarterly basis. The discharge permit should be changed to require that any exceedances that are found should be reported immediately.

The Monitoring, Reporting, and Other Requirements portion of the draft discharge permit also calls for monitoring at several specified wells. Monitoring, Reporting, and Other Requirements, ¶14. Two of those monitoring wells, MCOBT-4.4 and PW-3 are being replaced, however, and the discharge permit should require monitoring at the replacement wells. In addition, several new monitoring wells have been installed in Mortendad Canyon. The permit should require monitoring at those wells also.

The discharge plan should provide for making monitoring and other data available to members of the public in real time.

Several provisions of the draft discharge permit require monitoring and reporting to the NMED. *See, e.g.*, Monitoring, Reporting, and Other Requirements ¶¶9-14 and Contingency Plans ¶¶15-19. The discharge permit should mandate that the results of these and other monitoring and sampling procedures be made available to the members of the public at the time that they are submitted to the NMED. Such results can be made available

by electronic mail to members of the public who have requested ongoing information; for other members of the public, results could be placed on a web site.

The discharge plan should include a State specific closure plan

The Regulations specifically provide for requirement of closure plans as part of discharge permits, and list several specific items that should be addressed in those plans (NMAC §20.6.2.3107.A(11)). Despite that, the proposed discharge permit's closure plan provides little in the way of details about closure and post-closure activities. Existing contamination in Rio Grande Canyon has not been characterized adequately to develop a detailed closure plan that addresses remediation of existing ground water contamination and contamination that could lead to further ground water contamination. For that reason the discharge permit should include a closure plan that provides for alternative contingency plans to address contamination that is found.

These alternative contingency plans should take into account that existing ground water contamination has the potential to affect ground water used for drinking water. Those plans also should take into account ground water management, including ground water pumping, treatment and discharge of treated water will most likely be necessary to protect state resources and public health. Because existing soils contamination has the potential to cause additional ground water contamination, those plans also should address remediation of soils, including excavation, treatment and/or location in a suitable repository.

Finally, a cost estimate should be provided based on the tasks included in the closure plan, and a corresponding financial assurance should be required in order to ensure that funds are available for the State of New Mexico to carry out those plans in the event that the permittees fail to carry out the necessary actions.

DP-1132 should require the posting of a financial assurance by LANL

Because of the need for a closure plan, and because the discharges from the Facility may result in the need for remediation, DP-1132 should require the posting of a financial guarantee to cover necessary costs in the event that the permittees are not able to pay for them. The Regulations specifically provide for requiring financial assurances (NMAC §20.6.2.3107.A(11)), and the potential costs involved in reclaiming and remediating contamination caused by the Facility are such that such a requirement is appropriate here. In accordance with financial assurance mechanisms requirements in other contexts, the financial assurance should be in the form of a trust account, a letter of credit, or an insurance policy, and must be payable to the State of New Mexico.

The Bureau should connect DP-1132 to the Compliance Order.

The Compliance Order is a comprehensive document calling for investigation of contamination at and around LANL facilities including the Facility and Mortandad Canyon. Specifically, the Compliance Order calls for LANL to enhance its monitoring program in Mortandad Canyon and to provide NMED with a number of documents and reports regarding ground water in the canyon system. These data and reports may contain new information requiring action in order to protect ground water.

Therefore, in order for DP-1132 to control appropriately the discharge of wastewater contaminants from LANL operations to ground and surface water, the Bureau should tie DP-1132 to the Compliance Order. In other words, the Bureau should include in DP-1132 provisions for taking action based on the results of the investigations mandated by the Compliance Order. DP-1132 also should provide for public involvement in decisions to be made on the basis of Compliance Order investigation results.

The discharge permit should call for the indefinite retention of records generated pursuant to the permit.

The draft discharge permit indicates that records generated pursuant to the permit shall be retained for a period of at least five years. Closure Plan ¶25. Because of the longevity of the contaminants that are in the wastes handled by the Facility, that period is not sufficient. The discharge permit should require that those records be retained indefinitely.

Conclusion

The draft discharge permit should be revised to include the additional requirements discussed above. It also should include provisions to ensure that members of the public are kept informed about operations at the Facility.

We would appreciate your confirming that you have received this request for a public hearing and these comments. We also would appreciate hearing from you when the Secretary has determined whether a public hearing will be conducted.

Thank you for your cooperation.

Yours truly

Douglas Meiklejohn
Attorney

Copies to:

Brian Shields
Executive Director
Amigos Bravos

Jessi Arends
Executive Director
Concerned Citizens for Nuclear Safety

Communities for Clean Water

A Northern New Mexico Network

December 12, 2013

Mr. Jerry Schoeppner, Bureau Chief
Ms. Jennifer Fullam, Environmental Scientist
Ground Water Quality Bureau
New Mexico Environment Department
P.O. Box 5469
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Via email to: Jerry.Schoeppner@state.nm.us and Jennifer.Fullam@state.nm.us

Re: Second Set of Comments and Hearing Request of the *Communities for Clean Water*, *Tewa Women United* and three individuals on the proposed permit DP-1132

Dear Mr. Schoeppner and Ms. Fullam:

Below are the Second set of Comments and the Hearing Request of *Communities for Clean Water* ("CCW"), *Tewa Women United* ("TWU") and individuals *Kathy WanPovi Sanchez, J. Gilbert Sanchez* and *Robert H. Gilkeson, Independent Registered Geologist*, as referenced above. We incorporate herein by reference the hearing request in our first set of comments and the materials set forth in attached Appendices A - H. The second set of comments are page numbered to follow the first set of comments.

We thank you in advance for your careful attention to these comments and look forward to an opportunity to attempt to resolve the issues raised by the First and Second Set of Comments in a cooperative manner with your agency and the permit applicant.

Respectfully submitted:

_____

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: 13525

IV. INTRODUCTION TO SECOND SET OF COMMENTS

A. Acknowledging Our Government's Occupation and Pollution of Sacred Places.

In the support of the statements made in the first set of comments, dated December 6, 2013, we cite the following Declarations of Indigenous Women. The Declarations state the threats and harms from dangerous industries such as is the Los Alamos National Laboratory nuclear, chemical and biological weapons complex. Recommendations are made and references to actions being taken to restore justice and well-being to Indigenous communities. The Declarations are attached to these comments in Appendices B through F. The information therein documents the environmental justice aspects of this permit.

1. *Las Mujeres Hablan: The Women Speak - Women's Declaration for New Mexico 2010*

> 9. Be it further resolved that we will support the work of **Las Mujeres Hablan.** (New Mexico Acequia Association (NMAA); Honor Our Pueblo Existence (HOPE), Tewa Women United (TWU); Concerned Citizens for Nuclear Safety (CCNS); Embudo Valley Environmental Monitoring Group (EVEMG); New Mexico Conference of Churches (NMCC); Community Service Organization (CSO) Del Norte
>
> **Mission**: To address past, present and future issues arising from the nuclear industry's releases of toxic chemicals and radioactive materials that cause contamination to our land, air, and water; demand clean-up of these sites; question the continued manufacturing of nuclear weapons; and restore justice to the Peoples who have been impacted by this industry. And, address other activities that violate and cause harm to our environment and well-being within the Sacred Mountains of New Mexico and other places in the world,

2. *Indigenous Women and Environmental Violence,* A Rights-based approach addressing impacts of Environmental Contamination on Indigenous Women, Girls and Future Generations. Submitted to the United Nations Permanent Forum on Indigenous Issues Expert Group Meeting *Combating Violence Against Indigenous Women and Girls,* January 18 – 20, 2012, United Nations Headquarters, New York, by Andrea Carmen, International Indian Treaty Council and Indigenous Women's Environmental and Reproductive Health Initiative, and Viola Waghiyi, Native Village of Savoonga, St. Lawrence Island, Alaska and Alaska Community Action on Toxics – Theme 2: *Contextualizing Violence.*

> *From a traditional perspective, the health of our Peoples cannot be separated from the health of our environment, the practice of our spirituality and the expression of our inherent right to self-determination, upon which the mental, physical and social health of our commu*nities is based.

--- IITC Oral Intervention presented by Faith Gemmill, Gwich'in Nation Alaska
United Nations Working Group on Indigenous Populations, Geneva July 31, 1996

3. *Report of the International Indigenous Women's Environmental and Reproductive Health Symposium,* April 27th – 29th, 2012, Chickaloon Native Village, Alaska. Co-hosted by the International Indian Treaty Council (IITC) and Indigenous Women's Initiative for Environmental and Reproductive Health, Alaska Community Action on Toxics (ACAT), Chickaloon Native Village and International Indigenous Women's Forum (FIMI). Submitted to the 11th Session of the United Nations Permanent Forum on Indigenous Issues as a Conference Room Paper by the International Indian Treaty Council, Indigenous Non-governmental Organization in General Consultative Status to the United Nations Economic and Social Council. May 5th, 2012. Kathy WanPovi Sanchez of Tewa Women United and Marian Naranjo of Honor Our Pueblo Existence participated in the Symposium and signed the Report.

Based on these shared understandings, we adopt by consensus this ***2nd DECLARATION for the Health, Survival and Defense of OUR LANDS, OUR RIGHTS and our FUTURE GENERATIONS and make the following recommendations:***

That Indigenous Peoples, Nations and Communities:

1) Identify and document the disproportionate impacts of environmental toxins on Indigenous women and children as "environmental violence" for which States and corporations can be held accountable.

2) Provide community capacity-building and training linking reproductive and environmental health and human rights.

3) Maintain, support, strengthen and assert traditional systems of law, community organization, decision-making, leadership and representation.

4. *Sovereignty: Long Live Mother Earth – Women's Declaration 2012: Year of Indigenous Women,* by Las Mujeres Hablan: The Women Speak, which include Honor Our Pueblo Existence, Tewa Women United, and Concerned Citizens for Nuclear Safety.

29. Be it further resolved that we will work in solidarity with each other in our struggles to defend the air, land, and water from contamination, exploitation, and militarization,

30. Be it further resolved that we honor, respect, and recognize the dignity of women and their families throughout the world and here at home who are subjected to exposure to toxins through their work, their food, or their proximity to pollution and that we resolve to speak and act in solidarity with them in efforts to defend the health of their families and communities,

31. Be it further resolved that we will continue to play an important role in reshaping our communities to achieve a vision of safe, healthy, and joyful lives for our families and communities with good, healthy and locally grown food, good livelihoods that honor the dignity of every human person, and a meaningful and spiritual relationship with Mother Earth.

5. *References to Indigenous Women in the ALTA Outcome Document,* Compiled and submitted to the World Conference of Indigenous Women, October 28 – 30, 2013, Lima Peru, by Andrea Carmen (North America Region) and Mililani Trask (Pacific Region).

Recommend that States uphold and respect the right of self determination and the free, prior and informed consent of Indigenous Peoples who do not want mining and other forms of resource extraction, "development" and technologies deemed as degrading to their human, cultural, **reproductive** and ecosystem health. Where mining and other forms of resource extraction are already occurring, States shall develop mechanisms with the full and effective participation of Indigenous Peoples to develop a comprehensive strategy for ecologically sustainable and equitable development to end and prevent uncontrolled and unsustainable industrial contamination and degradation with plans for clean-up, remediation and restoration. Such as strategy shall incorporate strengthening the capacity of Indigenous youth in relation to sustainable development practices based on Indigenous knowledge and the relationship with the land as well as the protection and promotion of the important role of traditional knowledge holders including Indigenous Elders and **women**; ***(Theme 1: Indigenous Peoples' lands, territories, resources, oceans and waters, Paragraph 6)***

V. SUPPLEMENT TO SECTION II, GENERAL COMMENTS ON THE PERMIT.

A. Second Set of General Comments on DP-1132.

Appendix A to these comments provides the analysis and comment of Independent Registered Geologist Robert H. Gilkeson on the ground water monitoring issues related to the permit. Appendices B through F contain documents related to the environmental justice issues involved in this permit. Appendix G to these comments demonstrates that we have been denied ready access to documents necessary to fully and effectively analyze the potential human health impacts of the Radioactive Liquid Waste Treatment Facility operations sanctioned by the permit. Appendix H to these comments provides documentation of the lengthy history of the attempt to regulate this facility and obtain public hearings of the permit.

1. Commenters - Section II.A.4. **DOE-IG Report.** We are concerned about the issues raised in the September, 2013 U.S. DOE, Office of Inspector General, Office of Audits and Inspections report entitled, *The Radioactive Liquid Waste Treatment Facility Replacement Project at Los Alamos National Laboratory,* OAS-L-13-15.[1] We

[1] See http://energy.gov/ig/downloads/audit-report-oas-l-13-15

incorporate this report herein by reference. It is ironic that, according to the DOE report, LANL wasted $100,000,000 on planning a new facility, yet, now that the permit is pending LANL ignores studies it has done since the 1970s which conclude that the existing facility can be converted to have "zero discharge". It confounds reason that LANL spent that much money and never built a facility. We contend that this is further evidence that LANL should be forced to seek a Resource Conservation and Recovery Act (RCRA) permit for this facility as a hazardous waste treatment facility—and go to zero discharge within one year of issuance of the permit.

2. Commenters - Section II.A.5. **Effluent Quality Limits for Discharges to the MES and SET**. The waste treatment processes under this draft permit presents a regulatory intersection of DOE self-regulation, an NMED draft ground water discharge permit, and EPA regulation of the radionuclide air emissions from LANL. *See generally*, 40 CFR 61, Subpart H. We have been in communication with LANL and EPA staff since November 1, 2013 in order to obtain documents about the evaporation of inorganic chemicals, nitrogen compounds and radioactivity from the Solar Evaporative Tank System (SET) and Mechanical Evaporator System (MES). Because of the incomplete responses, on November 27, 2013 we have had to file Freedom of Information Act (FOIA) requests with both DOE/LANL and EPA. *See generally* Appendix G, Copies of FOIA requests and responses.

We have learned that the MES may be designated by LANL as TA-50-257. It is a non-monitored emission source under 40 CFR 61, Subpart H. *See* 2011 LANL Radionuclide Air Emissions Report, LA-14458 at 21. The annual report to EPA, however, does not mention the SET and how its emissions are being monitored. *See id.*, and 2012 LANL Radionuclide Air Emissions Report, LA-14469. Given the extremely large volumes of evaporated liquid from these two evaporation units and the potential inorganic chemical and radioactive constituents of the liquid—see DP-1132 at 20-21--there is a serious issue concerning the apparent lack of monitoring to demonstrate that the established effluent limits on the evaporators is appropriate for the protection of public health and ground water quality. We reserve the right to supplement these comments once we have secured all the information requested under FOIA. *See generally*, Appendix G.

VI. SUPPLEMENTAL COMMENTS ON SPECIFIC PORTIONS OF THE PERMIT.

A. Supplementing previous comments on specific permit conditions as follows:

1. Section IV.B.25. Effluent Sampling at 26. COMMENT: The Permittees should be required to post their submittal to NMED when no discharge occurs for any calendar month.

2. Section VI.E.51. Modifications and Amendments at 46. COMMENT: The Permittees should be required to post any proposed modifications and amendments to the discharge to the Electronic Public Reading Room. *See* Section VII below.

3. **Sections VI.B. 26, 27, 28 and other portions of the permit dealing with ground water monitoring issues.** COMMENT: Ground water monitoring issues are extensively addressed in Appendix A to these supplemental comments. Appendix A was prepared by Independent Registered Geologist Robert H. Gilkeson. We incorporate herein by reference the observations and conclusions in Appendix A and note generally that Mr. Gilkeson's analysis and comments make clear that a rewrite of the water quality monitoring program is necessary to address the appropriate location and construction of new monitoring wells. This must include replacement of the existing antiquated monitoring and characterization wells, and augmentation of a number of new wells to protect the regional aquifer and to monitor potential seepage and discharges from the tritium evaporation tanks

4. **Section VI.B.26. Soil Moisture Monitoring System for the SET at 27.** COMMENT: In addition to comments on this issue incorporated from Appendix A, there should be a requirement to establish a baseline for the probe and an action level and the soil moisture detection action level and requests an opportunity to discuss this concern with NMED. Also, the permit should only provide LANL thirty (30) days to repair a failure of the moisture monitoring boreholes and neutron probes.

VII. EXPANDED PUBLIC PARTICIPATION AND NOTIFICATION.

A. We appreciate that NMED required the Permittees to post submittals to NMED and NMED's response to LANL's Electronic Public Reading Room (EPRR). In some sections of the draft permit, however, the Permittees are required to post their submittal and NMED response at the same time. *See* Section IV.A.3. In other sections, the Permittees are required to post their submittal promptly and subsequently, to post the NMED response. *See* Section VI.C.30. In order to be transparent, we request that the Permittee's submittal be posted when submitted to NMED. Upon receipt of NMED's response, we request a requirement that the Permittees post – in a timely manner - the NMED response to the EPPR. We note below the sections requiring this change:

1. Section VI.A. Operational Plan
- 3) Submittal of Plans and Specifications
- 12) Freeboard

2. Section IV.B. Monitoring and Reporting
- 26) Soil Moisture Monitoring System for the SET
- 28) Ground Water Monitoring

3. **Section IV.C. Contingency Plans**
   29) Containment
   31) Settled Solids Removal
   32) Damage to Structural Integrity
   33) Freeboard Exceedance
   34) Effluent Exceedance
   35) Soil Moisture Detection System Exceedance
   36) Monitoring Well Location
   37) Monitoring Well Construction
   38) Ground Water Exceedance
   39) Spill or Unauthorized Release
   40) Failures in Discharge Plan/Discharge Permit

4. **Section VI.D. Closure**
   42) Stabilization of Individual Units and Systems
   43) Final Closure Plan
   44) Final Closure
   45) Post-Closure Ground Water Monitoring
   46) Termination

5. **Section VI.E. General Terms and Conditions**
   51) Modifications and Amendments
   56) Right to Appeal
   57) Transfer of Ownership

Appendix A
To CCW, TWU and Individual Public Comments and Hearing Request - DP-1132

Deficiencies in Ground Water Protection in the Draft Ground Water DP-1132 Permit, by Independent Registered Geologist Robert H. Gilkeson

The five groundwater monitoring wells in the draft discharge permit for the LANL TA-50 Radioactive Liquid Waste Treatment Facility (RLWTF) are not reliable to detect:

1. groundwater contamination from past, present or future leaks below the RLWTF, which began operations in 1963;
2. groundwater contamination from waste water discharged from the 051 outfall located 1,100 feet to the north of the RLWTF (Outfall 051 began discharges in 1963); or
3. groundwater contamination from leaks below the Solar Evaporative Tank System (SET) at Technical Area 52 located a considerable distance to the east of the RLWTF.

The factors necessitating replacement of the wells are described below. The New Mexico Environment Department (NMED) is required to order the Permittees (the Department of Energy (DOE) and Los Alamos National Security, LLC (LANS)) to replace the wells. Significantly, the five groundwater monitoring wells in the draft discharge permit do not comply with the NMED well construction requirements. *See generally*, NMED GWQB, *Monitoring Well Construction and Abandonment Guidelines, Revision 1.1* (March 2011).

The five groundwater monitoring wells are listed on page 29 in the Draft Discharge Permit for the TA-50 RLWTF as follows:

a. **MCO-3-** previously constructed and located in the alluvial aquifer presumed to be hydrologically downgradient of Outfall 051.

b. **MCO-7-** previously constructed and located in the alluvial aquifer presumed to be 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, downgradient of the RLWTF.

e. **R-60-** previously constructed and located in the regional aquifer, downgradient of the RLWTF.

Figure 1 on the top of page 3 displays the locations of the five monitoring wells. Figure 1 shows the location of the LANL RLWTF in TA-50 approximately 400 feet north of the center of the LANL waste disposal dump known as Material Disposal Area (MDA) C. Figure 1 also shows the location of Outfall 051 approximately 1,400 feet north of the RLWTF. Outfall 051 discharges to Effluent Canyon; a tributary to Mortandad Canyon. Discharges to Outfall 051 began in 1963 coincident with the start of the treatment of radioactive liquid wastes at the RLWTF (see Figure 2).

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Figure 1 is a contour map of groundwater flow at the water table of the regional aquifer below and away from MDA C, the RLWTF, and Outfall 051. The elevation of the water table of the regional aquifer is displayed on Figure 1 by the blue contour lines. The direction of groundwater flow at the water table is perpendicular to the contour lines along a trend from higher to lower elevations. From west to east on Figure 1, the bold blue contour lines show the elevation of the water table declines by 100 feet from 5950 feet above mean sea level (ft amsl) to 5850 ft amsl.

However, Figure 1 does not provide accurate knowledge of the direction of groundwater flow away from MDA C, the RLWTF, or Outfall 051. For example, the uncertainty in the direction of groundwater travel in the regional aquifer east of MDA C is displayed by the pair of red arrows on Figure 1. They show that the actual direction of groundwater travel at the water table may be to the northeast or to the southeast. The great uncertainty in the direction of groundwater travel in the vicinity of MDA C, the RLWTF and Outfall 051 is due to the lack of an adequate number of monitoring wells installed at the water table in the regional aquifer.

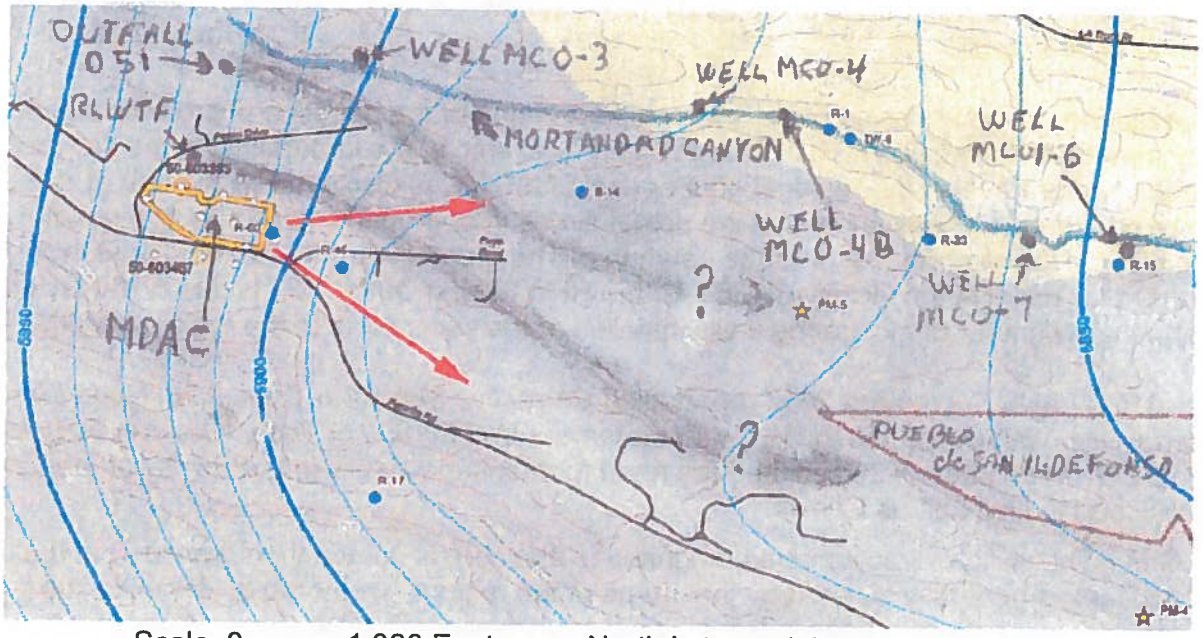
Indeed, the LANL September 2012 report titled *Corrective Measures Evaluation Report for Material Disposal Area C, Solid Waste Management Unit 50-009 at Technical Area 50* (LA-UR-12-24944) on page F-2 described the need for monitoring wells in the vicinity of the RLWTF and Outfall 051 as follows:

> Groundwater flow directions and magnitudes that control contaminant transport in the aquifer are generally dictated by the shape of the regional water table. However, the groundwater flow directions in the regional aquifer beneath MDA C are uncertain because of the low density of existing wells in the vicinity of MDA C; more specifically, the water-level data for defining regional flow directions west and north of MDA C are limited.

NMED is required to order the Permittees to install the necessary number of additional monitoring wells for accurate knowledge of the direction and speed of groundwater travel at the water table for MDA C, RLWTF, and Outfall 051. *See generally*, NMED GWQB, *Monitoring Well Construction and Abandonment Guidelines, Revision 1.1* (March 2011).

Regional aquifer monitoring wells R-46 and R-60 do not monitor groundwater contamination from the TA-50 RLWTF or from Outfall 051. The draft discharge permit has made a serious mistake to describe wells R-46 and R-60 as hydraulically downgradient from the RLWTF. The information on Figure 1 is irrefutable evidence that wells R-46 and R-60 are **NOT** hydraulically downgradient of the TA-50 RLWTF or Outfall 051. The two gray groundwater flow lines on Figure 1 show that there are no LANL monitoring wells installed in the regional aquifer at appropriate locations to detect contaminated groundwater from the LANL RLWTF or from outfall 051.

Figure 1. Locations of the existing regional monitoring wells near MDA C, including the elevation of the regional water table representative of September 2010. Reproduced with additional annotations from *Corrective Measures Evaluation Report for Material Disposal Area C, Solid Waste Management Unit 50-009 at Technical Area 50* (LA-UR-12-24944, September 2012) at Figure F-1.0-1.



Scale 0----------1,000 Feet North is toward the top of the page

– The red arrows east of MDA C represent the large uncertainty in the direction of groundwater flow at the water table of the regional aquifer east of MDA C, RLWTF, and Outfall 051.

– The blue contour lines on Figure 1 are the elevation of the water table of the regional aquifer. The water table declines by more than 100 feet from west to east. The blue contour lines are based on the network of R-wells installed in the regional aquifer. The spacing of the blue contour lines is close below MDA C, the RLWTF, and Outfall 051 with a wide spacing of the contour lines in the region to the east. The close spacing identifies a high hydraulic gradient present in the immediate vicinity of MDA C, the RLWTF and Outfall 051.

– Accurate knowledge of the hydraulic gradient is necessary to calculate an accurate speed of groundwater travel in the regional aquifer. The high hydraulic gradient requires installation of a minimum of two monitoring wells at the water table of the regional aquifer immediately east of the RLWTF and immediately east of Outfall 051. This is demonstrated on Figure 1 by the location of well R-60 close to the eastern side of MDA C and well R-46 located 800 feet east of well R-60.

— Figure 1 shows that Outfall 051 is located close to the confluence of Effluent Canyon with Mortandad Canyon.

– On Figure 1, the upper gray flow line shows the direction of groundwater flow at the water table of the regional aquifer below and away from Outfall 051 is toward Los Alamos County Drinking Water Well PM-5. The very large amount of waste water discharged from Outfall 051 displayed in Figure 2 for the years 1963 to 2000 may have caused groundwater

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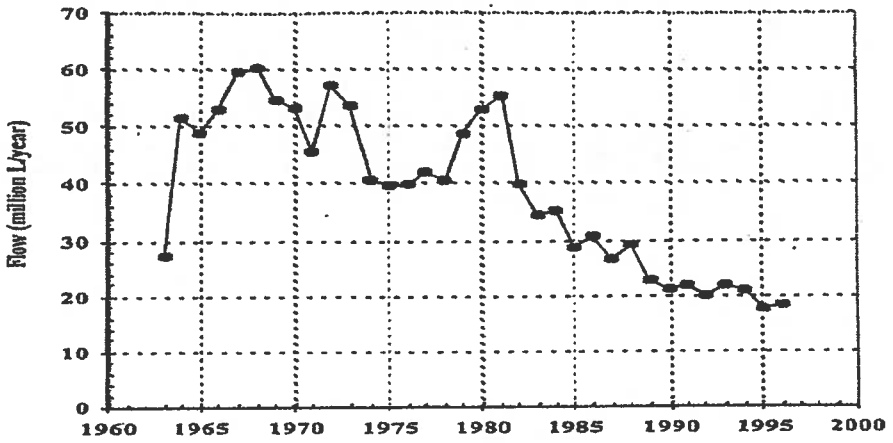
contamination in the regional aquifer. The requirement to install a minimum of two monitoring wells in the regional aquifer close to the east side of Outfall 051 was described earlier.

--The distance from Outfall 051 to well Los Alamos County Drinking Water Well PM-5 is approximately 6,100 feet. There is a requirement to install two monitoring wells in the regional aquifer close to the west side of well PM-5. One well installed at the water table of the regional aquifer and the second well installed at the depth of the top of the well screen in well PM-5. The two monitoring wells will provide important information on the hydraulic interaction of pumping well PM-5 on the elevation of the water table of the regional aquifer in the vicinity of well PM-5. The two wells will also serve as sentry wells for the detection of contaminated groundwater. LANL has already installed two sentry wells, R-35a and R-35b, close to Los Alamos County Drinking Water Well PM-3 in order to provide early knowledge of the migration of the large chromium plume to well PM-3. The request duplicates LANL efforts to provide an early warning for the Los Alamos County drinking water wells.

– On Figure 1, the lower gray flow line shows the direction of groundwater flow at the water table of the regional aquifer below and away from the RLWTF toward the property of the Pueblo de San Ildefonso.[1] The distance from the RLWTF to the Pueblo property line is approximately 6,800 feet. The requirement to install two monitoring wells in the regional aquifer close to the eastern side of the RLWTF because of the high hydraulic gradient was described earlier. In addition, there is a minimum requirement to install two monitoring wells at the water table in the regional aquifer close to the boundary of the Pueblo de San Ildefonso. The two wells are necessary because of the great uncertainty in the actual direction of groundwater flow below and away from the RLWTF.

-Outfall 051 discharged large volumes of liquid wastes from the LANL RLWTF into Effluent Canyon for more than 50 years beginning in 1963. Treated RLWTF effluent volumes were as much as 60 million liters per year. *See* Figure 2 below.[2]

FIGURE 2



Treated effluent in Mortandad Canyon (1963-1996)[1]

[1] References herein to Pueblo de San Ildefonso are solely for the purpose of describing the direction of ground water flow from the LANL property.

[2] D. Moss et al., *Elimination of Liquid Discharge to the Environment from the TA-50 Radioactive Liquid Waste Treatment Facility,* LA-13452-MS, UC-902 (1998) at Figure 1, "Treated RLWTF Effluent to Mortandad Canyon (1963 – 1996)."

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In summary: Figure 1 shows that there are no monitoring wells at appropriate locations to detect groundwater contamination in:

1. the shallow alluvial aquifer close to and downgradient from Outfall 051;
2. in perched aquifers close to and downgradient of Outfall 051;
3. at the water table in the regional aquifer close to and downgradient from Outfall 051; and
4. at the water table in the regional aquifer close to the western side of Los Alamos County Well PM-5.

The immediate installation of monitoring wells to address the above four omissions is a requirement in Section VI.C.36 and 37 for the draft discharge permit for the TA-50 RLWTF.

Further, Figure 1 also shows that there are no monitoring wells at appropriate locations to detect groundwater contamination in:

1. perched zones below the RLWTF;
2. at the water table in the regional aquifer below and downgradient of the RLWTF;
3. at the water table of the regional aquifer on the property of the Pueblo de San Ildefonso; and
4. at the water table in the regional aquifer close to the western side of Los Alamos County Well PM-4.

The immediate installation of monitoring wells to address the above four omissions is a requirement as described above for the draft discharge permit for the TA-50 RLWTF.

The NMED Ground Water Quality Bureau (GWQB) made a serious mistake by identifying wells R-46 and R-60 as ***"previously constructed and located in the regional aquifer, downgradient of the RLWTF."*** There is substantial information on record in LANL reports that the two wells are NOT hydraulically downgradient of the RLWTF.

In fact, Section VI.C.36 in the draft RLWTF Discharge Permit describes the replacement process to be followed when information shows a monitoring well is not located hydrologically downgradient of the discharge location it is intended to monitor as follows:

> 36. **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 30 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. The Permittees'

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Proposal along with NMED's response shall be posted, by the Permittees, on LANL's Electronic Public Reading Room located at http://eprr.lanl.gov/oppie/service (or as updated).

Section VI.C.36 requires the NMED GWQB to take action now, before a public hearing on the draft permit, to require the Permittees to install the required monitoring wells in the regional aquifer hydraulically downgradient of the RLWTF, Outfall 051 and also the Solar Evaporator Tank System (SET). The requirement for monitoring wells in the regional aquifer at the SET is described below.

Monitoring wells in the regional aquifer are required at the location of the SET. The draft RLWTF discharge permit includes discharge of large volumes of waste water to the "unsealed subgrade concrete structure with a single double-lined synthetic liner, and a leak detection system within the synthetic liner" for solar evaporation. *See* Section V.D. The soil moisture monitoring tubes do not provide adequate monitoring of leakage from the unsealed concrete tanks. **Protection of precious groundwater resources require installation of a minimum of three monitoring wells at the water table of the regional aquifer at locations close to the SET.** *See* Section VI.B.26.

Monitoring Wells MCO-3, MCO-7 and MCOI-6 require replacement. The NMED GWQB report, *Monitoring Well Construction and Abandonment Guidelines, Revision 1.1* (March 2011), requires that the monitoring wells MCO-3, MCO-7 and MCOI-6 in Mortandad Canyon be plugged, abandoned, and replaced with new monitoring wells. The locations of the three wells are displayed on Figure 1. These wells must be replaced before a public hearing on the draft discharge permit.

Alluvial Aquifer Monitoring Wells MCO-3 and MCO-7. The details on drilling and installation of wells MCO-3 and MCO-7 are provided in Purtymun, W.D., *Geologic and Hydrologic Records of Observation Wells, Test Holes, Test Wells Supply Wells, Springs, and Surface Water Stations in the Los Alamos Area,* LA-12883-MS (1995) ("Purtymun report").

The Purtymun report states, in pertinent part:

> The earlier holes [from 1960 to 1973] were augered using a 4.5-in.-diam bit. For casing, 2-in.-diam and 3-in.-diam plastic pipe was used. These wells were not gravel packed. The casing was placed in the hole, and the annulus between the casing and the hole wall was sealed with cuttings from the hole. . . The screen section of the plastic pipe was perforated with a 1/4-in. drill bit. At the surface the hole was sealed with cement and a security cap installed. Geologic logs and construction data are shown in Table VI-B.

Id. at 69. A table in the report set forth as follows:

Observation Well MCO-3

Geologic Log	Thickness (ft)	Depth (ft)
Alluvium		
Sand and gravel in a matrix of silt and clay		

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Tuff (weathered in place)		
Silt and clay with some lenses of sand and gravel	11	18

Construction
12 ft of 3-in.-diam plastic pipe, lower 10 ft perforated.

Observation Well MCO-7

Geologic Log	Thickness (ft)	Depth (ft)
Alluvium		
Sand and gravel in a silt and clay matrix		
Tuff (weathered in place)		
Silt and clay with lenses of sand and gravel	22	77

Construction
69 ft of 3-in.-diam plastic pipe, lower 30 ft perforated.

Id. at Table VI.B.

Well MCO-3: The information provided in the Purtymun report shows that well MCO-3 was installed in 1967 in a borehole with diameter of 4.5 inches to a total depth of 12 feet. The well screen was formed by perforating the 3 inch plastic casing with a ¼-inch drill bit over the 10 foot interval from 2 feet to 12 feet below ground surface.

Well MCO-7: The information provided in the Purtymun report shows that well MCO-7 was installed in 1960 in a borehole with diameter of 4.5 inches to a total depth of 69 feet. The well screen was formed by perforating the 3 inch plastic casing with a ¼-inch drill bit over the 30 foot interval from 39 feet to 69 feet below ground surface.

There are many factors that show the construction of wells MCO-3 and MCO-7 are not in compliance with the well construction specifications in the NMED GWQB *Monitoring Well Construction and Abandonment Guidelines, Revision 1.1.* Examples are as follows:

Specification 2. The borehole diameter must be drilled a minimum of 4 inches larger than the casing diameter to allow for the emplacement of sand and sealant.

– For wells MCO-3 and MCO-7, the borehole diameter was only 1.5 inches larger than the casing diameter. The required annular space was not provided for the emplacement of sand and sealant.

Specification 6. A 20-foot section of continuous slot, machine slotted, or other manufactured PVC or stainless steel well screen or well screen of an alternate appropriate material that has been approved for use by NMED must be installed across the water table. Screens created by cutting slots into solid casing with saws or other tools must not be used. The screen material selected for use must be compatible with the anticipated chemistry of the ground water and appropriate for the contaminants of interest at the facility. . . The well screen slots must be appropriately sized for the formation materials and should be selected to retain 90 percent of the filter pack. A slot size of 0.010 inches is generally adequate for most installations.

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– For wells MCO-3 and MCO-7, we are not aware of a document from NMED for approval of the alternate plastic pipe that was used for the well casing and well screen.

– For wells MCO-3 and MCO-7, the screens were created by drilling slots in the solid plastic casing, a screen construction practice that is not allowed by Specification 6.

– For wells MCO-3 and MCO-7, there is no documentation that the chemistry of the plastic casing was compatible with the chemistry of the groundwater and appropriate for the contaminants of interest at the RLWTF.

– The slot size of 0.25 inches from the drill bit was much too large to retain the clay rich drill cuttings that were used as the filter pack in wells MCO-3 and MCO-7.

Specification 7. Casing and well screen must be centered in the borehole by placing centralizers near the top and bottom of the well screen.

– Centralizers were not installed near the top and bottom of the slotted plastic casing in wells MCO-3 and MCO-7. No measures were taken to center the "well screen" in the borehole.

Specification 8. A filter pack must be installed around the screen by filling the annular space from the bottom of the screen to 2 feet above the top of the screen with clean silica sand.

– For wells MCO-3 and MCO-7 a filter pack of clean silica sand was not installed in the annular space surrounding the field fabricated well screens. Instead, the well screens were surrounded by the drill cuttings produced from the boreholes.

Specification 9. A bentonite seal must be constructed immediately above the filter pack by emplacing bentonite chips or pellets (3/8-inch size or smaller) in a manner that prevents bridging of the chips/pellets in the annular space. The bentonite seal must be 3 feet in thickness and hydrated with clean water. Adequate time should be allowed for expansion of the bentonite seal before the installation of the annular space seal.

– The required bentonite seal was not installed above the screened intervals in wells MCO-3 and MCO-7. Instead, the interval immediately above the well screens was filled with the borehole cuttings.

Specification 10. The annular space above the bentonite seal must be sealed with cement grout or a bentonite-based sealing material acceptable to the State Engineer pursuant to 19.27.4 NMAC. A tremie pipe must be used when placing sealing materials at depths greater than 20 feet below the ground surface. Annular space seals must extend from the top of the bentonite seal to the ground surface.

– For wells MCO-3 and MCO-7, the annular space above the well screens was not sealed with a cement grout or a bentonite-based sealing material. Instead, the

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annular space was filled with the borehole cuttings. A tremie pipe was not used to place sealing materials at well MCO-7 which has a total dept of 69 feet.

Specification 11. For monitoring wells finished above grade, a concrete pad (2-foot minimum radius, 4-inch minimum thickness) must be poured around the shroud and wellhead. The concrete and surrounding soil must be sloped to direct rainfall and runoff away from the wellhead.

– For wells MCO-3 and MCO-7, the Purtymun report also states, "At the surface the hole was sealed with cement and a security cap installed." There is no information provided on the radius or thickness of the cement seal or that the cement seal was sloped to direct rainfall and runoff away from the wellhead.

In summary, there is substantial evidence that establishes the requirement to plug and abandon wells MCO-3 and MCO-7 because they do not meet the basic NMED GWQB requirements. Specifically, there is not a seal to prevent rainfall, snowmelt, or stormwater from entering the unsealed annular space. Further, the clay-rich drill cuttings used as filter pack around the field site fabricated screens have properties to prevent collection of reliable and representative groundwater samples for contaminants of concern.

The NMED GWQB must require the Permittees to install new monitoring wells at locations close to the locations of wells MCO-3 and MCO-7 before any public hearing on the draft discharge permit.

Two new monitoring wells installed at the locations of wells MCO-3 and MCO-7 are not sufficient to monitor groundwater contamination in the shallow alluvium along Mortandad Canyon from the large volume of treated waste water discharged from Outfall 051.

First, new monitoring wells are required to be installed because the distance from Outfall 051 to Well MCO-3 is too great, at approximately 1,100 feet. NMED is required to order the Permittees to install a monitoring well in the shallow alluvium in Effluent Canyon north of Outfall 051 near the confluence with Mortandad Canyon before the public hearing on the discharge permit.

Second, the distance from well MCO-3 to MCO-7 is too great at approximately 7,700 feet. There is a large zone of highly contaminated alluvial sediments in the Mortandad Canyon stream section between MCO-3 and MCO-7 that is not monitored. The discharge of large volumes of treated waste water from Outfall 051 will remobilize the contamination that is presently bound up on the alluvial sediments in this zone.

On Figure 1, wells MCO-4 and MCO-4B are within the large zone of highly contaminated sediments. Groundwater samples are not collected by the Permittees from the two wells because of low water levels. The wells must be replaced. *See* Section VI.C.37.

The highly contaminated alluvial sediments at well MCO-4 are documented by the contaminated groundwater samples collected from well MCO-4 as described in the LANL *Hydrogeologic Workplan*, LA-UR-01-6511 (1998) as follows:

[a]lluvial well MCO-4 which contains elevated concentrations or activities of NO3 [nitrate], tritium, strontium-90, cesium-137, plutonium-238, plutonium-239, 240 and americium-241.

Id. at 4-92. The highly contaminated alluvial sediments at well MCO-4B are documented in the LANL report, *Demonstration of a Multi-Layered Permeable Reactive Barrier in Mortandad Canyon at Los Alamos National Laboratory* (LA-UR-03-7320), as follows:

Table 3-1. Summary of Groundwater Data for Mortandad Canyon

Constituent	Concentration	Action Level	Comment
^{90}Sr	80 pCi/L	8 pCi/L	DCG
^{238}Pu	1.182 pCi/L	1.6 pCi/L	DCG
$^{239,240}Pu$	0.61 pCi/L	1.2 pCi/L	DCG
^{241}Am	1.53 pCi/L	1.2 pCi/L	DCG
Nitrate (N)	5.7 mg/L	10 mg/L	MCL
Perchlorate	120-250 ppb	4 µg/L	Proposed EPA MCL

Data from monitoring well MCO-4B upgradient from the multiple PRB (LANL, 2002). DCG is derived concentration guideline from DOE. MCL = maximum contaminant level.

Id. at Table 3-1. Indeed, Section VI.C.37 in the draft RLWTF Discharge Permit requires that Permittees install new monitoring wells as described above in the alluvial aquifer:

> 37. 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 Discharge Permit Monitoring Well Construction and Abandonment Guidelines, Revision* 1.1, March 2011; 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. The Permittees' proposal along with NMED's response shall be posted, by the Permittees, on LANL's Electronic Public Reading Room located at http://eprr.lan1.gov/oppie/service (or as updated).

In summary, the RLWTF draft discharge permit requires that Permittees:

1. plug and abandon wells MCO-3 and MCO-7 with installation of new replacement wells;
2. install a new monitoring well in Effluent Canyon at an appropriate location north of Outfall 051 close to the confluence with Mortandad Canyon; and
3. install a minimum of two alluvial monitoring wells at the locations of wells MCO-4 and MCO-4B that are not sampled at the present time because of low water levels.

Section VI.C.37 requires the NMED GWQB to take action now to require LANL and DOE to install the required monitoring wells in the alluvial sediments in Effluent Canyon and in Mortandad Canyon before any public hearing.

Perched Zone Monitoring Well MCOI-6 requires replacement. Well MCOI-6 is not reliable to detect groundwater contamination because of:

1. the deep placement of the top of the well screen below the water table of the perched zone of saturation; and
2. the drilling method allowed organic drilling fluids to flow into the strata surrounding the well screen.

The deep placement of the well screen in well MCOI-6. The NMED GWQB report, *Monitoring Well Construction and Abandonment Guidelines, Revision 1.1* (March 2011), requires well screens in monitoring wells to be installed across the water table. The requirement is in Specification 6 as follows:

> **Specification 6.** A 20-foot section (maximum) of continuous-slot, machine slotted, or other manufactured PVC or stainless steel well screen or well screen of an alternate appropriate material that has been approved for use by NMED must be installed across the water table.

However, the water level data in the LANL Intellus data base shows that the water level in the perched zone at the location of well MCOI-6 was 27.5 feet above the top of the screen for the most recent water level measurement reported on August 22, 2013. For the previous 12 month period, the water levels varied from 27.1 feet to 29.4 feet above the top of the well screen. The deep placement of the well screen does not provide groundwater samples that are representative of contaminated groundwater at top of the perched zone of saturation.

Characterization well MCOI-6 was installed as an activity of the LANL Hydrogeologic Work Plan with well drilling and well installation performed over the period from January 3 to January 13, 2005. The LANL characterization well MCOI-6 was drilled with methods that allowed a large volume of organic water-based drilling fluids to flow into the strata surrounding the depth interval where the well screen was installed. The organic drilling fluids form a new chemistry in the sampling zone with strong properties to conceal accurate knowledge of many LANL contaminants in the groundwater samples collected from the impacted wells.

The National Academy of Sciences issued a report entitled "Plans and Practices of Groundwater Protection at Los Alamos National Laboratory" in 2007 that described the requirement to replace many and possibly all of the LANL characterization wells.[3] The NAS report states in pertinent part:

> Many if not all of the wells drilled into the regional aquifer [and into perched zones of saturation] under the LANL Hydrogeologic Workplan appear to be compromised in

[3] See http://www.nap.edu/catalog.php?record_id=11883

their ability to produce water samples that are representative of ambient groundwater for the purpose of monitoring.

Id. at 49. Further on in the NAS report we find the following recommendation:

> ***Recommendation:*** *LANL should design and install new monitoring wells with the following attributes:*
>
> • *A borehole drilled through the monitoring zone without the introduction of drilling muds or additives (i.e., use air or water).*

Id. at 60.

In November 2010, the NMED Hazardous Waste Bureau (HWB) issued *General Response to Comment on the LANL Renewal RCRA Permit.* [4] In that report, the NMED HWB agreed with the conclusions in the NAS 2007 Report about the greater than 40 LANL characterization wells installed for the LANL Hydrogeologic Work Plan. The NMED described the LANL characterization wells as not meeting the requirement to be monitoring wells for the NMED 2005 Consent Order or the NMED 2010 Renewal of the Federal Resource Conservation and Recovery Act (RCRA) Permit for LANL.

For example, in the NMED 2010 General Response to Comment it states in pertinent part:

> The Department agrees with many of the conclusions in the referenced National Academy of Sciences (NAS) Report; however the report is based on conditions at the time that the NAS conducted the evaluation. Since that time, the Permittees have installed, replaced and rehabilitated numerous wells completed in the intermediate perched aquifers and the regional aquifer at the Facility. The NAS report does not account for the additional groundwater characterization and actions taken to address deficient wells.
>
> The NAS report references wells that were installed as part of LANL's groundwater characterization efforts that were conducted in accordance with their Hydrogeologic Work Plan (1998). These [characterization] wells were not installed for contaminant detection or groundwater monitoring. Therefore, these wells have limited relevance to groundwater protection goals set forth by the March 1, 2005 Consent Order [Emphasis supplied].

Id. at 31. There was no effort to rehabilitate characterization well MCOI-6. Further, the attempt to rehabilitate many of the LANL characterization wells was categorically unsuc-cessful and a great misspending of financial resources that should have been used to replace the wells. The NMED GWQB has a duty to require the Permittees to plug and abandoned characterization well MCOI-6 and replaced with a new monitoring well before any public hearing takes place.

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[4] See http://www.nmenv.state.nm.us/HWB/Permit.htm On the NMED webpage under the heading "Renewal Permit," click on the topic "General Response to Comments."

Las Mujeres Hablan: The Women Speak

Women's Declaration for New Mexico 2010

Preamble

The Earth community stands at a defining moment in time. Injustices, poverty, ignorance, corruption, crime and violence have deepened and our Earth Mother is suffering. These offenses have lead to values that have become hurtful and a destructive way of living.

We believe that women are sacred unique human beings of the Earth. We believe that female and male energy is found within the other. We believe that all people belong to one earth community as a human family.

We, therefore, declare the following:

1. Whereas, women are the nurturers of the human seed within their wombs and bearers of the blessing of creation through the process of giving birth,

2. Whereas, because of the profound role of women in creation, ancient cultures and civilizations throughout human history and today have revered the earth as our Mother, the source of all life,

3. Whereas, women's bodies are intimately connected to Mother Earth as reflected in our moon cycles that are the basis for procreation and birthing of children,

4. Whereas, mothers and grandmothers continue to be the primary caregivers of children through breastfeeding, feeding, and nurturing, from infancy through all the stages of our human lives,

5. Whereas, women have also nurtured other women historically and traditionally serving as midwives and helping one another raise their children along with their extended families,

6. Whereas, women are believed to have been the first seed savers and contributed to the cultivation of crops in a way that transformed human existence and, today, in our families and communities mothers and grandmothers have continued to be the primary caretakers of seeds,

7. Whereas, women have a special relationship with food in their role as farmers, nurturers, seed savers, and cooks and, therefore, they are the holders of culturally significant recipes and methods for storing and preparing food,

8. Whereas, many of the increasing numbers of small scale, independent farmers are women farmers from various backgrounds who are dedicated to growing clean, healthy, and fair food and to restoring harmony to the earth,

9. Whereas, women provide an important support system for all the activities of operating our *ranchitos*, the family farms and ranches, including serving as part of the labor essential to the process, providing meals for other laborers, and teaching children the values of land-based culture and way of life,

10. Whereas, women are often the teachers of life skills to their children and are therefore important to ensuring that traditional knowledge is passed from generation to generation.

11. Whereas, women play important roles in our communities as spiritual leaders who offer blessings at important times in our lives and who offer guidance on important life decisions,

12. Whereas, women in traditional communities hold essential traditional knowledge including teachings about medicinal plants, where they can be harvested, and how they should be used,

13. Whereas, historically, women's role as homemakers was broad and included helping one another to build, periodically plaster and re-plaster, and maintain their homes,

14. Whereas, for millennia, women have harvested foods such as *piñon, quelites*, *tsimaja*, asparagus, *verdolagas*, *chocoyole*, and many varieties of berries, which we regard as special gifts and blessings,

15. Whereas, historically and traditionally, women's roles in families and communities were highly valued and the equally important role of men included providing the needed support system in order to raise healthy families,

16. Whereas, historically and in modern times, women have, out of the love of their children and men in their families, been at the forefront of resisting all forms of violence, including war,

17. Whereas, women today are often not respected as they were traditionally and are often subjected to violence in their own homes by those closest to them,

18. Whereas, because of the nature of women's bodies related to procreation and our intimate relationship with the earth through farming, herb gathering, and earthwork, we are particularly sensitive to exposure to pollutants from various sources,

19. Whereas, the parts of our bodies meant to nurture and nourish our children are also most susceptible to disease and cancer considering that elevated levels of breast cancer, ovarian cancer, and other deadly diseases result from exposure to toxins,

20. Whereas, mothers and grandmothers who feed and nurture their children are concerned about the existence of synthetic hormones and pesticide residues in foods resulting in unprecedented effects on boys and girls such as premature puberty, cancer, and other long-term effects that are unknown,

21. Whereas, our families are also threatened by the unknown health and ecological effects of genetically engineered seeds, plants, and animals, and we are gravely concerned about the patenting of human life which could have unintended consequences for our families and future generations,

22. Whereas, New Mexico is home to various polluting industries, mining operations, power plants, and nuclear facilities that, although serve as a source of financial income for some of our families, also are responsible for pollution that harms all of our families and are part of a pattern of economic development that displaces traditional peoples from the land,

23. Whereas, women are often low-wage workers in these same polluting industries exposed to certain toxins and women are often low-wage agricultural workers who are exposed to pesticides and herbicides in industrial agriculture,

24. Whereas, women have played a key role along with men in social movements to achieve social, economic, and environmental justice by voicing concerns about the threats of toxins to our families and by calling for livelihoods for ourselves and our families that are clean, healthy, and dignified,

Be it resolved;

1. That we are gathered to declare our reverence for our women ancestors that nurtured generation upon generation so that we could be given the blessing of life,

2. Be it further resolved that we will collectively and intentionally work to carry on the seed saving, farming, and ranching traditions of our ancestors and to pass these teachings on to the younger generations,

3. Be it further resolved that we will resist the genetic engineering and patenting of life so that we may maintain the integrity of our seeds, our right to grow our own food, and the sacredness of life itself,

4. Be it further resolved that we will raise our children to be conscious human beings mindful of the sacred gift of life we have been granted by the creator, to be reverent of our Mother Earth, and to be respectful in their relations,

5. Be it further resolved that we will work in solidarity with each other in our struggles to defend the land, air, and water from contamination, exploitation, and commoditization,

6. Be it further resolved that we honor, respect, and recognize the dignity of women and their families throughout the world and here at home who are subjected to exposure to toxins through their work, their food, or their proximity to pollution and that we resolve to speak and act in solidarity with them in efforts to defend the health of their families and communities,

7. Be it further resolved that we will continue to play an important role in reshaping our communities to achieve a vision of safe, healthy, and joyful lives for our families and communities with good, healthy, locally grown food, good livelihoods that honor the dignity of every human person, and a meaningful, spiritual relationship with Mother Earth.

8. Be it further resolved that we will support the work of the **New Mexico Food and Seed Sovereignty Alliance**. (New Mexico Acequia Association (NMAA); Traditional Native American Farmers Association (TNAFA); Tewa Women United (TWU); Honor Our Pueblo Existence (HOPE); Agriculture Implementation, Research and Education (AIRE).

Mission: To continue, revive, and protect our native seeds, crops, heritage fruits, animals, wild plants, traditions, and knowledge of our indigenous, land- and acequia- based communities in New Mexico for the purpose of maintaining and continuing our cultural integrity and resisting the global, industrialized food system that can corrupt our lives, freedom, and culture through inappropriate food production and genetic engineering.

9. Be it further resolved that we will support the work of **Las Mujeres Hablan.** (New Mexico Acequia Association (NMAA);Honor Our Pueblo Existence (HOPE), Tewa Women United (TWU); Concerned Citizens for Nuclear Safety (CCNS); Embudo Valley Environmental Monitoring Group (EVEMG); New Mexico Conference of Churches (NMCC); Community Service Organization (CSO) Del Norte

Mission: To address past, present and future issues arising from the nuclear industry's releases of toxic chemicals and radioactive materials that cause contamination to our land, air, and water; demand clean-up of these sites; question the continued manufacturing of nuclear weapons; and restore justice to the Peoples who have been impacted by this industry. And, address other activities that violate and cause harm to our environment and well-being within the Sacred Mountains of New Mexico and other places in the world,

10. Be it further resolved that we will honor and respect the women in our lives including our mothers, grandmothers, and great-grandmothers by thanking them for giving us life and for nurturing us throughout our lives,

AND:

May it be further resolved that we the undersigned, have read this document and are in support of Las Mujeres Hablan: The Women Speak; Women's Declaration for New Mexico 2010. We find it to be true and will assist wherever possible to learn and teach the children, boys and girls, the importance of living close to the land, having respectful relations with one another and act with dignity and respect to protect Mother Earth, so she in turn can continue to care for us.

"Indigenous Women and Environmental Violence"

A Rights-based approach addressing impacts of Environmental Contamination on Indigenous Women, Girls and Future Generations

Submitted to the United Nations Permanent Forum on Indigenous Issues Expert Group Meeting *"Combating Violence Against Indigenous Women and Girls"*, January 18 – 20, 2012, United Nations Headquarters, New York by Andrea Carmen, International Indian Treaty Council and Indigenous Women's Environmental and Reproductive Health Initiative, and Viola Waghiyi, Native Village of Savoonga, St. Lawrence Island, Alaska and Alaska Community Action on Toxics

Theme 2: "Contextualizing Violence"

"From a traditional perspective, the health of our Peoples cannot be separated from the health of our environment, the practice of our spirituality and the expression of our inherent right to self-determination, upon which the mental, physical and social health of our communities is based."

--- IITC Oral Intervention presented by Faith Gemmill, Gwich'in Nation Alaska
United Nations Working Group on Indigenous Populations, Geneva July 31, 1996

"We have listened to each other's stories, and have seen the tragic effects within our own families, communities, and nations of the environmental, economic, social and cultural impacts of toxic contamination. These imposed, deplorable conditions violate the right to health and reproductive justice of Indigenous Peoples, and affect the lives, health and development of our unborn and young children. They seriously threaten our survival as Peoples, Cultures, and Nations."

--- Declaration for Health, Life and Defense of Our Land, Rights and Future Generations", 1st International Indigenous Women's Environmental and Reproductive Health Symposium, June 30 – July 1, 2010, UN Permanent Forum's 10th session [E/C.19/2011/CRP. 9]

Above: Annie Alowa, Yupik elder and community health aide stands among toxic waste at the formerly used defense site, Northeast Cape, St. Lawrence Island, Ak *photo: ACAT*
Right: Three generations of women and girls from a Yaqui family affected by pesticides: Potam Pueblo, Rio Yaqui, Sonora Mexico, June 2006. *Photo: Jeff Conant*

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I. Introduction

The severe and ongoing harm caused by environmental toxics to Indigenous women, girls, unborn generations and Indigenous Peoples as a whole, requires immediate attention. These toxics include pesticides and other Persistent Organic Pollutants, as well as chemicals produced by extractive industries (coal, oil, tar sands etc.), military installations and weapons testing, waste dumping and incineration, industrial processes, all phases of uranium mining, milling and waste storage.

The production, use, dumping, and general proliferation of environmental toxics adverse effect the collective and individual rights of Indigenous Peoples, and Indigenous women and children specifically, to free prior and informed consent, health, well-being, culture, development, food and subsistence, life and security of person. The lack of accountability by corporations and States is resulting in devastating health impacts that continue to release environmental toxics into the environment. Of more than 80,000 chemicals in commerce, more than 85% of these chemicals have never been assessed for possible effects on human health in general, let alone their specific impacts on Indigenous women as a uniquely vulnerable group.

States and industry knowingly permit, produce, release, store, transport, export and dump hazardous chemicals that impair the endocrine and immune systems, adversely affect neurodevelopment and reproduction, and cause disease including all forms of cancer with few consequences. This is an egregious example of impunity. Unlike infectious diseases, environmental contaminants that cause disease and death are either deliberately released into the environment specifically *because* they are toxic to living things (i.e. pesticides), or they are a result of manufacturing from industrial or military processes that are judged by States and corporations to pose an "acceptable risk" as compared to their purported economic or military "benefits" to society as a whole. States and corporations deny "provable" impacts despite the clear evidence that these environmental toxics cause a range of serious, well documented health impacts, including harm to reproduction, health and fetal development which disproportionately affect Indigenous women.

Indigenous Peoples live in some of the most remote areas in the world: the deserts, mountains, forests and Arctic tundra. Indigenous families subsist off the land and waters through farming, herding, hunting, fishing and gathering for their main food supplies. Many of these regions are heavily exposed to toxic contaminants as a result of mining and extractive industries as well as industrial agriculture and "green revolution" programs which rely heavily on the use of toxic pesticides. Many chemicals are also transported atmospherically and through ocean currents, and heavily contaminate Indigenous lands and foods far from the points of production and use.

Indigenous women play a key role in farming, food gathering and preparation. They are also cultural practitioners, healers, teachers and knowledge holders who have a central role in the transmission of language and culture to younger generations. Indigenous women have a central role in food gathering and preparation and in a range of traditional cultural practices inextricably linked to the natural environment. These everyday practices increase their exposure and makes them particularly vulnerable to absorbing environmental contaminants, which are increasingly affecting their health, livelihoods and reproductive capacities.

The particular health effects of toxic contaminants on Indigenous women are well documented, and are further affirmed through a range of testimonies from the communities most affected, some of which have been included in this paper. Multiple studies confirm that alarmingly high levels of toxics are found in Indigenous women's breast milk, placental cord blood, blood serum and body fat. Devastating impacts on maternal health include sterility, reproductive system cancers, decreased lactation and the inability to produce healthy children. Research also demonstrates the link between chemical exposures and intellectual and neurological

development of children, impacting their ability to retain and pass on culture, ceremonies, stories, language, songs -- a primary concern of Indigenous women.

Participants in the **1st International Indigenous Women's Environmental and Reproductive Health Symposium** from the North America, Latin America, Pacific, and Arctic and Caribbean regions summarized the impacts:

"Indigenous Peoples, and in particular women and children, are suffering the detrimental, devastating, multi-generational and deadly impacts of environmental toxins and contaminants that were unheard of in our communities prior to industrialization, including:

- *Contamination of mothers' breast milk at 4 to 12 times the levels found in the mother's body tissue in some Indigenous communities;*
- *Elevated levels of contaminants such as POPs and heavy metals in infant cord blood; Disproportionate levels of reproductive system cancers of the breasts, ovaries, uterus, prostate and testicles, including in young people;*
- *Increasing numbers of miscarriages and stillbirths, and;*
- *High levels of sterility and infertility in contaminated communities."*[1]

The disproportionate impacts of environmental contamination on Indigenous Peoples and communities of color are the basis of the now well-accepted concept "environmental racism". The concept of "gender-based environmental violence" is not yet as common. Through this paper, we hope to lay some initial groundwork for the continuing development of this concept, and the development of solutions through implementation of human rights accountability. We will demonstrate why Indigenous women, and the unborn children that they carry, are disproportionally affected by environmental toxics for a number of cultural and biological reasons. We will also address some of the associated pervasive human rights violations that impact Indigenous women, girls, and the cultural health, viability and survival of Indigenous Peoples as a whole.

II. Environmental Violence Against Indigenous Women and Children: Human Rights Framework

"The protection of our health, lands, resources including air and water, languages, cultures, traditional foods and subsistence, sovereignty and self-determination, and the transmission of our traditional knowledge and teachings to our future generations are inherent and inalienable human rights. These rights are affirmed in the ***UN Declaration on the Rights of Indigenous Peoples*** *and other international standards, and must be upheld, respected and fully implemented."* [2]

"Human rights are integral to the promotion of peace and security, economic prosperity and social equity... A major task for the United Nations, therefore, is to enhance its human rights programme and fully integrate it into the broad range of the Organization's activities". [3]

The fundamental link between human rights and environmental contamination is a relatively new and evolving concept in the UN system. It has yet to be fully recognized and effectively integrated in international Convention

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[1] Declaration for Health, Life and Defense of Our Land, Rights and Future Generations", *1st International Indigenous Women's Environmental and Reproductive Health Symposium, June 30 – July 1, 2010*, submitted to the UN Permanent Forum's 10th session as Conference Room Paper [E/C.19/2011/CRP. 9]

[2] Ibid

[3] "Human Rights in the Report of the Secretary-General on Renewing the United Nations: a Programme for Reform, Extracts from the report of the Secretary-General to the General Assembly, A/51/950, para. 78 and 79, 14 July 1997

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processes addressing toxic contaminants. Many States continue to resist addressing this fundamental inter-relationship in the context of UN Environmental Convention processes, despite the fact that a number of existing international human rights norms and standards provide a clear and compelling case for doing so.

A central factor of the proliferation of environmental toxics is the conscious and deliberate nature of their production, marketing, export and release despite their well-known and well documented risks and impacts. Identifying the disproportionate and often devastating impacts on Indigenous women as "environmental violence" for which States and corporations can be held accountable is an even newer concept. A review of some of the inter-related human rights affirmed in international standards can begin to provide the elements and framework for the development of this emerging concept. These include, inter alia:

1. The rights of all individuals to health, food and well-being (Article 25), and life and security of person (Article 3) as per the Universal Declaration on Human Rights.
2. The rights of Indigenous Peoples to self-determination and free prior informed consent, regarding matters which affect them including the use of hazardous materials on their lands, to determine their own priorities for development, and to maintain the productive capacity of their lands[4], in particular, in this context, as applies to the economic, subsistence and cultural activities to which Indigenous women are directly tied.
3. The rights of Indigenous Peoples to attain the highest levels of health.[5]
4. The rights of Indigenous Peoples to practice and transmit their cultures and traditional knowledge to future generations.[6]
5. The rights of Indigenous women and children to special protection.[7]
6. The obligation of States to implement, promote and monitor the enjoyment of these rights, to implement effective solutions, remedies and mechanisms in conjunction with Indigenous Peoples and monitor the human rights impacts of corporations which they license as specifically recommended by the UN CERD in its periodic reviews of Canada and the US. (2007 and 2008)

The ongoing resistance of States to the mainstreaming of human rights into international environmental standard-setting processes may be directly related to their resistance to consider accountability mechanisms for the egregious and ongoing violations of human rights resulting from the deliberate production, sale and use of toxic substances with well-known and well-documented harmful effects on human health and development.

Specific relevant Human Rights Standards which can provide a useful framework for the UNPFII's consideration of "environmental violence" as new area of human rights include:

A. The United Nations Declaration on the Rights of Indigenous Peoples in its preamble affirms the principle of non-discrimination as well as the rights of Indigenous People to maintain their traditional economic, cultural and subsistence activities, protect their health and exercise free prior informed consent regarding decisions and activities affecting them, including the release of environmental toxics in their lands. These rights have been directly threatened and violated, both on an individual and collective level, by State policies and corporate activities which promote, allow and impose unsustainable economic development, including resource extraction and industrial agriculture.

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[4] Article 29, UN Declaration on the Rights of Indigenous Peoples as well as CERD General Recommendation XXIII

[5] UNDRIP Article 24

[6] various Articles of the UNDRIP as well as UNESCO, the Convention on the Rights of the Child and others

[7] affirmed in both the UDHR Article 25 and UNDRIP Articles 21 and 22

A number of Preambular paragraphs and Articles of the UN Declaration on the Rights of Indigenous Peoples directly address the rights of Indigenous Peoples, and Indigenous women, as well as State obligations to take both preventative and restorative action. These include:

- Article 3 - Right to Self-Determination
- Article 7 – the Right to Life, physical and mental integrity and the security of person; right to live as distinct Peoples
- Article 8 - Right to not be subjected to destruction of culture
- Article 13 - Right to revitalize, use, develop and transmit histories, languages and oral traditions to future generations
- Article 19 – Free Prior and Informed Consent regarding legislative and administrative measures by states
- Article 20 - Right to be secure in subsistence and development
- Article 21 – Right to the improvement of their economic and social conditions, including, inter alia, health
- Article 22 - Attention to the rights and special needs of indigenous elders, women, youth, children and persons with disabilities
- Article 24 - Right to the highest attainable standard of health and the conservation of vital plants and animals
- Article 25 – Right to maintain spiritual relationships to land and resources for future generations
- Article 26 – Right to traditional lands, territories and resources
- Article 29 - Right to conservation and protection of the environment and productive capacity of lands, territories and resources; right to free prior and informed consent regarding hazardous materials and the obligations of States to take action to restore the health of the Indigenous Peoples affected
- Article 31 - Right to maintain, control, protect and develop cultural heritage, traditional knowledge and cultural expressions including genetic resources, seeds and medicines
- Article 32 - Right to determine and develop priorities and strategies for development including the right to free, prior and informed consent
- Article 37 – Treaty Rights
- Article 42 - Obligation for implementation and follow-up by States and UN agencies and processes

Article 29, paragraphs 2 and 3 are of particular relevance to this discussion with regards to the rights of Indigenous Peoples and the related obligations of States:

2. States shall take effective measures to ensure that no storage or disposal of hazardous materials shall take place in the lands or territories of indigenous peoples without their free, prior and informed consent.
3. States shall also take effective measures to ensure, as needed, that programmes for monitoring, maintaining and restoring the health of indigenous peoples, as developed and implemented by the peoples affected by such materials, are duly implemented.

B. The International Covenant on Civil and Political Rights (ICCPR)

Article 27 of the ICCPR states:

"In those States in which ethnic, religious or linguistic minorities exist, persons belonging to such minorities shall not be denied the right, in community with other members of the group, to enjoy their own culture, to profess and practice their own religion, or to use their own language."

General Comment 23 of the Human Rights Committee is meant to serve as guidance to the States in their compliance with Article 27:

"With regard to the exercise of the cultural rights protected under article 27, the Committee observes that culture manifests itself in many forms, including a particular way of life associated with the use of land resources, especially in the case of Indigenous Peoples. That right may include such traditional activities as fishing or hunting, and the right to live in reserves protected by law. The enjoyment of those rights may require positive legal measures of protection and measures to ensure the effective participation of members of minority communities in decisions that affect them."[8]

C. The Right to Food, Food Security, Subsistence and Food Sovereignty

"...In no case may a people be deprived of its own means of subsistence."

-- Article 1 in Common, International Covenants on Civil and Political Rights and on Economic, Social and Cultural Rights

The Rights to Health and Culture for Indigenous Peoples are closely linked to the Right to Food and Subsistence. It is well documented that environmental toxins have a serious impact on traditional foods, creating a false and forced choice for Indigenous Peoples, in particular, pregnant and nursing mothers. They are often forced to choose between the cultural and nutritional value of their traditional foods and subsistence way of life, and the health and development of their unborn children, as well as their ability to have children at all.

In 1997 the United Nations Rapporteur on the Right to Food, Jean Zeigler responded to a submission by the International Indian Treaty Council on behalf of Indigenous Tribes and Peoples in Northern California addressing mercury contamination and St. Lawrence Island, Alaska regarding military toxics and the impacts of this contamination on their traditional subsistence foods.

"The Special Rapporteur believes that the contamination of indigenous peoples' land and water affecting their livelihood (traditional fishing) may contribute to a violation of the Government's obligation to respect the right to food." [9]

Indigenous Peoples have consistently identified toxic contaminants as one of the primary obstacles to their food sovereignty, also affirming the inter-related links to the health impacts on Indigenous women and children. The **"DECLARATION OF ATITLÁN"** from the **1st Indigenous Peoples' Global Consultation on the Right to Food** in Atitlán, Sololá, Guatemala, April 17 - 19, 2002, identified toxic chemicals, in particular those used in industrial agriculture as a primary obstacles to their Food Security and Food Sovereignty, also noting the effects on women's and children's health, as follows:

"The growing imposition of the use of pesticides and chemical fertilizers that poison Mother Earth, the communities that work with the Earth, and the food resources on which Indigenous Peoples depend worldwide, affecting food production and hence nutrition and health, and increasing morbidity and mortality rates, in particular for our women and children;"[10]

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[8] General Recommendation No. 23, the rights of minorities (article 27), CCPR/C/21/Rev.1/Add.5, 08/04/1994

[9] UN Special Rapporteur on the Right to Food Jean Ziegler, report to the 4th session of the UN Human Rights Council [A/HRC/4/30/Add.1, 18 May 2007]

[10] **"DECLARATION OF ATITLÁN"** from the 1st Indigenous Peoples' Global Consultation on the Right to Food, Sololá, Guatemala, April 17 - 19, 2002,

D. The United Nations Convention on the Rights of the Child (November 20, 1989) is the international instrument that directly addresses the rights of all children, including the female child. Significantly, it is the only human rights Convention which specifically mentions environmental pollution as a human rights concern affecting the health of children, as well as the closely interrelated issues of maternal and prenatal health:

Article 24
1. States Parties recognize the right of the child to the enjoyment of the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health. States Parties shall strive to ensure that no child is deprived of his or her right of access to such health care services.
2. States Parties shall pursue full implementation of this right and, in particular, shall take appropriate measures:
(a) To diminish infant and child mortality;
(c) To combat disease and malnutrition, including within the framework of primary health care, through inter alia, the application of readily available technology and through the provision of adequate nutritious foods and clean drinking-water, taking into consideration the dangers and risks of environmental pollution;
(d) To ensure appropriate pre-natal and post-natal health care for mothers;

General Comment 11 of the Committee on the Rights of the Child [CRC/C/GC/11, 2009] further elaborates and underscores State parties' obligations under the Convention specifically with regards to Indigenous children. It also addresses the issue of maternal and family health and the impacts of environmental contaminants, specifically mentioning pesticides and herbicides:

Regarding "Right to Life, Survival and Development"
35. The Committee reiterates its understanding of development of the child as set out in its general comment No. 5, as a "holistic concept embracing the child's physical, mental, spiritual, moral, psychological and social development". The Preamble of the Convention stresses the importance of the traditions and cultural values of each person, particularly with reference to the protection and harmonious development of the child. In the case of indigenous children whose communities retain a traditional lifestyle, the use of traditional land is of significant importance to their development and enjoyment of culture. States parties should closely consider the cultural significance of traditional land and the quality of the natural environment while ensuring the children's right to life, survival and development to the maximum extent possible.

Regarding "Basic Health and Welfare"
53. States should take all reasonable measures to ensure that indigenous children, families and their communities receive information and education on issues relating to health and preventive care such as nutrition, breastfeeding, pre- and postnatal care, child and adolescent health, vaccinations, communicable diseases (in particular HIV/AIDS and tuberculosis), hygiene, environmental sanitation, and the dangers of pesticides and herbicides.

E. The United Nations Committee on the Elimination of Racial Discrimination (CERD)

Of particular relevance to the human rights framework pertaining to the theme and concerns of this Expert Seminar is General Recommendation No. XXIII on Indigenous Peoples, adopted by the 51st session of UN Committee on the Elimination on Racial Discrimination. [11]
General recommendation XXIII, Paragraph 4 states as follows:

[11] CERD, the Treaty Monitoring Body for the International Convention on the Elimination of All Forms of Racial Discrimination, ICERD, adopted August 18th, 2007

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4. The Committee calls in particular upon States parties to:

(c) Provide indigenous peoples with conditions allowing for a sustainable economic and social development compatible with their cultural characteristics;

(d) Ensure that members of indigenous peoples have equal rights in respect of effective participation in public life and that no decisions directly relating to their rights and interests are taken without their informed consent.

(e) Ensure that indigenous communities can exercise their rights to practice and revitalize their cultural traditions and customs and to preserve and to practice their languages.

F. The Universal Declaration of Human Rights (1948) firmly establishes that health and well-being are human rights, and also recognizes that "Motherhood and childhood are entitled to special care and assistance"[12]

G. One of the **5 objectives for the Plan of Action for the 2nd International Decade the Worlds Indigenous Peoples adopted by the UN General Assembly in January 2005 is** "is "*promoting full and effective participation of indigenous peoples in decisions which directly or indirectly affect their lifestyles, traditional lands and territories, their cultural integrity as indigenous peoples with collective rights or any other aspect of their lives, considering the principle of free, prior and informed consent*". This objective is of direct relevance in challenging activities related to environmental contamination which violate Indigenous Peoples' human rights, and provides a framework and criteria by which effective solutions and responses can be developed in full partnership with Indigenous Peoples.

H. UN Convention on the Elimination of Discrimination Against Women (CEDAW)

Although CEDAW does not specifically mention Indigenous women or impacts of environmental toxins, its provisions that address employment and rural women are relevant to these concerns:

Article 11
1. States Parties shall take all appropriate measures to eliminate discrimination against women in the field of employment in order to ensure, on a basis of equality of men and women, the same rights, in particular:
(f) The right to protection of health and to safety in working conditions, including the safeguarding of the function of reproduction.

Article 14
1. States Parties shall take into account the particular problems faced by rural women and the significant roles which rural women play in the economic survival of their families, including their work in the non-monetized sectors of the economy, and shall take all appropriate measures to ensure the application of the provisions of the present Convention to women in rural areas.
2. States Parties shall take all appropriate measures to eliminate discrimination against women in rural areas in order to ensure, on a basis of equality of men and women, which they participate in and benefit from rural development and, in particular, shall ensure to such women the right:
(a) To participate in the elaboration and implementation of development planning at all levels
(b) To have access to adequate health care facilities

[12] Article 25

I. **Nation to Nation Treaties between States and Indigenous Nations** and the consensual relationships they are based on, if honored, respected and put into practice by all Parties, can be the foundation and model for respectful partnerships addressing this and a range of other issues. This is true, in particular, when there is an urgent need for joint and or/shared decision-making in order to correct current injustices, respond to critical violations and redress historic and ongoing wrongs.

The following and other preambular paragraphs, along with Articles 3, 18, 19, 27, 28, 32, 37 and 40, inter alia, of the UN Declaration on the Rights of Indigenous Peoples make important contributions to a human rights framework incorporating Treaty rights and relationships based on FPIC and full participation in decision-making:

"Considering also those treaties, agreements and other constructive arrangements, and the relationship they represent, are the basis for a strengthened partnership between indigenous peoples and States"

Indigenous Peoples have also affirmed the **"Treaty Right to Health"** as a legally binding and sacred obligation of the Colonial governments, including the British Crown, which entered into Treaties with Indigenous Nations:
"That the medicine chest clause binds the federal government to provide medicines and all that is required to maintain proper health." [13]

III. Case Studies: Environmental Toxics and their impacts on Women and Girls in Indigenous Communities

A. Rio Yaqui, Sonora Mexico: Threats to women's, girl's and future generations' health and development

In 1997, Dr. Elizabeth Guillette, a scientist from the University of Arizona carried out a study of the health effects of industrial agricultural pesticides in the homelands of the Yaqui Indians in Sonora, Mexico,[14] a few hours south of the US/Mexico border. Yaqui Indigenous communities in the agricultural areas have been exposed to frequent aerial and ground spraying of pesticides since the government's implementation of the "Green Revolution" in the late 1940's. For some, their only source of water is contaminated irrigation canals.

In addition to the impacts of pesticides sprayed from airplanes affecting the entire community, Yaqui farm workers who are not provided by growers with any protective gear in the fields. Workers unintentionally carry poisons home in pesticides-soaked clothing and skin, unknowingly spreading the contamination to their families. The maternal health of Yaqui women working in the fields or living nearby, or whose husbands bring the contamination home on their clothing, is particularly impacted. Dr. Guillette's study documented the resulting high levels of pesticides found in the cord blood of newborns and in mother's milk (see table below).

Table 1: Mean concentrations in the cord blood at time of birth and in mothers milk one month post partum from women, Pueblo Yaqui, Sonora, Mexico. [Data from Garcia and Meza, 1991[15]]

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[13] "Treaty Right to Health" resolution adopted by the Chiefs in Treaty No. 6, No. 7 and No. 8, March 16-17, 2005, reaffirmed at the International Indian Treaty Council Conference, Ermineskin Cree Nation, Alberta Canada (Treaty No. 6 Territory) August 7th 2005

[14] "An Anthropological Approach to the Evaluation of Children Exposed to Pesticides in Mexico", Elizabeth A. Guillette, María Mercedes Meza M. Maria Guadalupe Aquilar A, Alma Delia Soto A., and Idalia Enedina Garcia C., Bureau of Applied Research in Anthropology, University of Arizona, Tucson, AZ, U.S.A. and Direccion de Investigacion y Estudias de Postgrado, Instituto Tecnológico de Sonora, Cd. Obregón, Sonora Mexico, published in *Environmental Health Perspectives* Volume 106, Number 6, June 1998

[15] Ibid

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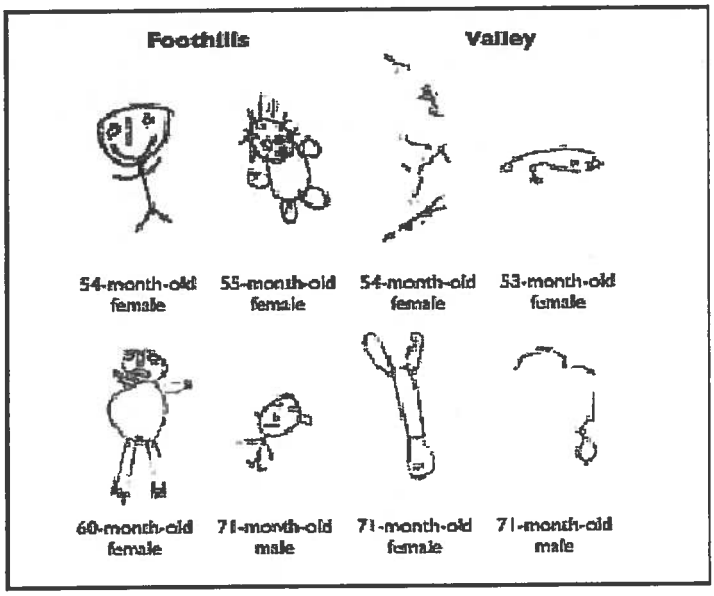
Pesticide	Cord Blood (ppm)	Milk (ppm corrected for fat)
N	19	20
α-HCH	0.030 ± 0.03	0.8599 ± 2.75
β-HCH	0	0.3791 ± 1.08
Lindane	0.084 ± 0.06	0.6710 ± 0.59*
Δ-HCH	0.0039 ± 0.1	0.4432 ± 0.84
Heptachlor	0	1.269 ± 1.65*
BHC	0.003 ± 0.002	0.6270 ± 0.66*
Aldrin	0	0.2363 ± 0.59*
Dieldrin	0.159 ± 0.12	0.0487 ± 0.08
Endrin	0.022 ± 0.02	0.5238 ± 1.1*
p,p'-DDE	0.03 ± 0.03	6.31 ± 5.9
ℜDDE	0.0434	6.52*

*All exceed FAO/OMS established limits

This study also found birth defects, learning and development disabilities, leukemia and other severe health problems in Yaqui children. Combined with personal testimonies from community members collected over years, it also provides strong and compelling evidence of the detrimental impacts of pesticide exposure on the development of exposed Yaqui children. The comparison of Yaqui children in the valley (where pesticide use is heavy) with Yaqui children in the foothills of the Sierra Madre Occidental mountains (where pesticide and insecticide use is minimal to none) showed dramatic differences in motor skills—eye-hand coordination and balance. It showed marked developmental differences included in cognitive skills which were observed in recall, simple problem solving and ability to draw simple stick figures of people:



Her study also found that Valley children had significantly less stamina and hand-eye coordination, poorer short-term memory and were less adept at drawing a person (right) than were children in the foothills (left) where traditional methods of intercropping control pests in gardens and insecticides are rarely used.[16]

Of particular significance to the issues addressed at this EGM is a follow-up study carried out by Dr. Elizabeth Guillette et al examining impacts of in utero pesticides exposure on breast development among girls in Rio Yaqui Sonora Mexico, **"Altered Breast Development in Young Girls from an Agricultural Environment"** published in 2006. This second study was designed to test the hypothesis that abnormal breast development was caused by in utero exposure to agricultural chemicals with endocrine action. The principal difference between the two groups of girls studied was parental exposure to agricultural chemicals which are known to cause endocrine disruption in utero. The study noted that "Various pesticides, mainly organophosphates and organochlorines, were used extensively in the agricultural areas of the Yaqui Valley near the time of the girls' birth (1992–1994), and many of these compounds are known to cross the placenta. A study of newborn children from the Yaqui Valley performed close to the period these children were conceived reported elevated pesticide levels, with cord blood values of lindane, heptachlor, benzene hexachloride, aldrin, and endrin all exceeding World Health Organization established limits (International Programme on Chemical Safety 2005)"[17]

This study was carried through medical examinations (with parental permission) of 50 girls ages 8 – 10 and noted an accelerated rate of breast size development (fatty tissue) in the girls from the high-pesticide use agricultural (valley) areas where their mothers had been exposed to greater levels of pesticides during pregnancy as compared to the girls in the foothill regions where exposure was minimal. Of particular concern to the scientists was the relative lack of and/or abnormal mammary gland development noted in the girls from valley communities, which could have an impact on lactation (breast feeding) later in life as well as a potential links to breast cancer. This first-of-its-kind study (as per Dr. Guillette) examining the relationship between human breast development and environmental contaminants is a unique and alarming confirmation of the impacts of pesticides exposure on the health and development of Indigenous women and girls.

Since 2002, the IITC's **"North-South Indigenous Network against Pesticides Project"** collected and submitted over 50 testimonies from Yaqui community members in Sonora Mexico documenting cancer and leukemia, other illnesses, birth defects and deaths including many from mothers, community midwifes and healers ("curanderas"). These community testimonies have been submitted consistently to the UN Rapporteurs on the adverse effects of the illicit movement and dumping of toxic and dangerous products and wastes on the enjoyment of human rights, the Right of everyone to the enjoyment of the highest attainable standard of physical and mental health, Right to Food and Rights of Indigenous Peoples. However, this issue has yet to be addressed as a specific area for in depth investigation by any of the UN mandate holders.

Following are translations into English of two of the most recent testimonies submitted to IITC by Yaqui community mothers and a midwife addressing women's and girl's health impacts, which have not as yet been submitted to any other UN body:

Mrs. Flor Reyna Osuna, (mother of the young woman)
Young woman, Flor Osuna García.
Jesús Gonzales, (midwife)

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[16] Ibid

[17] "Altered Breast Development in Young Girls from an Agricultural Environment" by Elizabeth A. Guillette, Craig Conard, Fernando Lares, Maria Guadalupe Aguilar, John McLachlan, and Louis J. Guillette Jr.

Interviewer: Francisco Villegas Paredes

DECEMBER 15, 2011.

Mrs. Flor Reyna, the mother of a young woman who was born with deformities. Currently the young woman is 30 years old and is 1.20 meters [3'11"] tall. She says that when her daughter was born, the child's body was WATERY and JELLY-LIKE. The girl, due to her scant growth, is unable to move her legs. She can only move her arms. Her vital organs are atrophied. Studies conducted on her reveal that the girl developed deformities while in her mother's womb.

The physicians, as an important conclusion of the studies conducted, consider that the young woman's housing location, on the periphery of agricultural lands and exposed to spraying with agrochemicals, quickly leads to CONGENITAL DISEASES. Also, some biochemists specializing in clinical analysis have analyzed certain products. As a result they have reached important conclusions: mixtures of two or more chemicals applied in inhabited areas also lead to CANCERS.

The midwife, Jesús made the following comments: These deformities are the product of tumors produced by chemicals when young women are exposed to their application while working in the field without personal safety measures or other similar protection.

Mrs. Xóchitl Valdés, (mother of the girl)
Girl: Mariana López Valdés
Interviewer: Francisco Villegas Paredes

DECEMBER 20, 2011.

The girl's mother, Mrs. Mariana López Valdés stated that her pregnancy was very delicate. She was constantly going to the doctor. Even some midwives told her that her girl was not developing well. When the girl was born, she had deformities on her face, principally to her lips. She also stated that the girl's grandfather, Mr. Manuel Valdés works in agriculture and would generally leave chemical residues behind at his house. Some doctors told him, based on studies conducted on the girl that the agro-chemicals are having a direct effect.

The contact she had with the residues while still young caused deformations to some parts of her body when she was a fetus. The girl is alive. She is 1 year 6 months old and her deformities are growing.

The testimonies of these Indigenous women translated from Yaqui into Spanish and then into English, are tragically typical in the highly-impacted Yaqui communities of Sonora Mexico.

B. California, USA

"Indigenous women are life givers, life sustainers and culture holders. Our bodies are sacred places that must be protected, honored and kept free of harmful contaminants in order for the new generations of our Nations to be born strong and healthy."[18]

Data on health impacts of pesticides and the particular danger to maternal health and unborn generations is also well-documented in other regions, including in "developed" countries. For example, results of a 12 year

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[18] "The Declaration for Health, Life and Defense of Our Land, Rights and Future Generations", *International Indigenous Women's Environmental and Reproductive Health Symposium,* Alamo, CA in June 30 – July 1, 2010 [E/C.19/2011/CRP. 9

study by the University of California and other agencies of over 600 mothers and their children in the California's Central Valley exposed to pesticides during pregnancy was published in December 2010. The study confirmed that that at age 2, the children of mothers who had the highest levels of organophosphate metabolites in their blood had the lowest levels of mental development in the group. They also had the most cases of pervasive developmental disorders. Prenatal exposure to pesticides has been consistently linked to ADHD and other developmental defects as well as cancers in children such as leukemia. [19]

This work, led by University of California Public Health Professor Brenda Eskenazi, served as a model for a recently launched National Children's Study by the National Institutes of Health (USA), which seeks to examine the effects of the environment on 100,000 children, tracking them from before birth until age 21
It is apparent that the continuing tragic impacts if pesticides on Indigenous women, girls, babies including coming generations is finally beginning to generate greater attention among scientists and policy makers.

Indigenous women in California and elsewhere have stressed the cultural effects of pesticides, which are closely related to health impacts of Indigenous women, and produce a double impact. Traditional cultural activities carried out specifically by Indigenous women, which include food gathering, preparation and production as well as the activities related to the creation of traditional cultural items and art forms, create additional expose to environmental toxins. The following testimony was presented by Monique Sonoquie, Chumash, of the Traditional California Indian Basket Weavers and Indigenous Youth Foundation at the Native Forum preceding the North America Indigenous Peoples preparatory session for UPFII10, March 18th 2011, in Arcata California:

"Pesticides are particularly dangerous to traditional native basket weavers. The Forest Service, Caltrans, governmental agencies, as well as the general public spray pesticides without thought to the natural environment, plants and animals, as well as those of us that work in the forests, parks, rivers, lakes, and oceans. Weavers are affected when gathering in areas sprayed with pesticides, we are constantly at risk as we breathe in, handle and ingest these toxins as we gather, weave and split reeds with our teeth. These pesticides also affect the life and quality of the plants, making them less bug resistant, more fragile, smaller and harder to find, as well as food sources for animals, and traditional medicines for practitioners"

Indigenous women have also expressed concerns regarding the developmental and neurological impacts of neurotoxins such as mercury, many pesticides and industrial chemicals, on the long-term ability of Indigenous peoples to retain and pass on their complex cultural systems which include oral histories, stories, songs language and ceremonies to the next generations. This is a primary responsibility of Indigenous women for girls and young women throughout their learning years, and for young children of both sexes.

It is clear is that the use toxic pesticides in these and other regions causes widespread suffering, injury and death, specifically impacting Indigenous women and girls on a level that constitutes "environmental violence" with a pattern of pervasive and brutal human rights violations that remain, by and large, unchallenged.

C. St. Lawrence Island, Alaska and the Arctic: Military Contamination and Global Transport of Persistent Chemicals

The Yupik Indigenous People of St. Lawrence Island, Alaska (USA) have been harmed and displaced by contamination from formerly used US military bases, with particular effects on women whose breast milk and adipose tissues concentrate chemical contaminants. The US military and Department of Defense disposed of

[19] "Study by the Center for Health Assessment of Mothers and Children of Salinas, a joint project of UC Berkeley, the Natividad Medical Center, Clinica de Salud Del Valle de Salinas and other community organizations, December 2010.

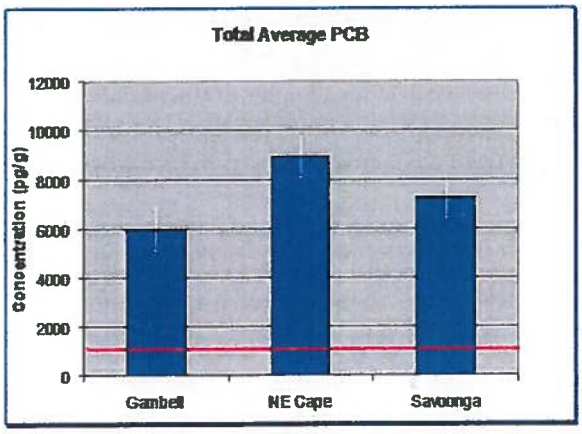
toxic waste on the Island, located in the Arctic Circle between Alaska and Russia, including massive amounts of fuels, solvents, PCBs, PAHs and, mirex (flame retardant), unexploded ordnance, and other persistent pollutants.

Annie Alowa, a respected elder and community health aide from the village of Savoonga, begin to raise concerns in the late 1970's about the adverse health effects she attributed to contamination from the abandoned military site at Northeast Cape, including particular effects on women and children. These included miscarriages, cancer, low-birth weight, and other reproductive health problems. Cancer deaths among the people of St. Lawrence Island are nearly ten times higher than in the general population in Alaska. Contamination from the military sites, which were closed in 1972 but which the US government never removed or adequately cleaned up, continues to adversely affect the health and well-being of the Islands' Indigenous Peoples to this day.

As a result of its strategic importance to the U.S. military during World War II and into present times, Alaska now has 700 formerly used defense sites (FUDS). Two of the most contaminated are located on St. Lawrence Island. The village of Gambell was used as a base for the military beginning in 1948. Hazardous wastes, military debris, unexploded ordnance and spills remain in the soil and groundwater beneath the village. The vulnerability of the drinking water source in Gambell is heightening due to increasing storm surges that accompany rapid climate warming. Northeast Cape is a former U.S. Air Force Base and was also used as a "White Alice" site, part of a military communications network established during the Cold War. Northeast Cape is a traditional food gathering and hunting camp for the residents of Savoonga. A village at Northeast Cape was displaced.

The military installed and later abandoned major facilities at Northeast Cape and Gambell with little or no consideration for the impact on the Island's residents. The Yupik People of St. Lawrence are doubly impacted because the Arctic has become a hemispheric sink for persistent chemicals that travel hundreds of miles into the region and accumulate in the bodies of wildlife and humans.

Hazardous chemicals from military waste sites combined with global transport of POPs to the north contaminate traditional subsistence foods, water supplies, medicinal and food plants (berries, herbs, greens, roots, etc.) that women use, gather and prepare, further exposing them in particular. This double source of toxic contamination undermines the health, cultural practices and development of the Yupik People of St. Lawrence Island, the reproductive health of Yupik women, and the right to survival of their future generations. This pattern is repeated in many other Arctic Indigenous communities.



*Levels of PCBs in the blood of St. Lawrence Island Yupik people are **6-9 times higher** than the average in the continental United States populations (indicated by the red line).*

Tribal members from the Villages of Savoonga and Gambell on St. Lawrence Island have levels of PCBs in their blood serum that are 6-9 times higher the average levels in people living in the continental United States due to global transport, with discernibly higher PCB levels among the people who lived or worked at the military base at Northeast Cape. Community health researchers on the island have documented health outcomes of concern including cancers, thyroid disease, learning and developmental problems, diabetes, heart disease, and reproductive health problems. As stated by Dr. David Carpenter, Director of the Institute for Health and the Environment at the University at Albany: "The evidence that there are health hazards from exposures to PCBs in the range of 6-9 ppb is very strong, with disease outcomes ranging from cancer to neurobehavioral effects to endocrine disruption and immune suppression."

Temperatures in the Arctic are warming 5-10 times faster than elsewhere in the world. These outcomes of climate change also cause more rapid dispersal of contaminants into freshwater and marine environments, affecting the health of fish and marine mammals that serve as the main traditional foods for Arctic and northern Indigenous Peoples. Atmospheric loading of contaminants to the ocean surface is increased as sea ice retreats.

D. Global Transport of Persistent Organic Pollutants (POPs) and Impacts on Arctic Indigenous Peoples

Persistent organic pollutants (POPs) are long-lasting pesticides and industrial chemicals that bioaccumulate through the food web, are capable of long-range transport and are toxic to humans and wildlife.[20] The highly toxic organochlorine (OC) pesticides DDT, toxaphene, chlordane, endosulfan, and lindane, and other POPs such as PCBs have been found in human and animal tissue as well as human breast milk in the Arctic at levels several times higher than in the rest of the world. The levels keep rising long after certain of these substances have been banned. For instance, even though DDT agricultural uses have been banned for 30 years in the U.S, it is still accumulating in the Arctic in peregrine falcons, orcas, and human beings

Through a well-known process known as 'global distillation' POPs travel northward and bioaccumulate in high quantities in the bodies of fish, marine mammals and other components of the traditional diets of the Indigenous Peoples in the Arctic. Prevailing ocean and wind currents bring contaminants to the Arctic where they are subsequently trapped by the cold climate. This process is often referred to as the "grasshopper effect", as chemicals repeatedly evaporate and condense while in their journey toward the Arctic. The Arctic is known as the ultimate sink because these contaminants concentrate in the cold environment and fat-based food web.

Levels of OC pesticides such as DDT, chlordane and endosulfan have been increasing in the Arctic. DDT in people is higher in the Arctic than in the rest of the world. PCB levels are 8 to 12 times higher than in the "lower 48 states" of the U.S. and Chlordane levels are 8 to 10 times higher in the people of St. Lawrence Island. Yupik women of the Yukon-Kuskokwim Delta region of Alaska have the highest levels of the POPs chemicals known as PBDEs (polybrominated diphenyl ethers) used as flame retardants in furniture, mattresses and electronics.[21]

POPs chemicals are causing changes in the very DNA of the people living in these areas, which has implications related to intergenerational health effects. The health impacts of POPs on Indigenous Peoples are well-documented on St. Lawrence Island. Much of the contamination by PCBs and other POPs is attributed to past

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[20] Stockholm Convention on Persistent Organic Pollutants. http://chm.pops.int/Convention/ThePOPs/tabid/673/Default.aspx accessed November 2011.

[21] Alaska Community Action on Toxics. 2009. Persistent Organic Pollutants in the Arctic: a report for the delegates of the fourth conference of parties of the Stockholm Convention; http://www.akaction.org/Publications_FactSheets_and_Video.htm

and present U.S. military base operations. [22],[23] However, POPs pesticides also continue to build up in Indigenous Peoples' and animals' bodies as these chemicals move northward.

In 1991, the United States joined several other Arctic States in adopting the Arctic Environmental Protection Strategy (AEPS). The AEPS addresses the monitoring, assessment, protection, and conservation of the Arctic zone. The U.S. and the other signing countries made a commitment to, among other things, "monitor the levels of, and assess the effects of, anthropogenic pollutants in all components of the Arctic environment" and "take preventive and other measures directly or through competent international organizations regarding marine pollution in the Arctic irrespective of origin."

In a statement made to U.S. officials of the Environmental Protection Agency, St. Lawrence Island tribal leaders asserted: "The Indigenous Arctic peoples are suffering the most from these chemicals because the chemicals – DDT, endosulfan, lindane, perfluorinated compounds and toxic flame retardants, to name a few—are long lasting, and drift North on wind and water currents from where they are applied in the Southern latitudes. That means these chemicals are also in our traditional foods and affecting our health and the health of our children."

The Arctic is home to approximately half a million Indigenous Peoples, who face significant cultural, food security/subsistence and human health threats from global contaminants combined with climate change which also threatens their food security and traditional subsistence food sources. Indigenous communities of the north are reliant on a traditional diet of foods from the land and ocean for their physical, cultural, and spiritual sustenance. In a 2010 study, researchers found levels of PCBs in the traditional foods of the Yupik people of St. Lawrence Island at 200-400 times the levels considered safe for consumption, particularly in the rendered oils that are so vital for survival in the cold Arctic environment.

The cost of store-bought food is almost six times higher for the same products in rural Alaska compared to other U.S. states. Loss of subsistence foods causes an unbearable economic and nutritional hardship for Arctic Indigenous Peoples and undermines cultural practices handed down through generations.

Specific impacts on women, children and maternal health are well documented. Disparities of health problems in the Alaskan Arctic include high levels of birth defects and neonatal deaths among Alaska Native infants that cannot be explained by the usual risk factors of maternal use of tobacco or alcohol. Data from the Alaska Birth Defects registry shows that the prevalence of birth defects in Alaska is twice as high as in the United States as a whole and that Alaska Native infants have twice the risk of birth defects as white infants born in Alaska. Mothers residing in villages with high hazard ranking are 43% more likely to have a low birth weight baby, 45% more likely to give birth prematurely and more likely to have babies afflicted with intrauterine growth retardation.[24]

IV. Scientific Evidence: Impacts of these Environmental Contaminants Women, Children, and Maternal Health

"We must never forget that it is at this most critical window of development in the mother's womb, the child's first environment and first relationship, where the embodied wealth of indigenous nations is determined."[25]

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[22] Henifin, Kai A. 2007. Toxic Politics at 64N, 171W: Addressing Military Contaminants on St. Lawrence Island. (Graduate thesis) http://ir.library.oregonstate.edu/dspace/bitstream/1957/4531/1/Henifin_Thesis_Revised.pdf

[23] Christopherson, S., M. Hogan, & A. Rothe. 2006. Formerly Used Defense Sites in the Norton Sound Region: Location, History of Use, Contaminants Present, and Status of Clean-up Efforts. Prepared for Alaska Community Action on Toxics

[24] Gilbreath, S. and Philip Kass. 2006. Adverse birth outcomes associated with open dumpsites in Alaska Native villages. American Journal of Epidemiology 164(6):518-528.

[25] ---Tekatsitsiakwa Katsi Cook, Akwesasne Mohawk: "Protecting the Child in the First Environment: Preconception Health To Save Native Future": Journal of the National Museum of the American Indian, Winter, 2011, 24-27

---Tekatsitsiakwa Katsi Cook, Akwesasne Mohawk: "Protecting the Child in the First Environment: Preconception Health to Save Native Future": Journal of the National Museum of the American Indian, Winter, 2011

A growing body of scientific evidence demonstrates that harm to women's health, particularly reproductive health, is closely associated with exposure to endocrine-disrupting chemicals, which include many POPs and pesticides, often at extremely low levels. In 2009, the Endocrine Society, a medical association of 14,000 endocrine researchers and specialists from more than 100 countries, warned that "even infinitesimally low levels of exposure [to endocrine-disrupting chemicals]–indeed, any level of exposure at all– may cause endocrine or reproductive abnormalities, particularly if exposure occurs during a critical developmental window. Surprisingly, low doses may even exert more potent effects than higher doses."[26] Studies from various fields are converging to implicate endocrine disrupting chemicals as a significant concern to public health. These are substances in our environment, food, and consumer products that interfere with "hormone biosynthesis, metabolism, or action resulting in a deviation from normal homeostatic control of reproduction. Effects of endocrine-disrupting chemicals may be transmitted to further generations through germline epigenetic modifications or from continued exposure of offspring to the environmental insult."[27]

"On top of our basic genetic inheritance lies epigenetics, or those environmental influences that drive changes in the gene function of the developing fetus. Many external agents during critical windows of a child's development, including maternal stress during pregnancy, maternal behaviors, exposures to toxic chemicals, radioactivity, cigarette smoke, diesel exhaust, heavy metals, and persistent organic pollutants like PCBs have lifelong effects on the child's physical, mental and emotional health and well-being. These epigenetic effects and their "reprogramming" of our mammalian physical functions during fetal development and through the end of adolescence can persist across generations."[28]

A 2005 peer-reviewed study by the Environmental Working Group found an average of 200 industrial chemicals and pollutants in the umbilical cord blood of ten babies born in U.S. hospitals.[29] In a study of infants born in 2007 and 2008, the Environmental Working Group commissioned five laboratories in the U.S., Canada, and Europe to analyze umbilical cord blood collected from 10 "minority" infants born in 2007 and 2008. "Collectively, the laboratories identified up to 232 industrial compounds and pollutants in these babies, finding complex mixtures of compounds in each infant. This research demonstrates that industrial chemicals cross the placenta in large numbers to contaminate a baby before the moment of birth." The developing child is particularly vulnerable. Exposures in the womb can result in immediate harm to the child's development; however "some adverse effects may not manifest themselves for years or decades. Scientists refer to this phenomenon as the "fetal basis of adult disease."[30]

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[26] Diamanti-Kandarakis, Evanthia. Jean-Pierre Bourguignon, Linda C. Giudice, Russ Hauser, Gail S. Prins, Ana M. Soto, R. Thomas Zeller, Andrea C. Gore. 2009. Endocrine-Distrupting Chemicals: An Endocrine Society Scientific Statement. *Endocrine Reviews* 30(4):293-342. http://www.ncbi.nlm.nih.gov/pubmed/19502515

[27] Diamanti-Kandarakis, Evanthia. Jean-Pierre Bourguignon, Linda C. Giudice, Russ Hauser, Gail S. Prins, Ana M. Soto, R. Thomas Zeller, Andrea C. Gore. 2009. Endocrine-Distrupting Chemicals: An Endocrine Society Scientific Statement. *Endocrine Reviews* 30(4):293-342. http://www.ncbi.nlm.nih.gov/pubmed/19502515

[28] Cook, Tekatsitsiakwa Katsi. 2011. Protecting the Child in the First Environment: Preconception Health to Save the Native Future. Journal of the National Museum of the American Indian Winter 2011:24-27.

[29] Environmental Working Group Report Industrial Pollution Begins in the Womb, a Benchmark Investigation of Industrial Chemicals, Pollutants, and Pesticides in Human Umbilical Cord Blood. 2005. Accessed at: www.ewg.org.

[30] Environmental Working Group Report Pollution in Minority Newborns. 2009. Accessed at: www.ewg.org.

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Exposure to chemicals can damage women's reproductive health by causing structural malformations and disease, adversely affect tissues or cells of the reproductive organs, and interfere with the endocrine system. Exposure to chemicals is linked with impaired fertility and ability to carry a baby to term. Chemical exposures also confer a higher risk of cancers and disorders of women's reproductive system. Some examples include:

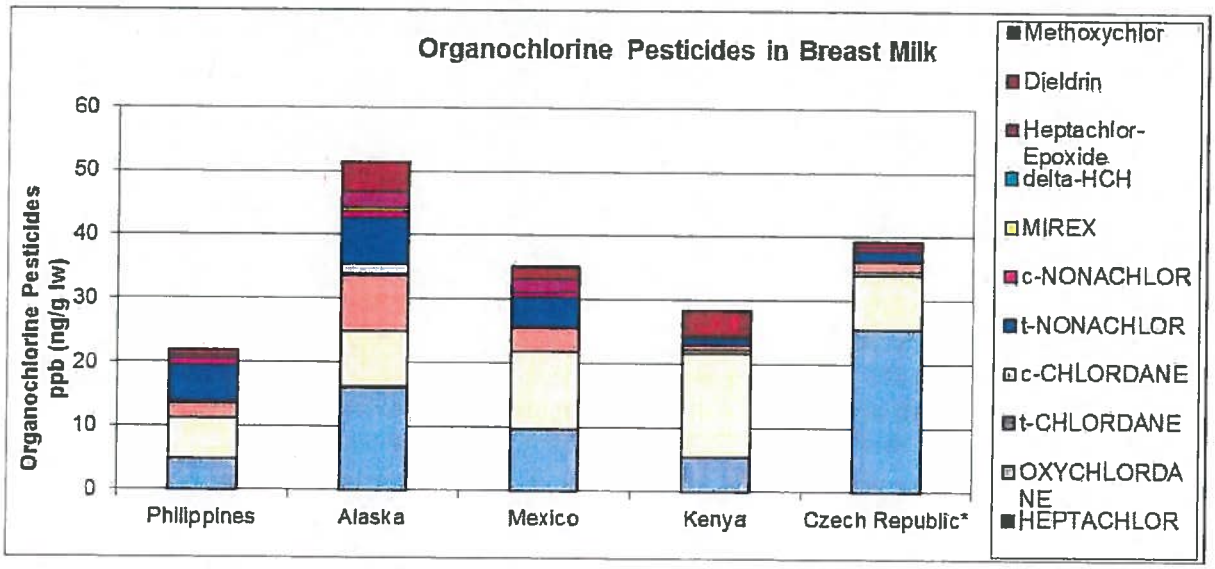
- Uterine fibroids—these noncancerous tumors of muscle lining of the uterus occur in 50% or more of women and are the major cause of hysterectomy in women of reproductive age. They can cause pain, abnormal bleeding, infertility and complications in pregnancy. Although all of the causes are not well understood, exposure to endocrine-disrupting chemicals (xenoestrogens) may cause fibroids. For example, researchers have found that exposure to the chemical bisphenol-A (BPA), found in certain hard plastics and the material lining canned foods and beverages is associated with fibroid development in laboratory studies.
- Endometriosis—is a painful disease occurring when the endometrium, tissue lining the inside of the uterus, grows outside of the uterus into the abdomen, pelvis, or ovaries. Endometriosis affects 10-20% of women of reproductive age and is a leading cause of infertility and hysterectomy. Dioxins and PCBs are among the chemicals associated with endometriosis in animal and human studies. Higher levels of phthalates (an endocrine-disrupting chemical found in personal care products and soft plastics) were found in women with endometriosis.
- Reproductive tract development and disease—exposure to certain xenoestrogenic chemicals such as BPA and the pesticide methoxychlor can interfere with the implantation of fertilized eggs in the uterus or harm the developing bones and uterus of developing babies.
- Effects on ovarian follicles—exposure to endocrine-disrupting chemicals during fetal development can adversely affect the quality and quantity of ovarian follicles. A recent study found that when laboratory animals are exposed to bisphenol-A at levels commonly measured in people, that high percentages (nearly 50%) of their eggs have chromosomal abnormalities. This genetic defect is then also found in the embryos that develop from these eggs. Chromosome abnormalities are the leading cause of miscarriages, birth defects, and mental retardation in people. Bisphenol-A is also associated with re-current miscarriages in humans.
- Early puberty—research demonstrates that exposure to chemicals such as PCs, PBDEs (polybrominated diphenyl ethers), dioxins, and phthalates is associated with earlier onset of puberty in girls.
- Breast cancer—more than 200 chemicals, including a number of endocrine-disrupting chemicals, are associated with increased incidence of breast tumors. Breast cancer incidence rates increased in the U.S. more than 40% between 1973 and 1998, a period that coincides with increasing production and use of pesticides and other industrial chemicals. A woman's lifetime risk of breast cancer is one in eight, as of January 1, 2006 (the most recent point in time for which data are available).
- Miscarriages—exposures to BPA and pesticides such as DDT are associated with miscarriages. Miscarriages affect 21% of known pregnancies and although there are a variety of factors, there is strong evidence that toxic chemicals are significant risk factors.
- Shortened lactation—PCBs and pesticides such as atrazine are associated with a reduction in the length of time that women can breastfeed her baby. Shortened lactation is a critical problem because it has long-term consequences for the development of a healthy child, including increased risk for infection and impaired immunity, obesity, and learning disorders.[31]

V. Contamination of Breast Milk Threatens Current and Future Generations

[31] Information in this section from the report *shaping Our Legacy: Reproductive Health and the Environment*. 2008. A report by the Program on Reproductive Health and the Environment, Department of Obstetrics, Gynecology, and Reproductive Sciences, National Center of Excellence in Women's Health, University of California, San Francisco.

Levels of contaminants found in breast milk demonstrate disproportionate effects in Indigenous communities. Human breast milk is a bioresource at the foundation of subsistence economies and traditional food ways of Indigenous communities. Biomonitoring of human breast milk has shown the ubiquity of persistent organic pollutants in the environment.[32] One study noted that in the Akwesasne Mohawk population with lifetime exposures to consuming fish near contaminated sites, women produced breast milk with higher concentrations of PCBs; yet when later generations of Akwesasne Mohawk mothers heeded fish advisories and did not have such lifetime exposures, the breast milk concentrations of PCBs went down.[33] Unfortunately, in many tribal jurisdictions, where subsistence foods provide an economic and healthy means to eat, and where other sources of food are less available and less desirable, tribal women may not have such a choice.

In a more recent study looking at body burdens of persistent organic pollutants in the Akwesasne Mohawk youth ages 17 to 21 years old, significantly higher levels of PCBs were found among individuals who were breastfed as infants, were first born, or had consumed local fish within the past year. [34]Comparing levels of various persistent organic pollutants (POPs) reported by the U.S. Centers for Disease Control (CDC) for youth between the ages of 12 and 19 years old, the geometric mean of several congeners was significantly higher than the reported CDC 90th percentile. This suggests continued higher than acceptable exposures and body burdens in Indigenous communities either through diet or other sources. Of five women tested from Czechoslovakia, Kenya, Mexico, Philippines and Alaska, levels of pesticides and the industrial chemicals PBDEs (polybrominated diphenyl ethers—used as flame retardants in furniture, mattresses and electronics) were highest in the breast milk of a Yupik woman from Arctic Alaska (see charts below).[35]



Contamination of human milk in Arctic mothers by POPs has been documented at levels considered unsafe. Impacted Indigenous Peoples have stated that they consider the contamination of breast milk as a clear human rights violation, making the most nutritious food for infants poisonous and contaminated in the pursuit of profit.

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[32] Fitzgerald, E. Hwang, S. et al. 1998. Fish Consumption and Breast Milk PCB Concentrations among Mohawk Women at Akwesasne, American Journal of Epidemiology 148:164-172.

[33] Fitzgerald et al. 1998.

[34] Gallo et al. 2011. Levels of persistent organic pollutant and their predictors among young adults. Chemosphere 03/2011; DOI: 10.1016/j.chemosphere.2011.02.071.

[35] Commonweal. 2009. Report: Monitoring Mother Earth by Monitoring Mother's Milk. www.ipen.org.

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Indigenous women continue to strongly encourage breastfeeding for a number of nutritional, spiritual, social, cultural, health and economic reasons. However they demand an immediate halt to all activities which cause it to be contaminated.

VI. State and International Complicity: the Manufacture and Exportation of Banned Pesticides from the United States to Mexico and others countries

"Just because something is not illegal, it may still be immoral. Allowing the export of products recognized to be harmful is immoral."

- UN Special Rapporteur on Adverse effects of the illicit movement and dumping of toxic and dangerous products and wastes on the enjoyment of human rights, Ms. Fatma-Zohra Ouhachi-Vesely on her first official country visit to the United States, 2001

In 2001, the Special Rapporteur on Adverse effects of the illicit movement and dumping of toxic and dangerous products and wastes on the enjoyment of human rights, Ms. Fatma-Zohra Ouhachi-Vesely visited the United States. She found that the United States allowed the manufacture and exportation of pesticides that were banned for use in the United States to other, primarily developing, countries. She cited a report on the alarming levels of this exportation:

"United States Customs records reveal that 3.2 billion pounds of pesticide products were exported in 1997-2000, an average rate of 45 tons per hour. Nearly 65 million pounds of the exported pesticides were either forbidden or severely restricted in the United States [...]. In the 1997-1999 periods, shipments of banned products were found in Customs Records [...] 57 per cent of these products were shipped to a destination in the developing world. Nearly half of the remaining 43 per cent were shipped to ports in Belgium and the Netherlands. Though it is not possible to make a final determination from available data, it is likely that the final destinations of a large number of these shipments were also developing countries." [36]

The same report further stated that:

"[B]etween 1996-2000, the United States exported nearly 1.1 billion pounds of pesticides that have been identified as known or suspected carcinogens, an average rate of almost 16 tons per hour [...]"[37]

These figures have particular importance in regard to girls and boys in developing countries. According to the International Labor Organization, 65 to 90 per cent of the children estimated to be working in Africa (80 million), Asia (152 million) and Latin America (17 million) are working in agriculture. Evidence that children have heightened susceptibility to the carcinogenic effects of pesticides has even greater significance for developing countries. There, children live and work in conditions that involve almost continuous exposure, ranging from contact in fields to contaminated water, pesticide-contaminated clothing, and storage of pesticides in homes.

A more recent report based on US Government Custom Service Records, "*Pesticide Exports from U.S. Ports, 2001–2003*" states that:

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[36] Carl Smith, "Pesticide Exports from US ports, 1997-2000", vol. 7 *International Journal of Occupational and Environmental Health* (2001), 266-274.

[37] Ibid

"Analysis of U.S. Custom Service records for 2001-2003 indicates that nearly 1.7 billion pounds of pesticide products were exported from U.S. ports, a rate >32 tons/hour. Exports included >27 million pounds of pesticides whose use is forbidden in the United States. WHO Class 1a and 1b pesticides were exported at an average rate of >16 tons/day. Pesticide exports included >500,000 pounds of known or suspected carcinogens, with most going to developing countries; pesticides associated with endocrine disruption were exported at an average rate of >100 tons/day."[38]

The United Nations Declaration on the Rights of Indigenous Peoples as well as CERD General Recommendation XXIII requires the Free Prior Informed Consent by Indigenous Peoples who are exposed and detrimentally affected by exposure these highly toxic substances. The IITC has received extensive documentation from many such communities, in particular in Mexico and Guatemala, affirming that this is, in fact, not the case.

During her visit to the United States Mme. Vesely also met with government officials, reporting that "US officials told me that pesticides banned in the United States but exported cannot be regulated if there is a demand overseas, because of free-trade agreements."[39] The Rapporteur, Ms. Vesely justifiably found that the US policy is based upon, among other unacceptable premises, "... on an untenable premise that pesticides deemed unacceptable for the residents and environment of the United States are somehow acceptable in other countries. Clearly, countries such as the US often choose to offer their citizens a higher degree of protection than they insure for others in other countries and fail to monitor the human rights impacts of this practice by US corporations. One of the most common reasons for doing so is to acknowledge different levels of economic and social development among States. However this disparity is difficult to justify in respect of pesticides found to be so dangerous that they are banned from sale or use." [40]

As one farm worker who is a member of a Yaqui community in Mexico expressed in a meeting with the US's Environmental Protection Agency in the San Diego, California USA in 2001, commenting on the US's policy of banning pesticides for use in the US but still permitting their production for export, "Why are the lives of our Yaqui children in Mexico worth less than the lives of your children here in the US?"

There are a great many difficulties in tracing the use abroad of banned pesticides manufactured in the US. In Mexico and Guatemala, for example, there is no labeling of origin or content of pesticides. They are given names like "Veloz" (speedy), or "Ninja" in Guatemala. As the Special Rapporteur pointed out, "Even if something is marked 'poison' it tends to be shipped in large amounts, and then transferred to smaller containers without proper labeling for local sale and use. And the people actually using the products often cannot read anyway."[41]

In an investigation conducted by the International Indian Treaty Council in Sonora, Mexico, on Indigenous Yaqui ancestral lands received testimony from an indigenous agricultural worker who was told by the agricultural companies involved in aerial spraying to bury large pesticide canisters because they knew that the pesticide was banned. As stated above, many Yaqui family members, farm workers and midwives and mothers have presented testimonies about increasing levels of birth defects, cancers and deaths due to toxic exposure from

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[38] Pesticide Exports from U.S. Ports, 2001–2003 CARL SMITH, KATHLEEN KERR, MD, AVA SADRIPOUR, ESQ. International Journal of Occupational and Environmental Health ,VOL 14/NO 3, JUL/SEP 2008

[39] U.N. Deems Export of Banned Pesticides Immoral, U.S. Newswire, 202-347-2770/ 12/17 16:09

[40] Special Rapporteur on Adverse effects of the illicit movement and dumping of toxic and dangerous products and wastes on the enjoyment of human rights, Ms. Fatma-Zohra Ouhachi-Vesely , Mission to the United States, UN Doc. E/CN.4/2003/56/Add.1.

[41] U.N. Deems Export of Banned Pesticides Immoral, U.S. Newswire, 202-347-2770/ 12/17 16:09,

indiscriminate aerial spraying, storage and use of highly toxic pesticides in communities and unsafe working conditions with no safely precautions or information about the dangers provided.

The export of banned and dangerous toxics from the "developed/industrialized" to the "developing" countries continues, with impacted Indigenous and other communities at the bottom end uniformed, sickened and killed. It should be noted with concern that the production and export of banned pesticides by the US is permitted under federal law (the Federal Insecticide, Fungicide, and Rodenticide Act, FIFRA) as well as under the International Rotterdam Convention, as long as the receiving country is informed of this status. Unfortunately no one informs the Indigenous communities "on the ground" who suffer grave human rights consequences.

VII. Holding States and Corporations Accountable

"The agrochemical industry is valued at over $42 billion and operates with impunity while, according to the World Bank over 355,000 people die from pesticide poisoning every year."[42]

On December 3rd 2011, 27 years later after the Bhopal disaster caused by the release of toxic pesticides from the Union Carbide factory in Bhopal India killed over 25,000 people, the **Permanent Peoples Tribunal** convened in Bangalore India with an international panel of 5 judges. Based on testimonies and statements about health and other human rights violations caused by pesticides from communities around the world, including Indigenous communities from Alaska, Mexico, Peru and elsewhere, the Tribunal delivered a scathing indictment of the pesticide industry. It focused on the "Big 6" agrochemical giants, the Multi-national Corporations (MNC's) Monsanto, Syngenta, Dow, DuPont, Bayer, and BASF (Dow bought Union Carbide in 2001).

Blame for the agrochemical industry's human rights abuses was also assigned to the three States where these corporations are headquartered—the United States, Switzerland, and Germany. As stated in the PPT's findings, these countries *"failed to comply with their internationally accepted responsibility to promote and protect human rights, especially of vulnerable populations."*

Other findings included:

"The Tribunal makes the following declaration of responsibility for the six indicted MNCs and three Governments in particular and further also declares the responsibilities of all States, international organizations, UN Specialist Agencies, all other institutions of global governance."

"AS CONCERNS THE INDICTED SIX CORPORATIONS (BASF, BAYER, DOW CHEMICAL, DUPONT, MONSANTO

-- The Tribunal finds on all evidence presented before it the six MNCs responsible for gross, widespread and systematic violations of the right to health and life, economic, social and cultural rights, as well as of civil and political rights, and women and children's' rights.

-- The Tribunal also finds these corporations responsible for their systematic conduct resulting in violation of indigenous peoples' human rights and other entitlements.

AS CONCERNS THE THREE SPECIFICALLY INDICTED STATES:

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[42] Pesticides Action Network North America, January 10th, 2012

"The United States of America (USA), the Swiss Confederation (Switzerland) and the Federal Republic of Germany (Germany) have failed to comply with their internationally accepted responsibility to promote and protect human rights, especially of vulnerable populations and their specific customary and treaty obligations in the sphere of environment protection..." [43]

The Permanent Peoples tribunal was convened by Non-Governmental organizations and its findings are considered non-binding upon the States and corporations in question. However similar conclusions were reached by a legally binding UN Treaty Monitoring body process, the UN Committee on the Elimination of Racial Discrimination in its Concluding Observations for the periodic review of the United States which took place in February 2008. The International Indian Treaty Council coordinated a joint Indigenous Peoples shadow report which includes testimony and documentation addressing the human rights impact of the production and export of toxic pesticides, including tons of pesticides banned for use in the US due to amble proof of severe health impacts including cancers and birth defects.

In response, the CERD issued the following recommendation to the US, following up on a similar recommendation to the Canadian government during its periodic review the previous year (March 2007):

"30. The Committee notes with concern the reports of adverse effects of economic activities connected with the exploitation of natural resources in countries outside the United States by transnational corporations registered in the State party on the right to land, health, living environment and the way of life of indigenous peoples living in these regions.

> **In light of article 2, paragraph 1 (d), and 5 (e) of the Convention and of its general recommendation no. 23 (1997) on the rights of indigenous peoples, the Committee encourages the State party to take appropriate legislative or administrative measures to prevent acts of transnational corporations registered in the State party which negatively impact on the enjoyment of rights of indigenous peoples in territories outside the United States. In particular, the Committee recommends that the State party explore ways to hold transnational corporations registered in the United States accountable. The Committee requests the State party to include in its next periodic report information on the effects of activities of transnational corporations registered in the United States on indigenous peoples abroad and on any measures taken in this regard."** [44]

The IITC Shadow report submitted to the CERD for the US review specifically documented the export of banned pesticides by the US to Mexico. The issue of Mexico's continuing IMPORT and use of dangerous and banned pesticides and their use in agricultural area of Mexico as impacting Indigenous communities (Yaqui and Huichol) was also submitted by IITC and addressed in the recommendations of the UPR review of Mexico by the UN Human Rights Council in September 2008.

Clearly, United States policies and laws as well as International Conventions allowing banned pesticides to be manufactured and exported by US based corporations are immoral and wrong, and violate the human rights of the impacted Indigenous communities where they are applied without their free, prior and informed consent,

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[43] DRAFT FINDINGS AND RECOMMENDATIONS, PERMANENT PEOPLE'S TRIBUNAL ON AGROCHEMICAL TRANSNATIONAL CORPORATIONS, Bangalore, India, 3-6 December 2011

[44] Concluding Observations of the UN Committee on the Elimination of Racial Discrimination, United States of America [CERD/C/USA/CO/6 May 8th 2008]

and also where they travel as a result of global transport. As Mme. Ouachi-Veseley stated in her report to the Commission of Human Rights, "[i]n particular, the right to life, the right to health, the right to found a family, the right to a private life are most commonly violated by the effects of pesticide use."[45]

The National Congress of American Indians also affirmed the human rights impacts on Indigenous Peoples of the export of banned pesticides by the United States and US based corporations in a resolution adopted by consensus at its annual conference in November 2007:

"WHEREAS, the production, export and unmonitored use of banned, prohibited and dangerous toxics including pesticides violates a range of human rights for Indigenous Peoples around the world including the Rights of the Child, Right to Health, Food Security, Development Life, Physical Integrity, Free Prior Informed Consent, Cultural Rights, the Right to be Free from all Forms of Racism and Racial Discrimination and the Right of All Peoples not to be Deprived of Their Own Means of Subsistence." [46]

This NCAI resolution also called for a formal Hearing by the United States Senate to further address this matter.

VIII. Advances and Challenges in International Environmental Standards Regarding Environmental Toxics: An opportunity for the UNPFII to exert pressure in support of Indigenous Women and communities' voices, rights and participation

A. The Stockholm Convention on Persistent Organic Pollutants

The Stockholm Convention was adopted by States from around the world in 2001 and entered into force in 2004 when 50 States had ratified it. Currently, the Convention includes 176 State parties that agree to work together toward global elimination of the world's most dangerous chemicals. The Stockholm Convention is a living Treaty that includes provisions to add new chemicals that meet scientific criteria for persistence, long-range transport, adverse effects, and bioaccumulation. In addition to the initial list of twelve chemicals including nine pesticides, which were included in the Convention, the "dirty dozen" (aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, mirex, toxaphene, hexachlorobenzene, PCBs, dioxins, and furans), the Parties agreed to add 9 new substances in 2009 and an additional pesticide, endosulfan, in 2011. The scientific committee of the Stockholm Convention, the POPs Review Committee (POPRC), works to determine whether chemicals that are nominated for inclusion under the Convention meet the scientific criteria and warrant global action.

The Preamble of the Convention recognizes the serious health concerns including "*particular impacts upon women and children and, through them, upon future generations;*" and that "*Arctic ecosystems and indigenous communities are particularly at risk because of the biomagnification of persistent organic pollutants and that contamination of their traditional foods is a public health issue*." Because exposure to even low levels of POPs can harm human health and development, the Convention is strongly based on the Precautionary Principle.

However major challenges remain. The chemical industry remains a strong political force in this process, exerting constant and well-funded pressure on States to avoid or delay adding new chemicals. Despite the recognition of impacts on health of women, children and Indigenous Peoples in the Convention's preamble,

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[45] Special Rapporteur on Adverse effects of the illicit movement and dumping of toxic and dangerous products and wastes on the enjoyment of human rights, Ms. Fatma-Zohra Ouhachi-Vesely , Mission to the United States, UN Doc. E/CN.4/2003/56/Add.1, para 39.

[46] National Congress of American Indians Resolution #DEN-07-050, "Impacts on the Contamination of Subsistence Food Resources, Health, Human Rights and Development of Tribes and Indigenous Communities

Human rights including the Rights of Indigenous Peoples most often take a back seat to industry concerns or are not addressed at all in the States' deliberations. Also, there is no formal mechanism for the participation of Indigenous Peoples in the implementation of the Convention. This continues to be a key demand of Indigenous Peoples participating in this process, along with unqualified recognition of human rights.

In the closing statement of the Global Indigenous Peoples Caucus at the 2011 4th Conference of the Parties to the Stockholm Convention (April 6 – 10, 2011, Geneva), these ongoing concerns were emphasized:

"For Indigenous Peoples, the impacts of the production, export and use of dangerous toxics violates and threaten human rights protected under International Laws, norms and Conventions, including the UN Declaration on the Rights of Indigenous Peoples. Reproductive health and justice, which includes our right to bear and raise healthy children, also continue to be undermined for Indigenous Peoples living at the source of application as well as in Arctic communities, far from the original point of exposure. Indigenous Peoples reiterate our call for formal participation in this process so that we are able to work more effectively with the State parties for the realization of the Stockholm Convention's goals." [47]

B. The Rotterdam Convention

The **Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade** is an important tool to protect human health and the environment by controlling trade in hazardous chemicals and pesticides that meet the requirements of the Convention. However, as with the Stockholm Convention, there is no formal mechanism for the participation of Indigenous Peoples or to address the human rights abuses caused by the export of hazardous substances when they are used in the lands and territories of Indigenous Peoples without their free prior and consent.

In fact, the Rotterdam Convention specifically allows for the export of pesticides and other chemicals that have been banned for use in the producing State as long as the receiving (importing) State is properly notified. There is no provision to ensure that Indigenous Peoples are afforded the right of Free Prior Informed Consent as stipulated by Article 29 of the UN Declaration of the Rights of Indigenous Peoples, CERD General Recommendations XXIII and other human rights standards. Also, there is no formal process for consideration by State parties of the widespread, brutal Human Rights impacts caused by this practice as have been documented in this paper, putting this UN Convention directly at odds with a number of existing UN human rights standards.

C. Agenda 21 and Rio + 20, the World Conference on Sustainable Development, June 2012

In 1972, the United Nations held the World Conference on the Human Environment in Stockholm, Sweden. The resultant Declaration of the United Nations Conference on the Human Environment was the first pronouncement by the international community on the world's environment. Calling for an environment of a quality that permits a life of dignity and well-being, the Conference established the United Nations Environmental Programme (UNEP).

The Stockholm Declaration addressed the issue of the environment and development but left it up to the States to deal with the growing problem of environmental degradation as a result of development throughout the

[47] United Nations Stockholm Convention on Persistent Organic Pollutants , 5th Conference of the Parties, April 25th 29th, 2011, Geneva Switzerland , Global Indigenous Peoples Caucus Closing Statement , Presented by Monique Sonoquie, International Indian Treaty Council I

world. The Stockholm Declaration did recognize the connection between human right and the environment, but in its formulation of a right to the environment, it framed this right as an individual right even though the right to the environment, like the rights of self-determination, development, and peace, are all so-called "third generation" collective rights of peoples.

The World Conference on the Environment and Development (Rio) was held twenty years later, in 1992, in Rio de Janeiro, Brazil, leading to an explosion of international activity, including development of international conventions addressing the environment.

Principle 22 of the Rio Declaration recognizes that:

Indigenous Peoples and their communities... have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture and interests and enable their effective participation in the achievement of their sustainable development.

Indigenous Peoples are addressed in Agenda 21, Chapter 26 which calls for a "full partnership" with Indigenous Peoples in the accomplishment of the goals of Agenda 21. Chapter 26.3 calls upon the States to "strengthen and facilitate" Indigenous Peoples' participation in their own development and in external development activities that may affect them.

Another important advance, which was also included in the Stockholm Convention, was the key concept of the "Precautionary Principle" placing the burden of proof on the corporation or State that chemicals are safe for human and environmental health BEFORE they are produced, used or released. This formula stands as a rights-based alternative to current practices supported by governmental regulatory models such as "risk assessment", "safe management", and "acceptable risk" which allow the continued use and proliferation of chemicals known to be dangerous if their impacts can be "controlled" or limited to low or "acceptable" rates of illness and death.

Agenda 21 Section I, Chapter 6: "Protecting & Promoting Human Health, E. Reducing health risks from environmental pollution and hazards" recognizes that pesticides pose a serious threat to human health. Although Agenda 21 also endorses partnership with Indigenous Peoples, the Precautionary Principle and Free Prior and Informed Consent, in Chapter 19 and 20 it endorses another model altogether regarding the Management of Chemicals and Hazardous Wastes.

In Chapter 19 it states that "the principle of the right of the community and of workers to know those risks [of chemicals] should be recognized. However, the right to know the identity of hazardous ingredients should be balanced with industry's right to protect confidential business information". [48] In other words, it proposes that the fundamental right of exposed communities to FPIC be "balanced" with corporate business interests. Chapter 19 paragraph 52 f) also allows for the "export of chemicals that are banned, severely restricted, withdrawn or not approved for health or environmental reasons, except when such export has received prior written consent from the importing country"[49] This provides the basis for similar provisions in the Rotterdam Convention.

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[48] Agenda 21, Chapter 19 paragraph 8

[49] Agenda 21 Chapter 19, "Environmentally Sound Management Of Toxic Chemicals, Including Prevention Of Illegal International Traffic In Toxic And Dangerous Products", paragraph 52) f

Indigenous Peoples have challenged these provisions of Agenda 21, and the health and human rights threats they pose, in their statements in preparation for the upcoming World Conference on Indigenous Peoples, "Rio + 20" in June 2012, based on the minimum standard in the UN Declaration on the Rights of Indigenous Peoples, in particular Article 29, in this regard. Indigenous Peoples are optimistic regarding the inclusion of the UN Declaration on the Rights of Indigenous Peoples in the "Zero-draft outcome document" for Rio+20 as drafted by the United Nations Secretary General[50] and encourage the UNPFII to urge that this reference remain or be strengthened in the final outcome document.

D. The United Nations Legally-Binding Instrument on Mercury: A Current International Standard-setting opportunity to incorporate the right to health for Indigenous Women, Girls and Future Generations

Mercury is highly toxic. Some levels of inorganic mercury are found in nature. Metallic mercury is used in batteries, thermometers and dental amalgams. The largest amounts of mercury are released into the environment by coal-fired power plants, paper milling, mining and other industrial processes. The most toxic form is "methylated mercury", created when mercury is exposed to decaying plant matter, for example in marshes or lakes created by dams. This form of organic mercury "bio-accumulates" or builds up in the cells of fish and other animals, moving up the food chain in higher and higher concentrations. Humans are most commonly exposed by eating contaminated fish. Mercury contaminates our air, water, lands and traditional foods, in particular the fish upon which so many Indigenous communities depend, producing serious health impacts for persons of all ages. But the gravest danger is to the health and development of our children. Exposure to mercury impairs the neurological development of infants, babies and children, including those still in those mothers' wombs.

The Second Ministerial Meeting of the Arctic Council met in Barrow, Alaska in 2000. Participants were concerned about effects to human health and the environment of mercury and its impacts globally, particularly the Arctic. The Arctic Council asked UNEP to complete a global assessment of mercury to provide information for next steps. UNEP released "Global Mercury Assessment" report in 2002. In summary the report acknowledged that mercury, due to its long range transport, its ability to bioaccumulate in the environment, its persistence and its harm to human health and the environment, is of global concern. In 2009, UNEP agreed to negotiate a global, legally binding mercury-control Treaty. The Treaty was to be drafted in five "Intergovernmental Negotiating Committee" or INC meetings to begin in 2010 and to be completed in early 2013. The first three took place in Japan, Sweden and Kenya. The next session, INC 4, is scheduled in Uruguay in June 2012.

About two-thirds of the mercury released in the environment can be attributed to human activity. The largest source of global mercury pollution comes from burning fossil fuels, primarily coal. The second largest source appears to be artisanal and small scale gold mining, as well as continued run offs from abandoned gold mines. Mercury can also be found in a number of products (batteries, dental fillings, cosmetics etc.)

Mercury contamination is bound to the protein tissue rather than the fatty tissue, unlike contamination from POPs. Although mercury can travel far from the source, contamination is of particular concern for waterways that are near coal-fired power plants, waste dumps, pulp and paper mills, cement kilns, gold mines, sites of fossil fuel extraction for oil, coal and tar sands and chlor-alkali facilities.

[50] "The Future We Want", Zero-Draft text for Rio+20, January 10, 2012, para. 21

Abandoned mercury and gold mines in areas such as California, South Dakota and Alaska continue to emit mercury. Current gold mining and processing taking place in many countries in Latin America, Asia and Africa as well as North America produce new mercury contamination. For example, in 2003, gold mining and processing at Placer Dome's Cortez mine and Barrick's Gold strike in Northern Nevada released 2435 pounds of mercury into the environment.

Methylmercury is known to affect the neurological system of both the developing as well as the adult brain. Prenatal exposure can cause irreversible damage to the developing nervous system resulting in reduced IQ, abnormal muscle tone and losses in motor function and attention. Heart disease and high blood pressure have also been associated with methylmercury consumption as well as damaged immune systems kidney damage and reproductive effects.

As a mother accumulates mercury in her body she can then pass this pollution onto her unborn child. Babies can be exposed by consuming breast milk with high levels of mercury. Indigenous Peoples that rely primarily on fish for their physical, economic and cultural survival are at highest risk. In 2000, the National Academy of Sciences estimated that 60,000 babies born each year in the US are at risk for learning disabilities and other kinds of neurological damage due to mercury contamination. The Academy concluded that there is "little or no margin of safety" for consumption of mercury by women of childbearing age. In 2004, the US Environmental Protection Agency estimated that over ten times that many babies may actually be at risk. Umbilical cord blood has been found to contain almost twice the level of mercury than that found in the mothers' blood, further increasing the risks to unborn generations.

Mercury is an international problem affecting Indigenous Peoples around the world. In British Colombia Canada, the dam holding Teck Cominco's mercury mine tailings burst in 2004, releasing large amounts of mercury into water used for traditional subsistence fishing. In Northern Ontario, paper mill emissions containing mercury had devastating effects on the health and subsistence fishing of the Grassy Narrows First Nation Peoples. The UN Environmental Programme estimates that over one million people in Latin America, including many women and children, are currently involved in small-scale mining activities in which mercury is used.

Indigenous Peoples participating in the INC sessions have proposed including references to Indigenous Peoples in several places in the current Treaty negotiating text, in addition to the current language recognizing "vulnerable populations" as well as a new operative article addressing specific impacts for Indigenous Peoples. The Indigenous Peoples' Global Caucus at INC 3 in Nairobi Kenya (31 October – 4 November 2011) also strongly supported the inclusion of a new operative paragraph on "Health Aspects" currently proposed as Article 20 bis by the GRULAC (Latin American) countries . Their statement to the INC3 plenary linked health impacts to cultural concerns and also called for better data regarding specific impacts on Indigenous women and children.

"Harms from all mercury releases and a need for more and better data on impacts to Indigenous Peoples and vulnerable populations, such as pregnant women, the developing fetus, children, and workers, need to be better tracked and communicated. For us, these harms are linked to traditional foods and diets, and cultural values. This expanded definition of vulnerability includes other factors of poverty, poor nutrition, reproductive concerns of our women, learning disabilities of our children, and the retention of our languages."[51]

Indigenous Women have taken a strong stand regarding the continued release of mercury into the international environment, the lack of political will by States to conduct effective cleanup of lands and waterways that are

[51] Indigenous Peoples Global Caucus intervention on Health Aspects, INC 3, Nairobi Kenya, November 3rd, 2011

contaminated and the need for a strong international instrument on mercury guided by health and human rights concerns rather than priorities set by industry.

The "Indigenous Mothers against Mercury Open Letter to National, State and regional Policy- Makers", was finalized on May 18th 2011 and has received over 1000 signatures from Indigenous mothers around the world. It reiterates the health impacts of mercury as a neurotoxin which most severely damages the developing fetus. It reminds policy makers that this represents *"a violation of our human rights to health, cultural practices, Treaty rights, subsistence, Rights of the Child, and our Right to Free Prior and Informed Consent as recognized by the UN Declaration on the Rights of Indigenous Peoples and other international human rights instruments, norms and standards."*[52]

Regarding the international standard setting process currently underway, the letter stresses the need for full and effective participation of Indigenous Peoples, including women, and for a strong and effective outcome. The letter concludes with the following 3 proposals to policy-makers:

As policy-makers, we call upon you to take a strong stand for the development of the Global Mercury Treaty, and through policies on the national and international levels that will:

1. *Halt emissions of mercury into the environment from all sources, including the burning of coal, current and past gold mines and production and disposal of medical products that use mercury*
2. *Commit to thorough cleanup of sources of current contamination including legacy mine sites, working in full collaboration with Indigenous Peoples when their homelands, waters, sacred areas and subsistence foods have been impacted.*
3. *Ensure the full, formal and effective participation of Indigenous Peoples, including Indigenous women, in the development of a Global Mercury Treaty and in measures to implement its provisions on the national, regional and local levels."*[53]

IX. RECOMMENDATIONS

In light of the information and concerns presented in this paper, we suggest that the following recommendations be included in the report of this Expert Group Meeting of the UN Permanent Forum on Indigenous Issues, and be considered for inclusion in the final report of the UNPFII 11th Session in May 2012. These include support for relevant recommendations that have already emerged from a number of consensus documents and processes agreed to by Indigenous Peoples in response to the concerns raised in this paper:

1. This EGM calls upon States to eliminate the production and use of pesticides, industrial chemicals and toxic byproducts that disrupt the endocrine system, affect learning and neurological development, cause cancers and other illnesses, undermine women's and maternal health, contaminate lands, waters and traditional food sources, cause harm to reproduction and affect any aspect of the health and development of our future generations. This EGM also calls upon States to take responsibility for

[52] "Indigenous Mothers against Mercury Open Letter to National, State and regional Policy- Makers", International Indian Treaty Council and the Indigenous Women's Environmental Justice and Reproductive Health Initiative
May 18th 2011

[53] "INDIGENOUS MOTHERS AGAINST MERCURY OPEN LETTER TO NATIONAL, STATE AND REGIONAL POLICY-MAKERS", MAY 8TH, 2012, Submitted by the International Indian Treaty Council and the Indigenous Women's Environmental Justice and Reproductive Health Initiative, May 8th 2011

effective and immediate clean-up of contaminated sites created by activities which it either permitted or approved, in collaboration and coordination with the impacted Indigenous Peoples.

2. The EGM calls upon States to report on their progress at the 12th session on the UNPFII towards full and effective implementation of Article 29 of the UN Declaration on the Rights of Indigenous Peoples, in particular paragraphs 2 and 3 regarding their obligation to ensure free prior and informed consent regarding hazardous materials and to implement programs to restore the health of impacted Peoples in conjunction with these Peoples, ensuring the participation of Indigenous women.

3. We recommend that the "precautionary approach" (principle 15 of the Rio Declaration on Environment and Development) be reaffirmed at Rio + 20, together with a renewed commitment by States to eliminate the production, use and dumping of chemicals that are toxic, persistent and hazardous that pose dire threats to the health of impacted communities and ecosystems, and most of all violate human rights; including the rights of Indigenous Peoples to free, prior and informed consent as stated in Article 29 of the UN Declaration on the Rights of Indigenous Peoples. We call upon States to make a commitment to utilize and implement the Precautionary Principle as an alternative to the models of "risk assessment" and "management" of toxic chemicals presented in sections 19 and 20 of Agenda 21. In addition, we recommend that agricultural methods and practices used traditionally by Indigenous communities based on safe alternatives to toxic pesticides be recognized and supported.[54]

4. The EGM calls upon the UNPFII to urge States and the UN Secretary General to ensure that the reference recognizing "the importance of the UN Declaration on the Rights of Indigenous Peoples in the global, regional and national implementation of sustainable development strategies"[55] be maintained and strengthened in the final Rio + 20 Outcome Document.

5. We recommended that the practice of exporting banned pesticides and other chemicals by the USA and other States cease immediately. We also recommend that the provisions within UN Conventions and national laws which permit this practice without the free, prior and informed consent of the Indigenous Peoples and communities who may be impacted at the source of exposure as well as through global transport, be reviewed immediately and revised. [56]

6. The EGM calls upon the United Nations, its agencies and members to ensure that Human Rights principles and standards must be mainstreamed in all international standard setting processes addressing environment and development, including, interalia, including the Rights to Health, Free Prior Informed Consent, Food and Subsistence, Treaty Rights, Rights of Women and Children and Right to Life, and all rights affirmed in the United Nations Declaration on the Rights of Indigenous Peoples.

7. The EGM recommends that all relevant national and international bodies and processes respect the traditional knowledge of Indigenous women regarding sustainable development, environmental protection, cultural practices, food production and health and take action to strengthen their roles as participants, leaders, and experts in all levels of discussions and decision-making on these matters.

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[54] Conclusions and recommendations, from the "Rio + 20: Indigenous Peoples in Route to the Rio +20 Conference" from the Global Preparatory Meeting of Indigenous Peoples on Rio +20 and Kari-Oca 2, August 22 - 24, 2011, Manaus, Amazonia, Brazil"

[55] "The Future We Want", Zero-Draft text for Rio+20, January 10, 2012, para. 2121

[56] Conclusions and recommendations, from the "Rio + 20: Indigenous Peoples in Route to the Rio +20 Conference" from the Global Preparatory Meeting of Indigenous Peoples on Rio +20 and Kari-Oca 2, August 22 - 24, 2011, Manaus, Amazonia, Brazil"

8. The UN Permanent Forum on Indigenous Issues, the UN Special Rapporteur on the Situation of Human Rights and Fundamental Freedoms of Indigenous Peoples and other UN bodies and mechanisms addressing Indigenous Peoples' rights are requested to focus attention and collect information from Indigenous Peoples, in particular Indigenous women, on the links between environmental contamination and reproductive health and justice, for the purpose of recommending effective solutions and remedies at the international level. [57]

9. States and their Territories must be accountable for the implementation, with the full and effective participation of Indigenous Peoples of all international Treaties, Standards and Conventions entered into including the Nation to Nation Treaties with Indigenous Peoples and Nations. Processes and mechanisms to ensure accountability must be put in place, with the full participation of affected Indigenous Peoples.[58]

10. Women, children and families who have suffered the impacts of toxic contaminants require special care. States and corporations which have allowed contamination to damage our communities must be held accountable to cover the costs and ensure that adequate care and services are provided, with the full participation and collaboration of the affected Indigenous Peoples.[59]

11. We encourage the development and dissemination of educational materials explaining the links between environmental toxics and reproductive health and justice. We also encourage the development of training programs to inform Indigenous women of opportunities for their participation locally, nationally and internationally, and to build their capacity as strong voices for their families and Nations. [60]

12. Regarding the current process being carried out by UNEP for the development of a legally-binding International Treaty on Mercury, we support the recommendations proposed by the "Indigenous Mothers Against Mercury" open letter, representing the voices of over 1000 Indigenous women worldwide regarding the development of strong language to: *halt emissions of mercury into the environment from all sources, including the burning of coal, current and past gold mines and production and disposal of medical products that use mercury; to commit to thorough cleanup of sources of current contamination including legacy mine sites, working in full collaboration with Indigenous Peoples when their homelands, waters, sacred areas and subsistence foods have been impacted; to Ensure the full, formal and effective participation of Indigenous Peoples, including Indigenous women, in the development of a Global Mercury Treaty and in measures to implement its provisions on the national, regional and local levels."*[61]

    Further, we fully support the proposal of the Global Indigenous Peoples Caucus made at INC3 to include an operative paragraph addressing the health impacts, aspects and concerns regarding mercury in the context of human rights and the health of Indigenous women, children and unborn generations.

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[57] Declaration for Health, Life and Defense of Our Land, Rights and Future Generations", 1st International Indigenous Women's Environmental and Reproductive Health Symposium, June 30 – July 1, 2010, UN Permanent Forum's 10th session Conference Room Paper [E/C.19/2011/CRP. 9], "Recommendations to the United Nations System and International bodies"

[58] Ibid, "Recommendations to States and their Territories"

[59] Ibid, "Recommendations to States and their Territories"

[60] Ibid, "Recommendations to Indigenous Peoples, Communities, Nations, Tribal Governments and Organizations"

[61] "INDIGENOUS MOTHERS AGAINST MERCURY OPEN LETTER TO NATIONAL, STATE AND REGIONAL POLICY-MAKERS", MAY 8TH, 2012, Submitted by the International Indian Treaty Council and the Indigenous Women's Environmental Justice and Reproductive Health Initiative, May 8th 2011

13. We call for disaggregation of data and studies carried out with the consent and full participation of Indigenous women and communities, to provide better information about specific impacts of environmental toxics, including pesticides, mercury, mining runoffs, uranium mining and processing, waste dumping, and Persistent Organic Pollutants, on the health of Indigenous women, girls and children.

14. States, international financial institutions, United Nations programmes and actions, as well as private investors and corporations must do due diligence and fully disclose to all Indigenous Peoples, Nations, tribes, and communities, their activities and potential risks. Peoples and individuals who may be affected by or exposed to pesticides, mining, dumping, incineration and other forms of toxic chemical production, the complete known or suspected effects of the chemicals in question, the location and names of corporations producing them, any current or prior legal sanctions or cases filed against them, the Indigenous Peoples in the same or other countries who have experiences with the given process or corporation, so that informed decisions can be made as part of Indigenous Peoples right to free, prior and informed consent.[62]

15. Based on paragraph 33 of the report of the UN Permanent Forum on Indigenous Issues 10th session affirming that "the Permanent Forum notes the intention of the International Indigenous Women's Environmental Justice and Reproductive Health Initiative to organize an expert group meeting on the environment and indigenous women's reproductive health and requests that the organizers invite members of the Permanent Forum to participate in the meeting..." [63] that this EGM requests the Symposium, scheduled for April 2012 in Alaska, to collect additional data, testimonies and case studies to submit to the UNPFII at its 11th session documenting environmental violence against Indigenous women.

16. We affirm that the rights and relationships affirmed in the legally-binding Nation-to-Nation Treaties between States and Indigenous Peoples, including self-determination, free prior and informed consent, partnership, mutual respect, full and effective participation in decision-making and the "Treaty Right to Health" are fundamental for developing solutions to critical problems affecting Indigenous Peoples, including all forms of violence against Indigenous Women.

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[62] From "Contributions to the UN Secretary General for preparation of the Rio + 20 "Zero-draft outcome document", submitted by the International Indian Treaty Council (IITC), Dene Nation (Northwest Territories, Canada), Nishnawbe Aski Nation (Thunder Bay, Ontario, Canada), Indigenous Environmental Network (IEN), Indigenous Peoples Council on Biocolonialism (IPCB), Indigenous World Association (IWA), Alaska Community Acton on Toxics (ACAT), and Ms. Mirna Cunningham, President, UN Permanent Forum on Indigenous Issues and CADPI (Nicaragua), October 31, 2011

[63] United Nations Permanent Forum on Indigenous Issues Report on the tenth session (16-27 May 2011), Economic and Social Council Official Records, 2011, [E/2011/43-E/C.19/2011/14]

Andrea Carmen and Vi Waghiyi wish to thank:
Pamela K. Miller, Executive Director, and Karla L. Brollier, Environmental Health and Justice Organizer, Alaska Community Action on Toxics; Monique Sonoquie, California Traditional Basket Weavers; Jaquelynn Warledo, IITC Environmental Health Program Coordinator; Dr. Elizabeth Guillette; Tekatsitsiakwa Katsi Cook; the participants in the 1st International Indigenous Women's Environmental and Reproductive Health Symposium; the community members of Savoonga and St. Lawrence Island, Alaska; Francisco "Paco" Villegas Paredes, Jittoa Bat-Natika Weria, traditional curanderas, midwives and traditional authorities of the Yaqui Pueblos of Rio Yaqui, Sonora Mexico; Kathryn Gilje, Pesticides Action Network North America; and Sherri Norris and Angela Berry-Phillip, California Indian Environmental Alliance for their invaluable contributions to this paper.

We also wish to thank the UNPFII for its interest and attention to this critical issue in the context of the theme "Violence against Indigenous Women". This context provides an innovative approach for consideration of the urgent issues presented in this paper, bridging several areas of the UNPFII's mandate and priority focus areas, including human rights, environment, health, development, indicators of well-being and the specific situations affecting Indigenous women and girls.

Participants in the 1st International Indigenous Women's Environmental and Reproductive Health Symposium June 30 – July 1, 2010

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REPORT OF THE INTERNATIONAL INDIGENOUS WOMEN'S ENVIRONMENTAL AND REPRODUCTIVE HEALTH SYMPOSIUM

APRIL 27TH – 29TH 2012, CHICKALOON NATIVE VILLAGE, ALASKA

Co-hosted by the International Indian Treaty Council (IITC) and Indigenous Women's Initiative for Environmental and Reproductive Health, Alaska Community Action on Toxics (ACAT), Chickaloon Native Village and International Indigenous Women's Forum (FIMI).

Submitted to the 11th Session of the United Nations Permanent Forum on Indigenous Issues as a Conference Room Paper by the International Indian Treaty Council, Indigenous Non-governmental Organization in General Consultative Status to the United Nations Economic and Social Council May 5th, 2012

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THE 2nd DECLARATION FOR HEALTH, LIFE AND DEFENSE OF OUR LANDS, RIGHTS AND FUTURE GENERATIONS

We, Indigenous women from North America, Latin America, the Arctic and the Pacific, gathered April 27th - 29th, 2012 at the ***2nd INTERNATIONAL INDIGENOUS WOMEN'S ENVIRONMENTAL AND REPRODUCTIVE HEALTH SYMPOSIUM,*** at the Yah Ne Dah Ah Tribal School, Chickaloon Native Village in Alaska.

We express our heartfelt thanks to the Native Village of Chickaloon and the Ya Ne Dah Ah Tribal School for their warm hospitality. We heard their stories, songs and language and learned about the devastating environmental, cultural, and social impacts of coal mining by the US Navy in Chickaloon traditional lands from 1914 to 1922. We stand in strong solidarity with Chickaloon Village's current fight to prevent new coal mining in their traditional lands which would drastically impact the health of the children, the environment and Community as a whole.

We thank the UN Permanent Forum on Indigenous Issues for recognizing the 1st International Indigenous Women's Symposium on Environmental and Reproductive Health at its 10th session, and receiving the report of the 2nd Symposium at this session. We also thank the UN Special Rapporteur on the Rights of Indigenous Peoples James Anaya for visiting the 2nd Symposium in conjunction with his US Country Visit on April 28th, 2012, and for his commitment to include the concerns expressed by participants his report to the UN Human Rights Council.

We have shared our stories and the experiences of our Peoples. We express our collective outrage that current federal and international laws permit industry, military and all levels of government to knowingly produce, release, store, transport, export, import and dump hazardous chemicals and radioactive materials, and expand contaminating activities such as fossil fuel development, hydraulic fracturing, uranium mining and milling, introduction of genetically modified seeds and animals, bio-fuel production and high-pesticide agriculture.

As Indigenous mothers and grandmothers, youth and elders, traditional healers, tribal leaders, human rights and environmental activists, we express our profound concern for the life and health of our communities, children, ecosystems and Mother Earth due to the proliferation of environmental toxins.

In response, we affirm, and reaffirm, the following:

1) We steadfastly reaffirm the 1st "***DECLARATION FOR HEALTH, LIFE AND DEFENSE OF OUR LANDS, RIGHTS AND FUTURE GENERATIONS"*** adopted by consensus at the International Indigenous Women's Symposium in Alamo, California on July 1st, 2010.

2) We acknowledge the sacredness of the life-giving force of our birthing places. Many are under attack from toxic contamination, extractive industries and other industrial processes. These include salmon spawning, caribou and moose birthing places, as well as women's wombs.

3) Our health and well-being, lands and resources including air and water, languages, cultures, traditional foods and subsistence, sovereignty and self-determination, life and security of person, free prior and informed consent and the transmission of traditional knowledge and teachings to our future generations are inherent and inalienable human rights. They are affirmed in the UN *Declaration on the*

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Rights of Indigenous Peoples and other international standards, and must be upheld, respected and fully implemented by States, UN bodies, corporations and Indigenous Peoples of the world.

4) Our bodies are sacred places that must be protected, honored and kept free of harmful contaminants so that new generations of our Nations are born strong and healthy. The right to self-determination for Indigenous Peoples includes our Indigenous identities, our sexualities and our reproductive health for the future of our Nations.

5) The detrimental health effects of toxic contaminants on Indigenous women are well documented, and are affirmed through testimonies presented in this Symposium. These include high levels of toxics in Indigenous women's breast milk, placental cord blood, blood serum and body fat infertility, miscarriages, premature births, premature menopause, early menses, reproductive system cancers, decreased lactation and inability to produce healthy children. This causes severe psychological, relational, emotional and economic damage to mothers, families and communities.

6) Environmental toxins also have severe negative impacts on the health and development of our children and unborn generations. Many toxic chemicals impair the endocrine and immune systems in utero, affecting health and reproductive capacity of future generations. The intellectual and neurological development of our children are also affected, impacting their ability to retain and pass on our culture, ceremonies, stories, languages and songs.

7) The individual and collective impacts of intergenerational trauma and the legacy of removal and violence are passed on to future generations. Intergenerational trauma amplifies and reinforces impacts of extractive industry, military and environmental degradation in our communities. Addressing intergenerational trauma is a core component of rebuilding reproductive health for our communities.

8) Environmental contaminants causing disease, birth defects and death are deliberately released into the environment *because* they are toxic to living things (i.e. pesticides), or as a result of industrial or military processes that are judged by States and corporations to pose an "acceptable risk" and "allowable harm." States and corporations deny "provable" impacts despite the clear evidence that they cause a range of serious health and reproductive impacts which disproportionately affect Indigenous women and children. This constitutes "environmental violence" by States and corporations and must be identified as such by Indigenous Peoples and human rights bodies.

9) Environmental contamination infringes on the cultural practices of Indigenous Peoples including women's coming of age, rites of passage and other ceremonies for the continuation of life. The use of pesticides on materials used for baskets and cradle boards has resulted in increased rates of cancer for basket makers. Plants, herbs, and traditional medicines vital to Indigenous Peoples' maternal and child health are often outlawed, prohibited, contaminated or are becoming extinct.

10) Land privatization, corporatization and militarization divides our collective land bases, facilitating resource extraction, displacement, forced removal and environmental contamination, impacting Indigenous women's economic, cultural and social practices and reproductive health.

11) We recognize the links between our concerns and struggles. Coal mining contaminates water and decimates fish, wildlife and traditional medicines. Burning coal is also a primary source of mercury emissions and climate change, affecting Indigenous communities globally. Pesticides used in Mexico and other countries contaminate Indigenous communities at the source of exposure, and then enters the

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environment and food chain, traveling to the Arctic and concentrating in traditional food, bodies, and breast milk. Likewise, introduction of extractive industries near our communities often results in increased levels of sexual exploitation and violence for our Indigenous women and girls.

12) We will continue to use our own languages and ways of knowing. Our understandings cannot always be expressed in the language of modern science and law. Our Peoples, especially our traditional knowledge holders, spiritual leaders and elders are the experts. We affirm their teachings that we are now in a time that will determine our survival, depending on the choices we make.

13) We affirm the use of our own Indigenous justice and legal systems, including Treaty-Based justice systems to hold those accountable for environmental violence.

14) We recognize the importance of continuing to educate our own Peoples and communities about the links between reproductive health, environmental contaminants and their human rights as affirmed in the UN Declaration, Nation-to-Nation Treaties and other international standards. When Indigenous communities understand these links, they become active participants in resisting environmental violence and violations of their rights.

15) We firmly denounce the continued impunity of States and corporations for the environmental violence they carry out or permit affecting Indigenous Peoples ecosystems, traditional foods, health, well-being and ways of life.

16) While we recognize the impacts and tragedies that have occurred as a result of environmental violence, we also celebrate our struggles, victories and our continued strength, resilience and resistance.

Based on these shared understandings, we adopt by consensus this ***2nd DECLARATION for the Health, Survival and Defense of OUR LANDS, OUR RIGHTS and our FUTURE GENERATIONS and make the following recommendations:***

That Indigenous Peoples, Nations and Communities:

1) Identify and document the disproportionate impacts of environmental toxins on Indigenous women and children as "environmental violence" for which States and corporations can be held accountable.

2) Provide community capacity-building and training linking reproductive and environmental health and human rights.

3) Maintain, support, strengthen and assert traditional systems of law, community organization, decision-making, leadership and representation.

That States and their subsidiary governments (Territories, provinces/states, municipal etc.):

1) Fully implement and uphold, without qualification, the UN Declaration on the Rights of Indigenous Peoples, including Article 29 regarding the right of Indigenous Peoples to the protection of their environments and the State obligation to ensure free prior and informed consent regarding hazardous materials. We also call for the full and unqualified implementation of Articles 23 and 24 affirming our collective rights to health and use of traditional medicines.

2) Eliminate the production and use of pesticides, industrial chemicals and toxic by-products that disrupt the endocrine system, affect learning and neurological development, cause cancers and other illnesses, undermine women's reproductive and maternal health, contaminate lands, waters and traditional food sources and affect any aspect of the health and development of our future generations.

3) Take responsibility for effective and immediate clean-up of contaminated sites created by activities which they permitted or approved in collaboration and coordination with impacted Indigenous Peoples.

4) Implement programs to restore the health of Indigenous Peoples, including women and children who have been negatively impacted by environmental toxins, including their export and import in collaboration and coordination with the affected Indigenous Peoples including Indigenous women.

5) Immediately cease the practice of exporting and importing banned pesticides, toxic wastes and other chemicals in particular from the United States. .

6) Implement and mandate culturally relevant gender based analysis in all impact statements regarding mining and other industries, also ensuring FPIC.

7) Recognize the knowledge and practices of Indigenous women's health, birthing, traditional midwifery, and the use of Indigenous medicinal knowledge on equal footing with other health systems and methods, and the right of Indigenous healers to protect and use this knowledge as they so choose.

8) Prosecute companies and hold military accountable for the full extent of their violations to the rights of Indigenous Peoples pertaining to the contamination of lands, territories and resources, and respect Indigenous Peoples' legal and judicial systems in accordance with Article 27 of the UN Declaration in their efforts to hold government and corporations accountable.

9) We call in particular upon Canada and the United States to implement the recommendations made in 2007, 2008 and 2012 by the UN Committee on the Elimination of Racial Discrimination (CERD) calling upon them to take appropriate legislative measures to prevent the transnational corporations they license from negatively impacting the rights of Indigenous outside Canada and the United States.

Recommendations to the United Nations System and International processes:

1) That the Permanent Forum 11th session in its half-day session on food sovereignty consider the direct links between food sovereignty, environmental violence and reproductive health and the specific impacts to Indigenous women, children and unborn generations.

2) That the World Conference on Indigenous Peoples address reproductive and environmental health, and receive the report of the 3rd symposium to be held in 2014 in the autonomous region of Nicaragua.

3) That effective, transparent international mechanisms be established to ensure accountability, redress and restitution with the full participation of affected Indigenous Peoples and for UN Human rights bodies to dedicate particular attention to the matter of environmental violence.

4) That the World Conference on Sustainable Development (Rio + 20, 2012) reaffirm the "precautionary approach as an alternative to the models of "risk assessment" and "management" of toxic chemicals and

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pesticides, and recognize and support sustainable agricultural methods and practices used traditionally by Indigenous Peoples.

5) That UN Conventions and national laws which permit the export, transport and import of banned pesticides, wastes and other toxics without the free, prior and informed consent of the Indigenous Peoples and communities who may be impacted be immediately reviewed and revised

6) That the United Nations, its agencies and members ensure that Human Rights principles and standards are mainstreamed in all international standard-setting processes addressing environment and development, including the United Nations Declaration on the Rights of Indigenous Peoples.

7) That the UN Permanent Forum on Indigenous Issues, the UN Special Rapporteur on the Rights of Indigenous Peoples and other UN bodies and mechanisms focus attention and collect information from Indigenous Peoples, in particular Indigenous women, on the links between environmental contamination and reproductive health and recommend effective solutions and remedies at the international level.

8) We endorse the "Indigenous Mothers Against Mercury" open letter's recommendations calling for strong language in the new legally-binding International Treaty on Mercury, to "*halt emissions of mercury into the environment from all sources, including the burning of coal,*" and "*to ensure the full, formal and effective participation of Indigenous Peoples, including Indigenous women.*" We also recommend that the Permanent Forum at its 11th session call upon States and the UN Environmental Program to incorporate the recognition of Indigenous Peoples and in the operative text of the Treaty.

Cross Cutting

1) We recommend that States, UN agencies and Indigenous Peoples affirm and utilize the Precautionary Principle, recognizing Indigenous Peoples' traditional knowledge about the effects of chronic pollution as well as the social stressors caused by development and industry that impact and divide communities. These include increased mental health concerns, violence against Indigenous women, children, and families, sexually transmitted infections including HIV, incarceration, child removal and suicide.

2) We reiterate our support for a moratorium on new fossil fuel exploration, processing and extraction, as the first step towards the full phase-out of fossil fuels with a just transition to sustainable energy and the protection of our Peoples and ecosystems from the devastating impacts of climate change.

3) We call upon Indigenous, National and International processes to respect the traditional knowledge of Indigenous women regarding sustainable development, environmental protection, cultural practices, food production and health and to include their full and effective participation as leaders and experts in all levels of decision-making on these matters.

Conclusion

We commit to continue our work and fulfill our responsibilities to our children and the generations still to come. We commit to reclaim our wellness as Indigenous women and Peoples. We reaffirm that our children have a right to be born healthy and to live in a clean environment, and that in order to heal our Peoples and Mother Earth, we have to continue to heal ourselves, tell our stories and be who we are.

"We are like a strong river that rises and falls, is always connected and will never stop flowing."

Affirmed by consensus of the participants in the Symposium on April 29th, 2012:

1. Alice Skenandore – Midwife, Wise Women Gathering Place, LCO Ojibwe, Wisconsin, USA
2. Alyssa Macy – International Indian Treaty Council, Warm Spring Tribe, Oregon , USA
3. Andrea Carmen - International Indian Treaty Council, Yaqui Nation, Mexico, USA
4. Aurelia Espinoza Buitimea – Traditional healer, curandera and midwife, Jittoa Bat Natika Weria, Yaqui Nation, Sonora Mexico
5. Blanch Okboak – Teller Traditional Council, Inupiat, Alaska
6. Brandy Standifer – Village of Tyonek Tribal Member, Tyonek, Alaska
7. Camille Gemmill – Youth Representative, Gwich'in Nation, Alaska
8. Charlotte Jane Kava - Inupiat, St. Lawrence Island, Native Village of Savoonga, Alaska
9. Danika Littlechild – International Indian Treaty Council, Ermineskin Cree Nation, Canada
10. Donna Miranda-Begay – Chairwoman, Tubatulabal Tribe, California, USA
11. Edda Moreno – Centro para la Autonomía y Desarrollo de los Pueblos Miskitu, Nicaragua
12. Elvia Beltran Villeda - Red Indigena de Turismo de México, Pueblo Hnahnu, Mexico
13. Emily (Funny) Murray – Elim Students Against Uranium, Inupiaq, Elim, Alaska
14. Erin Konsmo - Native Youth Sexual Health Network, Metis Nation, Canada
15. Enei Begay – Black Mesa Water Coalition, Dine, Arizona, USA
16. Faith Gemmill - California Indian Environmental Alliance, International Indian Treaty Council, REDOIL, Arctic Village, Gwich'in, Alaska and Pit River, Wintu California, USA
17. Faustina Buitimea Gotogopicio – Tradtional healer, curandera, Yaqui Nation, Sonora Mexico
18. Harriett Penayah – Elder, Native Village of Savoonga, St. Lawrence Island, Yupik, Alaska
19. Hinewirangi Kohu –Te Rau Aroha, Maori Women's Centers, Aotearoa (New Zealand)
20. Jackie Warledo - International Indian Treaty Council, Seminole Nation of Oklahoma, USA
21. Janet Mitchell – Inupiaq, Kivalina City Council, Alaska
22. Janet Daniels – Elder, Chickaloon Native Village, Chickaloon, Alaska
23. Jeannette Corbiere Lavel – Native Women's Association of Canada, Anishnabe Nation, Canada
24. Jessica Danforth - Native Youth Sexual Health Network, Mohawk Nation, USA and Canada
25. Judy Hughes – National Aboriginal Health Organization, Metis Nation, Canada
26. Julia Dorris – Traditional Council of Kalskag, Yupik, Alaska
27. Kandi Mossett – Indigenous Environmental Network, Fort Berthold Indian Reservation, USA
28. Kari L. Shaginoff - International Indian Treaty Council, Ya Ne Dah Ah Tribal School, Chickaloon, Alaska
29. Karla Brollier – Alaska Community Action on Toxics, Ahtna-Cantwell, Alaska
30. Kathy Sanchez – Tewa Women United, San Ildefonso Pueblo, New Mexico, USA
31. Lisa Wade – Chickaloon Village Health Director, Chickaloon, Alaska
32. Manuela Victoria Barrientos Carbajal – Chirapaq, Community of Hualia, Peru
33. Maria Berenice Sandez Lozada – Di sunga a Nana Shimjai, Nahua-Otomi, Mexico
34. Marian Naranjo - Honor Our Pueblo Existence, Santa Clara Pueblo, New Mexico, USA
35. Martha Itta - Inupiaq, Tribal Administrator, Native Village of Nuiqsut, Alaska
36. Maudilia López Cardona - Frente de Defensa Miguelense, Mam Maya, Guatemala
37. Melina Laboucan-Massimo – Lubicon Cree First Nation, Canada
38. Monique Sonoquie - California Indian Basket Weavers Alliance, Chumash, California, USA
39. Norma Chickalusion – Village of Tyonek Tribal Member, Tyonek, Alaska

40. Patricia Wade – Editor Chickaloon News, Chickaloon, Alaska
41. Pauline Kohler – Aleknagik Traditional Council, Yupik, Alaska
42. Penny Westing – Chickaloon Village Traditional Council Secretary, Chickaloon, Alaska
43. Princess Lucaj – Gwich'in Steering Committee, Gwich'in, Alaska
44. Rita Blumenstein – Traditional Healer, Yupik, Chefornak, Alaska
45. Rosemary Ahtuangaruk – Inupaiq, Native Villate of Nuiqsut, Alaska
46. Samantha Englishoe – Alaska Community Action on Toxics, Tlingit, Gwichin
47. Sewa Carmen – Chickaloon Village Youth Representative, Chickaloon, Alaska
48. Shawna Larson – Chickaloon Village Traditional Council Member, Chickaloon, Alaska
49. Sondra Stuart – Chickaloon Village Tribal Citizen, Chickaloon, Alaska
50. Susie Booshu – Native Village of Gambell, Yupik, Alaska
51. Viola Waghiyi – Native Village of Savoonga, St. Lawrence Island, Yupik, Alaska
52. Xiomara Ownes – Traditional Healer, Tlingit, Athabascan, Alaska

Sovereignty: Long Live Mother Earth

Women's Declaration 2012: Year of Indigenous Women

Preamble

Indigenous women have sacred parallel earth energy with Mother Earth.

In our diverse yet increasingly interdependent homelands, it is imperative that we, the people of Earth, declare our responsibility to one another as in all relationships, to the greater community of life and to future generations. We are one human family with one earth community with a common destiny. Yet as female and male energy is found within the other, so are we to love each other and do no harm to each other in the home of our mother, Mother Earth. All lands are sacred and in sacred time and space.

Humanity is part of a vast evolving multi-verse. Earth is our home and our mother is alive with a unique community of life givers. The life givers are Women. The protection of Women, their vitality and their well-being is the sacred fluid and energy of love.

The Earth community stands at a defining moment in time. Injustices, poverty, ignorance, corruption, crime and violence against women have deepened and our earth mother is crying and suffering. Corrupt fundamental racism has made changes into our present attitudes and values. Militaristic ways of making a living as have become harmful and destructive. Extreme materialism has dug deep into the holy body of our Mother Earth. These unhealthy ways need to be returned to the light of truth and colorful sounds of lovingness returned to our Earth Mother. The choice is ours: to care for our Mother Earth and one another or participate in the destruction of ourselves and all life givers.

We, therefore, declare the following:

1. Whereas, women are the nurturers of the human seed within their wombs are bearers of the blessing of creation through the process of giving birth,

2. Whereas, in worldwide ancient creation stories, in ancient cultures and throughout human life narratives ,women have played a profound role to return and revere earth as our source of all life,

3. Whereas, women's bodies are intimately connected to Mother Earth as reflected in our moon cycles that are the basis for procreation and birthing of children,

4. Whereas, mothers and grandmothers continue to be the primary caregivers of children through breastfeeding, feeding, and nurturing, from infancy to all the stages of our human lives,

5. Whereas, women have also nurtured other women herstorically and traditionally serving as midwives and helping one another raise their children along with their extended families,

6. Whereas, women are believed to have been the first seed savers and contributed to the

cultivation of crops in a way that transformed human existence and, today, in our families, communities mothers and grandmothers have continued to be the primary caretakers of seeds,

7. Whereas, women have a special relationship with food in their role as farmers, nurturers, seed savers, and cooks and, therefore, they are the holders of culturally significant recipes and methods for storing and preparing food,

8. Whereas, many of the increasing numbers of small scale, independent farmers are women farmers from various backgrounds who are dedicated to growing clean, healthy, and fair food and to restoring harmony to the earth,

9. Whereas, women provide an important support system for all the activities of operating our family farms and ranches, including serving as part of the labor essential to the process, providing meals for other laborers, and teaching children the values of land-based culture and way of life,

10. Whereas, women are often the teachers of life skills to their children and are therefore important to ensuring that traditional knowledge is passed from generation to generation.

11. Whereas, women play important roles in our communities as spiritual leaders who offer blessings at important times in our lives and who offer guidance on important life decisions,

12. Whereas, women in traditional communities hold essential traditional knowledge including teachings about medicinal plants, where they can be harvested, and how they should be used,

13. Whereas, in recorded time, women's role as homemakers was broad and including helping one another to build,thatch ,plaster, and maintain their earthen homes,

14. Whereas, for millennia, women have harvested foods such as *piñon*, *quelites*, *tsimaja*, asparagus, *verdolagas*, *chocoyole*, and many varieties of berries, which we regard as special gifts and blessings,

15. Whereas, herstorically and traditionally, women's roles in families and communities were highly valued and the equally important role of men included providing the needed support system in order to raise healthy families,

16. Whereas, women today are often not respected as they were traditionally and are often subjected to violence in their own homes by those closest to them,

17. Whereas, women today and herstorically have, out of the love of their children and men in their families, have been at the forefront of resisting all forms of domesticated violent ways of living, including economic ways of the war culture,

18. Whereas, because of the nature of women's bodies related to procreation and our intimate relationship with the earth through farming, herb gathering, and earthwork, we are particularly sensitive to exposure to toxic pollutants from various sources,

19. Whereas, the parts of our bodies meant to nurture and nourish our children are also most susceptible to disease and cancer considering that elevated levels of breast cancer, ovarian cancer, and other deadly diseases result from exposure to toxins,

20. Whereas, mothers and grandmothers who feed and nurture their children are concerned about the existence of synthetic hormones and pesticide residues in foods resulting in unprecedented effects on boys and girls such as premature puberty, cancer, and other long-term effects that are unknown,

21. Whereas, our families are also threatened by the unknown health and ecological effects of genetically engineered seeds, plants, and animals, and we are gravely concerned about the patenting of human life which could have unintended consequences for our families and future generations,

22. Whereas, sacred homelands are manipulated settings for various polluting industries, mining operations, power plants, and nuclear facilities that, although serve as a tainted source of financial income for some of our families, also are responsible for pollution that harms all of our families and are part of a pattern of economic development that displaces traditional peoples from the land,

23. Whereas, women are often low-wage workers in these same polluting industries exposed to certain toxins and women are often low-wage agricultural workers who are exposed to pesticides and herbicides in industrial agriculture,

24. Whereas, women have played a key role along with men in social movements to achieve social, economic, and environmental justice by voicing concerns about the threats of toxins to our families and by calling for livelihoods for ourselves and our families that are clean, healthy, and dignified,

25. Be it resolved that we are gathered to declare our reverence for our women ancestors of ancient times that nurtured generation upon generation so that we could be given the blessings of life for all,

26. Be it further resolved that we will collectively and intentionally work to carry on the seed saving, farming, and land-based traditions of our ancestors and to pass these teachings on to the younger generations,

27. Be it further resolved that we will resist the genetic engineering and patenting of life so that we may maintain the integrity of our seeds, our right to grow our own food, and the sacredness of life itself,

28. Be it further resolved that we will raise our children to be conscious human beings mindful of the sacred gift of life we have been granted by the creator, to be reverent of our Mother Earth, and to be respectful in their relations,

29. Be it further resolved that we will work in solidarity with each other in our struggles to defend the air, land, and water from contamination, exploitation, and militarization,

30. Be it further resolved that we honor, respect, and recognize the dignity of women and

their families throughout the world and here at home who are subjected to exposure to toxins through their work, their food, or their proximity to pollution and that we resolve to speak and act in solidarity with them in efforts to defend the health of their families and communities,

31. Be it further resolved that we will continue to play an important role in reshaping our communities to achieve a vision of safe, healthy, and joyful lives for our families and communities with good, healthy and locally grown food, good livelihoods that honor the dignity of every human person, and a meaningful and spiritual relationship with Mother Earth.

36. Be it further resolved that we will honor and respect the women in our lives including our mothers, sisters, aunties, grandmothers, and great-grandmothers by thanking them for giving us live and for nurturing us throughout our lives,

37. Be it further resolved that we will teach our children, both boys and girls, the importance of living close to the land, having good relations with one another, and acting with dignity and respect in our actions to protect Mother Earth.

38. May it be further resolved that we the undersigned, have read this document and are in support of **Sovereignty: Long Live Mother Earth**

Women's Declaration for 2012: Year of Indigenous Women. We find it to be true and will assist wherever possible to learn and teach the children the importance of living close to the land, having respectful relations with one another and act with dignity and respect to protect Mother Earth, so she in turn can continue to care for us.

References to Indigenous Women in the ALTA Outcome Document

"We reaffirm the peremptory norms of international law, including on equality and non-discrimination, and assert that the realization of the rights of Indigenous Peoples, including those affirmed in the Declaration, must be upheld by States, individually and collectively, free from all forms of discrimination including discrimination based on race, ethnicity, religion, **gender**, sexual orientation, age and disability. We also reaffirm that the Declaration must be regarded as the normative framework and basis for the Outcome Document and its full realization. ***(Preamble, Paragraph 7)***

"We condemn violence against Indigenous **women,** youth and children as one of the worst human rights violations affecting Indigenous Peoples and families. Violence against Indigenous **women**, youth and children is dehumanizing and also affects their spiritual development and violates their fundamental rights." ***(Preamble, Paragraph 9)***

"*Recommend* that States uphold and respect the right of self determination and the free, prior and informed consent of Indigenous Peoples who do not want mining and other forms of resource extraction, "development" and technologies deemed as degrading to their human, cultural, **reproductive** and ecosystem health. Where mining and other forms of resource extraction are already occurring, States shall develop mechanisms with the full and effective participation of Indigenous Peoples to develop a comprehensive strategy for ecologically sustainable and equitable development to end and prevent uncontrolled and unsustainable industrial contamination and degradation with plans for clean-up, remediation and restoration. Such as strategy shall incorporate strengthening the capacity of Indigenous youth in relation to sustainable development practices based on Indigenous knowledge and the relationship with the land as well as the protection and promotion of the important role of traditional knowledge holders including Indigenous Elders and **women**;" ***(Theme 1: Indigenous Peoples' lands, territories, resources, oceans and waters, Paragraph 6)***

" *Recommend* that all UN agencies, funds and programmes engaging in activities impacting on Indigenous Peoples from advisory councils or forums composed of representatives of Indigenous Peoples including **women,** youth and persons with disabilities to engage in dialogue and provide advice on policy making and country and regional level operations;" ***(Theme 2: UN system action for the implementation of the rights of Indigenous Peoples, Paragraph 6)***

"*Recommend* that States using the principles of Indigenous consent, ownership, control, and access, collect, analyze and disaggregate data on Indigenous Peoples, including Elders, **women,** youth, children and persons with disabilities, to help draft and implement public policy and legislation that better

addressed the situation of Indigenous Elderly, **women**, youth, children and persons with disabilities;" ***(Theme 3: Implementation of the Rights of Indigenous Peoples, Paragraph 3)***

"*Recommend* that States uphold and implement the rights of Indigenous **women** as sacred life givers and nurturers as well as strengthen – with the full and effective participation of Indigenous **women** – the protection of Indigenous **women** and girls though the formulation and implementation of national, regional and international plans of action developed in conjunction with Indigenous Peoples effective laws, policies and strategies;" ***(Theme 3: Implementation of the Rights of Indigenous Peoples, Paragraph 5)***

"*Recommend* States with the full, equal and effective participation of Indigenous **women**, youth and girls take immediate action to review, monitor and provide comprehensive reports on violence against indigenous **women**, youth and girls, in particular sexual violence, domestic violence, trafficking and violence related to extractive industries as well as provide redress for victims;" ***(Theme 3: Implementation of the Rights of Indigenous Peoples, Paragraph 6)***

"*Recommend* States cease current, and refrain from any further, militarization and initiate processes to demilitarize the lands, territories, waters and oceans of Indigenous Peoples. This can be achieved inter alia through the repeal and/or discontinuance of "anti terrorist", national security, immigration, border control and other special laws, regulations, operations and executive orders that violate the rights of Indigenous Peoples. Special measures should be taken to ensure the protection of Indigenous Elders, **women**, youth, children and persons with disabilities, particularly in the context of armed conflicts;" ***(Theme 3: Implementation of the Rights of Indigenous Peoples, Paragraph 7)***

"*Recommend* States support programmes of Indigenous Peoples to strengthen the capacity of Indigenous youth, including the transmission of traditional knowledge, innovations and practices as well as languages and on the important role of Indigenous Peoples including Elders and **women** as traditional knowledge holders. Further, that States and UN agencies, programs and funds respect and promote Indigenous Peoples' right to free, prior and informed consent in relation to their traditional knowledge and traditional cultural expressions;" ***(Theme 4: Indigenous Peoples' priorities for Development with free, prior and informed consent, Paragraph 3)***

Referencias a las Mujeres Indígenas en el Documento Final de ALTA

"Reafirmamos las normas imperativas del derecho internacional, incluidas aquellas en materia de igualdad y no discriminación, y afirmamos que la realización de los derechos de los Pueblos Indígenas, incluidos los enunciados en la Declaración, deben ser defendidos por los Estados en forma individual y

colectiva, libre de todas las formas de discriminación, incluida la discriminación por motivos de raza, origen étnico, religión, **género,** orientación sexual, edad y discapacidad. Reafirmamos también que la Declaración debe ser considerada como el marco normativo y la base para el Documento Final y su plena realización." ***(Preámbulo, párrafo 7)***

"Condenamos la violencia contra **las mujeres**, jóvenes y niños Indígenas como una de las peores violaciones de derechos humanos que afectan a los Pueblos y familias Indígenas. La violencia contra **las mujeres**, jóvenes y niños Indígenas es deshumanizante y también afecta a su desarrollo espiritual y viola sus derechos fundamentales. ***(Preámbulo, párrafo 9)***

"Recomendamos que los Estados defiendan y respeten el derecho de libre determinación y de consentimiento libre, previo e informado de los Pueblos Indígenas que no quieran la minería y otras formas de extracción de recursos, "desarrollo" y tecnologías consideradas como degradantes para la salud humana, cultural, **reproductiva** y del ecosistema. Cuando la minería y otras formas de extracción de recursos ya estén ocurriendo, los Estados deberán establecer mecanismos con la participación plena y efectiva de los Pueblos Indígenas para desarrollar una estrategia comprehensiva para el desarrollo ecológicamente sostenible y equitativo para poner fin y prevenir la contaminación industrial incontrolada e insostenible y la degradación, con planes de limpieza, rehabilitación y restauración. Esa estrategia deberá incluir el fortalecimiento de la capacidad de los jóvenes Indígenas en relación con las prácticas de desarrollo sostenible basadas en el conocimiento Indígena y la relación con la tierra, así como la protección y la promoción de la importancia del papel de los titulares de conocimientos tradicionales, incluidos los ancianos y **mujeres Indígenas**;" ***(Tema 1: Tierras, territorios, recursos, océanos y aguas de los Pueblos Indígenas, párrafo 6)***

"Recomendamos que todas las agencias, programas y fondos de las Naciones Unidas que participen en actividades que impactan a los Pueblos Indígenas establezcan consejos consultivos o foros integrados por representantes de los Pueblos Indígenas, incluidas **las mujeres,** jóvenes y personas con discapacidad para participar en el diálogo y proporcionar asesoramiento sobre políticas y operaciones de los países y a nivel regional;" ***(Tema 2: Acción del sistema de la ONU para la implementación de los derechos de los Pueblos Indígenas, párrafo 6)***

"Recomendamos que los Estados, utilizando los principios Indígenas de consentimiento, propiedad, control y acceso, recopilen, analicen y desglosen los datos sobre los Pueblos Indígenas, incluidos los ancianos, **mujeres**, jóvenes, niños y personas con discapacidad, para ayudar a redactar y poner en práctica la política pública y la legislación que se ocupe de mejorar la situación de los ancianos, **las mujeres**, jóvenes, niños y personas con discapacidad Indígenas;" ***(Tema 3: Implementación de los Derechos de los Pueblos Indígenas párrafo 3)***

*"Recomendamos que los Estados respeten e implementen los derechos de **las mujeres Indígenas** como dadoras sagradas de vida y criadoras, así como fortalezcan—con la participación plena y efectiva de **las mujeres Indígenas**— la protección de las mujeres y niñas Indígenas a través de la formulación e implementación de planes de acción nacionales, regionales e internacionales desarrollados conjuntamente con las leyes, políticas y estrategias eficaces de los Pueblos Indígenas;" **(Tema 3: Implementación de los Derechos de los Pueblos Indígenas párrafo 5)***

"Recomendamos que los Estados, con la participación plena, equitativa y efectiva de las mujeres, jóvenes y niñas Indígenas, tomen medidas inmediatas para examinar, supervisar y presentar informes completos sobre la violencia contra **las mujeres**, las jóvenes y las niñas Indígenas, en particular la violencia sexual, la violencia doméstica, la trata y la violencia relacionada a las industrias extractivas, así como proporcionen reparación a las víctimas;" ***(Tema 3: Implementación de los Derechos de los Pueblos Indígenas párrafo 6)***

"Recomendamos que los Estados cesen y se abstengan de continuar la militarización actual e inicien procesos de desmilitarización de las tierras, territorios, aguas y océanos de los Pueblos Indígenas. Esto se puede lograr mediante, entre otras cosas, la derogación y/o interrupción de la seguridad nacional "antiterrorista", las leyes sobre inmigración, control fronterizo y otras leyes, reglamentos, operaciones y órdenes ejecutivas especiales que violan los derechos de los Pueblos Indígenas. Se deben tomar medidas especiales para garantizar la protección de los ancianos, **las mujeres**, jóvenes, niños y personas con discapacidad, en particular en el contexto de los conflictos armados;" ***(Tema 3: Implementación de los Derechos de los Pueblos Indígenas párrafo 7)***

Recomendamos que los Estados apoyen programas de los Pueblos Indígenas para fortalecer la capacidad de los jóvenes Indígenas, incluidos aquellos sobre la transmisión de los conocimientos tradicionales, innovaciones y prácticas, así como sobre los idiomas y el papel importante de los Pueblos Indígenas, incluidos los ancianos y **las mujeres**, como titulares de conocimientos tradicionales. Además, recomendamos que los Estados y las agencias, programas y fondos de Naciones Unidas respeten y promuevan el derecho de consentimiento libre, previo e informado de los Pueblos Indígenas en relación con sus conocimientos tradicionales y sus expresiones culturales tradicionales; ***(Tema 4: Prioridades de los Pueblos Indígenas en materia de Desarrollo con consentimiento libre, previo e informado, párrafo 3)***

Compiled and submitted to the World Conference of Indigenous Women, October 28 – 30, 2013, Lima Peru, by Andrea Carmen (North America Region) and Mililani Trask (Pacific Region)

Elaborado y presentado a la Conferencia Mundial de las Mujeres Indígenas, 28 de octubre - 30, 2013, Lima, Perú, por Andrea Carmen (Región de América del Norte) y Mililani Trask (Región de Pacífico).

Appendix G to CCW, TWU and Individual Public Comments and Hearing Request – DP-1132

Freedom of Information Act (FOIA) Documents

November 27, 2013 Request Confirmation for Tracking Number: EPA-R6-2014-001500

December 2, 2013 Department of Energy HQ-2014-00270-F

Request Confirmation

Request Information

Tracking Number : *EPA-R6-2014-001500*

Requester Name : Joni Arends

Date Submitted : 11/27/2013

Request Status : Submitted

Description :

CCNS requests all correspondence, documents, emails, notes and data submitted to and responded by the Environmental Protection Agency (EPA) Region 6 from and to Los Alamos National Laboratory (LANL) as required by 40 CFR 61, Subpart H (Rad NESHAPs) about the new/modified source review for the Solar Evaporation Tank (SET) at Technical Area 52 and the Mechanical Evaporation System (MES) associated with operations at the TA-50 Radioactive Liquid Waste Treatment Facility. Please provide all information supporting the LANL determination that the evaporation systems (SET and MES) emit less than 0.1 millirems (mrems) into the environment annually. Please provide all EPA correspondence, documents, emails, notes and data regarding any approval or disapproval of the new/modified source review determination for the SET and MES.

Department of Energy
Washington, DC 20585

December 02, 2013

Ms. Joni Arends
Concerned Citizens for Nuclear Safety
107 Cienega Street
Santa Fe, NM 87501

HQ-2014-00270-F

Re: All documents, emails and data that Los Alamos National Laboratory (LANL) submitted to the Environmental Protection Agency (EPA) Region 6 regarding the Clean Air Act new/modified source review for the Zero Liquid Discharge Solar Evaporation Tanks (SET) at Technical Area 52, as well as the use of the Mechanical Evaporation System (MES). Copies of all documents, emails and data that support LANL's new/modified source determination that the evaporation systems emit below 0.1 millirem (mrem) of radiation to the environment as required by 40 CFR 61, Subpart H.

Dear Ms. Arends:

Thank you for the request for information that you made to the Department of Energy (DOE) under the Freedom of Information Act (FOIA), 5 U.S.C. 552. Your letter was received in this office on today, and has been assigned a controlled number, HQ-2014-00270-F. Since we receive several hundred requests a year, please use this number in any correspondence with the Department about your request.

We are reviewing your letter to determine if it addresses all of the criteria of a proper request under the FOIA and the DOE regulation that implements the FOIA at Title 10, Code of Federal Regulations, Part 1004. We will send you a subsequent letter to inform you if we need additional information or to state where the request has been assigned to conduct a search for responsive documents.

I appreciate the opportunity to assist you with this matter. If you have any questions about this letter, please contact this office on (202)586-5955.

Sincerely,

Alexander C. Morris
FOIA Officer
Office of Information Resources

Printed with soy ink on recycled paper

State of New Mexico
ENVIRONMENT DEPARTMENT
Ground Water Quality Bureau
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502
(505) 827-2918 phone
(505) 827-2965 fax

GARY E. JOHNSON
GOVERNOR

MARK E. WEIDLER
Secretary

CERTIFIED LETTER - RETURN RECEIPT REQUIRED

February 26, 1999

Susan Diane
P.O. box 9855
Santa Fe, New Mexico 87504

RE: Discharge Plan (DP-1132) for Los Alamos National Laboratory, Radioactive Liquid Waste Treatment Facility

Dear Ms. Diane:

The New Mexico Environment Department (NMED), Ground Water Quality Bureau (GWQB) received a request for public hearing from you, December 16, 1996, for the proposed discharge from the Los Alamos National Laboratory (LANL), Radioactive Liquid Waste Treatment Facility (RLWTF). In addition to your request, The Pueblo of San Ildefonso also requested a public hearing. However, the Pueblo of San Ildofonso withdrew their request for public hearing on April 27, 1998. The NMED has not been able to contact you by phone and would like to discuss with you the current status of the groundwater discharge plan and your current interest in a public hearing.

The following provides a response to the questions that were submitted with your request for a public hearing.

1. Q. *Does the plan eliminate the discharge of radionuclides and bring the release of nitrates to within acceptable levels?*

A. LANL has proposed discharge limitations for both radionuclides and nitrates in their permit application. Phase I of the upgrades to the RLWTF will include Tubular Ultrafiltration ro removal of radionuclides followed by reverse osmosis. LANL states in the discharge plan application that the Phase I upgrades will ensure that treated effluent to be discharged will be below the Derived Concentration Guidelines (DCG's) for radionuclides set forth in DOE Order 5400.5.

: 13600

Nitrate will be removed from the waste stream by reverse osmosis. Long term compliance with WQCC Regulation 3103 standards will be achieved by evaporating off reverse osmosis reject waste water with a mechanical evaporator. Short term compliance with WQCC Regulation 3103 standards will be achieved by containerizing the reverse osmosis waste stream and returning it to the clean water waste stream at a rate that will not cause effluent concentrations to be above any WQCC Regulation 3103 standard. This includes nitrate.

If treated wastewater does not meet the numerical discharge limitations, LANL has proposed to retain and recirculate treated wastewater at the treatment plant until it meets discharge limitations.

2. Q. *Does the plan address the extent of past contamination and possible remediation efforts?*

A. The original discharge plan application submitted August 1996 includes information on past contamination in the alluvial aquifer. In addition to the original discharge plan application, LANL has produced the Work Plan for Mortandad Canyon which provides details on a groundwater investigation for Mortandad Canyon. The work plan is describes the actions LANL will take to determine the extent of past contamination in Mortandad Canyon. Without knowing the extent of current contamination, remediation requirements have not been determined. When information on the extent of past contamination becomes available, LANL will be required to propose and implement corrective actions.

3. Q. *Have adequte waste stream characterizations been performed for liquid volumes coming into RLWTF?*

A. The influent quality data that has been submitted to the GWQB is composite and not specific to an upstream waste water generator. The data is more representative of the wastewater that is treated at the ROWTF. The GWQB has reviewed data for influent quality and has requested updated comprehensive influent data to the RLWTF. The data will be reviewed prior to issuing the permit to insure that effluent monitoring requirements are adequate. In addition to water quality data, the original discharge plan application contains the waste acceptance criteria that waste generators must follow. The waste acceptance criteria sets limits on concentrations of constituents that can be discharged to the RLWTF.

4. Q. *What volumes of radioactive sludge are being projected for future burial at TA-54, Area G?*

A. The groundwater discharge plan application does not address the volumes of sludge to be disposed at TA-54. For further regulatory information on the disposal of sludge, contact the NMED, Hazardous and Radioactive Material Bureau (HRMB).

Please contact Phyllis Bustamante of the GWQB, Pollution Prevention Section (PPS) at 827-0166 by March 12, 1999 to discuss the status of the discharge plan application and your current concerns. Based on your current concerns, the NMED will make a decision on holding a public hearing by mid March.

Sincerely,

Dale M. Doremus

Dale M. Doremus, Program Manager
Ground Water Quality Bureau, Pollution Prevention Section

DMD/PAB/pab

xc: James Bearzi, District Manager, NMED District II

mon lunch

extend the deadline till today since I wrote the letter in Dec DOE plans to expand it's operation - so therefor I have additional comments to submit since I made my 1st Comments over 2 years ago alot has changed & I know quite a few people int in the hearing

what kind of deadline is it? did the permit expire - can you send any extension permit without

13602

Typographical Errors and Minor Editorial Comments, Revised Draft Discharge Permit DP-1132 (Version 12/15/2014) by Communities for Clean Water, Gilkeson & Sanchez

~~U.S Department of Energy and Los Alamos National Security, LLC~~ ~~LA-UR-14-29705~~

Page #	Condition No.	Current Language	Proposed Change	CCW Response 1-26-15
				Please note: CCW, Gilkeson and Sanchez incorporate all of their previous comments into this submittal.
9	V.C	*Solar Evaporative Tank system*	*Solar Evaporative Tank System*	*OK*
10	V.	The Low-level Radioactive Waste water (RLW) Treatment System	The Low-level Radioactive Waste Water (RLW) Treatment System	
11	V.A.1	The posting of this information and other information as stipulated throughout this permit shall be voluntary, and as such, not enforceable under NMAC 20.6.2.1220	The posting of this information and other information to the Electronic Public Reading Room (EPPR) shall be enforceable. The Permittees shall notify individuals by email of submittals as specified in this Permit. The Permittees shall maintain a list of individuals who have requested email notification and send such notices to persons on that list. The notice shall be sent within seven (7) days of the submittal date and shall include a direct link to the specific document to which it relates. Within 180 days of the effective date of this Discharge Permit (by DATE), the Permittees will establish a website for this permit. The website will post all of the documents required to be posted in the Electronic Public Reading Room. Permittees may use the Individual NPDES Storm Water Permit website as a model. *Please see* comments to Condition 28 below. Basis: NMED must hold the Permittees to the same level of accountability as in the hazardous waste permit. Providing uniformity across the permits, NMED will serve the public with access to the permitting processes (including report submittals, as well as requests for permit modifications, etc.). In order to provide consistency in the NMED, as well as that of the Permittees', relationship with the public, providing uniformity across regulated media in the email notification is necessary. The requested requirement for a direct link to the document is important because in some cases, a direct link is not provided causing the public to waste time looking for the document.	
11	VI.A.1.d.4	4) Ground Water Flow report (VI.A.26)	4) Ground Water Flow report (VI.A.27)	
12	3	*…design or capacity for any of the system, units or components…*	*…design or capacity for any of the systems, units or components…*	*OK*
12	3	*If NMED determines that the proposed changes require an amendment or modification of this Discharge Permit,*	*If NMED determines that the proposed changes require an amendment or modification of this Discharge Permit, NMED will so inform, in writing, the Permittees ~~LANL~~.*	*OK*

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		NMED will so inform, in writing, LANL.		
14	4	*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;*	*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 specifications made during construction (based on field concerns and changes);*	*OK*
14	5	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.	The Permittees shall, at all times, prevent the authorized entry of persons, wildlife, or livestock into the active portions of this Facility so that physical contact with the waste streams, structures and equipment is restricted.	
15	6	The Permittees shall post and maintain signs at each entrance to the active portions of the Facility (with the exception of Outfall 051) and at other locations, in sufficient numbers to be seen from any approach to the active portions of the Facility stating that access is limited to Authorized Personnel only.	The Permittees shall post and maintain signs at each entrance to the active portions of the Facility and at other locations, in sufficient numbers to be seen from any approach to the active portions of the Facility stating that access is limited to Authorized Personnel only.	
15	6	*Authorized Personnel only*	*Authorized Personnel Only*	*OK*
15	8	Within 180 days following the effective date of this Discharge Permit (by DATE), and every 540 days thereafter, the Permitttees 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.	Within 180 days following the effective date of this Discharge Permit (by DATE), and every 180 days thereafter, the Permitttees 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. Basis: CCW did not agree to the change from 180 days to 540 days for subsequent water tightness testing of the units and systems. The 180 days is found in the 10-18-14 and 10-31-14 versions of the draft permit, of which the 10-31-14 version was discussed at the November meetings with NMED, the Permittees and CCW. The Permittees' own requirements necessitated that the pipeline between the RLWTF and the SET be constructed to provide secondary containment. The fact that the Permittees did not follow their own requirements should not lessen the timing requirements for water tightness testing for units without secondary containment.	
16	9	A settled solids measurement device shall be utilized to obtain one settled solids thickness measurement (to the nearest half-foot) per area.	A settled solids measurement device shall be utilized to obtain one settled solids thickness measure (to the nearest inch) per area. Basis: There are devices to measure the depth to more accuracy than 50% of the permitted allowance. Permittees should be required to provide more accuracy than 50%.	
17	9	*The Permittees shall not allow settled solids to accumulate in any open unit or system used to convey,*	*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 ~~volume~~ greater*	OK

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		store, treat, or dispose of liquid or semi-liquid at an average volume greater than one foot. In the event that settled solids volumes exceed the volumes defined in this Discharge Permit or upon implementation of any settled solids removal activity, the Permittees shall implement the contingency plan set forth in this Discharge Permit.	*than one foot. In the event that settled solids depth ~~volumes~~ exceed the ~~volumes~~ depth defined in this Discharge Permit or upon implementation of any settled solids removal activity, the Permittees shall implement the contingency plan set forth in this Discharge Permit.*	
20	Table 1	Xylenes (total) (total)	Xylenes (total) ~~(total)~~	OK
20	Table 1	Total Nitrogen (sum of TKN+NO_3-N) (total)	Total Nitrogen (sum of TKN (total) +NO_3-N (dissolved)) ~~(total)~~ Basis: Table 2 and Condition No. 14.d identify NO3-N as "dissolved" which is consistent with the regulations (20.6.2.3103 NMAC).	OK
20	13.b	Until LANL is operating new reverse osmosis treatment units, but no later than September 30, 2016, the following alternative effluent quality limits for Total Nitrogen shall apply for discharges to Outfall 051	Until LANL is operating new reverse osmosis treatment units, but no later than September 30, 2015, the following alternative effluent quality limits for Total Nitrogen shall apply for discharges to Outfall 051 Basis: The 10-31-14 draft permit, which was subject to the meetings with NMED, Permittees and CCW, stated "but no later than September 30, 2015" - not 2016. The Permittees have not provided CCW with the basis for the requested one-year delay. Please provide.	
21	14.d	No_3-N	NOo_3-N	OK
21	14.d	*Until LANL is operating new reverse osmosis treatment units, but no later than September 30, 2016, the following alternative effluent quality limits for No_3-N shall apply for discharges to Outfall 051:*	*Until LANL is operating new reverse osmosis treatment units, but no later than September 30, 2016, the following alternative effluent quality limits for NO_3-N shall apply for discharges to the SET and MES ~~Outfall 051~~:*	OK
21	14.d	Until LANL is operating new reverse osmosis treatment units, but no later than September 30, 2016, the following alternative effluent quality limits for No_3-N shall apply for discharges to Outfall 051:	Until LANL is operating new reverse osmosis treatment units, but no later than September 30, 2015, the following alternative effluent quality limits for NO_3-N shall apply for discharges to the SET and MES ~~Outfall 051~~: The 10-31-14 draft permit, which was subject to the meetings with NMED, Permittees and CCW, stated "but no later than September 30, 2015" - not 2016. The Permittees have not provided CCW with the basis for the requested one-year delay. Please provide.	
22	16	Emergency Response Procedures	Emergency Response Plan. Basis: What is the basis for changing the plan to procedures?	
23	16	*The emergency response procedures shall be reviewed, and updated as necessary, by the Permittees on no less than annual triennial basis or in the event the plan fails during an emergency,*	*The emergency response procedures shall be reviewed, and updated as necessary, by the Permittees on no less than ~~a annual~~ triennial basis or in the event the plan fails during an emergency,*	CCW supports an annual review.
23	16		The Permittees' written summary shall be provided to the Los Alamos County Emergency Management Coordinator, Los Alamos Fire Department, Los Alamos County Police, Los	

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			Alamos Medical Center, New Mexico's Department of Homeland Security and Emergency Management (DHSEM), Pueblo de San Ildefonso, Pueblo of Santa Clara, Pueblo of Jemez and Pueblo of Cochiti, and shall be posted on LANL's Electronic Public Reading Room located at http://eprr.lanl.gov/oppie/service (or as updated). CCW refers NMED to our October 24, 2014 comments about the Emergency Plan and recent Defense Nuclear Facilities Safety Board Weekly Reports about the Permittees' failure to have compliant emergency preparedness in place. *See page 4 - 5.* NMED staff has said, "The RLWTF is not like any other facility we regulate in New Mexico." Communication channels must be opened to local, regional and statewide emergency response organizations to the potential threats and hazards at the Facility.	
23	18	Flow meters shall be calibrated to within plus or minus 10 percent of actual flow, as measured under field conditions.	Flow meters shall be calibrated to within plus or minus 0.1 percent of actual flow, as measured under field conditions. Basis: With a 10 percent calibration rate for a permit limit of 40,000 gpd could be 4,000 gpd flow that would not be accounted for. 4,000 gpd x 365 days a year could result in unaccountable flows of nearly 1.5 million gallons per year. This is unacceptable. On November 14, 2014 CCW, Gilkeson and Sanchez provided extensive research about how "ISO 17025-certified meters can achieve +/-0.05 percent accuracy" and "measuring uncertainties of +/- 0.1% of rate are achievable with modern flowmeters." *See p. 3.* We do not understand why calibration rates of 100 to 200 times greater are being allowed in the draft permit.	
26	24.d		• The time period in which the waste stream was conveyed to the Facility. Basis: This important information is a missing piece to reconstructing what may be found in the treatment and discharge units.	
28	26	SOIL MOISTURE MONITORING SYTEM FOR THE SET -	SOIL MOISTURE MONITORING SYSTEM FOR THE SET -	
28	26	Within 120 days following the effective date of this Discharge Permit (by DATE), the Permittees shall submit to NMED for approval a proposed workplan, design and schedule for the installation of a moisture monitoring system for the detection of unauthorized releases from the SET.	Permitttees established a baseline for the moisture monitoring system prior to the effective date of this Discharge Permit (by DATE). The baseline addressed the expected seasonal variation for the soil moisture monitoring system. The seasonal baseline provides the performance goals for the monitoring system, including: the level of sensitivity; the porosity of the soil; the precision to determine what change in moisture will signify a leak; the accuracy of the impact for a leak of a certain size, such as 100, 500 and 1,000 gallon leaks; how the perimeter of a leak will be determined; how the depth of a leak will be determined; proposed action levels; and the most effective spatial placement for the monitors.	
30	28	*Within 90 days of the effective date of this discharge plan, permittees will submit to NMED a workplan for the installation of two replacement monitoring wells in the alluvial aquifer at a location hydrologically downgradient of Outfall 051.*	*Within 90 days of the effective date of this ~~D~~discharge ~~plan~~ Permit(by DATE), the ~~P~~permittees ~~will~~ shall submit to NMED a workplan for the installation of two replacement monitoring wells in the alluvial aquifer at a location hydrologically downgradient of Outfall 051.*	*OK*

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30	28		The Permittees proposed well installation work plan shall be posted by the Permittees on LANL's Electronic Public Reading Room (EPRR) located at http://eprr.lanl.gov/oppie/service (or as updated). All responses from NMED shall be posted by the Permittees in the EPRR within seven (7) days of their receipt.	
30	29	MCOI-6 previously constructed and located in the intermediate aquifer [deleted: presumed to be] hydrologically downgradient of Outfall 051	MCOI-6 previously constructed and located in the intermediate aquifer presumed to be hydrologically downgradient of Outfall 051.	
30	29		CCW refers NMED to the memos that have been submitted by Independent Registered Geologist Robert H. Gilkeson about the defective ground water monitoring wells.	**CCW objects to the use of the defective groundwater monitoring wells R-46, R-60, R-1 and R-14 as previous stated in oral and written comments.**
Page #	**Condition No.**	**Current Language**	**Proposed Change**	
33	31	*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, either through a primary or secondary containment unit or system, the Permittees shall provide NMED oral notification of the release in 20.6.2.1203 NMAC within 24 hours of learning of the release.* *b. If the failed unit or system does not have secondary containment the Permittees shall 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, the Permittees shall submit to NMED for approval a written proposal including a schedule for corrective actions to be taken to repair or permanently*	*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, ~~either through a primary or secondary containment unit or system~~, 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:* *~~b. If the failed unit or system does not have secondary containment the Permittees shall 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.* *~~c. If the failed primary unit or system has secondary containment, the Permittees shall submit to NMED for approval a written proposal for corrective actions, within 90 days following the failure of the unit or system. The corrective action proposal shall include a schedule for corrective actions to be taken to repair or to permanently cease operation of the unit or system.~~*	OK, with the CCW suggested change.

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		cease operation of the unit or system. *c. If the failed primary unit or system has secondary containment, the Permittees shall submit to NMED for approval a written proposal for corrective actions, within 90 days following the failure of the unit or system. The corrective action proposal shall include a schedule for corrective actions to be taken to repair or to permanently cease operation of the unit or system.*	Basis: Condition No. 31 is the contingency for Condition No. 8, *Water Tightness Testing*. Condition No. 8 is only applicable to units and systems WITHOUT secondary containment. Accordingly, all references to secondary containment in Condition No. 31 should be removed. In addition, *primary* has been removed from the definition of *Secondary containment*. Basis: Because there is no secondary containment, the amount of time for the Permittees to submit the written proposal for corrective action should be within 30 days after the failure.	
34	32	*In the event the average settled solids (as defined in Condition 9 of this Discharge Permit) accumulation in an open unit or system exceeds one foot...*	*In the event the average settled solids (as defined in Condition 9 of this Discharge Permit) accumulation in an open unit or system exceeds a depth of one foot...*	OK
34	32		NMED will provide a 30-day public review and comment period of the plan for the removal and disposal of the settled solids from the unit or system. NMED will provide a Response to Comments document to those who provided written comments. Or The Permittees provide a settled solids removal and disposal plan as part of their application. NMED will incorporate it into the draft permit which will be released for public review, comment and public hearing.	
36	35.c	*c. Increase the frequency of effluent sampling to adequately establish quality of all discharges by batch.*	*c. Increase the frequency of effluent sampling to adequately establish the quality of ~~all~~ discharges ~~by batch~~, prior to resuming discharges to the system with the exceedance.* Basis: Condition 35.a requires ceasing discharges. As currently written there is not a path to resumption.	OK
37	36	In the event the source of the soil moisture exceedance is demonstrated to be associated with failure of the SET, the Permittees shall cease discharges to the SET and 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.	In the event the source of the soil moisture exceedance is demonstrated to be associated with failure of the SET, the Permittees shall cease discharges to the SET and submit a corrective action plan to NMED, for approval, within 7 days following the date when the soil moisture was initially discovered to exceed the action level. Basis The Contingency Plan should include a proposed plan for failure of the SET or an occurrence other than a failure of the SET and what corrective action are anticipated to be taken. Allowing an exceedance to migrate for at least 120 days for the corrective action plan to be submitted is unacceptable. The minimum corrective action steps (a) through (d) should be part of the existing Contingency Plan that is subject to public review and comment and request for a public hearing.	
Page #	**Condition No.**	**Current Language**	**Proposed Change**	
38	37 & 38	*37. Within 30 days following receipt of such notification from NMED,* *38. Within 90 days following receipt of such notification*	*37. Within ~~30~~ 90 days following receipt of such notification from NMED,* Basis: Make Conditions Nos. 37 & 38 consistent.	*OK, with CCW suggestion below.*

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		from NMED,		
38	37 & 38	Within 120 days following well completion, the Permittees shall submit to NMED and post on LANL's Electronic Public Reading Room located at http://eprr.lanl.gov/oppie/service (or as updated) construction and lithologic logs, survey data, and a ground water elevation contour map.	Within 120 days following well completion, the Permittees shall submit to NMED and post on LANL's Electronic Public Reading Room located at http://eprr.lanl.gov/oppie/service (or as updated) a well completion report that will include: construction and lithologic logs, survey data, and a ground water elevation contour map. For condition 38, change the color of the http:// address to blue.	
42	42	*(Condition ~~42~~ 43)*	*(Condition ~~42~~ 43)*	OK
42	43	*(Condition ~~43~~ 44)*	*(Condition ~~43~~ 44)*	OK
42	43.e	*Identification of those portions of the approved Closure Plan*	*Identification of those portions of the ~~approved~~ submitted Closure Plan.* Basis: Per Condition No. 44, the *Closure Plan* is submitted at 180 days which is the same period as the *Stabilization Plan* (120 days for *Stabilization Plan* after cessation period of 60 days). Therefore, no time is available for NMED approval.	CCW does not agree. *Please see below.*
43	44	Within 180 days from the effective date of this Discharge Permit (by DATE), the Permittees shall submit to NMED for approval a written closure plan for the Facility.	Retain only: If the Permittees make any changes to the Facility that would affect the implementation of the approved 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 modification to the Closure Plan. All documents required to be submitted to NMED in this Condition by the Permittees along with NMED's responses shall be posted, by the Permittees, on LANL's Electronic Public Reading Room located at http://eprr.lanl.gov/oppie/service (or as updated). Public comments will be accepted by NMED regarding this submittal for a period of 30 day. Question: How will the public know when the public comment period begins and ends? We note in our October 24, 2014 comments that slowing down the negotiations by two or three months would "allow the Permittees to submit a more detailed closure plan and post-closure plan and for NMED to work on the plans so that [they] will be part of the permit when it is released for another round of public comments. This suggestion would comply with the New Mexico Water Quality Act and the Ground Water Quality Regulations."	CCW renews our request that the Closure Plan be in the draft permit that is subject to public review, comment and public hearing.

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Communities For Clean Water

October 24, 2014

Jennifer Pruett, Pollution Prevention Section Manager
Jerry Schoeppner, Bureau Chief
Steve Huddleson, Environmental Scientist
Ground Water Quality Bureau
New Mexico Environment Department
P. O. Box 5469
Santa Fe, NM 87502-5469

Re: Comments for September 22, 2014 New Mexico Environment Department draft Ground Water Discharge Permit for Technical Area 50 Radioactive Liquid Waste Treatment Facility at Los Alamos National Laboratory

Dear Ms. Pruett and Messr. Schoeppner and Huddleson:

The Communities for Clean Water (CCW), along with Independent Registered Geologist, Robert H. Gilkeson, and J. Gilbert Sanchez, with Tewa Environmental Watch Alliance, submit the following comments about the September 22, 2014 New Mexico Environment Department (NMED) draft Ground Water Discharge Permit for Technical Area 50 (TA-50) Radioactive Liquid Waste Treatment Facility (RLWTF) at Los Alamos National Laboratory (LANL). We appreciated the opportunities to discuss the issues with the parties on October 9th and October 15th, 2014.

CCW has carefully considered the items on the table. A number of these items below are not negotiable as we believe the underlying laws and regulations require these changes to assure adequate protection of the natural and human environment.

: 13610

List of Remaining Issues

1. **Groundwater Monitoring** at VI.B.26 "Ground Water Flow," VI.B.27 "Ground Water Monitoring," VI.C.35 "Monitoring Well Location", VI.C.36 "Monitoring Well Construction," VI.C.37 "Ground Water Exceedance," and VI.D.44 "Post-Closure Ground Water Monitoring."

CCW appreciates that NMED is requiring the Permittees to install two new replacement alluvial wells for MCO-3 and MCO-7. The Permittees stated that CCW representatives would be provided the opportunity to witness the drilling of the wells. The Permittees stated that they would provide the necessary training, if necessary, for CCW representatives and would provide CCW with a letter stating their commitment to us. We have not received the letter.

We remain concerned that the replacement alluvial wells would be installed "at a location presumed to be hydrological downgradient of Outfall 051." We do not find such "presumed" language in the regulations.

We remain concerned about the use of the intermediate well MCOi6 for monitoring purposes. We suggest that a new intermediate well be installed at the location of MCOi6 and that after completion, both wells are sampled for eight consecutive quarters and the data compared.

We remain concerned about the use of the regional wells R-46 and R-60 for groundwater monitoring. We are concerned about the addition of regional wells R-1 and R-14. We refer NMED to the memos that have been submitted by Independent Registered Geologist Robert H. Gilkeson.

We remain concerned that the regional wells are "topographically downgradient of the RLWTF" – and not the Outfall 051. We do not find such language in the regulations.

We support the VI.B.27.j. NMED reporting requirements for the physical parameters of the water in the Permittee's report submitted to NMED.

2. **Closure and Post-Closure Plans.** CCW supports slowing the process down (two to three months) as mentioned at the October 15th negotiations to allow the Permittees to submit a more detailed closure plan and post-closure plan and for NMED to work on the plans so that it will be part of the permit when it is released for another round of public comment. This suggestion would comply with the New Mexico Water Quality Act and the Ground Water Quality Regulations.

Further, the closure plan does not meet New Mexico's regulatory requirements. The Ground Water Quality Regulations describes a closure plan as a plan that will "prevent the exceedance of standards of Section 20.6.2.3103 NMAC or the presence of a toxic pollutant in ground water after the cessation of operation." 20.6.2.3107.A(11). The regulation states that a closure plan includes, "a description of closure measures, maintenance and monitoring plans, post-closure maintenance and monitoring plans, financial assurance, and other measures necessary to prevent and/or abate such contamination." *Id.* Moreover, the description states that, "[t]he obligation to implement the closure plan as well as the requirements of the closure plan, if any is required, survives the termination or expiration of the permit." Id.

The "plan" that Permittees submitted for the Radioactive Liquid Waste Treatment Facility [RLWTF] that is the subject of DP-1132 in Appendix H to their application, is a mere outline that does not even address these requirements in any meaningful manner. In particular, it does not meet the following regulatory requirements in that it does not provide: (1) a description of closure measures that are specific to the RLWTF; (2) maintenance and monitoring plans; (3) post-closure maintenance and monitoring plans; (4) financial assurance; (5) any other measures necessary to prevent and/or abate contamination after cessation of operations. Merely stating that closure will be in compliance with state and federal regulations does not meet the New Mexico Ground Water Quality Regulations. *See* Id.

Further, the draft Ground Water Discharge Permit Renewal for the San Juan Generating Station Solid Waste Disposal Pit, DP-306, requires financial assurance because "ground water impacts have occurred in the shallow alluvial Shumway Arroyo aquifer due to the San Juan Generating Station operations." *See* Conditions 16 to 19.

CCW ask why NMED would hold the Permittees to a lesser degree of financial responsibility than the operators of the San Juan Generating Station when the potential long-term environmental damage due to releases from the RLWTF is as great or greater than that of the San Juan Generating Station? There needs to be adequate financial assurance to completely remediate the RLWTF just as there needs to be adequate closure and post closure plan in place to guide that process.

3. VI.D.40 Cessation of Operation of Specific Units. On October 9th we learned that LANL wants to retain the 75,000-gallon concrete influent storage tank as an emergency sump. It remains unclear about whether the tank is for transuranic (TRU) or low-level waste. Please see October 23, 2014 email from Joni Arends, CCNS about this matter.

If NMED approves the use of the tank as an emergency sump, CCW requests that NMED require the installation of slant wells beneath it in order to determine if it has leaked.

CCW support NMED's position for 60 days after the effective date of the discharge permit for cessation of operations.

4. **VI.D.41 Stabilization of Individual Units and Systems.** CCW supports NMED's changed for the submittal of the workplan from 120 days to 90 days.

CCW supports the NMED's position about the new characterization requirements at the second (a). CCW will provide comments about whether the investigation is from cessation or the start of closure after we see the next draft of the permit.

5. **Public Participation.** CCW supports the Permittees' proposal to establish a website/webpage for the TA-50 discharge permits (NMED and Environmental Protection Agency (EPA)).

CCW does not support the Permittees' proposal to limit the number of documents from 43 to 13. CCW argues that the Permittees' have created a friendly, easy to access website for the EPA Individual Stormwater Permit. We believe that the Permittees should be able to do the same for the TA-50 discharge permits.

In addition, CCW requests that the Permittees establish a quality assurance/quality control system for all docs submitted to the Electronic Public Reading Room in the interim, while the website is finalized.

6. **Contingency Plan.** We do not find the contingency plan in the draft permit.

7. **Emergency Plan.** CCW supports the requirement for an Emergency Plan in the discharge permit. Recent Defense Nuclear Facilities Safety Board Weekly Reports indicate that the Permittees are experiencing difficulties with their emergency preparedness. For example,

a. June 13, 2014 report. The Permittees conducted a nuclear criticality exercise at TA-55 on April 17, 2014 and noted four findings and seven opportunities for improvement, including that "operations in the Facility Incident Command (FIC) lacked formality, including personnel not following checklists, providing sporadic briefings, and confusion with seating and phones; at least 12 individuals walked past injured victims without offering assistance; and radcon technicians were not wearing proper personnel protective equipment (PPE)."
http://www.dnfsb.gov/sites/default/files/Board%20Activities/Reports/Site%20Rep%20Weekly%20Reports/Los%20Alamos%20National%20Laboratory/2014/wr_20140613_65.pdf

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b. June 20, 2014 report. The Permittees conducted a functional exercise of the Emergency Operating Center (EOC) for a seismic event that resulted in the collapse of two nuclear facilities. During the initial critique "communications between the emergency directorate and support section personnel were identified." http://www.dnfsb.gov/sites/default/files/Board%20Activities/Reports/Site%20Rep%20Weekly%20Reports/Los%20Alamos%20National%20Laboratory/2014/wr_20140613_65.pdf

c. August 15, 2014 report. The Permittees released their after-action report for the June EOC exercise. The report notes that "other notable opportunities for improvement include a field office identified issue to develop predetermined situational awareness information for display on the large electronic wall, the need for training on aspects of WebEOC, and the need to strengthen the conduct and physical arrangements for tabletop field play." http://www.dnfsb.gov/sites/default/files/Board%20Activities/Reports/Site%20Rep%20Weekly%20Reports/Los%20Alamos%20National%20Laboratory/2014/wr_20140815_65.pdf

Since the Cerro Grande fire in May 2000, CCW member groups have been following the emergency preparedness and response problems at LANL, especially for the nuclear facilities. The issues raised over a decade ago have not been resolved as witnessed by the latest DNFSB weekly reports. The RLWTF is a nuclear facility and as a matter of public safety, an emergency plan should be integral to the discharge permit. And as NMED staff has said, "The RLWTF is not like any other facility we regulate in New Mexico."

List of Remaining Issues
We are Waiting to Review NMED Language Changes

1. Definition of Secondary Containment. On October 15th, LANL raised concerns about the definition of "primary unit" in the first dot. Some of the secondary containment structures do not completely surround the "primary unit."

2. Condition VI.A.3 "Submittal of Plans and Specifications." The submittals should be placed in the EPRR. On October 15th, LANL argued about language in (k) and (m) about the "earliest practicable time" and asked for "in advance" language.

3. Condition VI.A.4 "Construction Report." On October 15th, the Permittees argued that there are many field changes and asked NMED if they wanted all of them. NMED suggested "significant field changes" language.

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4. On October 15th, the Permittees raised concerns about the word "untreated" in VI.A.7 "Verification of Secondary Containment."

5. Water Tightness Testing at VI.A.8. The Permittees say they need 540 days (18 months) to test the units for water tightness.

6. NMED changed the language for exfiltration or infiltration rate from not exceeding 0.07 gallons per hour per thousand gallons of capacity to "as low as reasonably attainable for the unit or system" at VI.A.8 at p. 15. CCW supports the "number" of 0.07 gallons per hour per thousand gallons of capacity.

7. NMED deleted language of a rate of not to exceed 50 gal per mile per consecutive 24 hour period and reference to the manhole covers as a measure. CCW supports the "number" of 50 gallons per mile per consecutive 24 hour period.

8. Condition VI.A.9. Settled Solids and VI.C.30 Settled Solids Removal. CCW wants the settled solids removal and disposal plan now as part of the permit process – not 120 days after "the average settled solids accumulation in an open unit or system exceeds one foot." On October 15th, LANL wants the "average settled solids accumulation in an open unit or system exceeds one foot" language from Condition 30 inserted in Condition 9. CCW wants the plan to be submitted as part of the permitting process.

The Permittees said they wanted language in the second sentence in Condition 30 that says "Within at least 120 days prior to the determination ....

9. Condition VI.A.10 Facility Inspections. On October 15th, the Permittees had concerns about the use of the word "visual portions" of all synthetic liners in (b). NMED is going to add language for the visual portions above the water line.

10. Condition VI.A.13.b. Effluent Limits: Outfall 051. On Oct. 15th, the Permitees argued they want the same standards for the MES and the new RO treatment units. If approved, the language needs to be moved to Condition 14.

11. Condition VI.A.13.c. Effluent Limits: Outfall 051 – Table A-1 of NMED Risk Assessment Guidance for Site Investigation and Remediation (most recent edition). NMED only wants the reference to the most current version of the Table in the permit; LANL wants the entire Table A-1 in the permit.

12. Condition VI.A. 16 Installation of Flow Meters. There is a question about the need for 180 days to install the flow meters. There is one discharge pipe from TA-50 Bldg. 2 which splits and goes to the SET and Outfall 051. It will take about four to six months for LANL to install flow meters.

13. Conditions VI.A.16 and 17. The Permittees want 180 days to install and calibrate the flow meters.

14. Condition VI.B.23. Waste Tracking. On Oct. 15th, the Permitees argued that for the transuranic discharges they have the waste information, but for the low-level radioactive discharges, they don't. The Permittees should be keeping track of both.

15. Condition VI.B.25 Soil Moisture Monitoring System for the SET allows 120 days following the effective date of the DP to submit a workplan, design and schedule to NMED for approval for the installation of a moisture monitoring system.

16. Condition IV.B.24 Effluent Sampling. NMED identified whether the use of an in-house laboratory v. compliance sampling by an outside laboratory.

17. Condition VI.C.28. Containment. On October 15th, the Permittees requested language in (c) that says, … the Permittees shall provide NMED oral notification of the release in accordance with 20.6.2.1203 NMAC ….

18. Condition VI.C.33 Effluent Exceedance. NMED "believes that cessation of discharge to DP-51 is not unreasonable given the potential to impact groundwater. Operation of RLWTF can continue by discharging to MES which is exempt from this requirement."

List of Remaining Issues
We are Waiting for a Response from the Permittees

1. We asked why the SET is "an unsealed subgrade concrete structure." See Condition V. On Oct. 9th, Eric Trujillo, DOE/NNSA, said he would get back to us about whether it is "unsealed.

CCNS reserves our right to change our position on any of the issues raised in the negotiations and this letter based upon receiving the 39 documents that are being processed by the Permittees for our Freedom of Information Act request, No. 14-00061-K, filed on November 27, 2013.

We look forward to next steps.

Sincerely,

: 13616

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cc: Jennifer Hower, Counsel for NMED
Jon Block, Counsel for CCW

Communities For Clean Water

October 24, 2014
Revision 1 submitted on October 27, 2014

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Steve Huddleson, Environmental Scientist
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Santa Fe, NM 87502-5469

Re: Comments for September 22, 2014 New Mexico Environment Department draft Ground Water Discharge Permit for Technical Area 50 Radioactive Liquid Waste Treatment Facility at Los Alamos National Laboratory

Dear Ms. Pruett and Messr. Schoeppner and Huddleson:

The Communities for Clean Water (CCW), along with Independent Registered Geologist, Robert H. Gilkeson, and J. Gilbert Sanchez, with Tewa Environmental Watch Alliance, submit the following comments about the September 22, 2014 New Mexico Environment Department (NMED) draft Ground Water Discharge Permit for Technical Area 50 (TA-50) Radioactive Liquid Waste Treatment Facility (RLWTF) at Los Alamos National Laboratory (LANL). We appreciated the opportunities to discuss the issues with the parties on October 9th and October 15th, 2014.

CCW has carefully considered the items on the table. A number of these items below are not negotiable as we believe the underlying laws and regulations require these changes to assure adequate protection of the natural and human environment.

: 13618

List of Remaining Issues

1. **Groundwater Monitoring** at VI.B.26 "Ground Water Flow," VI.B.27 "Ground Water Monitoring," VI.C.35 "Monitoring Well Location", VI.C.36 "Monitoring Well Construction," VI.C.37 "Ground Water Exceedance," and VI.D.44 "Post-Closure Ground Water Monitoring."

CCW appreciates that NMED is requiring the Permittees to install two new replacement alluvial wells for MCO-3 and MCO-7. The Permittees stated that CCW representatives would be provided the opportunity to witness the drilling of the wells. The Permittees stated that they would provide the necessary training, if necessary, for CCW representatives and would provide CCW with a letter stating their commitment to us. We have not received the letter.

We remain concerned that the replacement alluvial wells would be installed "at a location presumed to be hydrological downgradient of Outfall 051." We do not find such "presumed" language in the regulations.

We remain concerned about the use of the intermediate well MCOi6 for monitoring purposes. We suggest that a new intermediate well be installed at the location of MCOi6 and that after completion, both wells are sampled for eight consecutive quarters and the data compared.

We remain concerned about the use of the regional wells R-46 and R-60 for groundwater monitoring. We are concerned about the addition of regional wells R-1 and R-14. We refer NMED to the memos that have been submitted by Independent Registered Geologist Robert H. Gilkeson.

We remain concerned that the regional wells are "topographically downgradient of the RLWTF" – and not the Outfall 051. We do not find such language in the regulations.

We support the VI.B.27.j. NMED reporting requirements for the physical parameters of the water in the Permittee's report submitted to NMED.

2. **Closure and Post-Closure Plans.** CCW supports slowing the process down (two to three months) as mentioned at the October 15th negotiations to allow the Permittees to submit a more detailed closure plan and post-closure plan and for NMED to work on the plans so that it will be part of the permit when it is released for another round of public comment. This suggestion would comply with the New Mexico Water Quality Act and the Ground Water Quality Regulations.

Further, the closure plan does not meet New Mexico's regulatory requirements. The Ground Water Quality Regulations describes a closure plan as a plan that will "prevent the exceedance of standards of Section 20.6.2.3103 NMAC or the presence of a toxic pollutant in ground water after the cessation of operation." 20.6.2.3107.A(11). The regulation states that a closure plan includes, "a description of closure measures, maintenance and monitoring plans, post-closure maintenance and monitoring plans, financial assurance, and other measures necessary to prevent and/or abate such contamination." *Id.* Moreover, the description states that, "[t]he obligation to implement the closure plan as well as the requirements of the closure plan, if any is required, survives the termination or expiration of the permit." Id.

The "plan" that Permittees submitted for the Radioactive Liquid Waste Treatment Facility [RLWTF] that is the subject of DP-1132 in Appendix H to their application, is a mere outline that does not even address these requirements in any meaningful manner. In particular, it does not meet the following regulatory requirements in that it does not provide: (1) a description of closure measures that are specific to the RLWTF; (2) maintenance and monitoring plans; (3) post-closure maintenance and monitoring plans; (4) financial assurance; (5) any other measures necessary to prevent and/or abate contamination after cessation of operations. Merely stating that closure will be in compliance with state and federal regulations does not meet the New Mexico Ground Water Quality Regulations. *See* Id.

Further, the draft Ground Water Discharge Permit Renewal for the San Juan Generating Station Solid Waste Disposal Pit, DP-306, requires financial assurance because "ground water impacts have occurred in the shallow alluvial Shumway Arroyo aquifer due to the San Juan Generating Station operations." *See* Conditions 16 to 19.

CCW ask why NMED would hold the Permittees to a lesser degree of financial responsibility than the operators of the San Juan Generating Station when the potential long-term environmental damage due to releases from the RLWTF is as great or greater than that of the San Juan Generating Station? There needs to be adequate financial assurance to completely remediate the RLWTF just as there needs to be adequate closure and post closure plan in place to guide that process.

3. VI.D.40 Cessation of Operation of Specific Units. On October 9th we learned that LANL wants to retain the 75,000-gallon concrete influent storage tank as an emergency sump. It remains unclear about whether the tank is for transuranic (TRU) or low-level waste. Please see October 23, 2014 email from Joni Arends, CCNS about this matter.

If NMED approves the use of the tank as an emergency sump, CCW requests that NMED require the installation of slant wells beneath it in order to determine if it has leaked.

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CCW support NMED's position for 60 days after the effective date of the discharge permit for cessation of operations.

4. **VI.D.41 Stabilization of Individual Units and Systems.** CCW supports NMED's changed for the submittal of the workplan from 120 days to 90 days.

CCW supports the NMED's position about the new characterization requirements at the second (a). CCW will provide comments about whether the investigation is from cessation or the start of closure after we see the next draft of the permit.

5. **Public Participation.** CCW supports the Permittees' proposal to establish a website/webpage for the TA-50 discharge permits (NMED and Environmental Protection Agency (EPA)).

CCW does not support the Permittees' proposal to limit the number of documents from 43 to 13. CCW argues that the Permittees' have created a friendly, easy to access website for the EPA Individual Stormwater Permit. We believe that the Permittees should be able to do the same for the TA-50 discharge permits.

In addition, CCW requests that the Permittees establish a quality assurance/quality control system for all docs submitted to the Electronic Public Reading Room in the interim, while the website is finalized.

6. **Contingency Plan.** We do not find the contingency plan in the draft permit.

7. **Emergency Plan.** CCW supports the requirement for an Emergency Plan in the discharge permit. Recent Defense Nuclear Facilities Safety Board Weekly Reports indicate that the Permittees are experiencing difficulties with their emergency preparedness. For example,

a. June 13, 2014 report. The Permittees conducted a nuclear criticality exercise at TA-55 on April 17, 2014 and noted four findings and seven opportunities for improvement, including that "operations in the Facility Incident Command (FIC) lacked formality, including personnel not following checklists, providing sporadic briefings, and confusion with seating and phones; at least 12 individuals walked past injured victims without offering assistance; and radcon technicians were not wearing proper personnel protective equipment (PPE)."
http://www.dnfsb.gov/sites/default/files/Board%20Activities/Reports/Site%20Rep%20Weekly%20Reports/Los%20Alamos%20National%20Laboratory/2014/wr_20140613_65.pdf

b. June 20, 2014 report. The Permittees conducted a functional exercise of the Emergency Operating Center (EOC) for a seismic event that resulted in the collapse of two nuclear facilities. During the initial critique "communications between the emergency directorate and support section personnel were identified."
http://www.dnfsb.gov/sites/default/files/Board%20Activities/Reports/Site%20Rep%20Weekly%20Reports/Los%20Alamos%20National%20Laboratory/2014/wr_20140613_65.pdf

c. August 15, 2014 report. The Permittees released their after-action report for the June EOC exercise. The report notes that "other notable opportunities for improvement include a field office identified issue to develop predetermined situational awareness information for display on the large electronic wall, the need for training on aspects of WebEOC, and the need to strengthen the conduct and physical arrangements for tabletop field play."
http://www.dnfsb.gov/sites/default/files/Board%20Activities/Reports/Site%20Rep%20Weekly%20Reports/Los%20Alamos%20National%20Laboratory/2014/wr_20140815_65.pdf

Since the Cerro Grande fire in May 2000, CCW member groups have been following the emergency preparedness and response problems at LANL, especially for the nuclear facilities. The issues raised over a decade ago have not been resolved as witnessed by the latest DNFSB weekly reports. The RLWTF is a nuclear facility and as a matter of public safety, an emergency plan should be integral to the discharge permit. And as NMED staff has said, "The RLWTF is not like any other facility we regulate in New Mexico."

List of Remaining Issues
We are Waiting to Review NMED Language Changes

1. Definition of Secondary Containment. On October 15th, LANL raised concerns about the definition of "primary unit" in the first dot. Some of the secondary containment structures do not completely surround the "primary unit."

2. Condition VI.A.3 "Submittal of Plans and Specifications." The submittals should be placed in the EPRR. On October 15th, LANL argued about language in (k) and (m) about the "earliest practicable time" and asked for "in advance" language.

3. Condition VI.A.4 "Construction Report." On October 15th, the Permittees argued that there are many field changes and asked NMED if they wanted all of them. NMED suggested "significant field changes" language.

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4. On October 15th, the Permittees raised concerns about the word "untreated" in VI.A.7 "Verification of Secondary Containment."

5. Water Tightness Testing at VI.A.8. The Permittees say they need 540 days (18 months) to test the units for water tightness.

6. NMED changed the language for exfiltration or infiltration rate from not exceeding 0.07 gallons per hour per thousand gallons of capacity to "as low as reasonably attainable for the unit or system" at VI.A.8 at p. 15. CCW supports the "number" of 0.07 gallons per hour per thousand gallons of capacity.

7. NMED deleted language of a rate of not to exceed 50 gal per mile per consecutive 24 hour period and reference to the manhole covers as a measure. CCW supports the "number" of 50 gallons per mile per consecutive 24 hour period.

8. Condition VI.A.9. Settled Solids and VI.C.30 Settled Solids Removal. CCW wants the settled solids removal and disposal plan now as part of the permit process – not 120 days after "the average settled solids accumulation in an open unit or system exceeds one foot." On October 15th, LANL wants the "average settled solids accumulation in an open unit or system exceeds one foot" language from Condition 30 inserted in Condition 9. CCW wants the plan to be submitted as part of the permitting process.

The Permittees said they wanted language in the second sentence in Condition 30 that says "Within at least 120 days prior to the determination ....

9. Condition VI.A.10 Facility Inspections. On October 15th, the Permittees had concerns about the use of the word "visual portions" of all synthetic liners in (b). NMED is going to add language for the visual portions above the water line.

10. Condition VI.A.13.b. Effluent Limits: Outfall 051. On Oct. 15th, the Permitees argued they want the same standards for the MES and the new RO treatment units. If approved, the language needs to be moved to Condition 14.

11. Condition VI.A.13.c. Effluent Limits: Outfall 051 – Table A-1 of NMED Risk Assessment Guidance for Site Investigation and Remediation (most recent edition). NMED only wants the reference to the most current version of the Table in the permit; LANL wants the entire Table A-1 in the permit.

12. Condition VI.A. 16 Installation of Flow Meters. There is a question about the need for 180 days to install the flow meters. There is one discharge pipe from TA-50 Bldg. 2 which splits and goes to the SET and Outfall 051. It will take about four to six months for LANL to install flow meters.

13. Conditions VI.A.16 and 17. The Permittees want 180 days to install and calibrate the flow meters.

14. Condition VI.B.23. Waste Tracking. On Oct. 15th, the Permitees argued that for the transuranic discharges they have the waste information, but for the low-level radioactive discharges, they don't. The Permittees should be keeping track of both.

15. Condition VI.B.25 Soil Moisture Monitoring System for the SET allows 120 days following the effective date of the DP to submit a workplan, design and schedule to NMED for approval for the installation of a moisture monitoring system.

16. Condition IV.B.24 Effluent Sampling. NMED identified whether the use of an in-house laboratory v. compliance sampling by an outside laboratory.

17. Condition VI.C.28. Containment. On October 15th, the Permittees requested language in (c) that says, … the Permittees shall provide NMED oral notification of the release in accordance with 20.6.2.1203 NMAC ….

18. Condition VI.C.33 Effluent Exceedance. NMED "believes that cessation of discharge to DP-51 is not unreasonable given the potential to impact groundwater. Operation of RLWTF can continue by discharging to MES which is exempt from this requirement."

List of Remaining Issues
We are Waiting for a Response from the Permittees

1. We asked why the SET is "an unsealed subgrade concrete structure." See Condition V. On Oct. 9th, Eric Trujillo, DOE/NNSA, said he would get back to us about whether it is "unsealed.

CCW reserves our right to change our position on any of the issues raised in the negotiations and this letter based upon CCNS receiving the 39 documents that are being processed by the Permittees for its Freedom of Information Act request, No. 14-00061-K, filed on November 27, 2013.

We look forward to next steps.

Sincerely,

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No	PgNo	Description	Remaining Issues
1	6	§II.W. Secondary Containment	Before the pipelines between the RLWTF and Outfall 051 and the Solar Evaporative Tanks (SET) are operated, the pipelines must have secondary containment. The Department of Energy (DOE) self-regulates management of its low-level, transuranic and high-level radioactive and mixed radioactive waste through DOE Order 435.1 "Radioactive Waste Management," and the associated Manual, Guidance, and Implementation Guide. They clearly provide that the pipelines from the RLWTF to Outfall 051 and the SET must provide secondary containment. https://www.directives.doe.gov/directives-documents/400-series/0435.1-BOrder-chg1 and Chapter IV "Low-Level Waste Requirements," Implementation Guide for Use with DOE M 435.1-1 ("Implementation Guide"), IV.M.(2)(a) "Confinement. Low-level waste systems and components shall be designed to maintain waste confinement." P. IV-137. *Please note:* DOE O 435.1 requirements for transuranic wastes are the same or similar to those for low-level waste management. In these comments, we have provided links and cites for low-level waste management.] "The objective of this requirement is to ensure the design of low-level waste storage and treatment facilities includes the installation of equipment capable of containing low-level waste so that releases that could result in exposures to workers or the public or that could contaminate the environment are minimized." *Id.* The DOE documents address the "unexpected or uncontrolled release of radioactive material from low-level waste treatment and storage facilities that could impact workers, the public, or the environment." The pipeline carries treated low-level waste over one-half mile from the RLWTF to the SET." *Id.*, and large map provided by Permittees at October 9, 2014 meeting. "Secondary confinement are those systems that provide the next level of confinement and can include process equipment, (e.g., double-walled tanks, double-walled piping systems), as well as curbing and diking of liquid storage tank areas, or secure or closed areas of buildings, that further prevent or mitigate uncontrolled releases of radioactive and/or hazardous materials to the environment. The need for redundancy and the degree of redundancy in these systems is determined by the safety analysis process and maintenance concerns for both active and passive components." *Id.* Mitigation measures are also required to reduce the loss of containment. Implementation Guide, §IV.M.(2)(d), p. IV-147.

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			Further, DOE allows the Permittees to use a graded approach to determine "the appropriate level of rigor in applying this control to the management systems employed at a particular low-level waste management facility." *Id.*, p. IV-138. "Consideration of Decontamination and Decommission" applies to new low-level waste management facilities that are subject to contamination with radioactive or other hazardous materials [that] shall be designed to facilitate decontamination. *Id.* at IV.M.(2)(c), p. IV-143. DOE Guidance 435.1-1 was approved on July 9, 1999 and certified on January 9, 2007. For over 15 years, the Permittees have been on notice about the requirements to protect the public and environment, to provide secondary confinement, and to consider impacts of decontamination and decommissioning in the design. We are at a loss to understand why the pipelines to Outfall 051 and the SET, which carry radioactive and hazardous constituents, do not have secondary containment. In order to meet the basic requirements for the treatment and storage of low-level radioactive waste found in DOE Order 435.1-1, CCW, Gilkeson and Sanchez urge the Permittees to replace the pipeline from the RLWTF to the SET to provide for secondary containment. DOE has discussed a "backfit" process and suggestions are provided at Section IV.M.(2) "Low-Level Treatment and Storage Facility Design," p. IV-134. The Permittees should begin the process to backfit the pipelines to Outfall 051 and the SET. The pipeline to Outfall 051 must have secondary containment before it is used again. We have no objection to the Permittees' request to remove the word "primary" from "primary unit."
2	10	§V. Description of SET	We are reviewing the engineering specification and designs and will provide further comments.
3	11	§1. Annual Update - Posting to EPRR	Posting to the Electronic Public Reading Room (EPRR) must be enforceable. We suggest a stepwise approach. If it is discovered that a document was not posted, the Permittees have 14 days after receiving notice from itself, NMED or a member of the public to post it to the EPRR. If it is not posted within that time frame, then failure to do so shall be enforceable under NMAC 20.6.2.1220. Below is the language from the 2010 HazWaste Permit, which may be helpful to include in the permit:

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			"1.13 PUBLIC NOTIFICATION VIA ELECTRONIC MAIL (E-MAIL) "The Permittees shall notify individuals by e-mail of submittals as specified in this Permit. The Permittees shall maintain a list of individuals who have requested e-mail notification and send such notices to persons on that list. The notice shall be sent within seven days of the submittal date and shall include a direct link to the specific document to which it relates. "The Permittees shall provide a link on the internet on the Permittees' environmental home page (http://www.lanl.gov/environment) whereby members of the public may submit a request to be placed on the e-mail notification list. In the event that the environmental home page stops operation, the Permittees shall use their best efforts to fully restore the page and its operation as soon as possible." *** Where a Permittee submittal and NMED response is required to be posted to the EPRR, the language needs to be clarified so that it is clear that the Permittees must post the submittal when it is submitted to NMED. We are concerned that the language could be interpreted to read that the Permittees may post their submittal when they receive NMED's response. For example, §12 Freeboard. We provide the following clarifying language from the NMED HazWaste Permit for LANL to ensure the language in the GWDP is clear that the Permittees must promptly post their submittals to NMED and associated replies from NMED: "The Permittees shall notify individuals by e-mail of submittals as specified in this Permit. The Permittees shall maintain a list of individuals who have requested e-mail notification and send such notices to persons on that list. The notice shall be sent within seven days of the submittal date and shall include a direct link to the specific document to which it relates." In order to provide transparency about what is happening with the GWDP, all documents required by it must be promptly posted to the EPRR. Our concerns are heighten after reading the revelations in the recent series of Santa *Fe New Mexican* articles, e.g., "LANL officials downplayed waste's dangers even after WIPP." http://www.santafenewmexican.com/special_reports/from_lanl_to_leak/
4	11	§1. Website	CCW accepts the Permittees' proposal to establish a website six months from the effective date of the permit. An informed, publicly accessible example is the Permittees' Stormwater website at: http://www.lanl.gov/community-environment/environmental-stewardship/protection/compliance/individual-permit-stormwater/index.php
5	14	§5.	We are concerned that Permittees cannot restrict entry into the area around the Outfall 051. The radiation

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		Restricting Entry	levels are very high in that area not only for workers, but also for the public who might be on a tour of the area.
6	15	§6. Signs	Did NMED conduct government-to-government consultation with the Tribes about the signage? Signs are only required to be in English and Spanish. The requirement should include a requirement for a visual sign – one without words. Below is language from 2010 HazWaste Permit, which may be helpful in the discussions: "2.5.1 Warning Signs "The Permittees shall post bilingual warning signs (in English and Spanish) at all gates and perimeter fences, where present, around the permitted units (see 40 CFR § 264.14(c)). 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. The 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) "The Permittees shall post warning signs in the appropriate dialect of Tewa in a manner equivalent to the bilingual warning signs in English and Spanish along shared boundaries with the Facility's permitted units and the Pueblo of San Ildefonso (PO WHO GEH). "The Permittees shall post signs requested by Santa Clara Pueblo (Kha-'Po). The Permittees shall include on the signs the following warning: Wi-i ts'uni pi' – (DO NOT ENTER)" We have additional information and will submit sign designs to NMED by the end of this week.
7	15	§7. Verification of Secondary Containment	Permittees must verify that systems and units that carry untreated liquid or semi-liquid waste streams meet requirements for secondary containment in §8 below. Permit gives LANL 180 days to verify. The permit should require verification within 30 days of the effective date of the permit. The systems and units that carry radioactive waste are subject to DOE Orders, specifically DOE O 435.1-1. For example, "A highly reliable means of monitoring for releases is the use of secondary confinement which is then checked for waste. It also offers the benefit of providing defense-in-depth in containment of releases of low-level waste." Implementation Guide, §IV.M.(2)(e), p. IV-150. It should be simple for verification of secondary containment because the Permittees already are required to

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			verify the systems and units that carry radioactive waste. Permittees should be able to provide the verification information to NMED promptly after the effective date of the permit.
8	15	§8. Water Tightness Testing	Testing for water tightness for the pipelines to the SET and Outfall 051 should begin within 30 days of the effective date of the permit. Are the Permittees testing for water tightness now? We reiterate our argument above for §II.W. Secondary Containment that DOE Orders require these pipelines to have secondary containment. We disagree with the Permittees' request for 540 days, or 18 months, to provide water tightness testing for these pipelines. Permittees are required under DOE Order 435.1 to test systems and units that carry radioactive waste. Implementation Guide, §IV.M.(2)(e), p. IV-150.
9	16	§9 Settled Solids	For clarification, we suggest that the title read "Settled Solids from the MES and SET." We need additional information about the SET settled solids. What are the contents of the liquid waste when it enters the RLWTF? What are the pretreatment processes? What constituents are removed in the pretreatment process? Where are they disposed? What are the entire contents of the discharge to the Outfall 051, SET and MES? What are the unregulated constituents in the discharge to the Outfall 051, SET and MES? What is the total solid content of the discharge to the SET and MES? What are the unregulated solids in the discharge to the SET? Is there an engineering estimate on the predicted solids accumulation rate? What is the estimated time for the SET to fill up to an average of one-foot depth? The settled solids will concentrate the radionuclides and hazardous constituents, while the SET is continuously refilled. For the combined radium-226 and Radium-228, it is estimated that over 8,000 kg will be concentrated in the SET settled solids, assuming a 40,000 gpd discharge over a period of five years. How will overflow be managed? What is the effectiveness of the liner? What happens if the liner leaks? At what point would the liner need to be repaired? What would be the timing for repair? At what point would the liner need to be replaced?

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			What is the level of sensitivity of the leak detection system? How much liquid must be in the tank in order to activate the detection system? How much liquid may leak before the system alarms?
10	21	§13 Effluent Limits	We will support Permittees' request to change Condition Nos. 13b and 13d compliance schedules from September 30, 2015 to September 30, 2016 given their request to reduce the daily maximum from 45 mg/L to 30 mg/L and the quarterly average from 15 mg/L to 10 mg/L. Why are the VOCs found in Condition 13, Table 1 not present in Table 2? The title of Condition 13 should read "Effluent Limits: Outfall 051 and SET and MES."
11	22	§15 Emergency Plan	We fully support the NMED position to include the Emergency Plan. The Contingency Plans provide 48 hours to report; in an emergency, notification and actions must be taken immediately. We find Permittees' 11-17-14 proposal to be incomplete. We do not support procedures; we support a plan that includes a list of all emergency equipment at the facility. Communication, collaboration and providing a written summary of the plan and any amendments thereto to the local emergency preparedness and response entities are key. In support for the Emergency Plan, we provide the following from the October 24, 2014 Defense Nuclear Facilities Safety Board (DNFSB) Weekly Report for LANL about ongoing inadequacies/concerns/issues for emergency response at LANL. The DNFSB is "an independent organization within the executive branch chartered with the responsibility of providing recommendations and advice to the President and the Secretary of Energy regarding public health and safety issues at Department of Energy (Department) defense nuclear facilities." http://www.dnfsb.gov/about/who-we-are "**Emergency Management:** Early this month, LANL issued the after action report for the annual full-scale exercise (see 8/29/14 weekly). Their findings included: (1) direct communication between facility incident command and the fire department was never established; (2) the Emergency Operations Center (EOC) was assumed to initially be habitable; however, modeling later showed it to within the plume and protective actions were not re-evaluated, and (3) field office public affairs was not represented. "They also identified 12 opportunities for improvement, including the following of note: (a) additional radiological controls experts should be trained as controller/evaluators;

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			(b) the Emergency Manager needs to communicate protective actions using actionable geographical reference points rather than distances, (c) the full screen monitor in the EOC needs repair, (d) the EOC needs more than one information technology support person, and (e) the Los Alamos Medical Center warrants improvements with training on protocols and communications between the decontamination room and emergency room." http://www.dnfsb.gov/sites/default/files/Board%20Activities/Reports/Site%20Rep%20Weekly%20Reports/Los%20Alamos%20National%20Laboratory/2014/wr_20141024_65.pdf
12	23	§17. Calibration of Flow Meters	Calibration of flow meters will protect groundwater because knowing the amount that is being discharged will provide accurate information for other calculations, such as determining leakage. LANL has stated that is should not be held to flow meter accuracy greater than +/- 10%. However, "ISO 17025-certified meters can achieve +/- 0.05 percent accuracy." Moreover, modern flow meters--of the type one would expect to be used at an advanced laboratory such as LANL-- are even more accurate. "[M]easuring uncertainties of +/- 0.1% of rate are achievable with modern flowmeters." Jerry Stevens & Jason Pennington, "Flowmeter Calibration, Proving, & Verification Ensuring the accuracy & repeatability of your flow measurements (September 26, 2010). Online at: http://www.flowcontrolnetwork.com/articles/calibration-proving-verification Additionally, it is important to note that the ISO/TEC 17025 General Requirements are the doormat for competent testing and calibration laboratories, so one would expect that LANL observe these standards in calibration and measurement. The standard is described as follows: ISO/IEC 17025 General requirements for the competence of testing and calibration laboratories is the main ISO standard used by testing and calibration laboratories. In most major countries, ISO/IEC 17025 is the standard for which most labs must hold accreditation in order to be deemed technically competent. In many cases, suppliers and regulatory authorities will not accept test or calibration results from a lab that is not accredited. Originally known as ISO/IEC Guide 25, ISO/IEC 17025 was initially issued by the International Organization for Standardization in 1999. There are many commonalities with the ISO 9000 standard, but ISO/IEC 17025 is more specific in requirements for competence. And it applies directly to those organizations that produce testing and calibration results. Since its initial release, a second release was made in 2005 after it was agreed that it needed

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			to have its quality system words more closely aligned with the 2000 version of ISO 9001. The standard was first published in 1999 and on 12 May 2005 the alignment work of the ISO/CASCO committee responsible for it was completed with the issuance of the reviewed standard. The most significant changes introduced greater emphasis on the responsibilities of senior management, and explicit requirements for continual improvement of the management system itself, and particularly, communication with the customer. The ISO/IEC 17025 standard itself comprises five elements that are Scope, Normative References, Terms and Definitions, Management Requirements and Technical Requirements. The two main sections in ISO/IEC 17025 are Management Requirements and Technical Requirements. Management requirements are primarily related to the operation and effectiveness of the quality management system within the laboratory. Technical requirements include factors which determines the correctness and reliability of the tests and calibrations performed in laboratory. Laboratories use ISO/IEC 17025 to implement a quality system aimed at improving their ability to consistently produce valid results. It is also the basis for accreditation from an accreditation body. Since the standard is about competence, accreditation is simply formal recognition of a demonstration of that competence. A prerequisite for a laboratory to become accredited is to have a documented quality management system. The usual contents of the quality manual follow the outline of the ISO/IEC 17025 standard. On line at: http://en.wikipedia.org/wiki/ISO/IEC_17025 (emphasis added).
13	26	§22. Discharge Volumes	Flow meters don't have to be installed until 180 days after the effective date of the permit. How will the discharge volumes be determined in the interim? Is there a flow meter on the discharge pipe that leaves TA-50, Bldg. 2 that splits to go to the Outfall and SET?
14	26	§23 (b). Waste Tracking	The permit must require waste tracking for both conveyance and discharge of TRU and LLW waste streams. DOE Order 435.1-1 requires waste tracking for low-level radioactive waste. Minimum requirements include: "Engineering controls shall be incorporated in the design and engineering of low-level waste

			treatment and storage facilities to provide volume inventory and to prevent spills, leaks, and overflows from tanks or confinement systems." Implementation Guide, §IV.M.(2)(d), p. IV-146. "Engineering controls in this requirement are considered to be those systems or design characteristics that are provided to prevent the loss of containment from low-level waste management facilities, **and to provide volume inventory data,** where appropriate." Emphasis added. *Id.*, p. IV-147. DOE is required to track its waste by providing volume inventories for low-level waste. By requiring waste tracking, NMED will not be regulating low-level waste, but requiring the Permittees to report their inventories. Also, see comments to §31 below about Settled Solids Removal.
15	27	§25. Soil Moisture Monitoring System for SET	Because the SET has been built, it is appropriate for the Permittees establish the baseline conditions now. Because of the variation in moisture throughout the year, it may be necessary to establish seasonal baseline conditions. This work must be done in the interim before the permit is issued. Otherwise, there should be a prohibition on using the SET until such time as the baseline conditions are established. It will be more difficult to ascertain baseline conditions once the SET is in operation. How will the neutron probes measure the volume of a leak? What is the justification for the 2% specification for absolute variation in volumetric soil moisture content below the SET? We support establishing a performance goal for the neutron probes that would include: 1. level of sensitivity; 2. seasonal variation; and 3. a level of moisture precision that will answer the question: What change in moisture will signify a leak? Please describe the placement and spatial coverage for the neutron moisture probes. Would they be positioned to detect a growing perimeter of a leak, or the depth of a leak, or both? Further, DOE Order 435.1-1 and Implementation Guide requires monitoring and/or leak detection capabilities "shall be incorporated in the design and engineering of low-level waste treatment and storage facilities to provide rapid identification of failed confinement and/or other abnormal conditions." Implementation Guide, §IV.M.(2)(e), p. IV-148.

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			"As in implementation of all of the requirements of DOE O 435.1 and DOE M 435.1-1, the graded approach is used for determining the appropriate level of rigor in applying this control to the management systems employed at a particular low-level waste management facility. Also monitoring for leakage and contamination spread needs to be performed by means appropriate for the type and character of radioactive waste being managed at the facility. Rigorous application of this requirement may be most appropriate for circumstances involved storage or treatment of liquid low-level waste, for example, highly acidic liquid waste in a single-walled, mild steel tank may require continuous monitoring coupled with alarms and transfer equipment." *Id.*
16	29	§26, et al., Groundwater Provisions.	We appreciate that NMED is requiring replacement of two alluvial wells. Nevertheless, a new alluvial well is necessary at a location between the two new wells at the site where maximum contaminant levels were measured in the alluvial sediments. Further, an additional alluvial well is needed in Mortandad Canyon at a suitable location that is hydrologically upgradient of Outfall 051. This well is necessary for background water quality data for Mortandad Canyon. We remain concerned about the use MCOI-6 and the regional wells for ground water monitoring purposes. They should also be replaced. We reference the detailed comments of Robert H. Gilkeson, found in Appendix A, "Deficiencies in Ground Water Protection in the Draft Ground Water DP-1132 Permit, by Independent Registered Geologist Robert H. Gilkeson," to the CCW, Gilkeson and Sanchez December 12, 2013 comments for the DP-1132 draft permit. Gilkeson has provided detailed comments about why MCOI-6 and the regional wells need to be replaced. A very serious mistake is that the permit language describes the regional wells as topographically downgradient of the RLWTF. Additionally, NMED has included two additional existing characterization wells (R-1 and R-14) in the regional aquifer monitoring network. The two additional wells are unacceptable because they are: 1) characterization wells (see below); and 2) not hydrologically downgradient of the RLWTF or the Outfall 051. At this time there are no wells that are hydrologically downgradient of the RLWTF or the Outfall 051. At this time there are no regional wells that are hydrologically downgradient of the RLWTF or the Outfall 051.

193936

			In addition, NMED has stated that the wells "were not installed for contaminant detection or groundwater monitoring." We quote from page 31 in the NMED November 2010 General Response to Comments on the LANL RCRA Renewal Permit: "The NAS report [National Academy of Sciences 2007 Final Report] references wells that were installed as part of LANL's groundwater characterization efforts that were conducted in accordance with their Hydrogeologic Work Plan (1998).... These [characterization] wells were not installed for contaminant detection or groundwater monitoring. Therefore, these wells have limited relevance to groundwater protection goals set forth by the March 1, 2005 Consent Order."
17	29	§27 Ground Water Monitoring Well Replacement	We are concerned about the proposed delay to 90 days for the Permittees to submit the workplans to NMED for installation of the two replacement alluvial wells. We propose that the permit provide that the Permittees allow CCW representatives to witness the drilling of the new wells; that the Permittees will provide the training, if necessary, so that the representatives will meet the requirements to witness the drilling. The Permittees agreed to provide a letter, but as was revealed at the recent meeting, not until after the final permit is issued.
18	34	§31. Settled Solids Removal	We are concerned that there is no public participation requirement for the submittal of the settled solids removal workplan. Because the RLWTF is unlike any other facility in NM, we urge NMED to require the workplan now to be part of the permit that is released for public comment. Additionally, reporting on the nature and amount of solids, timing of disposal at WIPP should be a matter of course, as LANL's "Supplemental Information for Discharge Permit Application DP-1132, Radioactive Liquid Waste Treatment Facility (RLWTF) and Zero Liquid Discharge (ZLD) Solar Evaporation Tanks," ENV-RCRA-12-0173, LAUR-12-21591 (August 10, 2012, as revised) ("Supplement") states at A-8, page 1: "(2) Transuranic RLW treatment consists of influent collection and storage, treatment of the transuranic RLW, and sludge treatment. Treated water is not discharged; it either receives additional treatment (secondary reverse osmosis) or is sent to storage tanks in Building 50-248 for disposition as bottoms. Sludge from the treatment process is concentrated, solidified with cement, and shipped to the Waste Isolation Pilot Project as a solid transuranic waste." It is, thus, clear that LANL has records of settled solid accumulation and removal that could be share with the public. Additionally, it is clear that these records include the volumes of material being accumulated and processed, which means LANL also can provide this information. In fact, the Supplement goes on to state

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			at B-12, page 2: "Transuranic influent is received in batches from TA-55, with influent collected in either the acid tank or caustic tank in Building 50-66. Level probes for these tanks are linked electronically to the RLWTF control room. Operators monitor and record tank level changes during each influent batch transfer. Influent volumes are calculated from the difference between beginning and ending tank levels." Similar data collection applies separately to Low Level Waste, as the Supplement states further that: "Low-level RLW influent volumes will be determined by monitoring and recording the change in level of Tank 5 and Tank 6 in the Waste Management and Risk Management (WMRM) Facility. While radioactive liquid waste (RLW) is being fed to the treatment process from one of these two influent tanks (e.g. Tank 5), the fresh influent will be received in the other influent tank (e.g. Tank 6). In this illustration, the change in the level of Tank 6 from one day to the next will reflect the volume of the influent received." *Id.* It is difficult to imagine that given LANL keeping such records of the influent, they are failing to do so for the treated effluent Low-level RLW. Thus, it is reasonable for LANL to make the input-output date for both Low-level RLW and Transuranic RLW and solidified material available to the NMED and the public. The permit condition should state it only applies to the SET. A statement should be included in the permit that the 1,200-gallon MES reservoir is drained at a frequency of no longer than four weeks. Where were the TA-53 SET settled solids disposed? Will the TA-52 SET settled solids be disposed of at the same facility? The SET has not been used, but holds water from rainfall and snowmelt. What type of inspection will take place before the SET goes into operation to determine the integrity of the exposed liner? Whether the exposed liner has been damaged by UV destruction? What are the manufacturer's specifications for the liner? The DOE specifications for the liner? If the liner must be replaced, we request that NMED and CCW representatives be present to observe the removal to insure the liner is not damaged. We are concerned about the drying of the settled solids containing concentrated radionuclides and hazardous air pollutants so that they turn to dust and be distributed into the air by the wind. What provisions will prevent dust from being created? Is there a buffer zone between allowing the settled solids dry too fast and the need to add liquid?

13638

19	41	§41. Cessation of Operation of Specific Units	We support retention of 75,000-gallon concrete influent storage tank for emergency storage for LLW liquid waste. Should this specific condition be moved to another section, or have its own condition? We suggested listing the tank under V. Authorization to Discharge, where the other operating tanks, etc. is listed.
20	41	§42 Stabilization of Individual Units & Systems	We support NMED's requirement that the workplan provide "a detailed description of the actions that will be taken to investigate and characterize, to the extent possible given site constraints, the potential impact to soil and groundwater from the facility, system, or individual units."
21	42	§43. Closure Plan	The draft permit that is released for public review and comment must include the Closure Plan. There is no schedule for closure. We support NMED's requirement that "a detailed description of the actions that will be taken to investigate and characterize, to the extent possible given site constraints, the potential impact to soil and groundwater from the facility, system, or individual units." At the 11-17-14 meeting, LANS staff said that the Consent Order should be referenced in this Condition. What provision of the Consent Order would be applicable?
22		Financial Assurance	CCW, et al., request financial assurance is required in the GWDP.
23		Reservation of Rights	CCW, et al., reserve the right to object or comment on issues raised or identified by CCW, et al.
24		Air Monitoring	CCNS received the DOE/LANL response to its November 2013 FOIA request. We are reviewing the documents and may have additional comments as a result. Did the Permittees calculate emissions to the air from the MES and SET for constituents other than the radionuclides? If so, please provide to us. Air monitoring for radionuclides and metals should be provided around the SET.
25		Seismic	We question the location of the RLWTF and the SET. Both are located in an area where LANL scientists have shown there are buried active faults, specifically the Rendija Canyon and Guaje Mountain faults. They run generally north and south and splay in the area of Technical Area 50. Volcanoes formed the Jemez Mountains.

			During site evaluation, DOE Order 435.1 requires, "Each site proposed for a new low-level waste facility or expansion of an existing low-level waste facility shall be evaluated considering environmental characteristics, geotechnical characteristics, and human activities, including for a low-level waste disposal facility, the capacity of the site to demonstrate, at a minimum, whether it is … (2) located in a flood plain, a tectonically active area, or in the zone of water table fluctuation…. Implementation Guide, §IV.M.(1)(a), p. IV-120.
26		Tritium	What standards will apply to the discharge of tritium through the Outfall 051, the MES, and the SET? DOE DCG of 2 million pCi/L, the Safe Drinking Water Act level of 20,000 pCi/L, or another standard?
27		Other commenters	How are the other commenters being kept informed about the ongoing discussions? We would appreciate receiving copies of any correspondence and emails, notes from phone calls or other forms of communication. Thank you.

5939

-------- Forwarded Message --------
Subject: Proposed DP-1132 signage
Date: Mon, 08 Dec 2014 11:10:46 -0800
From: Joni Arends <jarends@nuclearactive.org>
To: steven.huddleson@state.nm.us, Pruett, Jennifer, NMENV <Jennifer.Pruett@state.nm.us>, Jerry.Schoeppner@state.nm.us <Jerry.Schoeppner@state.nm.us>, Jon Block <jblock@nmelc.org>

Good morning Steve and All,
Attached are suggested draft signs for Condition 6 of the DP-1132 draft permit. More time to finalize the signs would be appreciated. New computers and new programs delayed the process. We would like to finalize the design. I believe we could bring completed signs to the next meeting. Is there any word about another meeting based on your meeting with management last week?

From Kathy Sanchez: Peni Poe is dangerous, harmful, death causing water. The other is as given to us - Tewa - for do not enter.

Please let us know what you think.
Best,
Joni

Unauthorized personnel

Keep out

: 1364 1

Se prohibe la Endrada a Personas

No Autorizado

Wi Ts'uni pi

2h931 : 1363

Communities for Clean Water

A Northern New Mexico Network

1 June 2015

Ms. Phyllis Bustamante, Acting Chief
Ground Water Quality Bureau
New Mexico Environment Department
Harold Runnels Building, Room N2250
1190 St. Francis Drive
Santa Fe, NM 87545

Re: Ground Water Discharge Permit No. DP-1132 (Los Alamos National Laboratory Radioactive Liquid Waste Treatment Facility)

Dear Ms. Bustamante:

Communities for Clean Water ("CCW") responds as follows to the proposed draft permit forwarded on May 21, 2015 to citizens participating in the comment process. Concerned Citizens for Nuclear Safety ("CCNS"), a member of CCW, has reviewed the comments and is in full agreement with them. Collectively, we have the following observations:

1. Electronic Public Reading Room ("EPRR") postings: Condition 49: CCW objects that all documents required to be submitted by the Permittees to the New Mexico Environment Department ("NMED"), and the NMED response, are not required to be posted to the EPRR. Under protest, we propose the following Mandatory and Voluntary Postings. [The list will be similar to comments we will submit on June 12, 2015 for the final draft permit, DP-1793]:

Mandatory Postings:

Notification of changes; NMED response

: 13644

Plans and specifications; NMED response

Final construction report; NMED response

Secondary containment verification; NMED response

Actual or potential water tightness failure; NMED response

Containment; NMED response

Damage to structural integrity; NMED response

Freeboard; freeboard exceedence; exception request; NMED response

Effluent exceedence; NMED response

Emergency response procedures; NMED response

Report re installation and calibration of flow meters; NMED response

Soil moisture monitoring system exceedence; NMED response

Two alluvial groundwater wells replacement; NMED response

Monitoring well location; NMED response

Monitoring well construction; NMED response

Groundwater report re exceedence and correction; NMED response

Spill or unauthorized release; NMED response

Failure of discharge plan/discharge permit; NMED response

Report re stabilization of units; NMED response

Closure plan; NMED response

Final closure; NMED response

Postclosure groundwater monitoring; NMED response

Termination; NMED response

Voluntary postings:

Annual Update – due February 1 – includes summary of maintenance and repairs made during reporting period; water tightness testing results (VI.A.8); settled solids measurements and settled solids removal (VI.A.10); and groundwater flow report (VI.A.27).

Quarterly monitoring reports: Condition 24 – includes:

Monitoring and repair: Condition 13

Influent volumes LLW – Condition 25

Influent volumes TRU – Condition 26

Discharge volumes – Condition 27

Effluent sampling – Condition 29

Groundwater monitoring – Condition 36

2. Signage and entry restrictions: Conditions 5 and 6: At the April 16, 2015 meeting, Permittees said they would set up meetings with key CCW members to discuss and try to resolve signage and entry concerns, as well as emergency response procedures. No one representing the Permittees has contacted Kathy Sanchez or Marian Naranjo, respectively, on these subjects. This is a prime example of why communication with the Permittees must be made mandatory – as in postings of all documents submitted to NMED under this permit to the EPRR.

The new language in the draft is helpful, but the problem remains of the risks to persons on Pueblo de San Ildefonso land, where potential flows may disturb and transport contaminants. It is insufficient to post signs on "shared boundaries." CCW proposes that the Applicants simply supply a quantity of signs (say, 12) with wording in the appropriate

dialect of Tewa and in English and the Pueblo authorities can place them in appropriate locations.

3. Water tightness testing: Condition 8: We welcome the change from 540 days to 180 days for water tightness demonstrations. In addition, at the meeting on April 16, 2015, we reiterated the need for the pipe connection between the Radioactive Liquid Waste Treatment Facility ("RLWTF") and the Solar Evaporative Tanks ("SET") to be double-walled. The draft permit does not respond to this proposal. CCW proposes that double containment be required in this important underground connection. Tritium-contaminated water will be transported in the pipeline. CCW has submitted extensive comments showing that DOE's own orders require secondary containment of pipelines. *See,* "Implementation Guide for use with DOE M 435.1-1, Chapter IV Low-Level Waste Requirements," IV.M.(2)(c), "Low-Level Waste Treatment and Storage Facility Design" and IV.M.(2)(e) "Monitoring." We do not understand why the pipeline was not designed for secondary containment. Settlement of the recent LANL fines could facilitate secondary containment of the pipeline. Further, CCW submits that the words "single-walled" should be inserted before "conveyance line from TA-50" into the description of the SET in section V.D. (p. 10) to accurately describe the SET.

4. Settled solids removal from SET, MES: Condition 10: Permittees have proposed new language, stating that the terms apply to the SET and Mechanical Evaporative System ("MES") "if applicable." CCW submits that these units will invariably be "open units and systems that are designed to store or dispose of a liquid or semi-liquid through evaporation," as described. Next, the draft permit contemplates submission of a plan to remove settled solids that exceed the permissible depth (or are

planned for removal) and a 120 day delay while the plan is reviewed. CCW submits that the settled solids should be removed as promptly as practicable, since the buildup may create risks of release of liquids. Some extended period of review may be needed the first time this process is carried out, but surely not every time thereafter. Permittees should now have a plan to remove solids from the SET and MES and should make it available as part of this permit process, since such removal is an inevitable part of operation. And the permit should call for removal of solids within 30 days after the identification of the problem and should allow an additional delay only if NMED makes a record that it needs time to review the plan.

5. Secondary containment verification: Condition 7: Similarly, CCW believes that 180 days following the effective date of the permit is too long for the Permittees to verify secondary containment.

6. Maintenance and repair and structural integrity damage: Conditions 13 and 14: The new draft attempts, correctly, to direct the process of remediation more specifically, here requiring a written corrective action plan. CCW questions whether a delay of 90 days before such a plan is submitted is appropriate, since the necessary action may be obvious. Thirty days is more appropriate, with an extension available for good cause. Moreover, by hypothesis the detected problem is at least potentially dangerous, and the condition should state that the equipment should normally be taken out of service, unless the Permittees can show that the damage is very unlikely to cause an actual risk before it can be repaired. In addition, equipment should be required to be maintained in accordance with manufacturer's specifications.

7. Effluent exceedence: Condition 18: Subpart (b) should state whether the notification to NMED GWQB is required to be oral and/or written.

8. Emergency response procedures: Condition 20: The discussion on site underscored the distinction between emergencies requiring action by RLWTF staff and those requiring involvement of outside, usually first responder, personnel. The new text says that the Incident Command System ("ICS") is used in response to all emergencies. ICS should be made a defined term and regulatory or other specific citations provided.

The new language appears to state that the emergency response procedures will follow the structure of the ICS and will be made available to the public. Under the ICS, procedures are pre-established and sanctioned by participating authorities. Since in any significant emergency, the authorities from one or more nearby pueblos will necessarily participate in the response, it is implied that such pueblos will be incorporated into the ICS structure and thus informed of any emergency affecting such pueblos and incorporated into the response by prior agreement. Please confirm this understanding. Further, CCW supports an annual review of the emergency response procedures. The emergency response procedures should address any exceedences of effluent limits and should state a time limit for remediation of violations.

9. Installation and calibration of flow meters: Conditions 21, 22: The new draft permit states that flow meters are to be installed within 180 days of the effective date of the permit. It has not been explained why it might take six months to install four meters, which are basically off-the-shelf gaging devices. These meters are almost the only guaranty that the basic flow processes of the RLWTF are operating as designed. They should be installed promptly; 30 days is not unreasonable.

We also see that the new draft allows meter operation within plus or minus 10% of actual flow. Since the meters are important components of the oversight of RLWTF's operation, and since much closer tolerances are entirely feasible, it is not correct to attempt to justify a needlessly broad range of variability based on asserted undated NMED "policy." In comments to various iterations of the draft permit, including on November 14, 2014, CCW has provided information that ISO 17025-certified meters can achieve +/-0.05 percent accuracy" and "measuring uncertainties of +/- 0.1% of rate are achievable with modern flowmeters." We do not understand why calibration rates of 100 to 200 times greater are considered appropriate in the draft permit. Further, CCW submits that the single-walled conveyance from the RLWTF to the SET should have flow meters at both ends of the pipe. And, learning from the recent Santa Barbara oil spill, a shutoff valve should be installed at the beginning of the pipeline – as shown in the SET engineering drawings.

10. Waste tracking: Condition 28: We probably do not have a difference in principle about the waste tracking records, but CCW does think the language proposed by Permittees is somewhat confusing. The basic question in the background is: Are the required records to be forward-looking, thus, to show the quantities of wastes that are authorized to be received and planned to be disposed, or are they backward-looking and, thus, to show the quantities of wastes that were actually received and were disposed of over (say) a given year? We suggest that it is more important for regulatory purposes to show the historical data. Thus, we would take the language in the draft permit and add "current" in the first line after "maintain," in (b) say "time period for which the Permittees approved," in (d) say "days per year discharge occurred" and "each year when

discharge occurred." In the second new paragraph, say "Permittees shall also maintain" and refer to "records of all waste streams conveyed from the facility, including but not limited to: Radioactive Liquid Waste Bottoms . . ."

11. Soil moisture monitoring: Conditions 30-31: We think it essential to establish scientific baseline conditions under the SET before it receives any water. Under the draft permit, that is possible but not assured. CCW requests that the initial monitoring data be taken before the SET is used for waste. In the alternative, the permit should prohibit use of the SET until the baseline conditions are established. Second, the permit should specify distinct criteria for the establishment of an action level. The permit should define the action level. We submit that the action level should be based upon (a) sensitivity of the monitoring equipment, (b) observed seasonal variation, such that the action level may vary with different seasons, (c), placement of sensors in space, (d) rate of change in moisture levels, (e) the observable impact of a 100 and a 500 gallon leak, (f) observable changes in the shape of a plume, and (g) depth of observed moisture. Further, the quarterly monitoring events and maintenance or repair of the soil moisture monitoring system should be required to be reported quarterly. CCW also questions why the Permittees have 15 days following discovery of a soil moisture increase beneath the SET to notify NMED. Oral and/or written notification should be made within 24 hours. CCW is concerned about providing a lengthy 60 days for the Permittees to identify the source; plus another 30 days if the exceedence is demonstrated to be associated with a leak from or breach of the SET. In the event that the exceedence is not associated with a failure of the SET, the Permittees have 120 days to submit a corrective action plan. These periods are too lengthy to promptly address a leak. Lastly, to provide transparency about the data

from the soil moisture monitoring, the quarterly results should be required to be included in the quarterly monitoring reports.

12. Ground water wells and monitoring: Conditions 32-36: Some improvements in the draft permit are needed: Some existing wells have extended screens. Thus, in Condition 34, the permit should state in the first sentence, "hydrologically downgradient in the stratum it is intended to monitor from the potential or actual discharge location it is intended to monitor . . ." There are other concerns. Condition 35 authorizes NMED to require a replacement well, but the authority is limited to instances where the existing monitoring well has "insufficient water" or is "not completed in a manner that is protective of ground water quality." However, a monitoring well may need replacement for other reasons, such as contamination by drilling chemistry or other defects in its construction. NMED must not be unduly limited in its authority to call for a new well.

13. Ground water wells: replacement of two existing wells: Condition 33. The title should include the word "Alluvial."

14. Ground water exceedences: Condition 37: This new condition correctly addresses any exceedence of a ground water quality standard or presence of a toxic pollutant. Nevertheless, CCW questions why the permit places the burden on the NMED to determine if there is an exceedence. CCW submits that the permit should require the Permittees to report an exceedence to NMED clearly in the cover letter forwarding the ground water investigation/source control workplan. NMED identified the need for such requirement when the Permittees buried chromium exceedences in report tables without specifically stating exceedences in the cover letter. As a result, NMED took

administrative action and fined the Permittees. As part of the settlement, specific reporting requirements mandate notification in the cover letter to NMED of any exceedences.

15. Spill or unauthorized release: Condition 38: This Condition is parallel to Condition 37. Under the draft, Conditions 37 and 38 may overlap, since Condition 37 is not excluded by the "other than" language in Condition 38. Neither is "spill" or "release" a defined term. The difficulty is that Condition 38 requires the Permittees to submit a corrective action report and plan within 15 days of discovery of the release, whereas Condition 37 allows the Permittees to await a notification from NMED and then submit an investigation/source control work plan within 60 days. While different releases of toxic pollutants may present different levels of urgency, it should be NMED's decision, not the Permittees', at which level of urgency to place a given event. Conditions 37 and 38 should be combined, swift initial reporting should be required, and NMED should set the schedule for subsequent actions.

16. Operation cessation of specific units: Condition 40: CCW submits that this condition should include requirements for the Permittees to notify NMED orally and/or in writing within 24 hours if the 75K tank is used for emergency storage and include that information in the quarterly monitoring report.

17. Stabilization of individual units and systems: Condition 41: Under the draft permit, the five units listed in Condition 41 would cease operations 60 days after the permit issues and the Permittees would submit a work plan to stabilize these units within 120 days after ceasing operations—i.e., 180 days after the permit issues. For comparison, Condition 42 would require the Permittees to submit their closure plan within 180 days of

the issuance of the permit. The "stabilization" plan and the "closure" plan can be expected to follow similar principles. These plans will raise similar novel and difficult issues as to the methods to close sites that are located in a highly developed location, monitoring methods in such locations, and permissible future uses. CCW submits that these important issues should be addressed as part of the permitting process and not as a follow-on action, occurring without effective public comment and participation.

18. Closure plan: Condition 42: As stated above, CCW does not agree that the Closure Plan is not part of the draft permit and subject to public hearing. The draft permit should state expressly that NMED will issue public notice about the public comment period, pursuant to 20.6.2.3108 NMAC.

19. Integration with Consent Order: Condition 46: This new provision states that the investigation, characterization, cleanup, and corrective action at the site of the RLWTF shall be conducted solely under the Consent Order and not under the permit. Given that many critical actions, if taken under the discharge permit, may have no public participation, it seems correct to conduct them under the Consent Order. We note that SWMU 50-001(a), SWMU 50-002(a), Consolidated SWMU 50-002(b) and AOC 50-001(b) will not be investigated under the Consent Order until after decommissioning of the RLWTF. *Corrected ENV-DO-14-0229, Request for Additional Information, Discharge Permit Application DP-1132, Radioactive Liquid Waste Treatment Facility,* ENV-DO-14-0247, LA-UR-14-26444, September 11, 2014.

20. Description of MES. V.D. (p.10). CCW submits that the description of the MES should include the facility numbers for the units, as provided in the SET description.

21. Quarterly reports. A new condition should be added that lists all of the information that is required throughout the permit to be submitted in the quarterly reports to NMED, similar to that provided in Condition 1 for the annual report. *See* list in Comment No. 1.

22. Correction to Permittees' May 20, 2015 cover letter: "CCW" is the acronym for "Communities for Clean Water" – not "Citizens for Clean Water." Jonathan Block represents CCNS, Lindsay Lovejoy represents CCW.

We thank you for your consideration of these comments and look forward to your action thereon.

Very truly yours,

/s/ Lindsay A. Lovejoy, Jr.

Lindsay A. Lovejoy, Jr.
Attorney for CCW
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Santa Fe, NM 875057
(505) 983-1800
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cc.:
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Bob Beers, bbeers@lanl.gov
Jon Block, jblock@nmelc.org
Joni Arends, jarends@nuclearactive.org
Rachel Conn, rconn@amigosbravos.org

-------- Forwarded Message --------
Subject:DP-1132 Postings to EPRR Must Be Mandatory
Date: Mon, 08 Jun 2015 10:26:46 -0700
From: Joni Arends <jarends@nuclearactive.org>
To: Huddleson, Steven, NMENV <steven.huddleson@state.nm.us>, Lindsay Lovejoy <lindsay@lindsaylovejoy.com>, Jon Block <jblock@nmelc.org>, rconn@amigosbravos.org

Steve,
Let's try this again.
Best,
Joni

Good morning Steve,

Below is an email thread that demonstrates why all DP-1132 postings to the Electronic Public Reading Room (EPRR) must be mandatory. As you can see, only the Applicants' transmittal letter to NMED for the Interim Facility-Wide Groundwater Monitoring Plan was posted. Only after CCNS notified DOE/LANS did they make the correction and post the cover letter and the 190-page October 2015 to September 2016 plan.

Without CCNS's intervention, a member of the public searching for the latest version of the IFWGMP would have only found the cover letter - and not the latest version of the annual plan.

As you know, the IFWGMP is a key document not only for DP-1132, but also the hazardous waste permit and the consent order. It took a member of the public to point out to the Permittees that the entire document was not posted to the EPRR. This is not an isolated case. I would be happy to provide you with more email threads demonstrating a lack of quality assurance/quality control (QA/QC) for posting documents to the EPRR. John Kieling, Bureau Chief of the NMED HazWaste Bureau, and Pete Maggiore, of DOE/NNSA, were copied on them. Improvements to QA/OC have not been done.

Here is another recent example. DOE/LANS provided CCNS and our counsel with allegedly complete copies of their DP-1132 application. They provided 246 printed pages in a binder, but no CD rom was enclosed, even though it was referenced in the cc's. Recently I was looking for another document in the EPRR and found the application. The full application is 2626 pages and has a CD rom enclosed. Even though DOE/LANS listed CCNS and our counsel on the transmittal letter as having been provided with the application, we were provided with less than 10% of the entire application. Obviously, the cc was misleading at best.

In your deliberations, please seriously consider making all DP-1132 postings to the EPRR mandatory.

Sincerely,

Joni Arends
CCNS

-------- Forwarded Message --------
Subject:RE: New documents added to Electronic Public Reading Room
Date: Thu, 4 Jun 2015 19:12:11 +0000
From: Lopez, Lorrie Bonds <lorriel@lanl.gov>
To: Joni Arends <jarends@nuclearactive.org>, pmaggiore@doeal.gov <pmaggiore@doeal.gov>, jblock@nmelc.org <jblock@nmelc.org>, john.kieling@state.nm.us <john.kieling@state.nm.us>

Joni,
I have heard from the source of the documents you mention. There was a submission error and the documents are being resubmitted. You should see the links in your email in the next few days.

I apologize for the inconvenience.

Best regards,

Lorrie Bonds Lopez

From: Joni Arends
Sent: Thursday, June 04, 2015 11:51:05 AM
To: Lopez, Lorrie Bonds; pmaggiore@doeal.gov; jblock@nmelc.org; john.kieling@state.nm.us
Subject: Fwd: New documents added to Electronic Public Reading Room

Hi,
Again, for today's postings only the cover letter link is provided for the second and third postings. Where are the documents?
Best,
Joni

-------- Forwarded Message --------
Subject: New documents added to Electronic Public Reading Room
Date: Thu, 04 Jun 2015 05:01:59 -0500
From: Los Alamos National Laboratory <lanl@service.govdelivery.com>
Reply-To:lanl@service.govdelivery.com
To:jarends@nuclearactive.org

Per regulatory requirements, this e-mail is to notify you that the following documents have been added to the Los Alamos National Laboratory Electronic Reading Room. The document(s) have been submitted to fulfill one or more requirements of the Los Alamos National Laboratory.

LANL-Weekly Technical Call Submission-May 22-28 2015

Submittal of the Response to the Approval with Modifications for Storm Water Performance Monitoring in the Los Alamos/Pueblo Watershed During 2013 and Revision 1

Submittal of the Interim Facility-Wide Groundwater Monitoring Plan for the 2016 Monitoring Year October 2015-September 2016

You may view these documents and many others at LANL's Electronic Public Reading Room.

If you have questions, please contact us.

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: 13659

-------- Forwarded Message --------
Subject: CCW comments about 8-31-15 Draft DP-1132
Date: Mon, 14 Sep 2015 14:58:13 -0600
From: Joni Arends <jarends@nuclearactive.org>
To: Huddleson, Steven, NMENV <Steven.Huddleson@state.nm.us>
CC: Rachel Conn <rconn@amigosbravos.org>, Hunter, Michelle, NMENV <Michelle.Hunter@state.nm.us>, Huey, Greg, NMENV" <greg.huey@state.nm.us> <kathy@tewawomenunited.org>, beata@tewawomenunited.org, joankansas@swcp.com, marlenep@swcp.com, mariannaranjo@icloud.com, robz.hope.yc@gmail.com, hjtrujillo@aol.com, sromelling@amigosbravos.org, rachel.conn@gmail.com

Hi Steve,
I hope you had a marvelous vacation. Please bring photos on Thursday.
In preparation for our meeting on Thursday to discuss the latest draft of the DP-1132 permit, please find attached the comments of the Communities for Clean Water.
With respect to Condition VI(A)(37), please find attached LANL's August 2015 monthly ground water exceedance report, which could serve to notify the GWQB of exceedances.
Please include the CCW commenters in the facility mailing list for this permit. Thank you.

See you Thursday.

Best,
Joni

On 2015-08-31 14:54, Huddleson, Steven, NMENV wrote:

Please forward appropriately to your respective associates. No redlines, this is a clean, fresh, new document for you to read and be prepared to discuss at our meeting on September 17. I have the large conference room reserved at the Marquez Building (where Air Quality Bureau lives) from 9:00 until 2:00 PM. Microsoft Word is hateful, and I haven't been able to get the table of contents to cooperate, so there is at least one missing page number.

This is the version derived from Bill Scott's edits, to flow in a more 'orderly' fashion. Some language has changed in the moves, some has not. I want you to all read it fresh, as a new document without our past history. I am out of State on vacation from September 2, returning September 9 and will only be checking my emails in moments of weakness and I am not leaving you my cell phone number.

Steve Huddleson, P.G., C.P.G.
Manager, Pollution Prevention Section
Ground Water Quality Bureau
New Mexico Environment Department
(505) 827-2936

Memo to: New Mexico Environment Department, Ground Water Quality Bureau~~MED File~~
From: Communities for Clean Water ~~I. A. Lovejoy, Jr CCW et al. mm9-15)~~
Date: 14~~01~~ September 2015
Re: ~~CCW; notes re~~ 8/31/15 draft DP-1132 permit – Comments for discussion at 9/17/15 meeting

Communities for Clean Water (CCW) has ~~We have~~ the comments that follow about NMED's draft permit for DP-1132 dated August 31, 2015. We note, in addition, that CCW and other commenters have a basic question whether the RLWTF should be regarded as exempt from regulation under the Hazardous Waste Act and RCRA by reason of the Wastewater Treatment Unit exemption. We have raised this issue with you and believe that you consider this issue to be outside the ambit of these negotiations. Accordingly, setting that issue aside, the draft permit raises the following questions:

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1. We request that the format b~~B~~e consistent. Please put the titles of the Conditions in parenthes~~e~~is following the "Condition XX."
2. Definitions: The definition of Incident Command System (Section II, item P) does not make express reference to any specific existing system, such as the Department of Homeland Security National Incident Management System. Presumably, this is what is meant. The DHS NIMS system calls for ~~includes~~ procedures that are pre-established and endorsed by participating authorities. Thus, under this system, the nearby pueblos would be included in planning and, when potentially affected, included in operation of the ICS.
3. The definition of "synthetic liner" (item AA) is confusing. Can the liner be both beneath and on the sides of the unit or system, as is the case with the SET?
4. The definition of "tank" (item BB) follows the RCRA definition (40 CFR § 260.10). Thus, presumably, it adopts the "parking lot" test for a tank: ~~I~~the item must be self-

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supporting if filled and placed on a flat surface (like a parking lot). We have seen no engineering report that confirms that the SET "tanks" meet that test.

5. Part III, last sentence on p. 8. Why does the permit allow that 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.WW NMAC"? Then NMED may require a Discharge Permit Modification?
6. Part V(D) of the definitions states that the low-level RLWTF may be altered, bypassed, etc. in accordance with the Permit Conditions. It remains problematic for Commenters/Hearing Requesters that the Permit ~~is intended~~ can be interpreted to apply to a facility other than the one to which their Comments and Hearing Request were ~~intended to apply~~addressed; viz. the physical plant which they toured under LANL's auspices on April 14, 2015.
7. Conditions: Condition VI(A)(1) provides for an annual update of the facility process. Apparently, t~~T~~his is needed because process modifications can be made without prior NMED approval. See below.
8. Condition VI(A)(2) calls for notification to NMED of changes that are not maintenance and also not "significant." Notice may be only 30 days before the change. However, r~~R~~egulations call for public notice and a possible hearing on a "discharge permit modification." See 20.6.2.3108. They call for much more than 30 days advance notice. Does "significant" in the Permit mean a change that is a "discharge permit modification"? If so, it might be better simply to use the regulatory language.

9. Language in the last paragraph of VI(A)(2) needs to be reviewed as it contains leftovers from the EPRR language. But it does raise an issues about Condition 49 and the need for the Permittees to post the NMED responses. See below.

10. Condition VI(A)(3) calls for submission of any changes that could constitute a 20.6.2.7.P "discharge permit modification" before going into effect. The regulation defines a discharge permit modification as a change in the location of the outfall, significant increase in the quantity of the discharge, significant change in the quality of the discharge, or as required by the Secretary. ~~(~~As planned, no such modifications may occur, since the outfall will not move, and quantity and quality of discharge may not change. But what about "discharges" to MES or SET? Would changes in such discharges require the procedure outlined in VI(A)(3)?~~)~~

~~10~~11. Section 20.6.2.3108 of the regulations calls for notice to nearby landowners and the public, submission of comments, publication of NMED's proposed action, a period for comments and requests for hearing, and (under certain conditions) a hearing. Condition VI(A)(3) of t~~T~~he draft permit does not do so. Is the permit intended to exclude the public processes called for by the regulations?

~~11~~12. Condition VI-(A)(6) refers to signs and as before, calls only for signs "along shared boundaries." Signs at the boundaries may not adequately warn about contaminants that may be carried or mobilized by waters flowing from LANL within p~~P~~ueblo territories. We have requested that the permit state that LANL will give a supply of signs to the nearby pueblos and allow them to place them. This seems like a practical solution. It would be helpful if LANL would disclose the reasons for its reluctance to post or provide signs, if such it is.

~~12.~~ 13. The draft (Condition VI (A)(7)) calls for verification of secondary containment by equipment that manages "untreated" liquid or semi-liquid waste. But "treatment" is loosely defined as any method that modifies waste characteristics, etc. (item EE). We cannot be sure how LANL interprets "treatment" in defining equipment that must have secondary containment. Previously, CCW proposed double containment for the pipe that supplies the SET. This is not required by the draft, and the failure to require it is not explained.

~~13.~~ The draft calls for verification of water tightness of equipment that manages liquid waste only every 540 days – or 18 months. (Condition VI(A)(8)). Moreover, water tightness is established with an allowance of 50 gallons leakage per mile per 24 hours. ~~There is no explanation of the basis for such 50 gallon allowance.~~ Leakage of contaminated fluids from nuclear reactors has created a scandal for NRC. We believe that NMED should reconsider the allowance of such amount of leakage. ~~Why is 50 gallons of leakage tolerable? Lindsay – CCW agreed to this leakage amount because it is much less than the example provided that is used for other conveyances. I don't have my notes with me, but I think the example was leakage from sewage systems.~~

14.

~~14.~~ 15. The language, "the criteria for leakage is greater than permissible . . . " is grammatically incorrect, mistakenly phrased, and awkward.

~~15.~~ 16. Condition VI(A)(10), concerning solids removal, must recognize the difficulty of determining the amount of solids present. It should call for LANL to attempt to establish a fair estimate of average thickness. To require a measurement "to the nearest half foot" is pointless. Near to what? And how does one determine whe~~n~~ther the "average depth

[is] greater than one foot"? Since these values are unknown, the terms are unenforceable. NMED needs to develop enforceable terms, if only to require a good faith effort to measure the depth.

~~16.~~ 17. In Condition VI(A)(10)(a), ~~i~~It is not clear if the entire SET is divided into nine equally sized areas, thus allocating 4.5 equally sized areas per cell, which could be awkward, or if each cell is divided into nine equally sized areas.

~~17.~~ 18. The terms about removal of settled solids, as before, calls for submittal of a plan 60 days before action is taken. This is still too long, at least for the second and subsequent actions. The first removal action will establish the approved method.

~~18.~~ The last paragraph should read, "in the annual report submitted by February 1 of each year."

19.

~~19.~~ 20. Condition VI(A)(11), Facility Inspections. To call for inspections "monthly" or "weekly" begs the question—can they do ~~two~~ on August 31 and September 1? The permit should call for, e.g., a monthly inspection schedule with no two inspections less than 3 weeks apart.

~~20.~~ 21. Condition VI(A)(11)(c). What are the Permittees to do when they "note" potential findings which may suggest a breach or failure of containment?

~~21.~~ 22. Condition VI(A)(12), Containment, raises the question of duplicate remedies. It would be best to have a single description of the action required on finding a violation, so that there is no incentive to contend that a violation should be shoehorned into an inapposite category. Compare sections 12, 13, and 14. If damage to a facility component is identified, does it come within section 12 (requiring immediate corrective action and

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90 day report), section 13 (requiring correction as soon as possible, no later than 30 days), or section 14 (requiring an oral report within 24 hours, corrective action plan within 30 days)? See Condition VI(A)(13), Maintenance and Repair, Condition VI(A)(14), Damage to Structural Integrity, Condition VI(A)(18), Effluent Exceedance, Condition VI(A)(31), Release Detection System Exceedance, Condition VI(A)(37), Ground Water Exceedance, Condition VI(A)(38), Spill or Unauthorized Release, Condition VI(A)(39), Failures in Discharge Plan/Discharge Permit, Condition VI (A)(45), Termination.

~~22.~~ 23. Please check each of the above sections, as some require "notification," others require "oral notification" and "written notification." Does email count as written notification? It is essential that there is consistency throughout the permit. See Condition VI(A)(31(a) and (b)), which provide no specificity.

~~23.~~ 24. Condition VI(A)(20), Emergency Response, refers directly to the National Incident Management System (NIMS). This ought to require LANL to pre-plan for pueblo involvement and to alert and include any pueblo potentially affected by an incident. But will LANL~~they~~ do that? ~~Perhaps w~~We should ask them to confirm this.

~~24.~~ 25. Given the recent Animas spill, ~~as one recent example,~~ the emergency response procedures should be reviewed, and updated as necessary, by the Permittees at least annually.

~~25.~~ 26. Condition VI(A)(21) on installation of flow meters still requires that the meters be installed only within 180 days. It should not take that long. CCW has proposed 30 days.

~~26.~~ 27. There is no technical justification for not having the flow meters in place before discharges to and from the RLWTF begin. ~~P~~Please see example of installing monitoring

equipment prior to use of the system at Condition 30 (~~for the~~ Soil Moisture Monitoring for the SET) ~~at Condition 30~~.

~~27.~~28. Remove "RLW" from the last sentence.

~~28.~~29. Condition VI(A)(22), Calibration of Flow Meters, calls for accuracy within plus or minus 5%. We have asked for much closer tolerances—less than 1%. The Permittees have not provided a technical justification for accuracy within plus or minus~~+/-~~ 5%.

~~29.~~30. Condition VI(A)(26) on Influent Volumes—TRU, should require daily estimates in paragraph 1, since it requires reporting of such values in paragraph 3.

~~30.~~31. Condition VI(A)(28), Waste Tracking, contains the gist of our submission of June 1, 2015. This is good. Does LANL ~~they~~ use a manifest system for internal transfers?

~~31.~~32. Condition VI(A)(29) on Effluent Sampling calls for ~~Did we agree to~~ limited sampling on a monthly basis and full suites every quarter. Did NMED make such provisions on the assumption that the Commenters had endorsed such practice?~~?~~

~~32.~~33. Condition VI(A)(30), on Soil Moisture Monitoring for the SET, ~~looks good (this is a victory!), since it~~correctly requires the system to be installed and the moisture baseline and action values to be established and approved by NMED before liquids are discharged to the SET.

~~33.~~34. Did NMED call for ~~Did we agree to~~ 2% precision for the soil moisture monitoring system on the assumption that the Commenters had endorsed such practice?~~?~~

~~34. Condition VI(A)(35) allows NMED to require a new monitoring well if the existing well is not constructed in accordance with NMED guidelines. This is an improvement. Lindsay, this provision has been in the permit for a while.~~

35. Condition VI(A)(33). The title should read~~ch~~ replacement of two existing "alluvial" ground water monitoring wells.

36. Conditions VI(A)(~~-~~33) (Replacement of two existing alluvial GW monitoring wells), (34) (Monitoring well location), and (35) ~~-~~(monitoring well construction) should be listed in the voluntary posting category.

37. We note that Condition VI(A)(35) allows NMED to require a new monitoring well if the existing well is not constructed in accordance with NMED guidelines.

~~37.~~ 38. Condition VI(A)(36). CCW opposes using defective regional wells R-46, R-60, R-1 and R-14 for groundwater monitoring for reasons described by Gilkeson in various submittals to NMED.

~~38.~~ 39. Condition VI(A)(37) now observes that Permittees report newly detected exceed~~a~~ences of groundwater quality standards or toxic pollutants to NMED. It is good to note that fact, in connection with reference to NMED's powers upon identification of an ~~e~~Exceedance. What is the process for notification? ~~We need to ask about the process.~~ Currently, LANL reports its ~~the~~ "Monthly Notification of GW Data Reviewed," which is required under Consent Order Section IV.A.3.g "Notification" (which resulted from the lack of notification of chromium exceedances), to NMED. It is sent to Kieling at HWB, and Yanicak with DOE Oversight Bureau. It is also posted to the Electronic Public Reading Room. How will the GWQB be notified? ~~The permit should include language that it also goes to Michelle Hunter, Chief of GWQB.~~

~~39.~~ 40. Condition VI(A)(38) Spill or Unauthorized Release. Please define "one week"—five business days or seven days—for the Permittees to submit written notification to NMED.

~~40~~ 41. Aren't Conditions VI(A)(40), Cessation of Ops of Specific Units, and Condition VI(A)(41), Stabilization of Individual Units and Systems, really addressing matters that are ~~closure~~a necessary part of closure?

~~41~~ 42. Conditions VI(A)(41) (Stabilization) and VI(A)(42) (closure) have timing conflicts. It will be impossible for ~~Permittes~~Permittees to submit the stabilization work plan within 180 (60 + 120 days) of the effective date of the permit, when the closure plan isn't due until 180 days after the effective date. See Condition VI(A)(41(e)), which references the approved closure plan.

~~42~~ 43. Condition VI(A)(41) references integration with the Consent Order (Condition VI(A)(46)) in paragraph (g).

~~43~~ 44. Condition VI(A)(42), Closure Plan, still calls for the closure plan to be submitted after the Permit is issued and as an after-the-fact addition, not subject to the same public process. The whole permitting process is taking such a long time, there is no reason why the closure plan cannot be part of the Permit. See (i) integration with CO.

~~44~~ 45. Condition VI(A)(43) Final Closure. Are the quarterly closure status reports the same as the Condition 24 quarterly reports? Are they on the same schedule? Clarification is needed.

~~45~~ 46. Condition VI(A)(44), Post-Closure Ground Water Monitoring, should be part of the closure plan. The idea that eight quarters of groundwater monitoring may be sufficient is quite absurd.

~~46~~ 47. Condition VI(A)(46), Integration with the Consent Order, states that cleanup and corrective action of SWMUs and AOCs associated with the Facility shall be conducted solely under the Consent Order and not under this Permit. But most units comprising the

RLWTF fit the definition of SWMUs, and the draft Permit contains numerous references to what could be called corrective action. Most importantly, the Consent Order expressly states that all corrective action for releases shall be conducted under the Consent Order and not under any RCRA permit, *except* "(1) new releases of hazardous waste or hazardous constituents from operating units at the Facility, . . . " (par. III.W.1). Until closure, the RLWTF constitutes one or more "operating units." So corrective action for releases of hazardous waste *during operations* is expressly *not* governed by the Consent Order. Therefore, it is a mistake to say (as the draft does) that corrective action should be conducted under the Consent Order. There are certainly SWMUs and AOCs within TA-50 at this time. Any releases from them would be covered by the Permit, so long as they are operating units. ~~To bolster argument, need to provide storage transportainers covered in HWP and SWMUs/AOCs in CO.~~

~~17.~~18. Condition VI(A)(49), Electronic Posting, lists mandatory and voluntary posting requirements. Notably, the mandatory posting proposals mainly concern items to be filed in event of some failure of containment or in the distant future—i.e., unlikely or distant events. The voluntary posting requirements involve matters that may be more current. However, ~~I~~Commenters have no reason to believe that LANL will not comply with its voluntary posting agreements.

~~18.~~19. ~~T~~There is no mention of the Permittees posting the NMED responses. Would the public have to file an IPRA to obtain NMED responses?

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NMED
Hazardous Waste Bureau

Associate Director for ESH
Environment, Safety, and Health
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Date: AUG 28 2015
Refer To: ADESH-15-123
LAUR: 15-26307
Locates Action No.: N/A

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

Subject: Monthly Notification of Groundwater Data Reviewed in August 2015

Dear Mr. Kieling:

This letter is Los Alamos National Laboratory's (LANL's) written submission that meets notification requirements presented in Section IV.A.3.g, Notification, of the Compliance Order on Consent (Consent Order). Members of LANL's Environmental Programs met on August 13, 2015, to review new groundwater data received in July 2015. This report was prepared by comparing the data against groundwater cleanup levels, as defined in Section VIII.A.1 of the Consent Order. For comparison with U.S. Environmental Protection Agency tap water standards, the carcinogenic risk was adjusted to 1×10^{-5}, as specified in the Consent Order.

1-Day Notification
There were no instances of a contaminant detected at a concentration that exceeded the New Mexico Water Quality Control Commission or federal water quality standards for the first time (based on samples collected since June 14, 2007).

Notification was not required because there were no cases of a contaminant detected in a well screen interval or spring at a concentration that exceeded a water quality standard for the first time.

15-Day Notification
The required information for the contaminants and other chemical parameters that meet the six reporting criteria requiring written notification within 15 days is given in the accompanying report and table.

If you have questions, please contact Steve Paris at (505) 606-0915 (smparis@lanl.gov) or Hai Shen at (505) 665-5046 (hai.shen@em.doe.gov).

Sincerely,

Bruce Robinson, Program Director
Environmental Remediation Program
Los Alamos National Laboratory

Sincerely,

Christine Gelles, Acting Manager
Environmental Management
Los Alamos Field Office

BR/CG/SP:sm

Enclosure: Two hard copies with electronic files – Summary of Groundwater Data Reviewed in August 2015 That Meet Notification Requirements (EP2015-0147)

Cy: (w/enc.)
Steve Paris, ADEP ER Program, MS M992
Public Reading Room (EPRR)
ADESH Records

Cy: (Letter and CD and/or DVD)
Laurie King, EPA Region 6, Dallas, TX
Steve Yanicak, NMED-DOE-OB, MS M894
Raymond Martinez, San Ildefonso Pueblo, NM
Dino Chavarria, Santa Clara Pueblo, NM
Jake Meadows, ADESH-ENV-CP, MS K490
PRS Database

Cy: (w/o enc./date-stamped letter emailed)
Pete Padilla, Los Alamos County Utility Department, Los Alamos, NM
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Peter Maggiore, DOE-NA-LA
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Annette Russell, DOE-EM-LA
Hai Shen, DOE-EM-LA
David Rhodes, DOE-EM-LA
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Tim Goering, ADEP ER Program
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Bruce Robinson, ADEP ER Program
Randy Erickson, ADEP
Jocelyn Buckley, ADESH-ENV-CP
Mike Saladen, ADESH-ENV-CP
Tony Grieggs, ADESH-ENV-CP
Alison Dorries, ADESH-ENV-DO
Michael Brandt, ADESH
Amy De Palma, PADOPS
Craig Leasure, PADOPS

SUMMARY OF GROUNDWATER DATA REVIEWED IN AUGUST 2015 THAT MEET NOTIFICATION REQUIREMENTS

INTRODUCTION

This report provides preliminary information to the New Mexico Environment Department (NMED) concerning recent groundwater monitoring data obtained by the Los Alamos National Laboratory (the Laboratory) under its interim monitoring plan and contains results for chemical constituents that meet the six screening criteria laid out in the Compliance Order on Consent (Consent Order). The report covers groundwater samples taken from wells or springs (listed in the accompanying table) that provide surveillance of the groundwater zones indicated in the table.

The report includes one table, *Table 1: NMED 7-15 Groundwater Report*. This table contains some values that are reported when they are detected for the first time since June 14, 2007, or are greater than other data collected since that time (as specified in the Consent Order). These reported data may be similar to data gathered before June 14, 2007.

This table includes the following:

- Additional comments on results that appear to be exceptional or based on consideration of monitoring data acquired before the current result (using statistics described below)
- Supplemental information summarizing monitoring results obtained before the current result
- Sampling date, name of the well or spring, location of the well or spring, depth of the screened interval, groundwater zone sampled, analytical result, detection limit, values for regulatory standards or screening levels, and analytical and secondary validation qualifiers. Additional information describing the locations and analytical data is also included. All data have been through secondary validation.

In accordance with the Consent Order, the screening levels used include the U.S. Environmental Protection Agency (EPA) maximum contaminant levels (MCLs), the New Mexico groundwater standards, and the EPA regional screening levels for tap water (for compounds having no other regulatory standard). The EPA regional screening levels for tap water are either for cancer (10^{-6} excess risk) or noncancer risk values. The data were screened using 10 times the EPA's 10^{-6} excess cancer risk values, to achieve 10^{-5} excess cancer risk as indicated in Section VIII.A.1 of the Consent Order.

Background levels applied in Criteria 2 and 5 are the most recent NMED-approved 95% upper tolerance limits for background for each groundwater zone as set forth in the "Groundwater Background Investigation Report," prepared under Section IV.A.3.d of the Consent Order.

DESCRIPTION OF TABLE

The table is divided into separate categories that correspond to the six screening criteria in the Consent Order. Some data meet more than one of the criteria and appear in the table multiple times. The table also presents only the instances where the results exceed criteria; therefore, all six criteria may not appear in the table.

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The criteria are as follows:

C1. Detection of a contaminant that is an organic compound in a spring or screened interval of a well if that contaminant has not previously been detected in the spring or screened interval.

C2. Detection of a contaminant that is a metal or other inorganic compound at a concentration above the background level in a spring or screened interval of a well if that contaminant has not previously exceeded the background level in the spring or screened interval.

C3. Detection of a contaminant in a spring or screened interval of a well at a concentration that exceeds either one-half the New Mexico water quality standard or one-half the federal maximum contaminant level, or if there is no such standard for the contaminant, one-half the EPA Region 6 human health medium-specific screening level for tap water (now the EPA Regional Screening Levels for tap water), if that contaminant has not previously exceeded one-half such standard or screening level in the spring or screened interval.

C4. Detection of perchlorate in a spring or screened interval of a well at a concentration of 2 µg/L or greater if perchlorate at such concentration has not previously been detected in the spring or screened interval.

C5. Detection of a contaminant that is a metal or other inorganic compound in a spring or screened interval of a well at a concentration that exceeds 2 times the background level for the third consecutive sampling of the spring or screened interval.

C6. Detection of a contaminant in a spring or screened interval of a well at a concentration that exceeds either one-half the New Mexico water quality standard or one-half the federal MCL, and that has increased for the third consecutive sampling of that spring or screened interval.

The next seven columns of the table give information on monitoring results obtained prior to the current result. The columns provide summary statistics for the samples collected since January 1, 2000, for the same analyte and field preparation (for example, filtered samples). The information includes the date of the first sampling event included in the statistics, the numbers of sampling events and samples analyzed, the number of detections, and the minimum, maximum, and median concentration for detections. This information indicates whether the new result is consistent with the range of earlier data.

The subsequent columns contain location and sampling information:

Hdr 1—canyon where monitoring location is found

Zone—groundwater zone sampled by monitoring location (such as alluvial spring)

Location—monitoring location name

Screen Depth—depth of top of well screen in feet (0 for springs, –1 if unknown)

Start Date—sample date

Fld QC Type Code—identifies regular samples (REG) or field duplicates (FD)

Fld Prep Code—identifies whether samples are filtered or unfiltered

Lab Sample Type Code—indicates whether result is a primary sample (INIT) or reanalysis (RE)

Anyl Suite Code—analytical suite (such as volatile organic compounds) for analyzed compound

Analyte Desc—name of analyte

Analyte—chemical symbol for analyte or CAS (Chemical Abstracts Service) number for organic compounds

Std Result—analytical result in standard measurement units

Result/Median—ratio of the Std Result to the median of all detections since 2000

LVL Type/Risk Code—type of regulatory standard, screening level, or background value (indicating groundwater zone) used for comparison

Screen Level—value of the LVL Type/Risk Code

Exceedance Ratio—ratio of Std Result to LVL Type/Risk Code. In earlier versions of this report, the ratio was divided by the basis for comparison in the criterion, but that is no longer the case. For example, for a criterion (such as C3) that compares the value to one-half the standard, a value equal to a standard previously had an exceedance ratio of 2. The current report shows this ratio as 1.

Std Mdl—method detection limit in standard measurement units

Std Uom—standard units of measurement

Dilution Factor—amount by which the sample was diluted to measure the concentration

Lab Qual Code—analytical laboratory qualifiers indicating analytical quality of the sample

Validation Flag—secondary validation qualifier

Validation Reason Code—concatenated secondary validation codes explaining assignment of qualifiers

Anyl Meth Code—analytical method number

Lab Code—analytical laboratory name

Comment—comment on the analytical result

Table 1: NMED 7-15 Groundwater Report

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Hdr 1	Zone	Location	Screen Depth	Start Date	Fld QC Type Code	Fld Prep Code	Lab Sample Type Code	Anyl Suite Code	Analyte Desc	Analyte	Std Result	ResultMedian	LVL TypeRisk Code	Screen Level	Exceedance Ratio	Std Mdl	Std Uom	Dilution Factor	Lab Qual Code	Validation Flag	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
C1	2	2	37418	3.29	3.29	3.29	1	Pueblo Canyon (includes Acid Canyon)	Alluvial	PAO-5n	7.43	42159	REG	UF	INIT	VOC	Methylene Chloride	75-09-2	3.29	1	EPA MCL	5	0.7	3	ug/L	1	J	J	J_LAB	SW-846:8260B	GELC	
C2	15	21	38469	152	152	152	1	Pueblo Canyon (includes Acid Canyon)	Regional	R-4	792.9	42157	REG	F	INIT	METALS	Aluminum	Al	152	1	LANL Reg BG LVL	68	2.2	68	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C2	15	21	38469	0.0353	0.0756	0.048	3	Pueblo Canyon (includes Acid Canyon)	Regional	R-4	792.9	42157	REG	F	INIT	GENINORG	Ammonia as Nitrogen	NH3-N	0.0756	1.8	LANL Reg BG LVL	0.05	1.5	0.017	mg/L	1		NQ	NQ	EPA:350.1	GELC	
C2	1	1	42159	0.215	0.215	0.215	1	Pueblo Canyon (includes Acid Canyon)	Alluvial	PAO-5n	7.43	42159	REG	F	INIT	GENINORG	Ammonia as Nitrogen	NH3-N	0.215	1	LANL Avl BG LVL	0.04	5.4	0.017	mg/L	1		NQ	NQ	EPA:350.1	GELC	
C2	2	2	36696	293	293	293	1	Pueblo Canyon (includes Acid Canyon)	Alluvial	PAO-5n	7.43	42159	REG	F	INIT	METALS	Boron	B	293	1	LANL Avl BG LVL	51.89	5.6	18	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C2	2	2	37418	0.111	0.111	0.111	1	Pueblo Canyon (includes Acid Canyon)	Alluvial	PAO-5n	7.43	42159	REG	F	INIT	GENINORG	Bromide	Br(-1)	0.111	1	LANL Avl BG LVL	0.07	1.6	0.067	mg/L	1	J	J	J_LAB	EPA:300.0	GELC	
C2	6	7	36696	1	10	8.15	4	Pueblo Canyon (includes Acid Canyon)	Alluvial	PAO-5n	7.43	42159	REG	F	INIT	METALS	Cobalt	Co	1	0.1	LANL Avl BG LVL	0.5	2	1	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C2	6	7	36696	3.2	5.5	4.35	2	Pueblo Canyon (includes Acid Canyon)	Alluvial	PAO-5n	7.43	42159	REG	F	INIT	METALS	Copper	Cu	5.5	1.3	LANL Avl BG LVL	3	1.8	3	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C2	3	3	36696	0.379	0.56	0.41	3	Pueblo Canyon (includes Acid Canyon)	Alluvial	PAO-5n	7.43	42159	REG	F	INIT	GENINORG	Fluoride	F(-1)	0.379	0.9	LANL Avl BG LVL	0.27	1.4	0.033	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C2	2	2	37418	2.18	2.49	2.335	2	Pueblo Canyon (includes Acid Canyon)	Alluvial	PAO-5n	7.43	42159	REG	F	INIT	METALS	Molybdenum	Mo	2.49	1.1	LANL Avl BG LVL	2	1.2	0.165	ug/L	1		NQ	NQ	SW-846:6020	GELC	
C2	6	7	36696	7.45	10.7	7.56	3	Pueblo Canyon (includes Acid Canyon)	Alluvial	PAO-5n	7.43	42159	REG	F	INIT	METALS	Nickel	Ni	7.45	1	LANL Avl BG LVL	1	7.5	0.5	ug/L	1		NQ	NQ	SW-846:6020	GELC	
C2	3	3	36696	0.55	7.3	0.73	3	Pueblo Canyon (includes Acid Canyon)	Alluvial	PAO-5n	7.43	42159	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	7.3	10	LANL Avl BG LVL	0.57	12.8	0.17	mg/L	10		NQ	NQ	EPA:353.2	GELC	
C2	1	1	42159	0.153	0.153	0.153	1	Pueblo Canyon (includes Acid Canyon)	Alluvial	PAO-5n	7.43	42159	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.153	1	LANL Avl BG LVL	0.05	3.1	0.05	ug/L	1	J	J	J_LAB	SW-846:6850	GELC	
C2	6	7	36696	12.1	16	14.8	6	Pueblo Canyon (includes Acid Canyon)	Alluvial	PAO-5n	7.43	42159	REG	F	INIT	GENINORG	Potassium	K	14.6	1	LANL Avl BG LVL	5.21	2.8	0.05	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C2	6	7	36696	60	78.6	63	7	Pueblo Canyon (includes Acid Canyon)	Alluvial	PAO-5n	7.43	42159	REG	F	INIT	GENINORG	Sodium	Na	64.7	1	LANL Avl BG LVL	15.54	4.2	0.1	mg/L	1		J-	I6a	SW-846:6010C	GELC	
C2	6	7	36696	7.3	58.3	17	7	Pueblo Canyon (includes Acid Canyon)	Alluvial	PAO-5n	7.43	42159	REG	F	INIT	GENINORG	Sulfate	SO4(-2)	58.3	3.4	LANL Avl BG LVL	24.83	2.3	1.33	mg/L	10		NQ	NQ	EPA:300.0	GELC	
C2	2	2	36696	340	349	344.5	2	Pueblo Canyon (includes Acid Canyon)	Alluvial	PAO-5n	7.43	42159	REG	F	INIT	GENINORG	Total Dissolved Solids	TDS	349	1	LANL Avl BG LVL	139	2.5	3.4	mg/L	1		NQ	NQ	EPA:160.1	GELC	
C2	2	2	37418	0.987	4.35	2.6685	2	Pueblo Canyon (includes Acid Canyon)	Alluvial	PAO-5n	7.43	42159	REG	F	INIT	GENINORG	Total Phosphate as Phosphorus	PO4-P	0.987	0.4	LANL Avl BG LVL	0.05	19.7	0.017	mg/L	1		NQ	NQ	EPA:365.4	GELC	
C2	6	7	36696	6.31	6.31	6.31	1	Pueblo Canyon (includes Acid Canyon)	Alluvial	PAO-5n	7.43	42159	REG	F	INIT	METALS	Vanadium	V	6.31	1	LANL Avl BG LVL	1	6.3	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C2	6	7	36696	8.34	10.2	7.77	2	Pueblo Canyon (includes Acid Canyon)	Alluvial	PAO-5n	7.43	42159	REG	F	INIT	METALS	Zinc	Zn	10.2	1.3	LANL Avl BG LVL	2	5.1	3.3	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C3	2	2	37418	3.29	3.29	3.29	1	Pueblo Canyon (includes Acid Canyon)	Alluvial	PAO-5n	7.43	42159	REG	UF	INIT	VOC	Methylene Chloride	75-09-2	3.29	1	EPA MCL	5	0.7	3	ug/L	1	J	J	J_LAB	SW-846:8260B	GELC	J-flag value
C3	3	3	36696	0.55	7.3	0.73	3	Pueblo Canyon (includes Acid Canyon)	Alluvial	PAO-5n	7.43	42159	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	7.3	10	EPA MCL	10	0.7	0.17	mg/L	10		NQ	NQ	EPA:353.2	GELC	highest result so far
C3	25	29	39519	1.25	6.8	2.3	29	Sandia Canyon	Regional	R-36	766.9	42129	REG	F	RE	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	6.8	3	EPA MCL	10	0.7	0.425	mg/L	25	H	J-	I9a	EPA:353.2	GELC	highest result so far
C5	15	16	38488	2.3	35.2	11.75	16	Pueblo Canyon (includes Acid Canyon)	Regional	R-2	908.4	42166	REG	F	INIT	METALS	Manganese	Mn	6.83	0.6	LANL Reg BG LVL	2.94	2.3	2	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C5	12	18	38823	2	5.17	4.495	18	Pueblo Canyon (includes Acid Canyon)	Regional	R-4	792.9	42157	REG	F	INIT	GENINORG	Perchlorate	ClO4	2	0.4	LANL Reg BG LVL	0.46	4.3	0.2	ug/L	4		NQ	NQ	SW-846:6850	GELC	lowest result so far
C5	37	44	38580	1.35	3.31	2.225	44	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-15	958.6	42128	REG	F	RE	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.22	1.4	LANL Reg BG LVL	0.89	3.6	0.17	mg/L	10	H	J-	I9a	EPA:353.2	GELC	
C5	15	19	38671	6.96	8.31	7.51	19	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Regional	R-24	825	42157	FD	F	INIT	GENINORG	Chloride	Cl(-1)	7.87	1	LANL Reg BG LVL	3.57	2.2	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C5	15	19	38671	6.96	8.31	7.51	19	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Regional	R-24	825	42157	REG	F	INIT	GENINORG	Chloride	Cl(-1)	7.87	1	LANL Reg BG LVL	3.57	2.2	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C5	14	18	38671	10.1	33.1	14.1	17	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Regional	R-24	825	42157	FD	F	INIT	METALS	Zinc	Zn	12.2	0.9	LANL Reg BG LVL	3.89	3.1	3.3	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	14	18	38671	10.1	33.1	14.1	17	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Regional	R-24	825	42157	REG	F	INIT	METALS	Zinc	Zn	12.3	0.9	LANL Reg BG LVL	3.89	3.2	3.3	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	25	29	39519	1.25	6.8	2.3	29	Sandia Canyon	Regional	R-36	766.9	42129	REG	F	RE	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	6.8	3	LANL Reg BG LVL	0.89	7.6	0.425	mg/L	25	H	J-	I9a	EPA:353.2	GELC	highest result so far
C5	11	16	38930	0.215	2.57	0.817	16	Upper Los Alamos Canyon (includes DP Canyon)	Alluvial	LAO-3a	4.7	42163	REG	F	INIT	GENINORG	Bromide	Br(-1)	0.275	0.3	LANL Avl BG LVL	0.07	3.9	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C5	13	19	38978	2	5.42	2.8	13	Upper Los Alamos Canyon (includes DP Canyon)	Alluvial	LAO-3a	4.7	42163	REG	F	INIT	METALS	Chromium	Cr	2.86	1	LANL Avl BG LVL	1	2.9	2	ug/L	1	J	J	J_LAB	SW-846:6020	GELC	
C5	16	24	38978	0.227	0.961	0.8385	24	Upper Los Alamos Canyon (includes DP Canyon)	Alluvial	LAO-3a	4.7	42163	REG	F	INIT	GENINORG	Fluoride	F(-1)	0.847	1	LANL Avl BG LVL	0.27	2.4	0.033	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C5	13	19	38978	134	2470	240	19	Upper Los Alamos Canyon (includes DP Canyon)	Alluvial	LAO-3a	4.7	42163	REG	F	INIT	METALS	Molybdenum	Mo	134	0.6	LANL Avl BG LVL	2	67	0.165	ug/L	1		NQ	NQ	SW-846:6020	GELC	
C5	11	16	38930	0.229	0.614	0.418	16	Upper Los Alamos Canyon (includes DP Canyon)	Alluvial	LAO-3a	4.7	42163	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.239	0.6	LANL Avl BG LVL	0.05	4.8	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	
C5	14	20	38978	32.6	75.4	46	20	Upper Los Alamos Canyon (includes DP Canyon)	Alluvial	LAO-3a	4.7	42163	REG	F	INIT	GENINORG	Sodium	Na	42.1	0.9	LANL Avl BG LVL	15.54	2.7	0.1	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	16	23	38978	0.11	0.296	0.1645	16	Upper Los Alamos Canyon (includes DP Canyon)	Alluvial	LAO-3a	4.7	42163	REG	F	INIT	GENINORG	Total Phosphate as Phosphorus	PO4-P	0.149	0.9	LANL Avl BG LVL	0.05	3	0.017	mg/L	1		NQ	NQ	EPA:365.4	GELC	
C5	13	19	38978	2.66	4.14	3.09	17	Upper Los Alamos Canyon (includes DP Canyon)	Alluvial	LAO-3a	4.7	42163	REG	F	INIT	METALS	Vanadium	V	3.09	1	LANL Avl BG LVL	1	3.1	1	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C5	10	14	40297	156	195	175	14	Pueblo Canyon (includes Acid Canyon)	Intermediate	TW-2Ar	102	42158	REG	F	INIT	METALS	Boron	B	159	0.9	LANL Int BG LVL	15.12	10.5	15	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	10	14	40297	36.3	43.3	37.75	14	Pueblo Canyon (includes Acid Canyon)	Intermediate	TW-2Ar	102	42158	REG	F	INIT	GENINORG	Calcium	Ca	37.4	1	LANL Int BG LVL	17.31	2.2	0.05	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	10	14	40297	40.2	50.8	45.95	14	Pueblo Canyon (includes Acid Canyon)	Intermediate	TW-2Ar	102	42158	REG	F	INIT	GENINORG	Chloride	Cl(-1)	45.9	1	LANL Int BG LVL	7.78	5.9	0.67	mg/L	10		NQ	NQ	EPA:300.0	GELC	
C5	10	14	40297	2.17	20.1	3.605	14	Pueblo Canyon (includes Acid Canyon)	Intermediate	TW-2Ar	102	42158	REG	F	INIT	METALS	Nickel	Ni	2.17	0.6	LANL Int BG LVL	1	2.2	0.5	ug/L	1		NQ	NQ	SW-846:6020	GELC	
C5	10	14	40297	0.469	0.585	0.493	14	Pueblo Canyon (includes Acid Canyon)	Intermediate	TW-2Ar	102	42158	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.483	1	LANL Int BG LVL	0.05	9.7	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	
C5	10	14	40297	249	299	286.5	14	Pueblo Canyon (includes Acid Canyon)	Intermediate	TW-2Ar	102	42158	REG	F	INIT	GENINORG	Total Dissolved Solids	TDS	283	1	LANL Int BG LVL	127	2.2	3.4	mg/L	1		NQ	NQ	EPA:160.1	GELC	

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Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Hdr 1	Zone	Location	Screen Depth	Start Date	Fld QC Type Code	Fld Prep Code	Lab Sample Type Code	Anyl Suite Code	Analyte Desc	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std Mdl	Std Uom	Dilution Factor	Lab Qual Code	Validation Flag	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
C5	13	15	38839	150	162	156	15	Pueblo Canyon (includes Acid Canyon)	Intermediate	R-3i	215.2	42156	REG	F	INIT	GENINORG	Alkalinity-CO3+HCO3	ALK-CO3+HCO3	155	1	LANL Int BG LVL	52	3	0.725	mg/L	1		NQ	NQ	EPA:310.1	GELC	
C5	12	13	38839	84.6	122	101	13	Pueblo Canyon (includes Acid Canyon)	Intermediate	R-3i	215.2	42156	REG	F	INIT	METALS	Boron	B	122	1.2	LANL Int BG LVL	15.12	8.1	15	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	13	15	38839	0.148	0.279	0.1675	12	Pueblo Canyon (includes Acid Canyon)	Intermediate	R-3i	215.2	42156	REG	F	INIT	GENINORG	Bromide	Br(-1)	0.149	0.9	LANL Int BG LVL	0.03	6	0.067	mg/L	1	J	J	J_LAB	EPA:300.0	GELC	
C5	12	13	38839	54.8	60	57.8	13	Pueblo Canyon (includes Acid Canyon)	Intermediate	R-3i	215.2	42156	REG	F	INIT	GENINORG	Calcium	Ca	58.9	1	LANL Int BG LVL	17.31	3.3	0.05	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	13	15	38839	34.4	44.9	37.7	15	Pueblo Canyon (includes Acid Canyon)	Intermediate	R-3i	215.2	42156	REG	F	INIT	GENINORG	Chloride	Cl(-1)	44.8	1.2	LANL Int BG LVL	7.76	5.8	0.67	mg/L	10		NQ	NQ	EPA:300.0	GELC	
C5	12	13	38839	15.1	16.8	15.8	13	Pueblo Canyon (includes Acid Canyon)	Intermediate	R-3i	215.2	42156	REG	F	INIT	GENINORG	Magnesium	Mg	16.3	1	LANL Int BG LVL	6.12	2.7	0.11	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	12	13	38839	8.69	9.7	8.7	13	Pueblo Canyon (includes Acid Canyon)	Intermediate	R-3i	215.2	42156	REG	F	INIT	METALS	Nickel	Ni	8.69	0.8	LANL Int BG LVL	1	8.7	0.5	ug/L	1		NQ	NQ	SW-846:6020	GELC	
C5	13	15	38839	0.104	3.45	2.41	15	Pueblo Canyon (includes Acid Canyon)	Intermediate	R-3i	215.2	42156	REG	F	INIT	GENINORG	Perchlorate	ClO4	1.91	0.8	LANL Int BG LVL	0.05	38.2	0.2	ug/L	4		NQ	NQ	SW-846:6850	GELC	
C5	13	15	38839	251	437	319	15	Pueblo Canyon (includes Acid Canyon)	Intermediate	R-3i	215.2	42156	REG	F	INIT	GENINORG	Total Dissolved Solids	TDS	319	1	LANL Int BG LVL	127	2.5	3.4	mg/L	1		NQ	NQ	EPA:160.1	GELC	
C5	12	13	38839	7.72	10.2	9.38	13	Pueblo Canyon (includes Acid Canyon)	Intermediate	R-3i	215.2	42156	REG	F	INIT	GENINORG	Uranium	U	7.72	0.8	LANL Int BG LVL	0.72	10.7	0.067	ug/L	1		NQ	NQ	SW-846:6020	GELC	
C5	12	12	38837	141	296	169.5	12	Pueblo Canyon (includes Acid Canyon)	Intermediate	POI-4	159	42156	REG	F	INIT	GENINORG	Alkalinity-CO3+HCO3	ALK-CO3+HCO3	141	0.8	LANL Int BG LVL	52	2.7	0.725	mg/L	1		NQ	NQ	EPA:310.1	GELC	
C5	11	11	38837	223	250	236	11	Pueblo Canyon (includes Acid Canyon)	Intermediate	POI-4	159	42156	REG	F	INIT	METALS	Boron	B	223	0.9	LANL Int BG LVL	15.12	14.7	15	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	12	12	38837	0.0905	0.179	0.118	11	Pueblo Canyon (includes Acid Canyon)	Intermediate	POI-4	159	42156	REG	F	INIT	GENINORG	Bromide	Br(-1)	0.114	1	LANL Int BG LVL	0.03	3.8	0.067	mg/L	1	J	J	J_LAB	EPA:300.0	GELC	
C5	11	11	38837	39.2	53	48.4	11	Pueblo Canyon (includes Acid Canyon)	Intermediate	POI-4	159	42156	REG	F	INIT	GENINORG	Calcium	Ca	39.2	0.8	LANL Int BG LVL	17.31	2.3	0.05	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	12	12	38837	42.5	49.9	46.05	12	Pueblo Canyon (includes Acid Canyon)	Intermediate	POI-4	159	42156	REG	F	INIT	GENINORG	Chloride	Cl(-1)	48	1	LANL Int BG LVL	7.76	6.2	0.67	mg/L	10		NQ	NQ	EPA:300.0	GELC	
C5	11	11	38837	1.1	2.1	1.645	10	Pueblo Canyon (includes Acid Canyon)	Intermediate	POI-4	159	42156	REG	F	INIT	METALS	Cobalt	Co	1.47	0.9	LANL Int BG LVL	0.5	2.9	1	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C5	11	11	38837	8.46	11.4	10.1	11	Pueblo Canyon (includes Acid Canyon)	Intermediate	POI-4	159	42156	REG	F	INIT	METALS	Nickel	Ni	8.46	0.8	LANL Int BG LVL	1	8.5	0.5	ug/L	1		NQ	NQ	SW-846:6020	GELC	
C5	12	12	38837	0.234	0.372	0.3065	12	Pueblo Canyon (includes Acid Canyon)	Intermediate	POI-4	159	42156	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.327	1.1	LANL Int BG LVL	0.05	6.5	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	
C5	11	11	38837	42.6	53	45.9	11	Pueblo Canyon (includes Acid Canyon)	Intermediate	POI-4	159	42156	REG	F	INIT	GENINORG	Sodium	Na	47.4	1	LANL Int BG LVL	12.19	3.9	0.1	mg/L	1		J+	I8b	SW-846:6010C	GELC	
C5	12	12	38837	331	393	368	12	Pueblo Canyon (includes Acid Canyon)	Intermediate	POI-4	159	42156	REG	F	INIT	GENINORG	Total Dissolved Solids	TDS	339	0.9	LANL Int BG LVL	127	2.7	3.4	mg/L	1		NQ	NQ	EPA:160.1	GELC	
C5	13	13	38479	0.032	1.69	1.14	13	Pueblo Canyon (includes Acid Canyon)	Intermediate	POI-4	159	42156	REG	F	INIT	GENINORG	Total Phosphate as Phosphorus	PO4-P	1.47	1.3	LANL Int BG LVL	0.08	18.4	0.017	mg/L	1		J	I4a	EPA:365.4	GELC	

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Memo to: New Mexico Environment Department, Ground Water Quality Bureau ~~MED File~~
From: Communities for Clean Water ~~L. A. Lovejoy, Jr. CCW et al. mm9-15)~~
Date: ~~14~~9 September 2015
Re: ~~CCW; notes re~~ 8/31/15 draft DP-1132 permit – Comments for discussion at 9/17/15 meeting

Communities for Clean Water (CCW) has ~~We have~~ the comments that follow about NMED's draft permit for DP-1132 dated August 31, 2015. We note, in addition, that CCW and other commenters have a basic question whether the RLWTF should be regarded as exempt from regulation under the Hazardous Waste Act and RCRA by reason of the Wastewater Treatment Unit exemption. We have raised this issue with you and believe that you consider this issue to be outside the ambit of these negotiations. Accordingly, setting that issue aside, the draft permit raises the following questions:

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1. We request that the format b~~B~~e consistent. Please put the titles of the Conditions in parenthes~~e~~is following the "Condition XX."
2. Definitions: The definition of Incident Command System (Section II, item P) does not make express reference to any specific existing system, such as the Department of Homeland Security National Incident Management System. Presumably, this is what is meant. The DHS NIMS system calls for ~~includes~~ procedures that are pre-established and endorsed by participating authorities. Thus, under this system, the nearby pueblos would be included in planning and, when potentially affected, included in operation of the ICS.
3. The definition of "synthetic liner" (item AA) is confusing. Can the liner be both beneath and on the sides of the unit or system, as is the case with the SET?~~.~~
4. The definition of "tank" (item BB) follows the RCRA definition (40 CFR § 260.10). Thus, presumably, it adopts the "parking lot" test for a tank: ~~It~~the item must be self-

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supporting if filled and placed on a flat surface (like a parking lot). We have seen no engineering report that confirms that the SET "tanks" meet that test.

5. Part III, last sentence on p. 8. Why does the permit allow that 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.WW NMAC"? Then NMED may require a Discharge Permit Modification?

6. Part V(D) of the definitions states that the low-level RLWTF may be altered, bypassed, etc. in accordance with the Permit Conditions. It remains problematic for Commenters/Hearing Requesters that the Permit ~~is intended~~ can be interpreted to apply to a facility other than the one to which their Comments and Hearing Request were ~~intended to apply~~addressed; viz. the physical plant which they toured under LANL's auspices on April 14, 2015.

7. Conditions: Condition VI(A)(1) provides for an annual update of the facility process. Apparently, tThis is needed because process modifications can be made without prior NMED approval. See below.

8. Condition VI(A)(2) calls for notification to NMED of changes that are not maintenance and also not "significant." Notice may be only 30 days before the change. However, rRegulations call for public notice and a possible hearing on a "discharge permit modification." See 20.6.2.3108. They call for much more than 30 days advance notice. Does "significant" in the Permit mean a change that is a "discharge permit modification"? If so, it might be better simply to use the regulatory language.

9. Language in the last paragraph of VI(A)(2) needs to be reviewed as it contains leftovers from the EPRR language. But it does raise an issues about Condition 49 and the need for the Permittees to post the NMED responses. See below.

10 Condition VI(A)(3) calls for submission of any changes that could constitute a 20.6.2.7.P "discharge permit modification" before going into effect. The regulation defines a discharge permit modification as a change in the location of the outfall, significant increase in the quantity of the discharge, significant change in the quality of the discharge, or as required by the Secretary. ~~(~~As planned, no such modifications may occur, since the outfall will not move, and quantity and quality of discharge may not change. But what about "discharges" to MES or SET? Would changes in such discharges require the procedure outlined in VI(A)(3)?~~)~~

~~10~~ 11. Section 20.6.2.3108 of the regulations calls for notice to nearby landowners and the public, submission of comments, publication of NMED's proposed action, a period for comments and requests for hearing, and (under certain conditions) a hearing. Condition VI(A)(3) of t~~T~~he draft permit does not do so. Is the permit intended to exclude the public processes called for by the regulations?

~~11~~ 12. Condition VI~~-~~(A)(6) refers to signs and as before, calls only for signs "along shared boundaries." Signs at the boundaries may not adequately warn about contaminants that may be carried or mobilized by waters flowing from LANL within p~~P~~ueblo territories. We have requested that the permit state that LANL will give a supply of signs to the nearby pueblos and allow them to place them. This seems like a practical solution. It would be helpful if LANL would disclose the reasons for its reluctance to post or provide signs, if such it is.

~~12~~ 13. The draft (Condition VI (A)(7)) calls for verification of secondary containment by equipment that manages "untreated" liquid or semi-liquid waste. But "treatment" is loosely defined as any method that modifies waste characteristics, etc. (item EE). We cannot be sure how LANL interprets "treatment" in defining equipment that must have secondary containment. Previously, CCW proposed double containment for the pipe that supplies the SET. This is not required by the draft, and the failure to require it is not explained.

~~13.~~ The draft calls for verification of water tightness of equipment that manages liquid waste only every 540 days – or 18 months. (Condition VI(A)(8)). Moreover, water tightness is established with an allowance of 50 gallons leakage per mile per 24 hours. ~~There is no explanation of the basis for such 50 gallon allowance.~~ Leakage of contaminated fluids from nuclear reactors has created a scandal for NRC. We believe that NMED should reconsider the allowance of such amount of leakage. ~~Why is 50 gallons of leakage tolerable? Lindsay – CCW agreed to this leakage amount because it is much less than the example provided that is used for other conveyances. I don't have my notes with me, but I think the example was leakage from sewage systems.~~

14.

~~14~~ 15. The language, "the criteria for leakage is greater than permissible . . . " is grammatically incorrect, mistakenly phrased, and awkward.

~~15~~ 16. Condition VI(A)(10), concerning solids removal, must recognize the difficulty of determining the amount of solids present. It should call for LANL to attempt to establish a fair estimate of average thickness. To require a measurement "to the nearest half foot" is pointless. Near to what? And how does one determine whether the "average depth

[is] greater than one foot"? Since these values are unknown, the terms are unenforceable. NMED needs to develop enforceable terms, if only to require a good faith effort to measure the depth.

~~16.~~17. In Condition VI(A)(10)(a), i~~I~~t is not clear if the entire SET is divided into nine equally sized areas, thus allocating 4.5 equally sized areas per cell, which could be awkward, or if each cell is divided into nine equally sized areas.

~~17.~~18. The terms about removal of settled solids, as before, calls for submittal of a plan 60 days before action is taken. This is still too long, at least for the second and subsequent actions. The first removal action will establish the approved method.

~~18.~~ The last paragraph should read, "in the annual report submitted by February 1 of each year."

19.

~~19.~~20. Condition VI(A)(11). Facility Inspections. To call for inspections "monthly" or "weekly" begs the question—can they do two~~it~~ on August 31 and September 1? The permit should call for, e.g., a monthly inspection schedule with no two inspections less than 3 weeks apart.

~~20.~~21. Condition VI(A)(11)(c): What are the Permittees to do when they "note" potential findings which may suggest a breach or failure of containment?

~~21.~~22. Condition VI(A)(12), Containment, raises the question of duplicate remedies. It would be best to have a single description of the action required on finding a violation, so that there is no incentive to contend that a violation should be shoehorned into an inapposite category. Compare sections 12, 13, and 14. If damage to a facility component is identified, does it come within section 12 (requiring immediate corrective action and

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90 day report), section 13 (requiring correction as soon as possible, no later than 30 days), or section 14 (requiring an oral report within 24 hours, corrective action plan within 30 days)? See Condition VI(A)(13), Maintenance and Repair, Condition VI(A)(14), Damage to Structural Integrity, Condition VI(A)(18), Effluent Exceedance, Condition VI(A)(31), Release Detection System Exceedance, Condition VI(A)(37), Ground Water Exceedance, Condition VI(A)(38), Spill or Unauthorized Release, Condition VI(A)(39), Failures in Discharge Plan/Discharge Permit, Condition VI (A)(45), Termination.

~~22.~~23. Please check each of the above sections, as some require "notification," others require "oral notification" and "written notification." Does email count as written notification? It is essential that there is consistency throughout the permit. See Condition VI(A)(31(a) and (b)), which provide no specificity.

~~23.~~24. Condition VI(A)(20), Emergency Response, refers directly to the National Incident Management System (NIMS). This ought to require LANL to pre-plan for pueblo involvement and to alert and include any pueblo potentially affected by an incident. But will LANL ~~they~~ do that? ~~Perhaps w~~We should ask them to confirm this.

~~24.~~25. Given the recent Animas spill, ~~as one recent example,~~ the emergency response procedures should be reviewed, and updated as necessary, by the Permittees at least annually.

~~25.~~26. Condition VI(A)(21) on installation of flow meters still requires that the meters be installed only within 180 days. It should not take that long. CCW has proposed 30 days.

~~26.~~27. There is no technical justification for not having the flow meters in place before discharges to and from the RLWTF begin. ~~SPlease s~~See example of installing monitoring

equipment prior to use of the system at Condition 30 (~~for the~~ Soil Moisture Monitoring for the SET)~~ at Condition 30~~.

~~27.~~28. Remove "RLW" from the last sentence.

~~28.~~29. Condition VI(A)(22), Calibration of Flow Meters, calls for accuracy within plus or minus 5%. We have asked for much closer tolerances—less than 1%. The Permittees have not provided a technical justification for accuracy within plus or minus~~+/-~~ 5%.

~~29.~~30. Condition VI(A)(26) on Influent Volumes—TRU, should require daily estimates in paragraph 1, since it requires reporting of such values in paragraph 3.

~~30.~~31. Condition VI(A)(28), Waste Tracking, contains the gist of our submission of June 1, 2015. This is good. Does LANL ~~they~~ use a manifest system for internal transfers?

~~31.~~32. Condition VI(A)(29) on Effluent Sampling calls for ~~Did we agree to~~ limited sampling on a monthly basis and full suites every quarter. Did NMED make such provisions on the assumption that the Commenters had endorsed such practice?~~?~~

~~32.~~33. Condition VI(A)(30), on Soil Moisture Monitoring for the SET, ~~looks good (this is a victory!), since it~~correctly requires the system to be installed and the moisture baseline and action values to be established and approved by NMED before liquids are discharged to the SET.

~~33.~~34. Did NMED call for ~~Did we agree to~~ 2% precision for the soil moisture monitoring system on the assumption that the Commenters had endorsed such practice?~~?~~

~~34. Condition VI(A)(35) allows NMED to require a new monitoring well if the existing well is not constructed in accordance with NMED guidelines. This is an improvement. Lindsay, this provision has been in the permit for a while.~~

35. Condition VI(A)(33). The title should readch replacement of two existing "alluvial" ground water monitoring wells.

36. Conditions VI(A)(33) (Replacement of two existing alluvial GW monitoring wells), (34) (Monitoring well location), and (35) (monitoring well construction) should be listed in the voluntary posting category.

37. We note that Condition VI(A)(35) allows NMED to require a new monitoring well if the existing well is not constructed in accordance with NMED guidelines.

~~37~~38. Condition VI(A)(36). CCW opposes using defective regional wells R-46, R-60, R-1 and R-14 for groundwater monitoring for reasons described by Gilkeson in various submittals to NMED.

~~38~~39. Condition VI(A)(37) now observes that Permittees report newly detected exceedaences of groundwater quality standards or toxic pollutants to NMED. It is good to note that fact, in connection with reference to NMED's powers upon identification of an eExceedance. What is the process for notification? ~~We need to ask about the process.~~ Currently, LANL reports its ~~the~~ "Monthly Notification of GW Data Reviewed," which is required under Consent Order Section IV.A.3.g "Notification" (which resulted from the lack of notification of chromium exceedances), to NMED. It is sent to Kieling at HWB, and Yanicak with DOE Oversight Bureau. It is also posted to the Electronic Public Reading Room. How will the GWQB be notified? ~~The permit should include language that it also goes to Michelle Hunter, Chief of GWQB.~~

~~39~~40. Condition VI(A)(38) Spill or Unauthorized Release. Please define "one week"—five business days or seven days—for the Permittees to submit written notification to NMED.

~~40.~~ 41. Aren't Conditions VI(A)(40), Cessation of Ops of Specific Units, and Condition VI(A)(41), Stabilization of Individual Units and Systems, really addressing matters that are ~~closure~~a necessary part of closure?

~~41.~~ 42. Conditions VI(A)(41) (Stabilization) and VI(A)(42) (closure) have timing conflicts. It will be impossible for ~~Permittes~~Permittees to submit the stabilization work plan within 180 (60 + 120 days) of the effective date of the permit, when the closure plan isn't due until 180 days after the effective date. See Condition VI(A)(41(e)), which references the approved closure plan.

~~42.~~ 43. Condition VI(A)(41) references integration with the Consent Order (Condition VI(A)(46)) in paragraph (g).

~~43.~~ 44. Condition VI(A)(42), Closure Plan, still calls for the closure plan to be submitted after the Permit is issued and as an after-the-fact addition, not subject to the same public process. The whole permitting process is taking such a long time, there is no reason why the closure plan cannot be part of the Permit. See (i) integration with CO.

~~44.~~ 45. Condition VI(A)(43) Final Closure. Are the quarterly closure status reports the same as the Condition 24 quarterly reports? Are they on the same schedule? Clarification is needed.

~~45.~~ 46. Condition VI(A)(44), Post-Closure Ground Water Monitoring, should be part of the closure plan. The idea that eight quarters of groundwater monitoring may be sufficient is quite absurd.

~~46.~~ 47. Condition VI(A)(46), Integration with the Consent Order, states that cleanup and corrective action of SWMUs and AOCs associated with the Facility shall be conducted solely under the Consent Order and not under this Permit. But most units comprising the

RLWTF fit the definition of SWMUs, and the draft Permit contains numerous references to what could be called corrective action. Most importantly, the Consent Order expressly states that all corrective action for releases shall be conducted under the Consent Order and not under any RCRA permit, *except* "(1) new releases of hazardous waste or hazardous constituents from operating units at the Facility, . . . " (par. III.W.1). Until closure, the RLWTF constitutes one or more "operating units." So corrective action for releases of hazardous waste *during operations* is expressly *not* governed by the Consent Order. Therefore, it is a mistake to say (as the draft does) that corrective action should be conducted under the Consent Order. There are certainly SWMUs and AOCs within TA-50 at this time. Any releases from them would be covered by the Permit, so long as they are operating units. ~~To bolster argument, need to provide storage transportainers covered in HWP and SWMUs/AOCs in CO.~~

~~17.~~ 18. Condition VI(A)(49), Electronic Posting, lists mandatory and voluntary posting requirements. Notably, the mandatory posting proposals mainly concern items to be filed in event of some failure of containment or in the distant future—i.e., unlikely or distant events. The voluntary posting requirements involve matters that may be more current. However, ~~I~~Commenters have no reason to believe that LANL will not comply with its voluntary posting agreements.

~~18.~~ 19. ~~T~~There is no mention of the Permittees posting the NMED responses. Would the public have to file an IPRA to obtain NMED responses?

Communities For Clean Water

Memo to: Steve Huddleson, Ground Water Quality Bureau
New Mexico Environment Department (NMED)
From: Communities for Clean Water (CCW)
Date: November 23, 2015
RE: CCW Comments to September 18, 2015 draft DP-1132 permit

Steve,

The September 18, 2015 NMED draft discharge permit, DP-1132, released for review on September 28, 2015, raises the following questions and comments for CCW:

1. Table of Contents: Change title of Condition 31 to "Soil Moisture Monitoring System Exceedance" to reflect change in the draft permit.
2. II.G, II.H: Given that the RLWTF is intended to be a "zero discharge" facility, does the definition of "discharge" or of "effluent" refer to any substance or event normally occurring at the RLWTF? It seems not.
3. II.Q: It should be noted in the permit that the definition of Incident Command System refers to a specific system developed by the Department of Homeland Security.
4. II.R: The definition of "leak detection system" seems to assume that a secondary containment system is in use. The definition should also apply to single containment leak-detection systems.
5. II.U: The definition of "open unit or system" has a misstatement. Should it state "in which"?
6. II.Y: The definition of "secondary containment" would not be met by some planned piping systems, which would not have a "foundation or base" as described.

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7. II.Z: As described, a "settled solids measurement device" is not designed to measure the depth (thickness) of settled solids. However, this is the use to which it is put later in the permit. See sec. VI(A)(10). The definition should be fixed to include this purpose.

8. The definition of "tank" (item CC) follows the Resource Conservation and Recovery Act ("RCRA") definition (40 CFR § 260.10). Thus, presumably, it adopts the "parking lot" test for defining a tank: the item must be self-supporting if filled and placed on a flat surface (like a parking lot). We have seen no engineering report or engineer's statement confirming that the SET "tanks" meet the RCRA definition.

9. The Draft contains "Findings" (sec. IV, A-D), which state that the facility is discharging effluent or leachate, which may move into ground water. There is no basis for such statements, which are in fact untrue.

10. The Authorization to Discharge (sec. V.C) is unnecessary and should not be given to the Permittees, since no discharges are planned. The statements in section V.C, authorizing the Permittees to "discharge" into the Mechanical Evaporator System ("MES") or the Solar Evaporative Tank ("SET") System are not logical, because "discharge" is defined as a release that may move directly or indirectly into ground water or interfere with health, etc. (sec. II.G.) A discharge into the MES or the SET is not calculated to move into ground water or interfere with health. Further, the authorization to discharge through Outfall 051 is not proper, since the Permittees state that the RLWTF will be a "zero-discharge" facility; Permittees do not propose to make any discharges through Outfall 051 and should not be given authority to do so.

11. The draft refers to the Influent Collection System (sec. V.D). Since NMED identifies that system as part of the regulated facility, the Permit should incorporate a

schematic and a scale drawing depicting the collection system, which, as part of the regulated facility, is subject to inspection and operational oversight by NMED.

12. Likewise, the Permit should incorporate a schematic and a scale drawing of the other elements of the permitted facility, i.e., the Low-level Radioactive Waste Water Treatment System, the Transuranic ("TRU") Waste Water Treatment System, the Secondary Treatment System, the MES, and the SET. Such systems are all subject to inspection and oversight by the regulator, NMED. Plans and specifications are required to be on file before the commencement of construction. See 20.6.2.1202, 20.6.2.3107 NMAC.
13. The draft Permit calls for approval by NMED of system or unit modifications, based on public comment. (Sec. VI.A.3). However, the public processes specified in 20.6.2.3108 NMAC apply only to a "discharge permit modification" as defined in 20.6.2.7.P. NMAC. The definition in 20.6.2.7.P NMAC is limited to modifications that significantly change the quantity or quality of the discharge, or as required by the Secretary. In the instance of the RLWTF there will be no changes in the quantity or quality of the discharge, since there will be no discharge. Therefore, we submit, the Permit should state instead that the Secretary has determined that any change in waste transportation, storage or treatment equipment or methods constitutes a "discharge permit modification" and requires a public process under the rules. The Permit should also state that the processes laid out in Sec. VI.A.3 are in addition to, and do not exclude, the processes called for in 20.6.2.3108-3114 NMAC.
14. CCW understood from the September 17, 2015 technical meeting that Applicants would contact CCW representatives about signs and arrange for a field trip to the area to determine the best placement for the signs. Also, see Comment [4] in September 18, 2015 draft permit for Condition 6, Signs. We are hopeful that the

signage issues can be resolved in discussions with the Applicants - prior to our next meeting.

15. The draft (Sec. VI (A)(7)) calls for verification of secondary containment by equipment that manages "untreated" liquid or semi-liquid waste. But "treatment" is loosely defined as any method that modifies waste characteristics, etc. (Sec. II.FF). We cannot be sure how LANL interprets "treatment," in defining equipment that must have secondary containment. CCW has proposed double containment for the pipe that supplies the SET. This is not required in the draft, and the failure to require it is not explained.

16. CCW continues to believe that the provision of a plan 60 days before removal of settled solids is too long. (Sec. VI(A)(10)). The method of removal of solids will have been established in the first round of removal. It is not necessary to provide 60 days' notice for each round, unless the methods change.

17. Condition VI(A)(12), Containment, is the first of several sections that concern responses to identified emergencies and violations. See VI(A)12, 13, 14, 15, 18, 31, 37, 38, 39. It would be best to have a single regulatory structure for such situations. The Permit might require the Permittees, when a violation or an unintended release is identified, to follow these steps:

    a. Report informally, but not just orally, to NMED (i.e., email) within 24 hours.

    b. Take action as promptly as reasonably possible (e.g., that day) to prevent potential releases from the source term.

    c. When an exceedance of an effluent is reported in analytical results, Applicants are required to "collect and submit for analysis a subsequent sample for the particular analyte that was in exceedance." Condition VI(A)(18).

d. Submit a report on the problem and a corrective action plan within 14 days, or ask for more time within 14 days. Work, other than emergency work, should not proceed without NMED's approval.

e. The plan should include a schedule for stages of work, ending in a report of completion, which NMED must approve.

Such a framework could be contained in Condition VI(A)(13), Maintenance and Repair, and incorporated by cross-reference in Condition VI(A)(14), Damage to Structural Integrity, Condition VI(A)(18), Effluent Exceedance, Condition VI(A)(31), Release Detection System Exceedance, Condition VI(A)(37), Ground Water Exceedance, Condition VI(A)(38), Spill or Unauthorized Release, and Condition VI(A)(39), and Failures in Discharge Plan/Discharge Permit.

18. Condition VI(A)(14). Please change reference to Condition VI(E)(53) to "Extension of Time."
19. Condition VI(A)(20), Emergency Response Procedures, refers directly to the National Incident Management System (NIMS). This ought to require LANL to pre-plan for pueblo involvement and to alert and include any pueblo potentially affected by an incident. But will LANL do that? Please confirm this.
20. Further, the emergency response procedures should be review annually, not on a triennial basis. CCW previously submitted support for our position on this important issue.
21. Condition VI(A)(21) on installation of flow meters still requires that the meters be installed only within 180 days. But there is no technical justification for not having the flow meters in place before discharges to and from the RLWTF begin. See the example of installing monitoring equipment prior to use of the system at Condition 30 (Soil Moisture Monitoring for the SET).

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22. Condition VI(A)(22), Calibration of Flow Meters, calls for accuracy within plus or minus 5% for the effluent lines to the SET, MES and Outfall 051. We have asked for much closer tolerances—less than 1%. The Applicants have not provided a technical justification for accuracy within plus or minus 5%.

23. Further, the draft permit allows for the flow meter on the 10-inch influent line to the RLWTF to be calibrated to within plus or minus 10%. Again, the Applicants have not provided technical justification for accuracy within plus or minus 10%.

24. Condition VI(A)(30). CCW objects to a 2% precision for the soil moisture monitoring system for the SET. Applicants have not provided technical justification for precision within plus or minus 2%.

25. Condition VI(A)(32) Ground Water Flow. For clarity, we suggest removing "in conjunction with the Quarterly Report" in the first sentence.

26. Condition VI(A)(36). CCW opposes using defective regional wells R-46, R-60, R-1 and R-14 for groundwater monitoring for reasons described by Gilkeson and the National Academy of Sciences in various submittals to NMED and the Ground Water Quality Bureau.

27. Condition VI(A)(42), Closure Plan. CCW supports the December 31, 2015 deadline for the Applicants to submit a proposed closure plan. CCW requests that NMED change the existing language in the permit that requires submittal of the closure plan after permit issuance.

28. The permit should clearly state when the annual updates of the Closure Plan are due to NMED. Are they due February 1 in the Annual Update (VI(A)(1)) or on another schedule?

29. Condition VI(A)(46), Integration with the Consent Order, has been revised. The reference to SWMUs and AOCs "that are contained within the Compliance Order on

Consent" is ambiguous, since that Order incorporates various lists of SWMUs and AOCs, having various different statuses. The statement that cleanup of "any future SWMUs and AOCs associated with the Facility shall be conducted solely under the Consent Order and not under this Permit" contradicts the Consent Order, which expressly excludes from its scope "(1) new releases of hazardous waste or hazardous constituents from operating units at the Facility, . . . " (par. III.W.1). It is not appropriate to include such erroneous language in DP-1132; in any case it cannot change the terms of the LANL RCRA Permit or the Consent Order.

30. Condition VI(A)(49), Electronic Posting, lists mandatory and voluntary posting requirements. There is no mention of the Permittees posting NMED responses or those of citizen groups. The Permit should state that any responses to or comments on posted reports will themselves be posted.

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Communities For Clean Water

August 29, 2016

By email to: Steven.Huddleson@state.nm.us

Mr. Steve Huddleson, P.G., C.P.G.
Manager, Pollution Prevention Section
Ground Water Quality Bureau
New Mexico Environment Department
P. O. Box 26110
Santa Fe, NM 87502

RE: Communities for Clean Water ("CCW") Comments on July 26, 2016 'final' draft permit DP-1132 and Revised Closure Plan for Los Alamos National Laboratory ("LANL") Radioactive Liquid Waste Treatment Facility ("RLWTF") at Technical Area 50 ("TA-50")

Dear Mr. Huddleson:

Thank you for providing to us, for the purpose of our continued comments, the 'final' draft Discharge Permit DP-1132 and revised Closure Plan for the LANL RLWTF. There are a number of issues that must be discussed at the August 30, 2016 meeting between the Communities for Clean Water ("CCW"), the New Mexico Environment Department (the "Department"), and the Applicants (the Department of Energy ("DOE") and the Los Alamos National Security, LLC ("LANS")) about the draft DP-1132 permit and revised closure plan.

1. Confronting additional complex meetings and possible hearings on this permit and closure plan, we have looked into the legal basis for issuing the

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discharge permit. We find that a discharge permit is only supportable where there is an actual discharge occurring or planned—a situation not present here.

The Water Quality Act ("WQA") authorizes the Water Quality Control Commission ("WQCC") to require persons to obtain "a permit for the discharge of any water contaminant" (74-6-5.A NMSA 1978), and it says that "the term of the permit shall commence on the date the discharge begins" (74-6-5(I) NMSA 1978). Regulations say the same thing as to the term of the permit. (20.6.2.3109.H NMAC).

Further, the WQCC regulations define a "discharge plan" as a plan "for any discharge of effluent or leachate which may move directly or indirectly into ground water." (20.6.2.R NMAC). The operative terms of the regulations state that "no person shall cause or allow effluent or leachate to discharge so that it may move directly or indirectly into ground water" except pursuant to a permit. (20.6.2.3104 NMAC)(*emphasis supplied*).

These WQA terms authorize the regulation of a facility that undergoes an identifiable event—termed a "discharge" of a water contaminant—by which the water contaminant is freed so that it can move toward ground water. The statutory reference to a "discharge" describes a release to the environment—not a transfer from tank to tank within a contained facility, which leaves the water and its contaminant still isolated from the environment. These terms do not authorize the regulation and permitting of the owner of a facility that is not designed or intended to release any liquid to the environment but, theoretically, could possibly fail and leak, but has not done so.

The idea that a transfer of liquid from the RLWTF to storage tanks or evaporation units, or back again, constitutes a WQA "discharge" --an event that cannot be shown to make a release toward ground water even incrementally more likely--cannot be squared with the language in the WQA and agency regulations.

Moreover, the term of a new discharge permit, as DP-1132 would be, only commences with an actual discharge. Here, the outfall in question (# 051) will indefinitely have 'zero discharge', i.e., no discharge at all. *See generally,* Exhibit 'A' attached hereto, *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).[1] Therefore, DP-1132, upon issuance, will be a nullity, and it will continue indefinitely to be a nullity.

The bottom line is that there is no basis in law or fact for issuing this permit. Probability, hope, expectation, fear, projection: none suffices to justify the time and effort all of us are spending on drafting a discharge permit for a non-discharging facility. It is not clear what NMED's purpose might be in issuing this unenforceable permit. Plainly, LANL has no plan to discharge outside the contained system of the RLWTF, allowing the water to move toward ground water. If this fact is even conceivably in dispute, we insist there be a public hearing at which it can be established that this is a 'zero discharge' facility, as everyone who has participated in the proceeding to date knows.

2. NMED has already recognized that, for LANL to avoid RCRA regulation of the RLWTF, the Wastewater Treatment Unit exemption must continue to apply, based upon the existence of an NPDES permit for Outfall #051. Indeed, the HWA permit for LANL so states. Specifically, Section 4.6 reads:

> **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. The Permittees shall not accept listed hazardous wastes as specified at 40 CFR Part 261 Subpart D at the RLWTF. (p. 86).

At the time the HWA permit was drafted, it was not clear on the permitting record that the RLWTF had become a "zero liquid discharge" facility. That is now clear. CCNS has shown (Exhibit A hereto) that there is no basis for an NPDES

[1] A copy of this filing 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.

permit for Outfall 051, since the RLWTF is a non-discharging facility. Under NMED's own analysis, there is no basis for LANL to claim the Wastewater Treatment Unit exemption from RCRA regulation for the RLWTF. Therefore, the RLWTF is a facility subject to the Resource Conservation and Recovery Act ("RCRA"). Indeed, the HWA permit in Section 4.6 already regulates the introduction of any listed wastes to the RLWTF, recognizing that the RLWTF manages hazardous wastes.

In this situation, clearly requiring full RCRA regulation of the RLWTF, we are appalled to learn in this DP-1132 proceeding that a "replacement" low-level radioactive liquid waste ("LLRLW") facility, designed by LANL to receive the same waste streams now going to the RLWTF, is being constructed by LANL without the prior approval, under a public process, of the proposed construction of a hazardous waste facility required by RCRA. The Applicants are required to submit a permit modification request to the Department's Hazardous Waste Bureau for the construction of the replacement LLRLW facility. No such application has been made. From the day the first spade went into the ground for the construction of the multi-million-dollar replacement LLRLW facility, LANL has been in continuous violation of RCRA.

3. Without waiving our serious reservations and substantive objection to this entire process, as set forth above and supported by Exhibit 'A', we submit the following comments on the 'final' draft of DP-1132 and the revised closure plan for the RLWTF:

In the Revised Closure Plan for the Draft Discharge Permit DP-1132, the final page provides a closure schedule. We note the following language:

> "In accordance with Condition 46 of the Groundwater Permit, closure of the RLWTF shall be conducted solely under the NMED Consent Order of June 2016 and not under the Ground Water Permit. Through the Consent Order, the NMED establishes priorities for characterization, cleanup and closure of SWMUs and AOCs across LANL. Therefore, actual start date for closure of the RLWTF will be dependent upon the Consent Order process, and may differ from the start date indicated in this schedule." (EPC-DO-16-208, LA-UR-16-21315, Fig. 4).

We are concerned that under the new 2016 NMED Consent Order for LANL the RLWTF is "deferred." (2016 NMED Consent Order for LANL, App. A *Solid Waste Management Unit/Area of Concern ("SWMU"/"AOC") List,* p. 28 of

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30). From what we understand, deferred sites might not be cleaned up under the Consent Order, but transferred to the NMED Hazardous Waste Permit for LANL "HWP").

Further, Outfall 051, SWMU 50-006(d), falls under Campaign "G," the "Known Cleanup Sites (above SSLs [soil screening levels]) Campaign. (Id., p. 28 of 30)..

We find Campaign No. G for the "Known Cleanup Sites (Above SSLs)" includes:

> "soil removal from twenty sites that previous investigations identified have hazardous contaminants at concentration that exceed the target risk levels of 10-5 lifetime excess cancer risk for carcinogenic Contaminants and a hazard index (HI) of 1 for non-carcinogenic Contaminants. This is an approximately 15-month campaign." (NMED Consent Order for LANL, App. C "Future Campaigns," p. C-2).

The NMED Consent Order for LANL at App. B "Milestones and Targets," includes the milestones for FY2017 and the targets for FY 2018 and FY 2019. Campaign No. G for "Known Cleanup Sites (Above SSLs)" is not included in Appendix B. Because the Consent Order does not have a completion date, there is no requirement for the existing RLWTF to be closed.

Further, the closure plan says

> "Stabilization of existing low-level treatment equipment in Building 50-001 is currently scheduled to start in the first quarter of 2019. This schedule start is contingent upon the current construction schedule, NMED issuance of DP-1132, and NMED concurrence to begin operations in the new low-level treatment facility."

It does not say which bureau – the Hazardous Waste Bureau ("HWB") or the Ground Water Quality Bureau ("GWQB") - must concur.

Further, the revised Closure Plan states:

> "This start date also allows for a 12-month probation period for the new facility, during which time the existing low-level treatment

> facility is maintained in a state of readiness. As Figure 4 (the last page of the revised Closure Plan) demonstrates, stabilization would require a little less than two years. Stabilization will leave treatment equipment empty and disconnected, so that it cannot receive additional radioactive liquid waste." (revised Closure Plan, p. 31).

But there is no closure timeline, nor a timeline for post-closure activities. We discuss these issues more fully below.

***

These points come up concerning the latest draft permit. They are numbered to correspond to the paragraphs of the November 23, 2015 memo sent by CCW to NMED:

1. Re table of contents: change made as requested.

2. Definition of "discharge" is now changed from the language, "may move directly or indirectly into ground water . . ." to, "has the potential to move . . . " The new language may suggest that the water somehow and someday could make it to ground water, but it's not moving there right now. This change departs from the statutory language concerning a "discharge" and attempts to describe a situation supporting this discharge permit, when in fact the situation required by the law does not exist. Clearly, the legal requirements for a permit cannot be altered by permit language.

3. The definition of Incident Command System should make reference to the DHS, but does not.

4. The definition of "leak detection system" still does not apply to a single containment system.

5. Typo fixed.

6. We have noted that the definition of "secondary containment" is not met by some pipe systems.

7. The definition of "settled solids measurement device" has been corrected.

8. The definition of "tank" corresponds to the RCRA definition. We note that the record does not show that the SET meets this definition.

9. The objectionable "findings" to the effect that the facility is discharging effluent or leachate so that such effluent or leachate may move directly or indirectly into ground water are unchanged. There is no basis for such statements; they are in fact untrue.

10. The objectionable "authorization to discharge" is unchanged. There is no need for such authorization, since no discharge is planned.

11. We do not understand that the drawings of the Influent Collection System, as it now exists, have been supplied.

12. We do not understand that the drawings of the low-level radioactive waste water ("LLRWW") treatment system, the TRU waste water treatment system, the secondary treatment system, the MES, and the SET are in the record, as they should be. The latest draft is actually worse than before, in that it now says that "subsequent replacement systems" are covered by the permit. There are no drawings depicting such systems, although it is said that they will be built.

13. We have requested that the permit state that any change in waste transportation, storage, or treatment equipment or methods constitutes a "discharge permit modification" and requires a public process. This has not been done.

14. There has been no contact with CCW representatives concerning signage, contrary to LANL representations.

15. There should be a definition of 'treatment" so that it will be known what equipment requires secondary containment under Sec. VI(A)(7).

16. Provision of a plan of removal of settled solids 60 days before removal is too long. (Sec. VI(A)(10)).

17. Some changes have been made with an eye to having a uniform system of requirements for reporting and remedying releases and other emergencies. We will not press the point further.

18. Change made as requested.

19. We note that the National Incident Management System ("NIMS") does require planning to involve potentially affected pueblos. LANL should give assurance that it will do so.

20. Emergency response procedures should be reviewed annually. (VI(A)(20)).

21. The draft continues to specify that flow meters be installed 180 days after the effective date of the permit. This is not acceptable, since the permit becomes effective only upon a discharge, and the RLWTF is a zero liquid discharge facility. So the requirements will not arise. Further, 180 days after a discharge is too long a delay.

22. No justification has been offered for the tolerance levels stated for flow meters.

23. No justification is offered for the 10% accuracy level for the flow meter on the ten-inch influent line.

24. No justification is offered for the 2% accuracy level for the moisture monitoring system.

25. The language is still confusing: What is the "Annual Report in conjunction with the Quarterly Report"?

26. No change is made in the reliance on defective regional wells R-46, R-60, R-1, and R-14 for monitoring.

We object to the use of "characterization" wells for the purposes of monitoring. (*Please see* Appendix A to CCW's December 13, 2013 comments by Independent Registered Geologist Robert H. Gilkeson, entitled *Deficiencies in Ground Water Protection in the Draft Groundwater DP-1132 Permit* for more information about the deficiencies in the use of these wells.*)*

27. The revised closure plan has now been received. Our comments are set forth in Exhibit 'C' *CCW Comments about Revised Closure Plan for draft Discharge Permit DP-1132,* attached to these comments.

Draft DP-1132 Section VI.A.42 states that the revised closure plan may be modified or amended at any time. This is unacceptable as there is no public process

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associated with the proposed modification or amendment. A public comment period of 30 days is provided, but there is no requirement for the Applicants to notify the public of the proposed modification or amendment; nor is there a requirement for the Department to notify the public of the public comment period.

28. Paragraph VI(A)(42) now says that corrective action for any releases from existing or future SWMUs and AOCs associated with the RLWTF shall be conducted pursuant to the Consent Order. The 2016 Consent Order says that new releases and newly discovered releases of hazardous waste or hazardous constituents from hazardous waste management units shall be addressed in the [LANL RCRA] Permit and not the consent order. (Consent Order, June 2016, at VII.A). These provisions appear to contradict one another.

29. There is no reference to posting of NMED's or citizens' responses to LANL postings in VI(A)(49). This should be added.

***

CCW provides the following additional comments as a result of proposed changes to the July 26, 2016 draft DP-1132:

1. Section II.L, definition of "impoundment," p.5. We do not find a definition for either "surface impoundment" or "impoundment" in 20.6.2 NMAC. The proposed definition is almost the RCRA definition, which reads:

> "*Surface impoundment or impoundment* means a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds, and lagoons." (40 CFR § 260.10).
>
> What is the technical justification for the new definition?

2. Section III "Introduction," third paragraph, p. 8. It would be helpful for the Department to provide a list of the current "materials contained in the administrative record."

3. Section V.D. The Waste Management/Risk Mitigation (WMRM) facility is not included in the description of "defined systems with their associated units for the process of collecting, treating, and disposing of waste water."

4. Section V.D. As stated above, we object to this permit allowing the "subsequent replacement facilities utilizing the same treatment processes located within the physical confines of TA-50" and "replacement systems" to be part of this permit.

We have not seen any documents that provide information about the proposed quality and quantity of the proposed discharges from the replacement facilities.

5. Section VI.A.10 "Settled Solids; Settled Solids Removal." What is the technical justification for removing the language "(to the nearest half foot)"? We believe the language in draft DP-857 provides clarity at (b). Please substitute the following language for (b) – "A settled solids measurement device (core sampler) shall be utilized to obtain one settled solids thickness measurement (to the nearest half foot) per sub-area."

6. Section VI.B.37 "Ground Water Exceedance." Please update reference to the NMED Consent Order for LANL in the last paragraph of this section.

7. Section VI.D.40 "Cessation of Operation of Specific Units." We believe it would be helpful to create a separate section for the 75,000-gallon concrete storage tank that will be used for emergency storage. It is confusing that the tank is included in the group of units that will cease operations and not be used for emergency storage.

8. Section VI.D.41 "Closure Plan," please see our comments about the revised Closure Plan in Exhibit "C" attached to these comments. How will the public be notified that the Applicants have submitted a modification or an amended to the Closure Plan?

9. Section VI.D.43 "Final Closure." Do we have a problem with this language? "Upon termination of the RLWTF mission.... Are they going to change the name of the new "replacement" facilities?

10. Section VI.D.46 "Integration with the Consent Order," remove "Permittees" and insert "DOE" as sole signatory of the Applicants to the 2016 Consent Order.

Thank you for your careful consideration of our comments and concerns. Please contact us with any questions or comments.

Sincerely,

Kathy Sanchez and Beata Tsosie-Pena
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Attachments:
Exhibit 'A' *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).

Exhibit 'B' Lack of Closure Performance Standards: *Pertinent Portions of the draft DP-1132 Permit, 2016 NMED Consent Order for LANL, and NMED Hazardous Waste Permit for LANL*

Exhibit 'C' *CCW Comments about Revised Closure Plan for draft Discharge Permit DP-1132*

cc: Lindsay Lovejoy, Counsel for CCW
Jon Block, Counsel for CCNS

: 13708

Lindsay A. Lovejoy, Jr.
attorney-at-law

June 17,2016

Ms. Lorena Vaughn, Paralegal/Regional Hearing Clerk
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue
Dallas, Texas 75202

Re: Request by Concerned Citizens for Nuclear Safety to Terminate NPDES Permit No. NM0028355 for Los Alamos National Laboratory Radioactive Liquid Waste Treatment Facility due to Lack of Discharges

Dear Ms. Vaughan:

Enclosed are the original and one copy of a Request on behalf of Applicant ("Petitioner") Concerned Citizens for Nuclear Safety ("CCNS"), to terminate NPDES Permit No. NM0028355 with respect to Outfall 051, which serves the Los Alamos National Laboratory Radioactive Liquid Waste Treatment Facility. Also enclosed are Exhibits to that Request.

The Request is filed pursuant to 40 C.F.R. § 124.5, which authorizes the filing of a request for permit termination by any interested person. CCNS is clearly an "interested person," and certain members of CCNS are named in the Request who demonstrate that they are interested as well. A copy of the Request and the Exhibits thereto are served simultaneously upon the U.S. Department of Energy, NNSA Los Alamos Field Office and Los Alamos National Security, LLC, which are co-operators of Los Alamos National Laboratory and hold the NPDES permit at issue here. A courtesy copy has also been send to the Secretary of the New Mexico Environment Department.

CCNS requests that you, as the Regional Hearing Clerk, refer this matter to the Regional Judicial Officer, who is designated under 40 C.F.R. § 22.51 to act as Presiding Officer in this matter.

Please do not hesitate to bring any issues that arise to my attention or to that of co-counsel, Jonathan Block Esq., of New Mexico Environmental Law Center, 1405 Luisa Street, Santa Fe, NM 87505, tel. (505) 989-9022, Ext. 22

Thank you for your assistance.

Very truly yours,

Lindsay A. Lovejoy, Jr.

Enc./ As described above

cc: Mr. Thomas Rucki
Regional Judicial Officer
U.S. Environmental Protection Agency
1445 Ross Avenue
Dallas, Texas 75202
(w/o Exhibits)

Mr. Ben Harrison
Acting Regional Counsel
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Mr. Charles F. McMillan, Director
Los Alamos National Laboratory
P.O. Box 1663 (MS K499)
Los Alamos, New Mexico 87545

Ms. Kimberly D. Lebak, Manager
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Los Alamos, New Mexico 87544

Mr. Ryan Flynn, Secretary
New Mexico Environment Department
P.O. Box 5469
Santa Fe, NM 87502-5469

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CONCERNED CITIZENS FOR NUCLEAR SAFETY EXHIBIT LIST

A. "Elimination of Liquid Discharge to the Environment from the TA-50 Radioactive Liquid Waste Treatment Facility," Moss et al. (1998).

B. Letter, Hanson and Rae to Bustamante (Sept. 3, 1998).

C. Letter, Erikson and Baca to Coleman (March 18, 1999).

D. Letter, Rae to Coleman (Dec. 22, 1999).

E. Letter, Rae to Coleman (June 13, 2000).

F. Letter, Yanicak to Coghlan (CCNS) (May 12, 1999).

G. Letter, Rae to Coleman (Oct. 22, 2001).

H. Letter, Rae to Coleman (Jan. 31, 2002).

I. Letter, Rae to Coleman (May 7, 2002).

J. Letter, Rae to Coleman (Nov. 27, 2002).

K. Letter, Rae to Strickley (Apr. 18, 2003).

L. Letter, Grieggs to Hall (May 14, 2007).

M. Letter, Grieggs to Hall (May 6, 2008).

N. Letter, Grieggs and Turner to Hall (June 3, 2010).

O. Letter, Grieggs and Turner to Hall (Aug. 19, 2010).

P. Letter, Grieggs and Turner to Hall (Sept. 16, 2010).

Q. Letter, Grieggs and Turner to Hall (Dec. 9, 2010).

R. Letter, Grieggs and Turner to Simmons (Feb. 23, 2011).

S. Letter, Grieggs and Turner to Chen (Feb. 23, 2011).

T. Letter, Grieggs and Turner to Branning (Sept. 28, 2011).

U. Letter, Grieggs and Turner to Branning (Nov. 16, 2011).

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V. Letter, Dorries and Turner to Schoeppner (July 25, 2013) (*diagrams omitted*).

W. Letter, Dorries and Smith to Hosch (Jan. 27, 2012), with attached excerpts from February 2012 Los Alamos National Laboratory, NPDES Permit No. NM0028355, 2012 NPDES Permit Re-Application, concerning Outfall 051, and Form 2C, showing no discharge from Outfall 051 after November 2010.

X. Los Alamos National Laboratory, NPDES Permit No. NM0028355, 1998 NPDES Permit Re-Application (May 1998).

Y. Letter, LANL to Saums, with Response to NMED-SWQB Review Comments, at 9-10 (Mar. 10, 1999).

Z. Letter, Rae to Hathaway with attached Benchmark Environmental report (Mar. 18, 1999).

AA. NPDES Permit No. NM0028355 Fact Sheet (Oct. 18, 1999).

BB. Letter, Gurulé to Hathaway (Nov. 25, 1998).

CC. Letter, Erickson to Hathaway (Oct. 26, 1999).

DD. LANL Comments on EPA Preliminary Draft NPDES Permit (Mar. 17, 2005).

EE. LANL NPDES Permit No. NM0028355 Comments on Draft Permit (Mar. 30, 2006).

FF. Letter, Lane to Wilmot, with attached NPDES Permit No. NM0028355 (July 17, 2007).

GG. Letter, Saums to Rae (Feb. 2, 1999).

HH. Letter, Ferguson to Gurulé (Oct. 13, 1999).

II. Letter, Yanicak to Casalina (June 2, 2011).

JJ. Final Site-Wide Environmental Impact Statement for Continued Operation of Los Alamos National Laboratory (2008) (excerpts).

KK. Letter, Grieggs to Hall (May 14, 2007).

LL. Record of Decision, Site-Wide Environmental Impact Statement for Continued Operation of Los Alamos National Laboratory, 73 Fed. Reg. 55833 (Sept. 26, 2008).

MM. Record of Decision, Site-Wide Environmental Impact Statement for Continued Operation of Los Alamos National Laboratory,74 Fed. Reg. 33232 (July 10, 2009).

NN. NPDES Permit No. NM0028355 Fact Sheet for the NPDES Permit to Discharge to Waters of the United States (June 26, 2013).

OO. Los Alamos National Laboratory, NPDES Permit No. NM0028355, Comments on Draft NPDES Permit Issued June 29, 2013 (Aug. 13, 2013).

PP. Isotopic evidence for reduction of anthropogenic hexavalent chromium in Los Alamos National Laboratory groundwater, 373 Chemical Geology 1 (May 12, 2014).

QQ. Letter, Yurdin to Dories with Inspection Report (Aug. 5, 2014).

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

SS. Letter, Honker to Dorries, with Response to Comments and Authorization to Discharge under the National Pollutant Discharge Elimination System (Aug. 12, 2014).

TT. Letter, Hosch to Lebak, with U.S. EPA Public Notice of Draft NPDES Permit(s) (Dec. 19, 2014).

UU. Letter, S. Dwyer to L. Lovejoy (Dec. 18, 2015).

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE REGION SIX REGIONAL ADMINISTRATOR

In the matter of CONCERNED CITIZENS FOR NUCLEAR SAFETY REQUEST TO TERMINATE NPDES PERMIT NM 0028355 FOR LOS ALAMOS NATIONAL LABORATORY RADIOACTIVE LIQUID WASTE TREATMENT FACILITY DUE TO LACK OF DISCHARGES

REQUEST TO TERMINATE NPDES PERMIT # NM0028355 AS TO OUTFALL 051 FOR THE RADIOACTIVE LIQUID WASTE TREATMENT FACILITY

I. STATEMENT OF FACTS.

1. This Request to Terminate NPDES Permit No. NM0028355 as to Outfall 051 is filed on behalf of the Applicant ("Petitioner" hereinafter), Concerned Citizens for Nuclear Safety ("CCNS"). The mission of CCNS, among other matters, is to address issues of public health and safety in connection with the nuclear weapons operations and legacy waste clean-up of the Los Alamos National Laboratory ("LANL"). The CCNS membership contributes financially, personally, or both to advance this mission. Members have participated in numerous hearings related to the hazardous waste, air, surface and ground water permitting of the LANL facility since the 1990s. Some CCNS members reside in the vicinity of Los Alamos, New Mexico, where LANL is located. CCNS members also reside at Santa Clara Pueblo, Pueblo de San Ildefonso, Española and Santa Fe, which are "downstream" and "downwind" of the operations of the LANL facility.

2. LANL is a federal facility within the terms of 33 U.S.C. § 1323 and 42 U.S.C. § 6961, owned by the U.S. Department of Energy ("DOE") and managed by Los Alamos National Security, LLC. LANL's functions include design and development of nuclear weapons. Such functions involve use of radioactive and hazardous materials, the release of which would be dangerous to human health and the environment.

3. Members of CCNS are at risk from the release or mismanagement of radioactive and hazardous wastes at LANL. Releases of such wastes would create a direct and immediate risk to members of CCNS.

4. CCNS members, Kathy Wanpovi Sanchez and J. Gilbert Sanchez, who live at 38 O Toh Nah Po, Santa Fe, New Mexico 87508, within 11.5 miles from Outfall 051, which serves the Radioactive Liquid Waste Treatment Facility ("RLWTF"), and 6.25 miles from the LANL boundary at State Route 4 and Jemez Road, have authorized CCNS to represent them in this proceeding and any others necessary to obtain the relief sought herein, as they are persons who would suffer harm from releases of waste from the RLWTF and facilities transporting waste to and from the RLWTF. These representative CCNS members wish to participate in proceedings under the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6901 *et seq.*, to assure that the RLWTF operates safely and is regulated pursuant to RCRA. They believe that the current regime of regulation by the New Mexico Environment Department ("NMED") Ground Water Quality Bureau, resulting from the asserted exemption of the RLWTF from RCRA regulations, does not provide sufficient scrutiny and safeguards over the operations of the RLWTF and is not lawful or appropriate, where the RLWTF does not discharge pollutants into the environment that reach the waters of the United States and is not required, or even eligible, to have a permit to do so. *See generally*, 33 U.S.C. §§ 1311, 1342, 1362(12).

5. LANL operates the RLWTF at Technical Area 50 ("TA-50") within the LANL site. The RLWTF treats liquid radioactive and hazardous wastes generated at LANL, which are delivered to the RLWTF by pipe and by truck. The RLWTF treats both low-level and transuranic radioactive and hazardous liquid waste. Such wastes contain hazardous constituents and come within the definition of "solid waste" and "hazardous waste" under RCRA, 42 U.S.C. § 6903(5), (27). RCRA is applied in New Mexico pursuant to a program under the New Mexico Hazardous Waste Act, §§ 74-4-1 *et seq.*, NMSA 1978, by action of the U.S. Environmental Protection Agency ("EPA").

6. Until late 2010, the RLWTF discharged to the environment certain pollutants that are regulated under the Clean Water Act, 33 U.S.C. § 1251 *et seq.* ("CWA"), through an outfall into a tributary to Mortandad Canyon. This outfall ("Outfall 051") is regulated under LANL's National Pollutant Discharge Elimination System ("NPDES"), 33 U.S.C. § 1342, permit No. NM0028355. LANL has maintained, and continues to maintain despite changed circumstances, that the RLWTF and its discharge through Outfall 051 are exempt from regulation under RCRA as a "wastewater treatment unit" and an NPDES discharge.[1]

7. The RLWTF was originally constructed at TA-50 in 1963. It was reconstructed in the early 2000's. The present RLWTF is designed and operated as a "zero liquid discharge" facility and has not discharged any liquid since November 2010. A 1998 LANL report[2] recited LANL's objective to attain zero liquid discharge: "Determining viable options for eliminating

[1] See 42 U.S.C. § 6903(27); 40 C.F.R. § 260.10 (*Tank system, Wastewater treatment unit*), and § 264.1(g)(6).

[2] Moss, et al., "Elimination of Liquid Discharge to the Environment from the TA-50 Radioactive Liquid Waste Treatment Facility," (1998) (Ex. A).

the discharge of treated radioactive liquid waste to Mortandad Canyon was the directive of the outfall 051 elimination working group."[3]

8. The 1998 report emphasizes that the adoption of zero liquid discharge will cause elimination of the RCRA exemption, thus imposing additional regulatory requirements: "Under RCRA, wastewater treatment facilities that are subject to NPDES permit limits may qualify for exemption from certain RCRA requirements, including engineering design standards. When the RLWTF implements zero liquid discharge, if the NPDES permit for Mortandad Canyon is deleted, current exemptions would not apply. RCRA-listed wastes are already administratively prohibited from the RLW ["Radioactive Liquid Waste"] stream. However, the potential for exposure to increased RCRA regulatory coverage with zero discharge underscores the need for better administration and documentation of compliance with WAC ["Waste Acceptance Criteria"] requirements."[4]

9. LANL's 1998 report states that the loss of the RCRA exemption was an "important consideration" in planning: "Loss of this exemption would mean that the RLWTF would be required to meet additional RCRA regulatory guidelines regarding waste treatment practices. RCRA guidelines regarding waste treatment at the RLWTF would focus on concentrations of metals and organics in the RO ["reverse osmosis"] concentrate stream and sludges produced at the RLWTF. The RLWTF would need to manage the constituents in the waste stream and so have much better knowledge of, and control over, wastes discharged to it for treatment."[5]

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[3] *Id.*, Ex. A at v.

[4] *Id.*, Ex. A at 12.

[5] *Id.*, Ex. A at 32.

10. In sum: "[T]he loss of the NPDES permit at the RLWTF will cause the loss of the RCRA exemption for the RLWTF. RCRA regulatory oversight will increase at the RLWTF. NPDES regulatory oversight will decrease."[6] Also: "As regulatory requirements become more stringent and as the possibility of eliminating outfall 051 progresses, it will be important to have complete characterization of wastes discharged to the RLWTF. . . . If the outfall 051 NPDES permit is allowed to be deleted, operation of the RLWTF will fall under RCRA guidelines. Management of waste at the source, including management of the waste generators' WAC and management of facility connections to the collection system, is a necessary part of this process. Specific monitoring regimes will be required by the RLWTF."[7]

11. If the RLWTF were regulated under RCRA, it would be subject, *inter alia*, to detailed protective RCRA requirements, calling for, *e.g.*, a public permitting process for approval of any new construction (40 C.F.R. § 270.10(f)), assurances of the engineering integrity of tank systems (40 C.F.R. §§ 264.190-.200), and completeness of closure planning (40 C.F.R. §§ 264.110-.120). LANL has maintained that these and other requirements do not apply to the RLWTF under its RCRA exemption. These requirements are applied under a public process, therefore enabling members of the public, such as CCNS's representative members, Kathy Wanpovi Sanchez and J. Gilbert Sanchez, to advocate higher levels of public health and safety assurance in the operation of the RLWTF than are provided under the New Mexico state regulation of the facility pursuant to its ground water quality regulations.

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[6] *Id.*, Ex. A at Table 6.

[7] *Id.*, Ex. A at 37.

12. Despite LANL's expressed concerns about the loss of the RCRA exemption, LANL advised NMED that zero liquid discharge at the RLWTF was LANL's "ultimate goal."[8] LANL repeatedly so advised EPA.[9] NMED has stated publicly that elimination of Outfall 051 is a desirable goal.[10]

13. During the RLWTF's reconstruction, LANL advised EPA and NMED of the upgrades.[11] LANL's January 2012 NPDES re-application lists 12 submissions concerning changes at the RLWTF.[12]

14. Elsewhere than at the RLWTF, LANL has striven to reduce the number of outfalls at LANL subject to NPDES regulation under its sitewide Outfall Reduction Program.[13] LANL

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[8] Letter, Hanson and Rae to Bustamante (Sept. 3, 1998) (Ex. B).

[9] *See* Letter, Erikson and Baca to Coleman (Mar. 18, 1999) (Ex. C); Letter, Rae to Coleman (Dec. 22, 1999) (Ex. D); Letter, Rae to Coleman (June 13, 2000) (Ex. E).

[10] *See* Letter, Yanicak to Coghlan (CCNS) (May 12, 1999) at 2 (Ex. F).

[11] *See* Letter, Rae to Coleman (Oct. 22, 2001) (Ex. G); Letter, Rae to Coleman (Jan. 31, 2002) (Ex. H); Letter, Rae to Coleman (May 7, 2002) (Ex. I); Letter, Rae to Coleman (Nov. 27, 2002) (Ex. J); Letter, Rae to Strickley (April 18, 2003) (Ex. K); Letter, Grieggs to Hall (May 14, 2007) (Ex. L); Letter, Grieggs to Hall (May 6, 2008) (Ex. M); Letter, Grieggs and Turner to Hall (June 3, 2010) (Ex. N); Letter, Grieggs and Turner to Hall (Aug. 19, 2010) (Ex. O); Letter, Grieggs and Turner to Hall (Sept. 16, 2010) (Ex. P); Letter, Grieggs and Turner to Hall (Dec. 9, 2010) (Ex. Q); Letter, Grieggs and Turner to Simmons (Feb. 23, 2011) (Ex. R); Letter, Grieggs and Turner to Chen (Feb. 23, 2011) (Ex. S); Letter, Grieggs and Turner to Branning (Sept. 28, 2011) (Ex. T); Letter, Grieggs and Turner to Branning (Nov. 16, 2011) (Ex. U); Letter, Dorries and Turner to Schoeppner (July 25, 2013) (Ex. V).

[12] Letter, Dorries and Smith to Hosch (Jan. 27, 2012) with attached excerpts from February 2012 Los Alamos National Laboratory, NPDES Permit No.NM0028355, 2012 NPDES Permit Re-Application, concerning Outfall 051, and Form 2C, showing no discharge from Outfall 051 after November 2010. (Ex. W).

[13] Los Alamos National Laboratory, NPDES Permit No. NM0028355, 1998 NPDES Permit Re-Application, at 11-12 (May 1998) (Ex. X); Letter, LANL to Saums, with Response to NMED-SWQB Review Comments, at 9-10 (Mar. 10, 1999) (Ex. Y); Letter, Rae to Hathaway with attached Benchmark Environmental report (Mar. 18, 1999) (Ex. Z); NPDES Permit No. NM0028355 Fact Sheet, at 10-14 (Oct. 18, 1999) (Ex. AA).

asked EPA to delete from the NPDES permit outfalls that are "no longer in use."[14] LANL reported that outfall 001B was out of use and could be deleted.[15] LANL stated that outfall 03A028, associated with the closed PHERMEX facility, could be deleted.[16] The 2007 NPDES permit omitted Outfalls 001B and 03A028.[17] For its part, NMED has suggested that unused outfalls be deleted from the permit.[18] LANL's NPDES application omitted these outfalls.[19] The 2008 LANL Site-Wide Environmental Impact Statement ("SWEIS") reports the closing of several outfalls.[20] In 1999 there were 36 permitted outfalls; in 2005 there were 21. Further: "Thirty-five outfalls were removed from service as a result of efforts to reroute and consolidate flows and eliminate outfalls. . ."[21]

15. The need for the RLWTF is diminishing. The 2008 LANL SWEIS shows that LANL liquid waste production has steadily declined in 1999-2005 and RLWTF discharge

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[14] Letter, Gurulé to Hathaway (Nov. 25, 1998) (Ex. BB); Letter, Erickson to Hathaway (Oct. 26, 1999) (Ex. CC).

[15] LANL Comments on EPA Preliminary Draft NPDES Permit, Part II at 5 (Mar. 17, 2005) (Ex. DD).

[16] LANL NPDES Permit No. NM0028355 Comments on Draft Permit, at 8-9, 13, 15 (Mar. 30, 2006) (Ex. EE).

[17] Letter, Lane to Wilmot with attached NPDES Permit (July 17, 2007) (Ex. FF).

[18] Letter, Saums to Rae at 5, 6 (Feb. 2, 1999) (Ex. GG); Letter, Ferguson to Gurulé (Oct. 13, 1999) (EX. HH); Letter, Yanicak to Casalina (June 2, 2011) (Ex. II).

[19] Los Alamos National Laboratory, NPDES Permit No. NM0028355, 2012 NPDES Permit Re-Application (January 27, 2012) (Ex. W).

[20] Final Site-Wide Environmental Impact Statement for Continued Operation of Los Alamos National Laboratory at 4-43, Table 4-12 at 4-44 (2008) ("SWEIS") (Ex. JJ).

[21] *Id.*, Ex. JJ, SWEIS at 4-43.

volume has steadily decreased.[22] The 2008 SWEIS notes that elimination of RLWTF discharges would minimize the potential to mobilize contaminated sediments.[23]

16. However, LANL has consistently scheduled the RLWTF outfall to remain in the NPDES permit.[24] Despite the extensive changes to the RLWTF looking to the goal of zero liquid discharge, LANL sought to continue the RCRA exemption. When LANL told EPA about planned construction of concrete "evaporation tanks" for the RLWTF, LANL also put forth its theory that the "tanks" would be exempt from RCRA.[25]

17. The 2008 SWEIS, Appendix G, discusses alternative designs for the "upgrade" of the RLWTF.[26] In the first Record of Decision ("ROD") based on the 2008 SWEIS, DOE determined to pursue design of a Zero Liquid Discharge RLWTF.[27] In a later ROD, DOE expressly determined to construct and operate a new RLWTF and operate the Zero Liquid Discharge facility.[28]

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[22] *Id.*, Ex. JJ, SWEIS Table 4-13, at 4-46; 4-48.

[23] *Id.*, Ex. JJ, SWEIS at 5-38; *see* G-76.

[24] NPDES Permit No. NM0023855 Fact Sheet for the Draft NPDES Permit to Discharge to the Waters of the United States at 21 (Oct. 18, 1999) (Ex. AA); February 2012 Los Alamos National Laboratory, NPDES Permit No. NM0028355, 2012 NPDES Permit Re-Application, concerning Outfall 051, and Form 2C, showing no discharge from Outfall 051 after November 2010 (Ex. W).

[25] Letter, Grieggs to Hall (May 14, 2007) (Ex. KK).

[26] Ex. JJ, SWEIS at G-60, G-73, G-83, G-88.

[27] Record of Decision, Site-Wide Environmental Impact Statement for Continued Operation of Los Alamos National Laboratory, 73 Fed. Reg. 55833, 55839 (Sept. 26, 2008) (Ex. LL).

[28] Record of Decision, Site-Wide Environmental Impact Statement for Continued Operation of Los Alamos National Laboratory,74 Fed. Reg. 33232, 33235 (July 10, 2009) (Ex. MM).

18. LANL's 2012 NPDES permit renewal application sought a permit for 11 outfalls, one of which was Outfall 051[29], even though Outfall 051 was falling out of use. LANL stated in the 2012 re-application that "[t]he configuration of the RLWTF and Outfall 051 will be changing in the next 5 years due to the construction of two new Concrete Evaporation Tanks at Technical Area (TA) 52 under the Zero Liquid Discharge (ZLD) Project."[30]

19. Thus, LANL sought a continued permit for Outfall 051—but expressly requested a permit only for a *possible* discharge: "The RLWTF has not discharged to Outfall 051 since November 2010. LANL requests to re-permit the outfall so that the RLWTF can *maintain the capability to discharge to the outfall should the Effluent Evaporator and/or ZLD Evaporation Tanks become unavailable due to maintenance, malfunction, and/or there is an increase in treatment capacity caused by changes in LANL scope/mission.*"[31] LANL gave no pollutant discharge data for Outfall 051 (which was not discharging anything) and explained that a "composite sample for the Form 2C constituents will be collected from Outfall 051 *when/if the RLWTF discharges effluent* to Mortandad Canyon."[32] EPA confirmed that "[t]he facility includes the outfall [051] in the application *in case the evaporator becomes unavailable* due to maintenance, malfunction, and/or capacity shortage."[33]

20. LANL's NPDES permit comments repeat that, since the RLWTF's conversion to zero liquid discharge, Outfall 051 appears in the application only as a fallback, for use in

[29] Ex. W, February 2012 Los Alamos National Laboratory, NPDES Permit No. NM0028355, 2012 NPDES Permit Re-Application, concerning Outfall 051, and Form 2C, showing no discharge from Outfall 051 after November 2010.

[30] *Id.*, Ex. W at 7 of 9.

[31] *Id.*, Ex. W at 5 of 9 (*emphasis supplied*).

[32] *Id.*, Ex W at Form 2C (*emphasis supplied*).

[33] NPDES Permit No. NM0028355 Fact Sheet for the NPDES Permit to Discharge to Waters of the United States at 12 (June 26, 2013) (Ex. NN) (*emphasis supplied*).

possible contingencies: "The Laboratory's TA-50 Radioactive Liquid Waste Treatment Facility (RLWTF) has not discharged since November 2010 as a result of using the mechanical evaporator. Additionally, RLWTF has constructed two Zero Liquid Discharge (ZLD) tanks that can passively evaporate treated effluent. The ZLD tanks are currently being processed for permitting under the NMED's Ground Water Discharge Permit program and are not currently in operation. Based on discharge records prior to November 2010, and with options of using the existing mechanical evaporator or new ZLD evaporation tanks, RLWTF would discharge to Outfall 051 only once or twice per week *if evaporation is not an option.*"[34]

21. LANL's statement, quoted above, first, admits that the RLWTF would have two options to evaporate liquid waste, *viz*: mechanical evaporator and evaporation tanks, and, second, suggests that evaporation might somehow not be "an option"—without explaining how both evaporation systems might become unavailable, nor how probable such a situation would be.

22. LANL's submission also asked leave to omit pollutant values for Outfall 051 discharges and supply them only if discharges take place: "DOE/LANS request that opportunity to provide EPA w*ith new data for Outfalls 051 a*nd 05A055, *if discharges through these outfalls are initiated* during the life of the new permit."[35]

23. A mid-2014 LANL report states: "Discharges from Outfall 051 decreased significantly after the mid-1980s and effectively ended in late 2010."[36] In late 2014 NMED

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[34] Los Alamos National Laboratory, NPDES Permit No. NM0028355, Comments on Draft NPDES Permit Issued June 29, 2013 at 3 (Aug. 13, 2013) (Ex. OO) (*emphasis supplied*).

[35] *Id.,* Ex. OO at 5, ¶ 8 (*emphasis supplied*).

[36] Isotopic evidence for reduction of anthropogenic hexavalent chromium in Los Alamos National Laboratory groundwater, 373 Chemical Geology 1, 4 (May 12, 2014) (Ex. PP).

reported to EPA Region 6 that Outfall 051 had not discharged since November 2010.[37] A LANL web site, NPDES Industrial Outfall Locations, states that "a mechanical evaporator was installed so no water has been discharged at Outfall 051 since November 2010."[38]

24. The Final Permit, dated August 12, 2014, refers to regulation of discharges from Outfall 051 *if discharges resume.*[39]

25. EPA, on December 19, 2014 issued a draft permit modification, denying a compliance schedule for Outfall 051. EPA stated that "[n]o discharge has occurred since 2010. The permittees can start evaluating the treatment technology and operation practices prior to the next discharge."[40] Thus, EPA saw no urgency to determine the Outfall's compliance, since a discharge from Outfall 051 was not viewed as imminent.

26. When LANL's permit re-application was filed in January 2012, discharges from Outfall 051 had ended only about a year before. Today, no discharges from Outfall 051 have occurred for over five years. Based on five blank years, it is apparent that LANL has no intention of discharging through Outfall 051.

II. GOVERNING LAW.

27. NPDES permits may be granted only for "the discharge of any pollutant, or combination of pollutants." 33 U.S.C. § 1342(a)(1). Regulations define "discharge" to mean

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[37] Letter, Yurdin to Dories with Inspection Report, 4th page (Aug. 5, 2014) (Ex. QQ).

[38] LANL web site, NPDES Industrial Permit Outfall Locations, http://www.lanl.gov/environment/protection/compliance/industrial-permit/index.php (reviewed on June 17, 2016) (Ex. RR).

[39] Letter, Honker to Dorries, with Response to Comments and Authorization to Discharge under the National Pollutant Discharge Elimination System at 15, 17 (Aug. 12, 2014) (*emphasis supplied*) (Ex. SS).

[40] Letter, Hosch to Lebak, with U.S. EPA Public Notice of Draft NPDES Permit(s), Fact Sheet at 4 (Dec. 19, 2014) (Ex. TT).

"[a]ny addition of a 'pollutant' or combination of pollutants to 'waters of the United States' from any 'point source.'" (40 C.F.R. § 122.2). As there is neither a "discharge" through Outfall 051, nor any plan or proposal to commence to discharge through Outfall 051, there is no basis for any permit authorizing such a discharge.

28. EPA Region 6 has said that a NPDES permit was issued for Outfall 051 because a discharge was merely *possible*: "EPA generally defers to a permit requester's determination that a discharge could occur and that permit coverage is needed."[41] But the CWA contains no authority to issue a permit for a discharge that "could occur," nor for a "capability" to discharge.

29. There are controlling precedents. EPA in 2003 issued CWA regulations for concentrated animal feeding operations ("CAFOs").[42] EPA's express premise was that any large CAFO (as defined) has the *potential* to discharge, and so must obtain a NPDES permit, even if there was no discharge: "The 'duty to apply' provision is based on the presumption that every CAFO has a *potential to discharge* and therefore must seek coverage under an NPDES permit."[43]

30. EPA's regulatory premise was conclusively rejected by the courts. In *Waterkeeper Alliance, Inc. v. U.S. Environmental Protection Agency,* 399 F.3d 486 (2d Cir. 2005), the Court of Appeals for the Second Circuit held that "in the absence of an actual addition of any pollutant to navigable waters from any point, there is no point source discharge, no statutory violation, no statutory obligation of point sources to comply with EPA regulations for point source discharges, and no statutory obligation of point sources to seek or obtain an NPDES

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[41] Letter, S. Dwyer to L. Lovejoy (Dec. 18, 2015) (Ex. UU).

[42] *See generally*, National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitation Guidelines and Standards for Concentrated Animal Feeding Operations (CAFOs), 68 Fed. Reg. 7176 (Feb. 12, 2003).

[43] *Id.*, at 7202 (*emphasis supplied*).

permit in the first instance." *Waterkeeper Alliance,* 399 F.3d at 505. In sum, "the Clean Water Act gives the EPA *jurisdiction to regulate and control only actual discharges—not potential discharges,* and certainly not point sources themselves." *Id.* (*emphasis supplied*). The court expressly ruled that, under *Chevron U.S.A. Inc. v. NRDC, Inc.*, 467 U.S. 837 (1984), analysis, EPA had *no discretion* to regulate potential discharges: "Congress has 'directly spoken to the precise question at issue' and 'the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress'." *Id.* at 506.

31. Despite that categorical ruling, after *Waterkeeper* EPA went back and drafted new CAFO regulations, again seeking to regulate facilities that were not discharging—but supposedly had a "potential" to discharge.[44]

32. EPA admitted that "the CWA subjects only actual discharges to permitting requirements rather than potential discharges."[45] However, reasoning that it could regulate "any person who discharges or proposes to discharge pollutants"[46], EPA issued 2008 CAFO rules, containing objective criteria identifying facilities that were "proposing to discharge."[47]

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[44] See Revised National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitation Guidelines for Concentrated Animal Feeding Operations in Response to Waterkeeper Decision, 71 Fed. Reg. 37744 (June 30, 2006); Revised National Pollutant Discharge Elimination System Permit Regulations for Concentrated Animal Feeding Operations; Supplemental Notice of Proposed Rulemaking, 73 Fed. Reg. 12321 (Mar. 7, 2008); Revised National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitations Guidelines for Concentrated Animal Feeding Operations in Response to Waterkeeper Decision, 73 Fed. Reg. 70418 (Nov. 20, 2008).

[45] 71 Fed. Reg. at 37746-47, 37748; *see also* 73 Fed. Reg. at 12324, 73 Fed. Reg. at 70420, 70422.

[46] 71 Fed. Reg. at 37747-48.

[47] 71 Fed. Reg. at 37744, 37748; 73 Fed. Reg. at 70422 and 70423-25.

33. The 2008 rules called "for a case-by-case evaluation by the CAFO owner or operator as to whether the CAFO discharges or proposes to discharge from its production area or land application area based on actual design, construction, operation, and maintenance."[48] EPA reasoned that "a CAFO proposes to discharge if based on an objective assessment it is designed, constructed, operated, or maintained such that a discharge will occur, not simply such that it might occur."[49]

34. The Court of Appeals for the Fifth Circuit rejected EPA's second attempt to issue CWA permits based upon a potential to discharge: "Instead, the EPA's definition of a CAFO that 'proposes' to discharge is a CAFO designed, constructed, operated, and maintained in a manner such that the CAFO will discharge. Pursuant to this definition, CAFOs propose to discharge regardless of whether the operator wants to discharge or is presently discharging. This definition thus requires CAFO operators whose facilities are not discharging to apply for a permit and, as such, runs afoul of *Waterkeeper*, as well as Supreme Court and other well-established precedent." *National Pork Producers Council v. U.S. Environmental Protection Agency,* 635 F.3d 738, 750 (5th Cir. 2011).

35. The Fifth Circuit quoted the Supreme Court (635 F.3d at 750) : "The triggering statutory term here is not the word 'discharge' alone, but 'discharge of a pollutant,' a phrase made narrower by the specific definition requiring an 'addition' of a pollutant to the water. § 1362(12)." *S.D. Warren Co. v. Maine Board of Environmental Protection,* 547 U.S. 370, 380-81 (2006). It added (635 F.3d at 750) that "several circuit courts have held that the scope of the EPA's authority under the CWA is strictly limited to the discharge of pollutants into navigable

[48] 73 Fed. Reg. at 70423.

[49] 73 Fed. Reg. at 70423-24.

waters," citing *Natural Resources Defense Council, Inc. v. EPA,* 859 F.2d 156, 170 (D.C. Cir. 1988), and *Service Oil, Inc. v. EPA,* 590 F.3d 545, 550 (8th Cir. 2009).

36. The appellate court emphasized that: "These cases leave no doubt that there must be an actual discharge into navigable waters to trigger the CWA's requirements and the EPA's authority. . . . Any attempt to do otherwise exceeds the EPA's statutory authority. Accordingly, we conclude that the EPA's requirement that CAFOs that "propose" to discharge apply for an NPDES permit is *ultra vires* and cannot be upheld." (635 F.3d at 751). The court added: "In summary, we conclude that the EPA cannot impose a duty to apply for a permit on a CAFO that 'proposes to discharge' or any CAFO before there is an actual discharge." *Id.* To repeat, "there must be an actual discharge into navigable waters to trigger the CWA's requirements and the EPA's authority." *Id.*

37. After the Fifth Circuit decision, EPA abandoned its effort to require a permit for a potential discharge. EPA withdrew regulations requiring a NPDES permit for a facility that, by regulatory tests, "proposes to discharge."[50] EPA conceded: "The EPA accepts the decision of the Court that vacated the requirement that CAFOs that propose to discharge apply for NPDES permits and the EPA lacks the discretion to reach a different conclusion."[51]

38. "The District of Columbia Circuit has held that for NPDES requirements to apply to any given set of circumstances, 'five elements must be present: (1) a *pollutant* must be (2) *added* (3) *to navigable waters* (4) *from* (5) *a point source*.' *National Wildlife Federation v. Gorsuch*, 693 F.2d 156, 165 (D.C. Cir. 1982)." *National Wildlife Federation v. Consumers*

[50] National Pollutant Discharge Elimination System Permit Regulation for Concentrated Animal Feeding Operations: Removal of Vacated Elements in Response to 2011 Court Decision, 77 Fed. Reg. 44494 (July 30, 2012).

[51] *Id.*, at 44496.

Power Co., 862 F.2d 580, 583 (6th Cir. 1988). Since the *Waterkeeper* decision, EPA's Office of General Counsel has stated, and EPA administrative proceedings have ruled, that EPA "cannot require one to obtain an NPDES permit on the basis of a mere potential to discharge." *In re Vos*, 2009 EPA ALJ LEXIS 47 at 63 (Dec. 2, 2008).

39. Thus, the courts have ruled explicitly and repeatedly, and EPA has concurred: EPA did not seek certiorari in *Waterkeepers,* nor in *National Pork Producers;* instead it withdrew the contested regulations. Clearly, EPA acquiesced in the decisions. EPA expressly conceded that EPA "lacks the discretion to" issue a NPDES permit based only on the fact that a facility may possibly discharge. EPA's issuance of a CWA permit for Outfall 051 based upon LANL's statement that Outfall 051 "could" discharge violates the CWA.

40. There is no discharge through Outfall 051. No discharge through Outfall 051 is planned or proposed. The permit should be terminated for Outfall 051.

41. LANL's NPDES permit is subject to conditions stated in 33 U.S.C. § 1342(b)(1), including that the permit "can be terminated or modified for cause including . . . change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge."[52]

42. In addition, regulations state that permit modification or revocation and reissuance are available in event of facility alterations, new information, new regulations, and similar situations. (40 C.F.R. § 122.62). Termination is available in event of a change in conditions, including discharge reduction, notably: "A change in any condition that requires either a temporary or permanent reduction or elimination of any discharge or sludge use or disposal practice controlled by the permit . . . ." (40 C.F.R. § 122.64(a)(4)).

[52] 33 U.S.C. § 1342(b)(1)(C)(iii); see § 1342(a)(3); *see also* 40 C.F.R. § 122.64.

43. Further, 40 C.F.R. § 122.64(b) states that "the Director shall follow part 124 of this chapter . . . for termination." Part 124 contains specific provisions on modification, revocation and reissuance, or termination. (40 C.F.R. § 124.5). This section allows an application to be made by "any interested person" to which the Director may respond. (40 C.F.R. § 124.5(b)). Section 124.5 directs that the agency follow the § 124.6 permitting process if modification, etc., is planned to be approved, *i.e.,* it states that if the Director tentatively determines to modify, etc., the permit, he shall prepare a draft permit under Section 124.6 or a notice of intent to terminate (40 C.F.R. §§ 124.5(c), 124.5(d)). Such draft shall follow the established procedure for review and issuance of a final permit. Further, a notice of intent to terminate is "a type of draft permit which follows the same procedures as any draft permit prepared under 124.6 of this chapter." (40 C.F.R. § 124.5(d)).

44. The validity of the NPDES permit for Outfall 051 should be reviewed under the present administrative process, because the RLWTF is an important component of LANL and receives waste from numerous sources within LANL. The availability of the RCRA wastewater treatment unit exemption and the availability of the definitional exemption from RCRA are important issues. They call for a decision based upon consideration of a single uncontradicted fact: Outfall 051 is not used to discharge any pollutants or, indeed, any liquid at all.

45. Legally and factually, the NPDES permit for Outfall 051 must be terminated. Because there is no basis for permitting Outfall 051 under the CWA, the RLWTF is subject to regulation under RCRA and, as New Mexico is a delegation state, under the New Mexico Hazardous Waste Act.

III. CONCLUSION AND REQUESTED RELIEF.

Petitioner contends that the foregoing facts and law conclusively require EPA, Region 6, to terminate permit NM 0028355 with respect to Outfall 051 due to lack of discharge.

WHEREFORE, Petitioner respectfully requests that the EPA grant this Petition and enter an order terminating NPDES permit NM 0028355 with respect to Outfall 051.

DATED: at Santa Fe, New Mexico, this 17th day of June, 2016.

Respectfully submitted,

CONCERNED CITIZENS FOR NUCLEAR SAFETY

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CERTIFICATION OF SERVICE

By our signatures above, we, Lindsay Lovejoy and Jonathan Block, hereby certify that on this day we mailed, U.S. Postal Service First Class postage pre-paid, copies of the foregoing Application with attachments to the Director of the Los Alamos National Laboratory, and the U.S. Department of Energy Los Alamos Field Office Manager:

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: 13731

Exhibit B
Lack of Closure Performance Standards
Pertinent Portions of the draft DP-1132 Permit, Revised Closure Plan, 2016 NMED Consent Order for LANL, and NMED Hazardous Waste Permit for LANL

Conditions 42, 43, 44, 45 and 46 of 7-26-16 draft DP-1132:

~~1.~~ **CLOSURE PLAN** - A closure plan is provided as an Attachment to this Discharge Permit. ~~Within 180 days from the effective date of this Discharge Permit (by DATE) the Permittees shall submit to NMED for approval a written closure plan for the Facility. The closure plan shall identify steps necessary to perform final closure of the Facility, including all units and systems at the Facility.~~

~~2.~~1. ~~At a minimum, the~~ The closure plan ~~shall~~ 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 that 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.

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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 ~~New Mexico Environment Department Hazardous Waste Bureau~~ 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.

~~If the Permittees make a~~For~~ny~~ changes ~~to the Facility~~ that would affect the implementation of the attached ~~approved~~ 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 30 days after the submittal of a modified ~~closure plan~~ 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]

~~3.~~ **FINAL CLOSURE** - **Permittee will notify the NMED a minimum of 120 days prior to** ~~**Upon cessation of operation of the Facility, system or individual unit, the Permittees shall implement the approved Closure Plan according to the approved schedule therein.**~~**initiation of closure activities at the facility.**

~~4.~~

2. 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]

~~5.~~3. **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.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.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 ~~March 1, 2005~~June 2016 Compliance Order on Consent (Consent Order) agreed to by

NMED~~,~~ and the DOE~~, and the Regents of the University of California (predecessor to LANS)~~.

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.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]

~~6.~~ 1. **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.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]

~~7.~~5.~~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 ~~are governed~~ and contained within ~~under~~ the Compliance Order on Consent (~~March 1, 2005~~June 2016~~) (~~, Consent Order) entered into between the New Mexico Environment Department 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)(*see* ~~http://www.nmenv.state.nm.us/HWB/documents/LANL_10-29-2012_Consent_Order__MODIFIED_10-29-2012.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.~~44~~1~~1~~ (Stabilization of Individual Units and Systems) and VI.D.~~42~~3 (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)]

Section 3.1"Closure Considerations" of revised Closure Plan:

NMED Consent Order of 2016: In accordance with Condition 46 of the draft Groundwater Permit, closure of the RLWTF shall be conducted solely under the NMED Consent Order of June 2016 (Re. NMED 2016) and not under the Groundwater Permit. No activities required under the Groundwater Permit shall conflict with or duplicate activities required for solid waste management units (SWMUs) and areas of concern (AOCs) identified under the Consent Order. Through the Consent Order, the NMED establishes priorities for characterization, cleanup, and closure of SWMUs and AOCs across LANL. Closure of the RLWTF will, therefore, be partly or largely dependent upon the Consent Order process used to establish cleanup priorities.

2016 Consent Order for LANL, pp. 23 -24:

VII. RELATIONSHIP TO PERMITS
A. NMED has determined that all corrective action for releases of hazardous waste or hazardous constituents at the Facility, required by Sections 3004(u) and (v) and 3008(h) of RCRA, 42 U.S.C. §§ 6924(u) and (v) and 6928(h), and Sections 74-4-4(A)(5)(h) and (i) and 74-4-4.2(B) of the HWA, shall be conducted solely under this Consent Order and not under the current or any future Hazardous Waste Facility Permit ("Permit"), with the exception of the

following five items which will be addressed in the Permit and not in this Consent Order:
1) New releases and newly discovered releases of hazardous waste or hazardous constituents from hazardous waste management units at the Facility.
2) The closure and post-closure care requirements of 20.4.1.500 NMAC (incorporating 40 C.F.R. Part 264, Subpart G), as they apply to hazardous waste management units at the Facility.
3) Implementation of the controls, including long-term monitoring, for any SWMUs or AOCs listed in the Permit in Attachment K (Listing of SWMUs and AOCs), Table K-2 (Corrective Action Complete with Controls).
4) Any corrective action conducted to address releases of hazardous waste or hazardous constituents that occur or are discovered after the date on which this Consent Order terminates pursuant to Section XXXVII (Termination) of this Consent Order.
5) Newly created SWMUs or AOCs from non-permitted operations.

B. Consistent with Subsection A above, the requirements of this Consent Order shall not terminate upon renewal of the Permit issued to DOE. The renewed Permit, and any future modifications, renewals, or reissuance of the Permit, will not include any corrective action activities, or any other requirement that is duplicative of this Consent Order. The Parties agree that Subsection A above is consistent with the intent of the Permit and, further, that any renewed Permit shall include the five excepted items described in Subsection A above.

C. The Parties enter into this Consent Order based on their understanding that this Consent Order shall be the only enforceable instrument for corrective action relating to the Facility, except for those items listed in Subsection A.1)-5) above, which shall be subject only to the Permit. For the purposes of any enforcement action taken by the State or any third party, other than the items listed in Subsection A.1)-5) above, NMED has determined that compliance with the terms of this Consent Order constitutes compliance with the requirements for corrective action under RCRA and the HWA and their implementing regulations, including Sections 3004(u) and (v) and 3008(h) of RCRA, 42 U.S.C. §§ 6924(u) and (v) and 6928(h), 40 C.F.R. Part 264, Subpart F, Sections 74-4-4.2(B) and 74-4-4(A)(5)(h) and (i) of the HWA and section 20.4.1.500 NMAC (incorporating 40 C.F.R. Part 264, Subpart F). Upon the effective date of this Consent Order, the sole mechanism for enforcing corrective action activities relating to the Facility, except as provided in Subsection A.1)-5) above, shall be this Consent Order. The State will not take any action to enforce the corrective action requirements of the existing Permit, except as to those items listed in Subsection A above. This Consent Order is an "enforceable document" pursuant to the requirements of 40 CFR § 264.101.

D. Consistent with Sections A through C of this Section, the Parties agree that the status of SWMUs and AOCs will be tracked under this Consent Order until Termination of this Consent Order. The Permit will not be updated while this Consent Order is in effect with information about the status of SWMUs and AOCs currently listed in the Consent Order except for SWMUs and/or AOCs for which DOE has been granted a permit modification for corrective action complete status.

E. Consistent with Section XXI (Certification of Completion), NMED's

determination that corrective action is complete for a SWMU or AOC placed on either the corrective action complete with controls list or the corrective action complete without controls list will be subject to the State's reservation of rights for new information. During the duration of this Consent Order, if NMED seeks to require additional work at any SWMU or AOC contained on either of the two lists for corrective action complete, NMED will initiate a permit modification to remove the SWMU or AOC from such list.

F. Upon Termination of this Consent Order pursuant to Section XXXVII, any SWMUs and/or AOCs where corrective action is not complete will be addressed under the Permit in accordance with the regulations at 20.4.1.900 NMAC (incorporating 40 C.F.R. § 270.42), 20.4.1.901 NMAC, and 20.4.1.902 NMAC, including, but not limited to, opportunities for public participation, including public notice and comment, administrative hearings, and judicial appeals.

G. The Parties agree that the rights, procedures and other protections set forth at 20.4.1.900 NMAC (incorporating 40 C.F.R. § 270.42), 20.4.1.901 NMAC, and 20.4.1.902 NMAC, including, but not limited to, opportunities for public participation, including public notice and comment, administrative hearings, and judicial appeals, do not apply to modification of the Consent Order itself.

H. This Consent Order shall establish no requirements for releases of Contaminants from SWMUs or AOCs to storm water runoff that:
1) Are permitted under DOE's National Pollutant Discharge Elimination System (NPDES) Individual Permit for storm water discharges from SWMUs and AOCs (Individual Permit) (NM0030759 or as reissued); or
2) Are from SWMUs or AOCs that DOE and EPA have determined did not require coverage under the Individual Permit (i.e., SWMUs and AOCs that were not exposed to storm water, did not contain significant industrial materials, and/or did not potentially impact surface water); or
3) Are from SWMUs or AOCs formerly permitted under the Individual Permit that were deleted from the Individual Permit.

I. For SWMUs or AOCs that are permitted under the Individual Permit, DOE may identify and implement corrective action activities pursuant to this Consent Order that address requirements of both this Consent Order and the Individual Permit. NMED's review and approval of such corrective actions shall be limited to those elements of the corrective action that specifically address requirements of this Consent Order.

NMED Hazardous Waste Permit for LANL (December 2014) – CLOSURE:

PART 9: CLOSURE
9.1 INTRODUCTION
This Permit Part addresses the three categories of permitted units at the Facility. They are identified as follows:
(1) regulated units (*i.e.,* material disposal areas G, H, L);
(2) indoor units (structures and related equipment); and

(3) outdoor units (asphalt or concrete pads and related structures and equipment):
a. co-located with a regulated unit; and
b. not co-located with a regulated unit.
Attachment J (*Hazardous Waste Management Units*), Table J-1 (*Active Portion of the Facility*), identifies the category of each permitted unit in the column titled *Type of Unit.*
This Permit does not address the closure of interim status units.
The Permittees shall adhere to the closure performance standards in Permit Section 9.2 for all the permitted units addressed in this Permit Section.
The Permittees shall close the permitted storage and treatment units in accordance with the requirements in 40 CFR §§ 264.110 through 264.116, 264.178, and 264.197 (which are incorporated herein by reference), this Permit Part (9), and the procedures described in the permitted unit-specific closure plans in Attachment G (*Closure Plans*).

9.1.1 Regulated Units
The regulated units shall not accept hazardous or mixed waste and shall undergo closure. The Permittees shall adhere to the closure performance standards in Permit Section 9.2 and the closure requirements in Permit Sections 9.3 and 9.5 for the closure of these units.

9.1.2 Indoor Units
Indoor units are buildings (*e.g.*, TA-54-412 DVRS), structures (*e.g.,* storage sheds, domes, transportainers, canopies, trailers, and permacons), or rooms within a building (*e.g.,* TA-3 Room 9010). The Permittees shall comply with the specific closure requirements in Permit Sections 9.4 and 9.5 for these units and comply with the closure performance standards in Permit Section 9.2.

9.1.3 Outdoor Units
Outdoor units are pads which are constructed of either asphalt or concrete and include, at some units, buildings, structures, or both, situated thereon. There are two distinct types of outdoor units addressed by this Permit:
(1) asphalt or concrete storage pads co-located with a regulated unit (*i.e.,* outdoor storage unit) (*e.g.,* TA-54 Area L); and
(2) asphalt storage pads not co-located with a regulated unit (*i.e.,* outdoor storage unit) (*e.g.,* TA-50-69 Outdoor Unit).
The Permittees shall comply with the specific closure requirements in Permit Sections 9.4 and 9.5 for these units and adhere to the closure performance standards in Permit Section 9.2.
Any building or structure, or its associated equipment, situated on an outdoor unit shall meet the specific closure requirements in Permit Sections 9.4 and 9.5 and meet the closure performance standard in Permit Section 9.2.

9.2 CLOSURE PERFORMANCE STANDARDS
The Permittees shall meet the following closure performance standards for permitted units identified in Permit Section 9.1.

9.2.1 Clean Closure
To achieve clean closure, the Permittees must:
(1) remove all hazardous waste residues and hazardous constituents; and
(2) ensure contaminated media do not contain concentrations of hazardous constituents greater than the clean-up levels established in accordance with Permit Sections 11.4 and 11.5. For soils the cleanup levels shall be established based on residential use. The Permittees must also demonstrate

that there is no potential to contaminate groundwater.

9.2.2 Inability to Achieve Clean Closure Performance Standards
If the Permittees are unable to achieve any one of the clean closure standards in Permit Section 9.2.1, they must:
(1) control hazardous waste residues, hazardous constituents, and, as applicable, contaminated media such that they do not exceed a total excess cancer risk of 10^{-5} for carcinogenic substances and, for non-carcinogenic substances, a target Hazard Index of 1.0 for human receptors, and meet Ecological Screening Levels established under Permit Section 11.5;
(2) minimize the need for further maintenance; and
(3) control, minimize, or eliminate, to the extent necessary to protect human health and the environment, the post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground, groundwater, surface waters, or atmosphere
(*see* 40 CFR § 264.111).
The Permittees may remove any structure pursuant to Permit Section 9.4.3.2 instead of attaining the closure performance standards under this Permit Part (9) for that structure.

9.2.2.1 Indoor Units
The Permittees shall notify the Department in accordance with 40 CFR § 264.112 if the closure performance standard at Permit Section 9.2.1(1) or (2) is not attainable for an indoor unit (*see* Permit Section 9.1.2). The notification shall include a demonstration that justifies the Permittees' inability to achieve the standard. The Permittees shall concurrently submit a permit modification request in accordance with 40 CFR §§ 264.112 and 270.42 that describes the measures that will be taken to ensure compliance with the closure performance standards at Permit Sections 9.2.2(1) through (3), and a post-closure plan, if necessary, to maintain the measures. The Permittees shall conduct any post-closure care in accordance with Permit Part 10 (*Post-Closure Care*).
The Permittees shall give notice by e-mail to persons on the e-mail notification list, in accordance with Permit Section 1.13, of the notice to the Department provided under this Permit Section (9.2.2.1).

9.2.2.2 Outdoor Units Co-located with Regulated Units
The Permittees may petition the Department for alternative closure requirements in accordance with 40 CFR § 264.110(c) if the closure performance standards at Permit Sections 9.2.1(1) and (2) are not attainable for an outdoor unit (including associated indoor structures) co-located with a regulated unit (*see* Permit Section 9.1.3(1)).
The Permittees shall give notice by e-mail to persons on the e-mail notification list, in accordance with Permit Section 1.13, of the petition to the Department provided under this Permit Section (9.2.2.2).

9.2.2.3 Other Outdoor Units
The Permittees shall notify the Department in accordance with 40 CFR § 264.112(c) if the closure performance standards at Permit Sections 9.2.1(1) and (2) are not attainable for an outdoor unit (including associated structures) *not* co-located with a regulated unit (*see* Permit Section 9.1.3(2)). The notification shall include a demonstration that justifies the Permittees' inability to achieve the standard. The Permittees shall concurrently submit a permit modification request in accordance with 40 CFR §§ 264.112 and 270.42 that describes the measures that will be taken to ensure compliance with the closure performance standards at Permit Sections 9.2.2(1) through (3), and a post-closure plan, if necessary, to maintain the measures. The Permittees shall conduct any post-closure care in

accordance with Permit Part 10 (*Post-Closure Care*).
The Permittees shall give notice by e-mail to persons on the e-mail notification list, in accordance with Permit Section 1.13, of the notice to the Department under this Permit Section (9.2.2.3).

9.3 CLOSURE REQUIREMENTS FOR REGULATED UNITS
Closure of the regulated units must meet the corrective action requirements of the March 1, 2005 Compliance Order on Consent (Consent Order). The Consent Order is an enforceable document that sets forth alternative closure requirements in accordance with 40 CFR § 264.110(c). The Permittees shall propose remedies in the Corrective Measures Evaluation Report under the Consent Order that achieve compliance with the closure performance standards at 40 CFR § 264.111. Fulfilling the requirements of the approved Corrective Measures Implementation Plan under the Consent Order shall also satisfy the requirements of 40 CFR Part 264, Subpart G.

9.4 CLOSURE REQUIREMENTS FOR INDOOR AND OUTDOOR UNITS
This section specifies the closure requirements for indoor and outdoor (asphalt and concrete pad) permitted units.

9.4.1 Closure Schedule
The Permittees shall notify the Department in writing at least 45 days prior to the date on which they expect to begin closure of a permitted unit in accordance with 40 CFR § 264.112(d)(1), which is incorporated herein by reference. The beginning of closure is marked by initiating removal of waste from a permitted unit for the purpose of closure. In accordance with 40 CFR § 264.112(d)(2), incorporated herein by reference, the date when the Permittees begin closure shall be no later than 30 days after the date on which a permitted unit receives the known final volume of hazardous wastes, or if there is a reasonable possibility that the permitted unit will receive additional hazardous wastes, no later than one year after the date on which the unit received the most recent volume of hazardous wastes. In accordance with 40 CFR § 264.113(a), within 90 days after receiving the permitted unit's final volume of hazardous waste, the Permittees shall remove or treat, as applicable, in accordance with the approved closure plan, all hazardous waste from a permitted unit.
The Permittees shall give notice by e-mail to persons on the e-mail notification list, in accordance with Permit Section 1.13, of the notice to the Department provided under this Permit Section (9.4.1).

9.4.1.1 Time Allowed for Closure
The Permittees shall complete all closure activities in compliance with this Permit Part within 180 days after receiving the final volume of hazardous waste at a permitted unit unless an extension is approved by the Department (*see* 40 CFR §§ 264.113(a)(1) and (2) or 264.113(b)(1) and (2), which are incorporated herein by reference).

9.4.2 Removal of Hazardous Waste
Within 90 days after receiving the final volume of hazardous waste at a permitted unit, the Permittees shall treat or remove from the unit all hazardous waste in accordance with 40 CFR §§ 264.112 through 114, which are incorporated herein by reference.

9.4.3 Decontamination and Removal
The Permittees shall decontaminate, remove, or both, all structures and related equipment and materials (*e.g.*, asphalt pads) in accordance with this Permit Part and the requirements for closure plans in 40 CFR §§ 264.112(b)(4) and 264.114.

9.4.3.1 Decontamination of Surfaces, Structures, and Related Equipment

The Permittees shall decontaminate by pressure-washing or steam-cleaning the floors, walls (up to 11 feet from the floor, or another height approved by the Department), and ceilings (lower than 11 feet high, or another height approved by the Department), of all surfaces and structures at permitted indoor and outdoor units as well as all related equipment (*e.g.,* railings, stairs, secondary containment pallets, piping). If such methods are not practicable, the Permittees shall propose to the Department, for its approval, an alternative decontamination method in their closure plans.

To achieve the performance standards for volatile organic compounds (VOCs), the Permittees shall decontaminate all structures and related equipment at indoor and outdoor permitted units at least twice. The Permittees shall identify and provide rationale in the sampling and analysis plan for the permitted unit and the structures and related equipment that do not undergo this type of decontamination.

The Permittees shall identify in each permitted unit's closure plan what surfaces, structures, and related equipment from the permitted unit will be decontaminated and the methods by which they will be decontaminated.

The Permittees are not required to decontaminate the outdoor permitted unit asphalt pads.

9.4.3.2 Removal of Structures, Related Equipment, and Pads

The Permittees shall ensure that structures and related equipment at permitted indoor and outdoor units that cannot be decontaminated in accordance with Permit Section 9.4.3.1 are removed (or containerized) in accordance with 40 CFR § 264.114, which is incorporated herein by reference, and managed in compliance with Permit Section 9.4.5.

The Permittees shall identify in the closure plans for each permitted unit the structures and related equipment that will be removed from the units.

After the Permittees conduct the structural assessment (in accordance with Permit Section 9.4.6) of an outdoor permitted unit constructed of asphalt, the Permittees shall remove the asphalt pad in its entirety.

9.4.4 Decontamination Verification and Soil Sampling

The Permittees shall verify that each indoor permitted unit has been decontaminated, that soils beneath each outdoor and indoor (as applicable) permitted unit are free of contamination, and that each indoor structure associated with an outdoor permitted unit has been decontaminated. Except for VOCs, the Permittees shall verify decontamination of surfaces (*e.g.,* walls, equipment, benches, pipes, doors) and that environmental media are free of contamination through sampling and analysis.

The Permittees may collect wipe samples for radionuclide analysis for use as indicators of contaminant releases in units where radionuclides were stored. The Permittees shall not, however, use these as surrogates for validation of attainment of a closure performance standard at a permitted unit (*see* 40 CFR § 270.32(b)(2)).

9.4.4.1 Decontamination Verification and Soil Sampling Activities

Wipe, chip, and liquid sampling shall be used, as appropriate, to verify the absence of hazardous constituents after decontamination of surfaces, structures, and related equipment at indoor and outdoor permitted units. Samples shall be analyzed for metals, SVOCs, and polychlorinated biphenyls (PCBs). Decontamination shall be considered verified and the clean closure performance standards in Permit Section 9.2.1 achieved when samples have hazardous constituent concentrations that are less than the detection limits for the analytical methods in the approved unit-specific closure plan.

Soils underlying pads at outdoor and indoor (as applicable) permitted units shall be sampled for total metals, VOCs, SVOCs, PCBs, and explosive compounds, as applicable.

All sampling activities shall be conducted in accordance with the Department-approved closure plans.

9.4.5 Management and Disposal Procedures for Waste Generated During Closure

By removing any hazardous wastes or hazardous waste constituents during closure, the Permittees may become a generator of hazardous waste. The Permittees shall manage and dispose of any waste generated from closure of indoor and outdoor permitted units
closed in compliance with this Permit Part and all applicable state, federal, and local requirements for wastes generated during closure activities (*see* 40 CFR § 264.114). These wastes include, but are not limited to:

(1) demolition debris;
(2) asphalt and concrete pads;
(3) containerized waste; and
(4) decontamination waste.

All decontamination waters used on structures and related equipment shall be containerized, characterized, and managed in compliance with all applicable regulations.

9.4.6 Records Review and Structural Assessment

The Permittees shall conduct a records review (review) for, and a structural assessment (assessment) of, each permitted unit prior to closure. The findings of the review and the assessment may result in a change(s) to the sampling and analysis plan (SAP) for the permitted units. If the Permittees update a SAP, they shall submit a permit modification request to the Department to amend the closure plan in accordance with Permit Section 9.4.8 and include the updated SAP in the amended closure plan.

9.4.6.1 Records Review

The Permittees shall review the permitted unit's Facility Operating Record, including but not limited to, inspection and contingency plan implementation records. The Permittees shall as a result of the review, update the list of constituents (*see* Permit Section 9.4.7.1(3), *List of Hazardous Constituents*) in the SAP, as necessary, to accurately reflect at the time of closure the hazardous wastes managed at the unit. The Review shall occur within ten days of the completed removal or treatment of all waste from the permitted unit (*see* 40 CFR 270.32(b)).

The Permittees shall determine whether any spills or releases, defects, deterioration, damage, or hazards (*e.g.,* damage to the flooring or other building materials) affecting waste containment occurred or developed during the operational life of the unit during which hazardous waste was managed. If the records indicate any such incidents, the Permittees shall include the locations of the incidents, as well as applicable sampling methods and procedures, in the updated SAP for purposes of the spill release assessment (*see* 40 CFR § 270.32(b)(2)).

9.4.6.2 Structural Assessment

The structural assessment is an assessment of a unit's physical condition and shall occur within ten days of the completed removal or treatment of all waste from the permitted unit (*see* 40 CFR 270.32(b)). The Permittees shall notify the Department at least 30 days prior to the scheduled assessment so the Department may have the opportunity to participate in the assessment. The notification shall include the date on which the Permittees expect to conduct the assessment. If the assessment reveals any evidence of a release (*e.g.,* stains) or damage (*e.g.,* cracks, gaps, chips) to the flooring or building materials, the Permittees must incorporate these locations for sampling, and include appropriate sampling procedures, in the updated SAP (*see* 40 CFR § 270.32(b)(2)).

9.4.7 Closure Plans

The Permittees shall submit to the Department for its approval a closure plan for each permitted unit

in accordance with 40 CFR § 264.112, incorporated herein by reference, and include in it all of the requirements addressed in this Permit Part, as applicable. Closure plans for indoor and outdoor permitted units (*see* Permit Sections 9.1.2 and 9.1.3) are contained in Attachment G (*Closure Plans*). The closure plans shall, at a minimum, describe how each permitted unit will be closed to meet the closure performance standards in Permit Section 9.2.
The closure plan shall include a SAP in accordance with Permit Section 9.4.7.1.
The schedule for each closure plan (*see* 40 CFR § 264.112(b)(6)) shall meet the requirements of Permit Section 9.4.1.

Notes from 8/30/16 Mtg w/NMED and Applicants
Exhibit C – Revision 1
CCW Comments about "Revised" Closure Plan for Discharge Permit
DP-1132, EPC-DO-16-208, LA-UR-16-21315

The Communities for Clean Water ("CCW") are pleased that the Applicants, the Department of Energy ("DOE") and Los Alamos National Security, LLC ("LANS"), submitted a draft DP-1132 closure plan (ENV-DO-15-0356) on December 23, 2015, prior to the December 31, 2015 deadline, to the New Mexico Environment Department ("NMED" or "the Department"). We understood, however, that the draft closure plan would be made available to CCW in December 2015, but it was not made available to us until July 26, 2016 through an email from Steve Huddleson of NMED. During the long months between December 2015 and almost the end of July 2016, the Applicants and the Department met to discuss the closure plan without inviting CCW representatives to participate. *See* Applicants' July 19, 2016 cover letter to the Department, EPC-DO-16-208, LA-UR-16-21315.

CCW first raised the need for a closure plan in our first set of comments, submitted to the Department on December 6, 2013. *See* p. 5. Amigos Bravos raised the need for a closure plan in their August 4, 2005 comments to the Department's draft permit issued April 11, 2005 and re-issued on June 11, 2005. *See* Amigos Bravos' 2005 comment letter attached to CCW's December 6, 2013 comments to NMED. Now we have an incomplete revised closure plan for our discussions, scheduled for Tuesday, August 30, 2016 in Santa Fe.

Request: CCW would appreciate a presentation about Figure 4 to the revised closure plan to ensure that we are all on the same page about what is being proposed and future closure plans. Please provide information about the draft DP-1132 Condition 41 "Stabilization of Individual Units and Systems" and the "Stabilization Plan" and the opportunities for public review, comment and opportunity to request a public hearing. Thank you.

Unclear Relationship of Revised Closure Plan and the June 2016 Consent Order for LANL: The draft closure plan states:

> "In accordance with Condition 46 of the Groundwater Permit, closure of the RLWTF shall be conducted solely under the NMED Consent Order of June 2016 and not under the Ground Water Permit."

The 2016 Consent Order states in VII.A:

> "NMED has determined that all corrective action for releases of hazardous waste or hazardous constituents at the Facility, required by Sections 3004(u) and (v) and 3008(h) of RCRA, 42 U.S.C. §§ 6924(u) and (v) and 6928(h), and Sections 74-4-4(A)(5)(h) and (i) and 74-4-4.2(B) of the HWA, shall be conducted solely under this Consent Order and not under the current or any future Hazardous Waste Facility Permit ("Permit"), with

> the exception of the following five items which will be addressed in the Permit and not in this Consent Order:
> . . . 2) The closure and post-closure care requirements of 20.4.1.500 NMAC (incorporating 40 C.F.R. Part 264, Subpart G), as they apply to hazardous waste management units at the Facility."

This leaves the impression that the draft 'final' DP-1132 Discharge Permit and the Consent Order create circular requirements.

Section 5.9 "Closure Schedule" of the revised Closure Plan states

> "[t]hrough the Consent Order, the NMED will establish the priority for RLWTF closure, which will establish a closure start date."

We note, however, that the closure of the RLWTF is **deferred** in the June 2016 Consent Order. *See* p. 28 of Appendix A "Solid Waste Management Unit/Areas of Concern List" of the 2016 Consent Order for Item Number 1295 "Solid Waste Management Unit (SWMU) 50-001(a) Waste treatment facility." The RLWTF is a deferred site with no closure date, nor is it currently assigned to a "Campaign." Further, the closure of RLWTF is not listed as a priority in Appendix B "Milestones and Targets" in the 2016 Consent Order.

We also note that the Outfall associated with Building 50-1, Item No. 1307, SWMU 50-006(d), is assigned to the "Known Cleanup Sites (Above SSLs) Campaign. *See* Appendix A, p. 28; Appendix C, "Future Campaigns" No. G, p. C-2. But Campaign G is not listed in Appendix B "Milestones and Targets." There is no definitive beginning and end of the proposed closure and post-closure monitoring. Further, there are no stated closure performance standards.

Seeking applicable closure performance standards sends us on a wild goose chase through the regulations, the draft DP-1132 permit, the revised closure plan, the 2016 Consent Order and the Department's 2014 Hazardous Waste Permit for LANL. We reference key sections of the applicable documents in Exhibit 'B' to these comments.

CCW requests that the Department and/or the Applicants walk us through the regulatory maze during the August 30, 2016 meeting.

<u>"Replacement" Facilities</u>: The Applicants did not submit a draft closure plan for the "replacement" LLW Treatment Facility, nor the "replacement" TRU Liquid Waste Treatment Facility.

Below are our preliminary comments:

1. The revised closure plan is limited to closure of the Low-Level Radioactive Liquid Waste Treatment Facility (RLWTF) at Technical Area (TA-50). *See*

Section 1 "Introduction," p. 7. It does not include closure of the Transuranic (TRU) portion of RLWTF. *See* Sec. 2.1.1 "Treatment Processes," p. 8.

The revised closure plan does not include closure plans for all the components found in Section V "Authorization to Discharge" of the July 26, 2016 draft DP-1132 permit. NMED and Applicants will work to create a "crosswalk" to make sure that all the components are included in both.

2. CCW is concerned about the lack of closure performance standards in the draft DP-1132 permit and the revised closure plan. The revised closure plan does not include closure performance standards, other than stating in Section 3.4 "Closure Completion Standard" that once the RLWTF is removed, the site will be "regraded and restored for unrestricted use." p. 17. This is inadequate for the purposes of cleanup and closure.

   The revised closure plan does not include closure performance standards. We note that Section 9.3 "Closure Requirements for Regulated Units" of the LANL Hazardous Waste Permit provides closure performance standards for a regulated unit, namely, the Radioactive Liquid Waste Treatment Facility, which received hazardous waste after July 26, 1986. *See* 40 CFR §264.90(a)(2). Closure performance standards for indoor, outdoor, regulated and co-located units are included in Exhibit B attached to these comments.

   "9.3 CLOSURE REQUIREMENTS FOR REGULATED UNITS
   Closure of the regulated units must meet the corrective action requirements of the March 1, 2005 Compliance Order on Consent (Consent Order). The Consent Order is an enforceable document that sets forth alternative closure requirements in accordance with 40 CFR §264.110(c). The Permittees shall propose remedies in the Corrective Measures Report under the Consent Order that achieve compliance with the closure performance standards at 40 CFR §264.111. Fulfilling the requirements of the approved Corrective Measures Implementation Plan under the Consent Order shall also satisfy the requirements of 40 CFR Part 264, Subpart G." 2014 NMED Hazardous Waste Permit for LANL, p. 98.

3. Section 2.1 – LANS suggested changing "in" to "is" in the last sentence of §2.1.

4. Section 2.5 "History of RLWTF Operations," in the revised closure plan, does not include the Mechanical Evaporator System ("MES"). It will be corrected.

5. Section 2.5 "History of RLWTF Operations" in the revised closure plan references 2012 for the Solar Evaporator Tank System (SET). On pages 36 and 39, the date referenced for the SET is 2010. 2012 is the correct date and it will be corrected.

   Chris talked about this section in his review.

6. Bob Beers, LANS, suggested removing language from Section 3.1 – see his memo.

   Chris said stabilization is to isolate now so that it can go to HWB under CO. They prioritize cleanup.

7. Section 3.3 "Closure Reports." Will the closure status reports and final reports be posted to the Applicants' Electronic Public Reading Room? They are mandatory posting in Con. 49 of DP-1132.

8. LANS suggested language changes in 3.5 Replacement LL Facility.

9. Section 3.5 "Replacement Low-level Facility" states that "[o]nce the new facility has been commissioned and approved for use by the NMED, low-level RLW influent will be pumped to Building TA50-230 instead of to Building TA50-01 (assuming LANL has received permission to use WMRM).

   It is unclear what "commissioned" means. We do not find such language in the New Mexico Ground and Surface Water Protection regulations, 20.6.2 NMAC. Please provide regulatory cites. LANS wants to eliminate "commissioned and approved for use by NMED. **JONI** – find reg language about NMED approving use of the new facility and submit to parties.

   Further, which entity within NMED will provide the "approval for use" of the new low-level RLW facility?

   Section 5.9 "Closure Schedule" states that NMED will concur "to begin operations in the new low-level treatment facility." Which entity within NMED will provide the "concurrence?"

10. To be transparent, the current and applicable LANL Detailed Operating Procedures (DOPs) must be cited in the revised closure plan. For example, Section 4.1.4 "Removal of Solids and Liquids from Individual Units" references the applicable LANL DOP, but does not provide a title, a document reference, effective date of the document. The current applicable document should be cited with the appropriate identifiers. It will provide a marker to check that the correct, and possibly updated or revised, procedure is being used in the future. We talked about these issues in detail earlier in the day.

11. What is the technical justification for the Department to rely on "existing LANL facility radiation survey plans and procedures," without any requirement for providing current procedures, DOPs, etc.? I didn't raise this issue in the discussions.

12. (LANL 2015) cited in Section 4.1.7 "Fixative or Paint" is not referenced on p. 33. Chris Del Signore, LANL, will track this down. He is the author of the Revised Closure Plan.

13. What is the technical justification for leaving pipe sections in place? *See* Section 4.1.8 "Removal of Conveyance Piping." If the site is going to be cleaned up to "unrestricted use," then all pipe sections should be removed. We re-read this section. Karen Armijo (the new Gene Turner) (she used to be with the DOE ABQ office; been around for decades), said this is part of the stabilization to protect GW. After stabilization under DP-1132, it goes to HWB. She did not specify if it would be dealt with by the 2016 CO or the HWP.

    We put on record now that we want all pipes to be removed.

    Review the timelines to see the details.

14. Section 4.2.3 "Removal of Balance of Plant Facilities and Structures," including stormwater systems. We are concerned about whether the stormwater systems will be protected for future use.

15. Section 5.1 "Surface Water and Groundwater Controls." What reporting is required if "temporarily stored waste containers" fail? Please provide regulatory cites. Under Con. * Reporting and Con. 38 Spill or Unauthorized Release. Also stormwater pollution prevention plans (SWPPP) will be prepared. The areas will be covered.

16. Fix that the 2016 CO is b/t NMED & DOE; eliminate "Permittee" language.

17. Section 5.3, last sentence in first paragraph, LANS wants to change last few words to "packaged as waste and disposed." I suggested adding – as required by local, state and federal statutes and regs.

18. Section 5.6 "Groundwater Monitoring Plan." Please see our comments about the July 26, 2016 draft DP-1132 about the inadequacy of the groundwater wells proposed to be used for post-closure groundwater monitoring. We incorporate those comments and Appendix A to those comments entitled, "Deficiencies in Ground Water Protection in the Draft Ground Water DP-1132 Permit," by Independent Registered Geologist Robert H. Gilkeson, here. Huddleson agreed to talk with Bob if he is able. We recognized that based on Bob's work, they will install two new alluvial wells under DP-1132.

19. Section 5.6 "Groundwater Monitoring Plan." Why are radionuclides, such as tritium, plutonium and americium, excluded from the groundwater monitoring plan? Beers quoted the exemption for source and accelerated generated rads under the Atomic Energy Act. I mentioned that NMED has required sampling

and reporting. WE'LL NEED TO PROVIDE EXAMPLES – LANL HWP? Air permits? IP? AND PROVIDE LANGUAGE IN OUR COMMENTS.

20. Section 5.7 "Characterization of Wastes Generated." Why is perchlorate not listed as a contaminant of concern for sampling? LANS will consider adding perchlorate in the second bullet.

When will the LANL Sampling Analysis Plan be made available for public review and comment?

21. Section 5.9 "Closure Schedule." Please provide a definition of "balance-of-plant" facility. *See* last paragraph, p. 31. Chris Del Signore said it is all the other structures that are not process equipment, e.g, HVAC, etc.

WITH RESPECT TO THE TABLES and FIGURES, WE MADE SUGGESTIONS TO EASE THE PUBLIC'S REVIEW DURING THE PUBLIC COMMENT PERIOD:

22. Change first row from black and white so that it will be easier to read.
23. Table 2 – will provide reference that N.A. means "not applicable"
24. Table 2 – will add 1963 to Year Built for Outfall 051 on p. 39.
25. Table 7 – add reference for the letters in the lst column; will add references for PVDF, HDPE, etc.
26. Table 9 – will add reference to CST – the caustic tanks; and DI – deionized water
27. Fig. 1 – add the building number on the roofs; include the new LLW facility under construction; and where proposed TRU facility will be located
28. Fig. 2 – enlarge it so that it is easier to read
29. Fig. 4 – make one for TRU

Communities for Clean Water

A Northern New Mexico Network

13 January 2017

By email to: Steven.Huddleson@state.nm.us, Jennifer.Hower@state.nm.us

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Re: Communities for Clean Water comments on Oct. 1, 2016 final draft permit DP-1132 and revised closure plan for Los Alamos National Laboratory Radioactive Liquid Waste Treatment Facility at Technical Area 50

Dear Steve and Jennifer:

Communities for Clean Water ("CCW") makes the following comments on the final draft of DP-1132 (November 15, 2016), incorporating by reference herein its earlier comments, including, but not limited to those concerning the changes made in the final draft allowing LANL a thirty-day (30) period for posting notices rather than the 7 (seven) day time period which had been agreed upon and was in the September draft:

: 13752

1. In this matter, the Environment Department ("NMED") seeks to issue a discharge permit ("DP-1132") under the New Mexico Water Quality Act (74-6-1 *et seq*. NMSA 1978) ("WQA") for the Radioactive Liquid Waste Treatment Facility ("RLWTF") at Los Alamos National Laboratory ("LANL") to the U.S. Department of Energy ("DOE") and Los Alamos National Security, LLC ("LANS"). For two principal reasons this discharge permit may not issue:

A. First, the RLWTF facility will not *discharge* any water or contaminants. Without a discharge, NMED has no authority to issue a discharge permit. 74-6-5(A), (I) NMSA 1978.

B. Second, the RLWTF is a *hazardous waste management facility*. Under 74-6-12(B) NMSA 1978, "[t]he 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 . . . "

2. Specifically, Section 74-6-5 states that the WQA applies only to a "discharge." Outfall 051 at the RLWTF issues no discharge. No discharge is planned. Therefore, the activities of the RLWTF are beyond the scope of the WQA.

3. The WQA expressly authorizes the Water Quality Control Commission ("WQCC") *only* to require "a permit for the discharge of any water contaminant." 74-6-5(A) NMSA 1978. Regulations define a "discharge plan" as a plan "for any discharge of effluent or leachate which may move directly or indirectly into ground water." 20.6.2.R NMAC. The pertinent portion of the regulations states that "no person shall cause or allow effluent or leachate to discharge so that it may move directly or indirectly into ground water" except pursuant to a discharge permit. 20.6.2.3104 NMAC (*emphasis supplied*).[1]

4. Thus, the WQA authorizes NMED to regulate a facility that makes a "discharge" by which a water contaminant is released to the environment so that it can move toward ground water. A transfer of water from one tank to another tank

[1] If NMED were actually concerned about leakage from the RLWTF facility, it might have required double lined pipes from the RLWTF to the Mechanical Evaporator System ("MES") or the Solar Evaporator Tank System ("SET"), but NMED refused to do so, because the treated water is considered "clean" – without water contamination. See draft permits exchanged between NMED, DOE/LANS, CCNS and Communities for Clean Water.

within a contained facility, after which the water and its contaminant remain isolated from the environment, does not meet this definition. The idea that a transfer of water from one storage tank to another storage tank or evaporation unit, or back again—an event that does not make a release into the environment and toward ground water even incrementally more likely—constitutes a "discharge" cannot be squared with the language of the WQA and its regulations.

5. Another theory is presented in NMED's memorandum dated December 2, 2016 concerning Discharge Permit DP-857 for LANL. It states that "Discharge permits are the appropriate mechanism for WWTFs [Waste Water Treatment Facilities] (such as the SWWS [Sanitary Waste Water System]) because the permits contemplate a failure of one or more of the mechanical systems (either in treatment or impoundment) that protect groundwater from contamination as a result of the discharge." *Id.* at 3.

6. The WQA does not authorize a permit for such a "possible" discharge. If the possibility of equipment "failure" required a discharge permit, then there would need to be a discharge permit for any pipe that connects a water tank to a power plant boiler, or to cooling towers, or to another treatment system, or to any other building. Obviously, any such pipe might leak.

7. But the WQA does not give NMED the discretionary authority to regulate a non-discharging facility, based upon someone's concern that it might leak. Here, LANL clearly has no plan to discharge any liquids from the RLWTF. NMED is not allowed to issue a discharge permit for a facility that does not discharge.

8. The issuance of an unauthorized discharge permit is not a harmless act. The WQA states that a facility that is subject to the Hazardous Waste Act, 74-4-1 *et seq.* NMSA 1978 ("HWA"), cannot be regulated by the WQA. 74-6-12(B) NMAC 1978. Therefore, issuance of a discharge permit under the WQA implies that NMED has determined that the facility cannot be subject to the HWA. To remove a facility wrongfully from the coverage of the HWA defeats the mandated scope of HWA regulation.

9. Further, a permit for a non-discharging facility is a futility. The term of a new discharge permit (like DP-1132) commences only with an actual discharge. The relevant portion of Section 74-6-5(I) NMSA 1978 states: "[T]he term of the permit shall commence on the date the discharge begins." *Id.* (*emphasis supplied*). *See also* 20.6.2.3109.H NMAC. Here, that will never happen, because Outfall 051 will have no discharge. DP-1132, upon issuance, would be a nullity and would

continue indefinitely to be a nullity. The New Mexico Legislature never intended NMED to spend its scarce resources to promulgate a nullity.

10. In addition, as noted, 74-6-12 NMSA 1978 states that the WQA does not apply to activities that are governed by the HWA:

> "B. 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 [Chapter 74, Article 4 NMSA 1978] . . . "

Id. at 12(B). Thus, Discharge Permit DP-1132 cannot be issued, because the RLWTF is subject to the HWA.

11. The Resource Conservation and Recovery Act ("RCRA") (42 U.S.C. § 6921 *et seq.*) contains federal statutory requirements as to the management of hazardous wastes. RCRA applies without regard to conflicting state statutes, because federal statutes are the supreme law of the land. (U.S. Const., Art. VI, Cl. 2).

12. Further, NMED represented to the U.S. Environmental Protection Agency ("EPA") that New Mexico's HWA program is "equivalent to, consistent with, and no less stringent than the federal program" under RCRA. EPA therefore authorized New Mexico under 42 U.S.C. § 6926(b) to operate the state's HWA program in lieu of RCRA. *See generally*, New Mexico: Final Authorization of State Hazardous Waste Management Program Revision, 72 Fed. Reg. 46165 (Aug. 17, 2007).

13. The HWA applies to any facility that treats, stores or disposes of hazardous waste. It requires the New Mexico Environmental Improvement Board ("EIB") to issue regulations as follows:

> 6. requiring each person owning or operating, or both, an existing facility or planning to construct a new facility for the treatment, storage or disposal of hazardous waste identified or listed under this subsection to have a permit issued pursuant to requirements established by the board; [and]
>
> 7. establishing procedures for the issuance, suspension, revocation and modification of permits issued under Paragraph (6) of this subsection,

> which rules shall provide for public notice, public comment and an opportunity for a hearing prior to the issuance, suspension, revocation or major modification of any permit unless otherwise provided in the Hazardous Waste Act[.]

74-4-4(A)(6), (7) NMSA 1978. Pursuant to the HWA, the EIB has issued hazardous waste management regulations. *See* 20.4.1 NMAC.

14. LANS/DOE concede 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 . . ." LANS/DOE have expressly stated that, "The RLWTF satisfies each of these conditions[.] The RLWTF [r]eceives and treats a small amount of hazardous wastewater[.]" LANS/DOE Comments, Dec. 12, 2013, Encl. 3 at 1. Moreover, LANS/DOE have told NMED that, "[A]ll units at the TA-50 RLWTF . . . have been characterized as a SWMU or AOC and are therefore subject to regulation under the [Consent Order]." LANS/DOE letter to [Jerry] Schoeppner, Head, Groundwater Quality Bureau, September 11, 2014.

Thus, LANS/DOE have determined that the RLWTF treats or stores hazardous waste. 40 C.F.R. §§ 264.90-101. As a facility that 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 must have a permit under RCRA or an authorized state program. 42 U.S.C. § 6925, 40 C.F.R. § 270.1(c).

15. LANS/DOE have heretofore avoided RCRA regulation by invoking a statutory exemption for discharges regulated under the National Pollutant Discharge Elimination System (42 U.S.C. § 6903(27)) ("NPDES") and a regulatory exemption for a "wastewater treatment unit" (40 C.F.R. §§ 260.10 (*Tank system, Wastewater treatment unit*), 264.1(g)(6)).

16. NMED must apply these exemptions, since 74-4-3.1 NMSA 1978 directs that "[n]othing in the Hazardous Waste Act shall be construed to apply to any activity or substance which is subject to the Federal Water Pollution Control Act, as amended . . . except to the extent that such application or regulation is not inconsistent with the requirements of such acts . . ."

17. Indeed, NMED has already done so in the final 2010 LANL HWA permit, where NMED states in Section 4.6 (see below) that the wastewater

treatment unit exemption depends upon the RLWTF discharging through a Clean Water Act outfall:

> 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. The Permittees shall not accept listed hazardous wastes as specified at 40 CFR Part 261 Subpart D at the RLWTF.

Id. at 86.

18. For more than six years since 2010, no discharges from Outfall 051 have occurred. No discharges are planned. A 2014 LANL report states: "Discharges from Outfall 051 decreased significantly after the mid-1980s and effectively ended in late 2010."[2] In late 2014 NMED reported to EPA Region 6 that Outfall 051 had not discharged since November 2010.[3] A LANL web site, NPDES Industrial Outfall Locations, states that "a mechanical evaporator was installed so no water has been discharged at Outfall 051 since November 2010."[4] The facts are set forth in detail in the Request to Terminate NPDES Permit #NM0028355 to Outfall 051 for the Radioactive Liquid Waste Treatment Facility (June 17, 2016), which is in the Record.

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[2] 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 the Request to Terminate NPDES Permit #NM0028355 to Outfall 051 for the Radioactive Liquid Waste Treatment Facility (June 17, 2016)(the "Request")).

[3] Letter, Yurdin to Dories with Inspection Report, at 4th page (August 5, 2014) (Ex. QQ to Request).

[4] LANL web site, NPDES Industrial Permit Outfall Locations, http://www.lanl.gov/community-environmental-stewardship (reviewed on Oct. 2, 2015) (Ex. RR to Request).

19. Without a "discharge," there can be no requirement for a NPDES permit, since the Clean Water Act regulates "the discharge of any pollutant, or combination of pollutants." 33 U.S.C. § 1342(a)(1). A "discharge" is "[a]ny addition of a 'pollutant' or combination of pollutants to 'waters of the United States' from any 'point source.'" 40 C.F.R. § 122.2.

20. An NPDES permit is only required for an actual discharge. *Waterkeeper Alliance, Inc. v. U.S. Environmental Protection Agency,* 399 F.3d 486, 505 (2d Cir. 2005), holds that

> in the absence of an actual addition of any pollutant to navigable waters from any point, there is no point source discharge, no statutory violation, no statutory obligation of point sources to comply with EPA regulations for point source discharges, and no statutory obligation of point sources to seek or obtain an NPDES permit in the first instance.

See also National Pork Producers Council v. U.S. Environmental Protection Agency, 635 F.3d 738, 750 (5th Cir. 2011) (rejecting another attempt by EPA to regulate facilities based upon a supposed "potential" discharge).

21. For a RCRA exemption, a "wastewater treatment unit" must be "subject to regulation under either section 402 or 307(b) of the Clean Water Act." *See* 40 C.F.R. § 260.10 (*Wastewater treatment unit*). Where there is no discharge, there is no requirement for a NPDES permit based on a discharge, and the facility has no exemption from RCRA. Thus, RCRA regulation is required. (See par. 14, above.).

22. Where RCRA regulation is required, the WQA does not apply. 74-6-12(B) NMSA 1978.

Conclusion:

23. Since RCRA—and in New Mexico the HWA—applies to the RLWTF, the WQA has no application, and NMED does not have jurisdiction to issue and/or regulate the RLWTF under a discharge permit. Therefore, this proceeding under the WQA must be dismissed, and a draft permit must be issued under the HWA.

Thank you for consideration of these and our previous unaddressed comments on the final draft DP-1132.

: 13758

Sincerely,

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: 13759

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Deputy Secretary

October 3, 2014

Robert Beers, ENV-RCRA,
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RE: Comments on 90% and 100% Design Specifications
Radioactive Liquid Waste Treatment Facility – Upgrade Project

The New Mexico Environment Department, Groundwater Quality Bureau (GWQB) has received from the Department of Energy and Los Alamos National Security LLC (DOE/LANS) design documents for the Radioactive Liquid Waste Treatment Facility Upgrade Project (RLWTF UP) including:

- 90% design plans and specifications for the RLWTF UP at Technical Area (TA)-50, including supplemental information to discharge permit application DP-1132.
- 100% design plans and specifications in fulfillment of NMAC Section 20.6.2.1202.

The DOE/LANS has requested comments from GWQB on the referenced plans and specifications. GWQB has reviewed both the 90% and 100% submittals as well as supplemental information to DP-1132 for compliance with basic elements necessary for protection of groundwater quality. GWQB makes no comment regarding the design adequacy, compliance with applicable State, Federal, and local statute, code and requirements.

The review confirms that the design, construction specifications, proposed systems and calculations are generally appropriate, and include adequate safeguards to protect groundwater quality including secondary containment, structural integrity, capacities, appropriate materials, and leak detection systems. As a sealed engineering document, GWQB relies on the design engineer for the efficacy of the design to meet permit requirements. GWQB similarly relies on DOE/LANS to provide adequate construction oversight to ensure conformance with the design specifications. Construction of the facility prior to issuance of the final approved Discharge Permit will proceed at the risk of DOE/LANS, should DOE/LANS decide to proceed before GWQB issues the final permit.

: 13760

GWQB appreciates the opportunity to provide these comments to the proposed RLWTF UP. Please contact myself, or Steven Huddleson, P.G., C.P.G., if you have any questions.

Sincerely,

Jerry Schoeppner, Chief
Groundwater Protection Bureau

Cc: John Kieling, Hazardous Waste Bureau
Jim Chiasson, Construction Programs Bureau
Jennifer Pruett, Groundwater Quality Bureau
Bruce Yurdin, Surface Water Quality Bureau
Jennifer Hower, Office of General Counsel

: 13762

Pullen, Steve, NMENV

From: Hayden, Kathryn, NMENV
Sent: Friday, June 9, 2017 11:40 AM
To: Pullen, Steve, NMENV
Subject: FW: CCW Comments and Hearing Request on DP-1132
Attachments: CCW Comments and Hearing Request on DP-1132 filed 20170605 (2).pdf; Attachment 1 CCW-TWA-COMMENTERS & HRG REQ RLWTF PERMIT 20131206.pdf; Attachment 2 DP1132 Comments Tewa Women and CCW 121213.pdf; Attachment 3 CCW Gilkeson & Sanchez DP1132 Comments 2014-01-26.pdf; Attachment 4 CCW RLWTF Comments 2014-10-24.pdf; Attachment 5 Rev1 CCW RLWTF Comments 2014-10-27.pdf; Attachment 6 CCW Gilkeson Sanchez Remaining Issues 2014-12-03.pdf; Attachment 7 Email with attachments re sinage 2014-12-08.pdf; Attachment 8 CCW Ltr to NMED 2015-06-01.pdf; Attachment 9 Email string CCW NMED LANL re delayed postings to EPRR 2015-06-08.pdf; Attachment 10 Email plus CCW re 8-31-15 Draft DP-1132 and LANL GW report 2015-09-14.pdf; Attachment 11 CCW DP-1132 memo to NMED 2015-09-14.pdf; Attachment 12 CCW DP-1132 comments 2015-11-23.pdf; Attachment 13 CCW Comments DP-1132 draft 2016-08-29.pdf; Attachment 14a CCNS Ltr to Region 6-Exh List-Petition to Rescind RLWTF NPDES Permit.pdf; Attachment 14b Ex. B to CCW 8-29 Comments - Closure Performance Standards 8-29-16.pdf; Attachment 14c Ex. C to CCW 8-29 Comments -Mtg Note re DP-1132 Closure Plan 2016-08-30.pdf; Attachment 15 CCW Comments to NMED re DP-1132 2017-01-13.pdf; Attachment 16 NMED Ltr LANL re RLWTF-UP Plans & Specs 2014-10-3.pdf

-----Original Message-----
From: Jonathan Block [mailto:jblock@nmelc.org]
Sent: Monday, June 05, 2017 4:23 PM
To: Hayden, Kathryn, NMENV <Kathryn.Hayden@state.nm.us>; Hunter, Michelle, NMENV <Michelle.Hunter@state.nm.us>
Cc: Rachel Conn <rconn@amigosbravos.org>; Marian Naranjo <mariann2@windstream.net>; Kathy Sanchez <Kathy@TEWAwomenunited.org>; Beata Tsosie <Beata@TEWAwomenunited.org>; Joan Brown <JoanKansas@swcp.com>; Marlene <marlenep@swcp.com>; Joni Arends <jarends@nuclearactive.org>; Lindsay Lovejoy <lindsay@lindsaylovejoy.com>
Subject: CCW Comments and Hearing Request on DP-1132

(Joni had some computer problems and sent the attached for me to forward to you.)

Dear Kathryn and Michelle:

Please find attached the Comments and Hearing Request of the Communities for Clean Water on DP-1132.

Please contact us with any questions or concerns regarding the attached.

We look forward to working with you both on the next steps in this matter.

Thank you on behalf of the Communities for Clean Water.

Joni Arends (by Jon Block)

: 13763

--
Jon Block
Staff Attorney
New Mexico Environmental Law Center
1405 Luisa Street, Ste. 5
Santa Fe, NM 87505
(505) 989-9022 (Office)

www.nmelc.org

CONFIDENTIALITY: This message is confidential and subject to attorney-client and attorney work product privileges. If you believe that this e-mail has been sent to you in error, please reply to the sender that you received the message in error and delete this e-mail.

: 13765

Beers, Bob

From: Saladen, Michael Thomas
Sent: Wednesday, July 06, 2016 11:46 AM
To: Huddleson, Steven, NMENV; Beers, Bob; Del Signore, Chris
Cc: Huey, Greg, NMENV; Pullen, Steve, NMENV
Subject: RE: List of SWMU associated with RLWTF
Attachments: RLWTF SWMUs.pdf

Steve,

Per your request, attached is the list of SWMUs. Bob will not be back in the office until next week. Please let me know if you have questions or need additional information. Thanks!!!

Mike

From: Huddleson, Steven, NMENV [mailto:Steven.Huddleson@state.nm.us]
Sent: Friday, July 01, 2016 11:04 AM
To: Beers, Bob; Del Signore, Chris; Saladen, Michael Thomas
Cc: Huey, Greg, NMENV; Pullen, Steve, NMENV
Subject: List of SWMU associated with RLWTF

Welcome back from your respective vacations. I continue to review the closure plan and plan revisions to DP-1132. In light of the new consent order, I am trying to locate a list of SWMU's associated with the RLWTF. The new consent order table in Appendix A is not descriptive enough to determine which units at RLWTF are actually identified in the consent order. This will be helpful..

Happy July 4..

Steve Huddleson, P.G., C.P.G.
Manager, Pollution Prevention Section
Ground Water Quality Bureau
New Mexico Environment Department
(505) 827-2936

SWMUs and AOCs in Upper Mortandad Canyon Aggregate Area associated with RLWTF

- SWMU 50-001(a) – RLWTF (Building 50-1)
- AOC 50-001(b) – Active RLW waste lines connected to Building 50-1
- SWMU 50-002(a) – Concrete vault containing waste tanks (Building 50-2)
- SWMU 50-002(b) – Vaulted underground waste tank (50-67) and inlet and outlet lines
- SWMU 50-002(c) – Vaulted underground waste tank (50-68) and inlet and outlet lines
- AOC 50-002(d) – Decommissioned aboveground nitric acid tank (50-5)
- SWMU 50-004(a) – Former underground RLW waste lines connected to Building 50-1
- SWMU 50-004(b) – Decommissioned underground vault (50-3)
- SWMU 50-004(c) – Former waste lines connected to vault 50-3
- SWMU 50-006(d) – RLWTF outfall

Consent Order Status of RLWTF SWMUs and AOCs

- SWMU 50-001(a) – Investigation delayed under D&D of facility.
- AOC 50-001(b) – Investigation delayed until D&D of facility.
- SWMU 50-002(a) – Investigation delayed until D&D of facility.
- SWMU 50-002(b) – Investigation delayed until D&D of facility.
- SWMU 50-002(c) – Investigation delayed until D&D of facility.
- AOC 50-002(d) – Investigation delayed until tank is removed.
- SWMU 50-004(a) – Supplemental investigation report for Upper Mortandad Canyon Aggregate Area.
- SWMU 50-004(b) – Supplemental investigation report for Upper Mortandad Canyon Aggregate Area.
- SWMU 50-004(c) – Supplemental investigation report for Upper Mortandad Canyon Aggregate Area.
- SWMU 50-006(d) – Supplemental investigation report for Upper Mortandad Canyon Aggregate Area.

: 13768

Pullen, Steve, NMENV

From: Pullen, Steve, NMENV
Sent: Wednesday, July 12, 2017 9:35 AM
To: 'bbeers@lanl.gov'
Subject: DP1132 - Integration with the Consent Order

Bob,

Please assist me in understanding the relationship between the CO and DP1132. DP Condition 37 implies that a GW exceedance would be addressed separately from the CO while Condition 46 implies the opposite.

DP Condition 37 states (paraphrased):

> **GROUND WATER EXCEEDANCE** -- 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.
>
> 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]

DP Condition 46 states:

> **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) 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 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)]

Condition 46 implies that any GW exceedance would be addressed under the CO because, as I understand it, all components of the RLWTF are SWMUs or AOCs. (I'd like to look at the Hazardous Waste Permit Appendix K with you to discuss which SWMUs and AOCs are associated with the RLWTF.)

I see that the CO is also referenced in DP Conditions associated with Closure/Post Closure (#s 41, 42, 44). Again, as SWMUs and AOCs, I presume at closure their status would no longer be "deferred" and the CO would take over.

I'm currently evaluating the need for a public hearing and resolving this issue would assist.

Best, Steve

Steve Pullen

Steve Pullen
Environmental Scientist
NMED/Ground Water Quality Bureau
Pollution Prevention Section
steve.pullen@state.nm.us
(505) 827-2962

: 13770

: 13771

Pullen, Steve, NMENV

From: Beers, Bob <bbeers@lanl.gov>
Sent: Monday, July 17, 2017 10:55 AM
To: Pullen, Steve, NMENV
Cc: Saladen, Michael Thomas; Armijo, Karen (CONTR) (Karen.Armijo@nnsa.doe.gov)
Subject: RE: DP1132 - Integration with the Consent Order
Attachments: SWMUs and AOCs associated with the RLWTF; DP-1132

Steve,

Although we discussed your questions (below) on the telephone (July 13, 2017) I'd like to recap the key points in this email. In addition, I've attached the two documents that I emailed you during our phone conversation.

As I indicated on the phone, we do not see a conflict between Condition Nos. 37 and 46 given the following key point: not all components and treatment units at the TA-50 RLWTF are SWMUs or AOCs. The following five units are not SWMUs or AOCs:

1. WMRM (TA-50-250): Waste Management and Risk Mitigation Tanks
2. MES (TA-50-257): Mechanical Evaporator System
3. SET (TA-52): Solar Evaporative Tank System
4. Bottoms Disposal Tanks (TA-50-248)
5. LLW (TA-50-230): Low-Level Waste Treatment Facility (under construction)

Condition No. 46 addresses contaminant releases, associated with the facility, to groundwater from SWMUs and AOCs. In contrast, Condition No. 37 is applicable to contaminant releases to groundwater from those units that are *not* SWMUs or AOCs. In this regard, Condition Nos. 37 and 46 complement each other.

Please contact me if you have additional questions.

Regards,

Bob Beers
Los Alamos National Security, LLC
505-667-7969

From: Pullen, Steve, NMENV [mailto:steve.pullen@state.nm.us]
Sent: Wednesday, July 12, 2017 9:35 AM
To: Beers, Bob <bbeers@lanl.gov>
Subject: DP1132 - Integration with the Consent Order

Bob,

Please assist me in understanding the relationship between the CO and DP1132. DP Condition 37 implies that a GW exceedance would be addressed separately from the CO while Condition 46 implies the opposite.

DP Condition 37 states (paraphrased):

: 13772

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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) 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 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)]

Condition 46 implies that any GW exceedance would be addressed under the CO because, as I understand it, all components of the RLWTF are SWMUs or AOCs. (I'd like to look at the Hazardous Waste Permit Appendix K with you to discuss which SWMUs and AOCs are associated with the RLWTF.)

I see that the CO is also referenced in DP Conditions associated with Closure/Post Closure (#s 41, 42, 44). Again, as SWMUs and AOCs, I presume at closure their status would no longer be "deferred" and the CO would take over.

I'm currently evaluating the need for a public hearing and resolving this issue would assist.

Best, Steve

Steve Pullen

Steve Pullen
Environmental Scientist
NMED/Ground Water Quality Bureau
Pollution Prevention Section
steve.pullen@state.nm.us
(505) 827-2962

: 13774

Pullen, Steve, NMENV

From: Beers, Bob <bbeers@lanl.gov>
Sent: Thursday, July 20, 2017 8:01 AM
To: Pullen, Steve, NMENV
Cc: Saladen, Michael Thomas; Stockton, Marjorie Bloomhardt; Homer, Pamela, NMENV; Armijo, Karen (CONTR) (Karen.Armijo@nnsa.doe.gov)
Subject: FW: DP1132 - Integration with the Consent Order
Attachments: No Permit Required (2195-U).pdf

Hi Steve,

Per your request, below is a brief description of the permits/authorizations from the NMED Air Quality Bureau (AQB) for the MES and SET:

1. **MES:** A *No Permit Required Determination* was obtained from the NMED AQB for the thermal evaporation unit (MES). Please see the attached September 20, 2010, letter.

2. **SET**: In 2010, DOE/LANS conducted an internal assessment of the Toxic Air Pollutants (TAPs), Hazardous Air Pollutants (HAPs), and VOCs from the TA-52 Solar Evaporation Tank System (SET). The assessment concluded that the potential emissions were insignificant with respect to regulatory thresholds. Accordingly, notification to the NMED AQB was not required.

Please let me know if you have additional questions.

Regards,

Bob Beers
Los Alamos National Security, LLC
505-667-7969

From: Pullen, Steve, NMENV [mailto:steve.pullen@state.nm.us]
Sent: Tuesday, July 18, 2017 4:36 PM
To: Beers, Bob <bbeers@lanl.gov>
Cc: Homer, Pamela, NMENV <Pamela.Homer2@state.nm.us>
Subject: RE: DP1132 - Integration with the Consent Order

Thank you Bob. Your response clarifies my issue.

Another question – are there any permits/authorizations from the NMED Air Quality Bureau associated with the MES and SET? If so, could you briefly describe or point me to a previously submitted document.

Thx,

SP

: 13775

13776

Pullen, Steve, NMENV

From: Pullen, Steve, NMENV
Sent: Monday, July 24, 2017 10:33 AM
To: Joni Arends (jarends@nuclearactive.org)
Cc: Homer, Pamela, NMENV
Subject: LANL DP1132 - monitoring equipment

Hi Joni,

Hope you're well.

I'm processing CCW's June 5, 2017 *Comments and hearing request on DP-1132*. Comment #5 references "*CCW's provision of information concerning current standard industry practices for calibration and sensitivity of monitoring equipment …*" I'm having difficulty locating this information and hope you might assist by either resending the document(s) or by pointing me toward someone who can.

Thanks in advance for any assistance you might provide.

Best regards,

Steve P.

Steve Pullen
Steve Pullen
Environmental Scientist
NMED/Ground Water Quality Bureau
Pollution Prevention Section
steve.pullen@state.nm.us
(505) 827-2962

: 13777

: 13778

Pullen, Steve, NMENV

From: Joni Arends <jarends@nuclearactive.org>
Sent: Monday, July 24, 2017 4:06 PM
To: Pullen, Steve, NMENV; Rachel Conn; Marian Naranjo; Kathy Sanchez; Beata Tsosie-Pena; 'Marlene'; Joan Brown; hjtrujillo@aol.com; Jon Block; Lindsay Lovejoy
Subject: Fwd: CCW Comments and Hearing Request on DP-1132 - monitoring equipment
Attachments: CCW Comments and Hearing Request on DP-1132 filed 20170605 (2).pdf; Attachment 1 CCW-TWA-COMMENTERS & HRG REQ RLWTF PERMIT 20131206.pdf; Attachment 2 DP1132 Comments Tewa Women and CCW 121213.pdf; Attachment 3 CCW Gilkeson & Sanchez DP1132 Comments 2014-01-26.pdf; Attachment 4 CCW RLWTF Comments 2014-10-24.pdf; Attachment 5 Rev1 CCW RLWTF Comments 2014-10-27.pdf; Attachment 6 CCW Gilkeson Sanchez Remaining Issues 2014-12-03.pdf; Attachment 7 Email with attachments re sinage 2014-12-08.pdf; Attachment 8 CCW Ltr to NMED 2015-06-01.pdf; Attachment 9 Email string CCW NMED LANL re delayed postings to EPRR 2015-06-08.pdf; Attachment 10 Email plus CCW re 8-31-15 Draft DP-1132 and LANL GW report 2015-09-14.pdf; Attachment 11 CCW DP-1132 memo to NMED 2015-09-14.pdf; Attachment 12 CCW DP-1132 comments 2015-11-23.pdf; Attachment 13 CCW Comments DP-1132 draft 2016-08-29.pdf; Attachment 14a CCNS Ltr to Region 6-Exh List-Petition to Rescind RLWTF NPDES Permit.pdf; Attachment 14b Ex. B to CCW 8-29 Comments - Closure Performance Standards 8-29-16.pdf; Attachment 14c Ex. C to CCW 8-29 Comments -Mtg Note re DP-1132 Closure Plan 2016-08-30.pdf; Attachment 15 CCW Comments to NMED re DP-1132 2017-01-13.pdf; Attachment 16 NMED Ltr LANL re RLWTF-UP Plans & Specs 2014-10-3.pdf

Hi Steve,

In your email today, you asked for specifics about the CCW comments about monitoring equipment. Attached are pdfs of the CCW comments, which we incorporated into our June 5, 2017. In your processing of our comments, we respectfully request that you review the attachments to the CCW June 5, 2017 comments.

I should have some time tomorrow to find the specific comments you requested - they are in several of the comments. Nevertheless, CCW believes it is essential that you and your colleagues within the NMED review all of the CCW comments in order to become familiar with our concerns, many of which were not addressed in the draft final permit. Until tomorrow,

Sincerely,

On behalf of CCW

Joni Arends, CCNS

Hi Joni,

Hope you're well.

: 13779

I'm processing CCW's June 5, 2017 *Comments and hearing request on DP-1132*. Comment #5 references *"CCW's provision of information concerning current standard industry practices for calibration and sensitivity of monitoring equipment ..."* I'm having difficulty locating this information and hope you might assist by either resending the document(s) or by pointing me toward someone who can.

Thanks in advance for any assistance you might provide.

Best regards,

Steve P.

Steve Pullen

Steve Pullen

Environmental Scientist

NMED/Ground Water Quality Bureau

Pollution Prevention Section

steve.pullen@state.nm.us

(505) 827-2962

-------- Forwarded Message --------
Subject:CCW Comments and Hearing Request on DP-1132
Date: Mon, 5 Jun 2017 16:22:49 -0600
From: Jonathan Block <jblock@nmelc.org>
To: Kathryn.Hayden@state.nm.us, Michelle.Hunter@state.nm.us
CC: Rachel Conn <rconn@amigosbravos.org>, Marian Naranjo <mariann2@windstream.net>, Kathy Sanchez <Kathy@TEWAwomenunited.org>, Beata Tsosie <Beata@TEWAwomenunited.org>, Joan Brown <JoanKansas@swcp.com>, Marlene <marlenep@swcp.com>, Joni Arends <jarends@nuclearactive.org>, Lindsay Lovejoy <lindsay@lindsaylovejoy.com>

(Joni had some computer problems and sent the attached for me to forward to you.)

Dear Kathryn and Michelle:

Please find attached the Comments and Hearing Request of the Communities for Clean Water on DP-1132.

: 13780

Please contact us with any questions or concerns regarding the attached.

We look forward to working with you both on the next steps in this matter.

Thank you on behalf of the Communities for Clean Water.

Joni Arends (by Jon Block)

--

Jon Block
Staff Attorney
New Mexico Environmental Law Center
1405 Luisa Street, Ste. 5
Santa Fe, NM 87505
(505) 989-9022 (Office)

www.nmelc.org

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13782

Environmental Protection & Compliance Division
Los Alamos National Laboratory
PO Box 1663, K490
Los Alamos, New Mexico 87545
(505) 667-0666

National Nuclear Security Administration
Los Alamos Field Office
3747 West Jemez Road, *A316*
Los Alamos, New Mexico, 87545
(505) 667-5105/Fax (505) 667-5948

Date: JUL 24 2017
Symbol: EPC-DO: 17-263
LA-UR: 17-25145
Locates Action No.: *NA*

Ms. Michelle Hunter, Chief
Ground Water Quality Bureau
New Mexico Environment Department
Harold Runnels Building, Room N2261
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, NM 87502

Subject: **Filing of 100% Design Plans and Specifications, Radioactive Liquid Waste Treatment Facility Upgrade–Transuranic Liquid Waste Project, DP-1132**

Dear Ms. Hunter:

In accordance with Section 20.6.2.1202 of the New Mexico Administrative Code, *Filing of Plans and Specifications—Sewerage Systems*, the U.S. Department of Energy and Los Alamos National Security, LLC (DOE/LANS) are submitting the 100% design plans and specifications (Enclosure 1–CD) for the Radioactive Liquid Waste Treatment Facility Upgrade–Transuranic Liquid Waste (RLWTF-TLW) Project at Technical Area (TA)-50. In December 2015 DOE/LANS provided the New Mexico Environment Department (NMED) with the 60% design plans and specifications for the RLWTF-TLW Project (ENV-DO-15-0359). The NMED responded to DOE/LANS request for comments on the 60% design in January 2016. In January 2017 DOE/LANS submitted the 90% design for the RLWTF-TLW Project (EPC-DO-17-007). The enclosed 100% design plans and specifications are ready for construction. The start of construction is tentatively planned for spring 2018.

The RLWTF-TLW Project scope is to replace the existing transuranic liquid waste (TLW) treatment capability at Los Alamos National Laboratory. This project is a "like-for-like" replacement of the capability currently provided in RLWTF – Room 60, with the following exceptions:

- Equipment will be modernized per technological advances;
- Additional systems and equipment will be employed as needed to meet current orders, regulations, requirements, influent characteristics, etc.; and
- Facility and equipment sizing will be based on current projections of future capacity as opposed to the capacity available in the existing RLWTF.

The TLW process is comprised of the following three primary systems:

- Transuranic (TRU) Waste Influent Storage System;
- TRU Waste Treatment System; and
- TRU Secondary Waste treatment and Packaging System.

The TRU Waste Influent Storage System receives approximately 29,000 liters per year of TRU acid and caustic waste in approximately 400 liter batches of either acid or caustic liquid waste. It then transfers the waste to the TRU Waste Treatment System for treatment to remove radionuclides.

The TLW Waste Treatment System receives TRU waste from the TRU Waste Influent Storage System and provides primary treatment for removal of radioactive components. Treated water (product water) from TLW Waste Treatment System is transferred to the headworks of the Low-Level Waste Treatment System (LLW). The TRU Waste Treatment System also transfers the resulting secondary waste to the TRU Secondary Waste Treatment and Packaging System for secondary treatment and packaging for disposal.

The TRU Secondary Waste Treatment and Packaging System collects, dewaters, and packages solids received from the tanks and equipment skids associated with the TRU Waste Treatment System. The RLWTF-TLW Project will be located at TA-50. The facility will consist of a single building.

Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at Karen.Armijo@nnsa.doe.gov, or Robert S. Beers by telephone at (505) 667-7969 or by email at bbeers@lanl.gov if you have questions regarding these plans and specifications.

Sincerely,

Anthony R. Grieggs
Group Leader

Sincerely,

Karen E. Armijo
Permitting and Compliance Program Manager

ARG/KEA/MTS/RSB:am

Enclosure:

(1) Compact Disc (CD) containing the 100% Design Plans and Specifications, Radioactive Liquid Waste Treatment Facility Upgrade–Transuranic Liquid Waste Project

Copy: Kathryn Hayden, NMED/GWQB, Santa Fe, NM (E-File)
Shelly Lemon, NMED/SWQB, Santa Fe, NM, (E-File)
John E. Kieling, NMED/HWB, Santa Fe, NM, (E-File)
Stephen M. Yanicak, NMED/DOE/OB, (E-File)
Jody M. Pugh, NA-LA, (E-File)
Karen E. Armijo, NA-LA, (E-File)
Eric L. Trujillo, LASO-OTHER, (E-File)
Craig S. Leasure, PADOPS, (E-File)
William R. Mairson, PADOPS, (E-File)
Michael T. Brandt, ADESH, (E-File)
Terry J. Singell, PADWP, (E-File)
Allison Respess Drexel, PM1, (E-File)
Cindy L. Costa, PM1, (E-File)
Jeffrey K. Tucker, ES-EPD, (E-File)
Randal S. Johnson, DESHF-TA55, (E-File)
Hugh A. McGovern, ADNHHO, (E-File)
John C. Del Signore, TA-55-RLW, (E-File)
Vincent P. Worland, TA-55-RLW, (E-File)
Michael T. Saladen, EPC-CP, (E-File)
Robert S. Beers, EPC-CP, (E-File)
Ellena I. Martinez, EPC-CP, (E-File)
Marjorie B. Stockton, EPC-CP, (E-File)
Adesh-records@lanl.gov , (E-File)
lasomailbox@nnsa.doe.gov, (E-File)
locateteam@lanl.gov, (E-File)
epc-correspondence@lanl.gov, (E-File)

ENCLOSURE 1

Compact Disc (CD) containing the 100% Design Plans and Specifications, Radioactive Liquid Waste Treatment Facility Upgrade–Transuranic Liquid Waste Project

EPC-DO: 17-263

LA-UR-17-25145

Date: JUL 24 2017

: 13786

13787

Pullen, Steve, NMENV

From: Joni Arends <jarends@nuclearactive.org>
Sent: Wednesday, July 26, 2017 12:18 PM
To: Pullen, Steve, NMENV; Homer, Pamela, NMENV; Rachel Conn; Shannon Romeling; Lindsay Lovejoy; Jon Block; Joan Brown; 'Marlene'; Marian Naranjo; Kathy Sanchez; Beata Tsosie-Pena; hjtrujillo@aol.com; Marissa Naranjo; Kay Matthews
Subject: 11-14-14 CCW, Gilkeson & Sanchez Comments to DP-1132 (10/31/14)
Attachments: CCW Gilkeson Sanchez Rem Issues 11-14-14.docx

Steve and Pam:

In response to Steve's July 24, 2017 request, the attached Revised draft NMED GWDP DP-1132 (October 31, 2014) spreadsheet, revised on November 14, 2014, contains CCW comments about "current standard industry practices for calibration and sensitivity of monitoring equipment" with references.

Please see CCW Comments:

No. 9 - Calibration of Flow Meters

No. 10 - Discharge Volumes

No. 11 - Waste Tracking

No. 12 - Soil Moisture Monitoring System for SET

No. 13 - Ground Water Provisions

No. 14 - Settled Solids Removal

Should you required additional information, please let me know.

Best,

On behalf of Communities for Clean Water

Joni

-------- Forwarded Message --------
Subject:CCW, Gilkeson & Sanchez Comments to DP-1132 (10/31/14)
Date: Fri, 14 Nov 2014 09:51:27 -0800
From: Joni Arends <jarends@nuclearactive.org>
To: Huddleson, Steven, NMENV <Steven.Huddleson@state.nm.us>, Pruett, Jennifer, NMENV <Jennifer.Pruett@state.nm.us>, Schoeppner, Jerry, NMENV <jerry.schoeppner@state.nm.us>, Jon Block <jblock@nmelc.org>, Kliphuis, Trais, NMENV <trais.kliphuis@state.nm.us>

Good morning,

CCW, Gilkeson and Sanchez had a long conversation yesterday about the remaining issues for the DP-1132 (10/31/14 version). We are prepared to discuss them on Monday. Attached is our list, along with suggested language changes, references, and some outstanding questions.

We look forward to Monday's meeting.
Best,
Joni Arends
CCNS

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	PgNo	Description	Remaining Issues
1	6	§II.W. Secondary Containment	Before the pipeline between the RLWTF and the SET is operated, the pipeline must have secondary containment.
2	10	§V. Description of SET	We still don't know if the SET is an "**unsealed** subgrade concrete structure with a single double-lined synthetic liner, and a leak detection system within the synthetic liner." At the 10/9/14 meeting, NNSA staff said they would get back to us on this issue. We have not received that information. If it is unsealed, we need to know how the thickness of the concrete structure. It would be helpful to have an engineering diagram of the concrete structure, as well as the leak detection system.
3	11	§1. Annual Update - Posting to EPRR	Posting to the Electronic Public Reading Room (EPRR) must be enforceable. We suggest a stepwise approach. If a document is found to not be posted, the Permittees have 14 days to post it to the EPRR. If it is not posted within that time frame, then it shall be enforceable under NMAC 20.6.2.1220. Below is the language from the 2010 HazWaste Permit, which may be helpful to include in the permit: **1.13 PUBLIC NOTIFICATION VIA ELECTRONIC MAIL (E-MAIL)** The Permittees shall notify individuals by e-mail of submittals as specified in this Permit. The Permittees shall maintain a list of individuals who have requested e-mail notification and send such notices to persons on that list. The notice shall be sent within seven days of the submittal date and shall include a direct link to the specific document to which it relates. The Permittees shall provide a link on the internet on the Permittees' environmental home page (http://www.lanl.gov/environment) whereby members of the public may submit a request to be placed on the e-mail notification list. In the event that the environmental home page stops operation, the Permittees shall use their best efforts to fully restore the page and its operation as soon as possible. *** Where a Permittee submittal and NMED response is required to be posted to the EPRR, the language needs to be clarified so that it is clear that the Permitees must post the submittal when it is submitted to NMED. We are concerned that the language could be interpreted to read that the Permittees may post their submittal when they receive NMED's response. For example, §12

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			Freeboard.
4	11	§1. Website	CCW accepts the Permittees' proposal to establish a website six months from the effective date of the permit. A wonderful example is the Permittee's Stormwater website at: http://www.lanl.gov/community-environment/environmental-stewardship/protection/compliance/individual-permit-stormwater/index.php
5	14	§5. Restricting Entry	We are concerned that Permittees cannot restrict entry into the area around the Outfall 051.
6	15	§6. Signs	Did NMED conduct government-to-government consultation with the Tribes about the signage? Signs are only required to be in English and Spanish. The requirement should include a requirement for a visual sign – one without words. Below is language from 2010 HazWaste Permit, which may be helpful in the discussions: 2.5.1 Warning Signs The Permittees shall post bilingual warning signs (in English and Spanish) at all gates and perimeter fences, where present, around the permitted units (see 40 CFR § 264.14(c)). 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. The 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) The Permittees shall post warning signs in the appropriate dialect of Tewa in a manner equivalent to the bilingual warning signs in English and Spanish along shared boundaries with the Facility's permitted units and the Pueblo of San Ildefonso (PO WHO GEH). The Permittees shall post signs requested by Santa Clara Pueblo (Kha-'Po). The Permittees shall include on the signs the following warning: Wi-i ts'uni pi' – (DO NOT ENTER)
7	15	§7. Verification of Secondary Containment	Permittees must verify that systems and units that carry **untreated** liquid or semi-liquid waste streams meet requirements for secondary containment in §8 below. Permit gives LANL 180 days to verify. The permit should require verification within 30 days of the effective date of the permit. Are the Permittees verifying secondary containment now?
8	15	§8. Water Tightness	Testing for water tightness should begin within 30 days of the effective date of the permit. Are

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		Testing	the Permittees testing for water tightness now?
9	23	§17. Calibration of Flow Meters	LANL has stated that is should not be held to flow meter accuracy greater than +/- 10%. However, "ISO 17025-certified meters can achieve +/- 0.05 percent accuracy." Moreover, modern flow meters--of the type one would expect to be used at an advanced laboratory such as LANL-- are even more accurate. "[M]easuring uncertainties of +/- 0.1% of rate are achievable with modern flowmeters." Jerry Stevens & Jason Pennington, "Flowmeter Calibration, Proving, & Verification Ensuring the accuracy & repeatability of your flow measurements (September 26, 2010). Online at: http://www.flowcontrolnetwork.com/articles/calibration-proving-verification Additionally, it is important to note that the ISO/TEC 17025 General Requirements are the doormat for competent testing and calibration laboratories, so one would expect that LANL observes these standards in calibration and measurement. The standard is described as follows: ISO/IEC 17025 General requirements for the competence of testing and calibration laboratories is the main ISO standard used by testing and calibration laboratories. In most major countries, ISO/IEC 17025 is the standard for which most labs must hold accreditation in order to be deemed technically competent. In many cases, suppliers and regulatory authorities will not accept test or calibration results from a lab that is not accredited. Originally known as ISO/IEC Guide 25, ISO/IEC 17025 was initially issued by the International Organization for Standardization in 1999. There are many commonalities with the ISO 9000 standard, but ISO/IEC 17025 is more specific in requirements for competence. And it applies directly to those organizations that produce testing and calibration results. Since its initial release, a second release was made in 2005 after it was agreed that it needed to have its quality system words more closely aligned with the 2000 version of ISO 9001. The standard was first published in 1999 and on 12 May 2005 the alignment work of the ISO/CASCO committee responsible for it was completed with the issuance of the reviewed standard. The most significant changes introduced greater emphasis on the responsibilities of senior management, and explicit requirements for continual improvement of the management system itself, and

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			particularly, communication with the customer. The ISO/IEC 17025 standard itself comprises five elements that are Scope, Normative References, Terms and Definitions, Management Requirements and Technical Requirements. The two main sections in ISO/IEC 17025 are Management Requirements and Technical Requirements. Management requirements are primarily related to the operation and effectiveness of the quality management system within the laboratory. Technical requirements include factors which determines the correctness and reliability of the tests and calibrations performed in laboratory. Laboratories use ISO/IEC 17025 to implement a quality system aimed at improving their ability to consistently produce valid results. It is also the basis for accreditation from an accreditation body. Since the standard is about competence, accreditation is simply formal recognition of a demonstration of that competence. A prerequisite for a laboratory to become accredited is to have a documented quality management system. The usual contents of the quality manual follow the outline of the ISO/IEC 17025 standard. On line at: http://en.wikipedia.org/wiki/ISO/IEC_17025 (emphasis added).
10	26	§22. Discharge Volumes	Flow meters don't have to be installed until 180 days after the effective date of the permit. How will the discharge volumes be determined in the interim? Is there a flow meter on the discharge pipe that leaves TA-50, Bldg. 2 that splits to go to the Outfall and SET?
11	26	§23 (b). Waste Tracking	The permit must require waste tracking for both conveyance and discharge of TRU and LLW waste streams. These numbers may be helpful if there is a problem with either conveyance or discharge. Also, see comments to §31 below about Settled Solids Removal.
12	27	§25. Soil Moisture Monitoring System for SET	It is not clear whether Permittees will be permitted to discharge to SET before the baseline conditions are established. Within 120 days following effective date of DP, Permittees are required to submit a workplan for the moisture monitoring system with neutron moisture probes.

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			After the effective date of the permit, it is foreseeable that a year could go befor the installation of the soil moisture monitoring system. The baseline must be established before discharges to the SET begin. We suggest an interim system should be in place before discharge so that a baseline may be promptly established. We need baseline numbers before operations.
13	29	§26, et al., Groundwater Provisions.	Permittees agreed to provide CCW, Gilkeson & Sanchez with letter confirming commitment to allowing us to witness drilling of new alluvial wells. We have not received it. We appreciate that NMED is requiring replacement of two alluvial wells. We remain concerned about the use MCOI-6 and the regional wells for ground water monitoring purposes. They should also be replaced. We reference the detailed comments of Robert H. Gilkeson, found in Appendix A, "Deficiencies in Ground Water Protection in the Draft Ground Water DP-1132 Permit, by Independent Registered Geologist Robert H. Gilkeson," to the CCW, Gilkeson and Sanchez December 12, 2013 comments for the DP-1132 draft permit. Gilkeson has provided detailed comments about why MCOI-6 and the regional wells need to be replaced. In addition, NMED has stated that the wells "were not installed for contaminant detection or groundwater monitoring." We quote from page 31 in the NMED November 2010 General Response to Comments on the LANL RCRA Renewal Permit: "The NAS report [National Academy of Sciences 2007 Final Report] references wells that were installed as part of LANL's groundwater characterization efforts that wer conducted in accordance with their Hydrogeologic Work Plan (1998).... These [characterization] wells were not installed for contaminant detection or groundwater monitoring. Therefore, these wells have limited relevance to groundwater protection goals set forth by the March 1, 2005 Consent Order."
14	34	§31. Settled Solids Removal	We are concerned that there is no public participation requirement for the submittal of the settled solids removal workplan. Because the RLWTF is unlike any other facility in NM, we urge NMED to require the workplan now to be part of the permit that is released for public comment. Additionally, reporting on the nature and amount of solids, timing of disposal at WIPP should be a matter of course, as LANL's "Supplemental Information for Discharge Permit Application DP-

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			1132, Radioactive Liquid Waste Treatment Facility (RLWTF) and Zero Liquid Discharge (ZLD) Solar Evaporation Tanks," ENV-RCRA-12-0173, LAUR-12-21591 (August 10, 2012, as revised) ("Supplement") states at A-8, page 1: "(2) Transuranic RLW treatment consists of influent collection and storage, treatment of the transuranic RLW, and sludge treatment. Treated water is not discharged; it either receives additional treatment (secondary reverse osmosis) or is sent to storage tanks in Building 50-248 for disposition as bottoms. Sludge from the treatment process is concentrated, solidified with cement, and shipped to the Waste Isolation Pilot Project as a solid transuranic waste." It is, thus, clear that LANL has records of settled solid accumulation and removal which could be share with the public. Additionally, it is clear that these records include the volumes of material being accumulated and processed, which means LANL also can provide this information. In fact, the Supplement goes on to state at B-12, page 2: "Transuranic influent is received in batches from TA-55, with influent collected in either the acid tank or caustic tank in Building 50-66. Level probes for these tanks are linked electronically to the RLWTF control room. Operators monitor and record tank level changes during each influent batch transfer. Influent volumes are calculated from the difference between beginning and ending tank levels." Similar data collection applies separately to Low Level Waste, as the Supplement states further that: "Low-level RLW influent volumes will be determined by monitoring and recording the change in level of Tank 5 and Tank 6 in the Waste Management and Risk Management (WMRM) Facility. While radioactive liquid waste (RLW) is being fed to the treatment process from one of these two influent tanks (e.g. Tank 5), the fresh influent will be received in the other influent tank (e.g. Tank 6). In this illustration, the change in the level of Tank 6 from one day to the next will reflect the volume of the influent received." *Id.* It is difficult to imagine that given LANL keeping such records of the influent, they are failing to do so for the treated effluent Low-level RLW. Thus, it is reasonable for LANL to make the input-output date for both Low-level RLW and Transuranic RLW and solidified material available to the NMED and the public.
15	41	§41. Cessation of Operation of Specific Units	We support retention of 75,000 gallon concrete influent storage tank for emergency storage for LLW liquid waste. Should this specific condition be moved to another section, or have its own condition?
16	42	§42. Closure Plan	The draft permit that is released for public comment must include the Closure Plan. There is no schedule for closure.

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17		Financial Assurance	CCW, et al., request financial assurance be required in the GWDP.
18	47	§52. Extensions of Time	The Permittees submittal must be posted to the EPRR. The NMED response must be posted to the EPRR.
19			CCW, et al., reserve the right to object or comment on issues raised or identified by CCW, et al.
20			CCNS received the DOE/LANL response to its November 2013 FOIA request. We are reviewing the documents and may have additional comments as a result. Did the Permittees calculate emissions to the air from the MES and SET for constituents other than the radionuclides? If so, please provide to us.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733

August 16, 2017

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Jonathan Block, Eric D. Jantz,
Douglas Meiklejohn, Jaimie Park,
New Mexico Environmental Law Center
1405 Luisa Street, Suite 5
Santa Fe, NM 87506

RE: Request to Terminate NPDES Permit #NM0028355 as to Outfall #051
for Radioactive Liquid Waste Treatment Facility

Dear Mr. Lovejoy and Mr. Jantz:

This letter is in response to the above-referenced request to terminate permit coverage, which was filed pursuant to 40 C.F.R. § 124.5 with the Acting Regional Administrator of EPA Region 6 (Region 6) by Concerned Citizens for Nuclear Safely (CCNS) on March 9, 2017 ("Request to Terminate"). CCNS asks the Region to terminate permit coverage for Outfall 051 under NPDES Permit #NM0028355, issued in 2014 to Los Alamos National Security, LLC (LANS) and the Department of Energy (DOE) as co-permittees for the Los Alamos National Laboratory facility located at Los Alamos, NM (LANL). The permit authorizes LANL to discharge from eleven sanitary and/or industrial outfalls, including a discharge of treated radioactive liquid waste from the Radioactive Liquid Waste Treatment Facility (RLWTF) through Outfall 051 into Mortandad Canyon.

CCNS argues that because LANL's RLWTF facility was redesigned as a zero discharge facility in the early 2000's and has not discharged since 2010, Outfall 051 does not require NPDES permit coverage, and that in fact issuing such coverage is outside the jurisdiction of EPA pursuant to federal court rulings in *National Pork Producers Council v. EPA*, 635 F.3d 738 (5th Cir. 2011)("*National Pork Producers*") and *Waterkeeper Alliance, Inc. v. EPA*, 399 F.3d 486 (2d Cir. 2005)("*Waterkeeper*"). CCNS further argues that NPDES coverage for Outfall 051 is improper because it makes LANL's RSWTF eligible for a Waste Water Treatment Unit (WWTU) regulatory exemption under the Resource Conservation and Recovery Act (RCRA) despite no actual Clean Water Act (CWA) discharges.

Region 6 does not agree with CCNS's arguments and has determined not to unilaterally propose termination of LANL's NPDES permit coverage for Outfall 051. Under 40 C.F.R. § 124.5(b), if the Regional Administrator decides a request to terminate NPDES permit coverage filed by an interested party is not justified, the Regional Administrator must send the requester "a brief written response giving a reason for the decision." Accordingly, Region 6 provides the following response.

40 C.F.R. § 124.5(a) states that NPDES permits may only be terminated for the reasons specified in 40 C.F.R. § 122.64. That section provides the following causes for terminating a permit during its term:

(1) Noncompliance by the permittee with any condition of the permit;
(2) The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time;
(3) A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination; or
(4) A change in any condition that requires either a temporary or permanent reduction or elimination of any discharge or sludge use or disposal practice controlled by the permit (for example, plant closure or termination of discharge by connection to a POTW). 40 C.F.R. § 122.64(a)(1) - (4).

CCNS does not allege that LANL is in violation of its permit conditions with regard to Outfall 051 or that the permittees failed to disclose or misrepresented any relevant facts. In addition, there is no information to support a determination that the permitted discharge endangers human health or the environment and could only be regulated through termination of the permit.

Finally, EPA is not aware of a change in any condition (e.g., facility closure or termination of the discharge by connection to a POTW) that would warrant termination of permit coverage for Outfall 051 pursuant to § 122.64(a)(4). In their application for permit coverage, LANS and DOE described the "no discharge" nature of the RLWTF and specifically sought permit coverage for Outfall 051 to protect against liability in case of a future discharge. The permittees indicated that under certain circumstances, e.g. if one or both evaporative systems have to be taken off-line, a discharge could occur. Without permit authorization, such a discharge could subject the permittees to liability under the CWA for discharging without a permit.

40 C.F.R. § 122.21 places the burden on the owner/operator of a facility to obtain NPDES permit coverage prior to discharge. If the owner/operator does not seek coverage and a discharge occurs, the owner/operator is strictly liable under the CWA and subject to civil and/or criminal penalties. Consequently, EPA generally defers to an owner/operator's determination that a discharge could occur and that permit coverage is needed. It is not unusual for facilities that do not routinely discharge to seek and retain permit coverage to protect against liability in the event of an unanticipated discharge.

Region 6 does not read *National Pork Producers* or *Waterkeeper* to prohibit EPA from issuing an NPDES permit to a facility seeking coverage to protect against liability in the event of a discharge. Those cases dealt with EPA's authority to **require** operators of Concentrated Animal Feeding Operations (CAFOs) to obtain NPDES permit coverage when there had been no discharge. The Courts in those cases found that EPA could require discharging CAFOs to obtain NPDES permits, but that the agency could not mandate coverage in cases where there was no actual discharge. The burden was on the CAFO owner/operator to determine whether to seek permit coverage or to risk liability in case of a discharge. Neither *National Pork Producers* nor *Waterkeeper* address EPA's authority to issue a permit to a facility **requesting** coverage for a possible discharge. In such cases, as in the current situation, EPA

has authority under CWA § 402 (a) to issue a permit authorizing the discharge of pollutants should one occur. Otherwise, the CWA's requirement that facilities obtain NPDES permit coverage **prior to discharge** would be impossible for the agency to implement.

As to CCNS's argument that LANL's NPDES permit for discharges from Outfall 051 should be terminated because the NPDES permit coverage allows LANL to obtain a Waste Water Treatment Unit (WWTU) regulatory exemption under the Resource Conservation and Recovery Act (RCRA), Region 6 has determined this argument to be outside the scope of our decision. Whether or not issuance of NPDES permit coverage might trigger the RCRA WWTU regulatory exemption has no bearing on EPA's NPDES permitting decisions, which must be based on the requirements of the CWA and implementing regulations.

For the above reasons, Region 6 has determined CCNS's Request to Terminate LANL's NPDES permit coverage for Outfall 051 under NPDES Permit No. NM0028355 is not justified. Should you have any question regarding this matter, please contact Ms. Stacey Dwyer of my staff at (214) 665-6729, or Renea Ryland at (214) 665 -2130.

Sincerely,

WK Honker

William K. Honker, P.E.
Director
Water Division

cc: Charles F. McMillan, Director
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OUTFALL 051 - Radioactive Liquid Waste Treatment Facility

Discharge Type: Intermittent
Latitude 35°51'54"N, Longitude 106°17'52"W (TA-50-1)

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge treated radioactive liquid waste to Mortandad Canyon in segment number 20.6.4.128 of the Rio Grande Basin.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
	CONCENTRATION (mg/L, unless stated)		LOADING (Lbs/day, unless stated)		FREQUENCY	SAMPLE TYPE
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM		
Flow (MGD)	***	***	Report	Report	1/Day	Estimate (*5)
COD	125	125	***	***	1/Month	Grab
TSS	30	45	73	109	1/Month	Grab
Total Toxic Organics (*1)	1.0	1.0	***	***	1/Month	Grab
Ra 226+228 (pCi/l)	30	30	***	***	1/Week	Grab
Total Chromium	1.34	2.68	***	***	1/Week	Grab
Total Lead	0.076	0.115	***	***	1/Week	Grab
Total Copper	0.014	0.014	***	***	3/Week	Grab
Total Zinc	0.191	0.191	***	***	3/Week	Grab
Total Hardness	Greater than or equal to 50 mg/l				3/Week	Grab
Total Residual Chlorine	***	0.011 (*2)	***	***	1/Week	Grab
Total Cadmium	Report	Report	***	***	2/Term (*3)	Grab
Total Mercury	Report	Report	***	***	2/Term (*3)	Grab
Total Nickel	Report	Report	***	***	2/Term (*3)	Grab
Total Selenium	Report	Report	***	***	2/Term (*3)	Grab

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Perchlorate	Report	Report	***	***	1/Week	Grab
Total PCB (µg/l)	Report	Report	***	***	2/Term (*3)	Grab
Total Recoverable Aluminum	Report	Report	***	***	1/Term	Grab
Adjusted Gross Alpha	Report	Report	***	***	1/Term	Grab
Chromium III	Report	Report	***	***	1/Term	Grab
Chromium VI	Report	Report	***	***	1/Term	Grab
pH (Standard Unit)	Range from 6.0 to 9.0		***	***	1/Week	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
Whole Effluent Lethality (PCS 22414) (48-Hr NOEC) (*4)	MONTHLY AVG MINIMUM	7-DAY MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Daphnia pulex	100%	100%	1/3 Months	3-Hr Composite

FOOTNOTES

*1 The limits and monitoring for Total Toxic Organics do not include 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD), Pesticides, or Polychlorinated biphenyls.

*2 The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes.

*3 At least two samples from different discharge events shall be taken during the term of the permit if discharges occur. EPA published congener Method 1668 Revision and detection limits shall be used for reporting purposes. The permittee is allowed to develop an effluent specific MDL in accordance with Appendix B of 40 CFR Part 136 (instructions in Part II.A of this permit).

*4 Monitoring and reporting requirements begin on the effective date of this permit. 100% limitation becomes effective on March 1, 2016. Critical dilution 100%, and the dilution series are 32%, 42%, 56%, 75%, 100%. Also see Part II, Section I. Whole Effluent Toxicity (48-Hour Acute Limits).

*5 "Estimate" flow measurements shall not be subject to the accuracy provisions established at Part III.C.6. The daily flow value may be estimated using best engineering judgment.

SAMPLING LOCATION(S)

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): following the final treatment and prior to or at the point of discharge from TA-50-1 treatment plant.

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NO DISCHARGE REPORTING

If there is no discharge event at this outfall during the sampling month, place an "X" in the NO DISCHARGE box in the Discharge Monitoring Report.

FLOATING SOLIDS, OIL AND GREASE

There shall be no discharge of oils, scum, grease and other floating materials that would cause the formation of a visible sheen or visible deposits on the bottom or shoreline, or would damage or impair the normal growth, function or reproduction of human, animal, plant or aquatic life.

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NEW MEXICO
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BUTCH TONGATE
Cabinet Secretary

J.C. BORREGO
Deputy Secretary

REQUEST FOR HEARING DETERMINATION
ATTACHMENT A

Date: September 14, 2017

Subject: Request for Hearing Determination for the draft DOE/LANS Discharge Permit, DP-1132, Radioactive Liquid Waste Management Facility - Background

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I. Facility Information – Need for Permit and Relation to Other Permits

The Los Alamos National Laboratory (LANL) operates under the oversight of the United States Department of Energy (DOE) and Los Alamos National Security, LLC (LANS), collectively the "Applicants." The Radioactive Liquid Waste Treatment Facility (RLWTF or Facility) receives and treats radioactive liquid waste (RLW) from waste generating locations at LANL.

The RLWTF consists of three principle components: 1) an underground collection system that conveys radioactive water to the RLWTF at Technical Area (TA) 50 from generators at LANL, 2) structures at TA-50, and 3) Solar Evaporation Tanks (SET) at TA-52. At TA-50, Building 50-01 is the primary structure; it houses treatment equipment, process tanks, analytical laboratories, and offices.

The need for a permit at the RLWTF is associated with the facility's main treatment process, the processing of low-level radioactive liquid waste (RLW). The main treatment process consists of influent collection and storage, the treatment of low-level RLW, and the discharge of treated water to the environment. Discharge to the environment is via three processes: 1) NPDES Outfall #051 (see note below about infrequency of this discharge), 2) solar evaporation at the TA-52 (SET), or 3) mechanical evaporation at the Mechanical Evaporation System (MES) TA-50-257.

The main treatment processes include clarification, filtration, ion exchange, and reverse osmosis. Two secondary streams, sludge and reverse osmosis concentrate, are generated by primary treatment and are sent to the secondary treatment process.

In addition to the main treatment process for low-level RLW, the RLWTF has a process for treating transuranic RLW and a secondary treatment process for waste streams from both the low-level and transuranic processes. Transuranic RLW treatment consists of influent collection

and storage, treatment of the transuranic RLW, and sludge treatment. Treated water is not discharged; it either receives additional treatment (secondary reverse osmosis) or is sent to storage tanks in Building 50-248. Sludge from the treatment process is concentrated, solidified with cement, and shipped to the Waste Isolation Pilot Plant (WIPP) as a solid transuranic waste.

The secondary treatment process treats wastes from the primary and transuranic treatment lines. It consists of a rotary vacuum filter to treat sludge from the main treatment process, secondary reverse osmosis to treat reverse osmosis concentrate from the main process and/or effluent from the transuranic process, and a sediment disposal step. Wastes from the secondary treatment process are disposed as low-level radioactive solid waste.

An EPA-issued NPDES Permit (NM0028355) authorizes the Applicants to discharge treated effluent associated with the RLWTF to an outfall (Outfall 051) in Mortandad Canyon. The Permit was issued on August 1, 2007, reissued on August 12, 2014, and subsequently modified on May 1, 2015 (Modification). The Modification states that Outfall 051 has had "no discharge since November 2010."

The LANL Hazardous Waste Permit (HWP), most recently reissued in May 2017, permits the storage and treatment of hazardous wastes at 24 separate Hazardous Waste Management Units (HWMUs), addresses the closure and post-closure care of disposal units located at TA-54 Areas G, H, and L, specifies corrective action activities for Solid Waste Management Units (SWMUs) and Areas Of Concern (AOCs), and mandates groundwater monitoring and remediation facility-wide. The LANL HWP addresses the RLWTF as both a HWMU and as a SWMU. Permit Condition 4.6 specifically exempts the RLWTF from permitted hazardous waste treatment under the wastewater treatment unit exemption at 40 CFR § 264.1(g)(6). This exemption remains valid as long as the RLWTF is subject to the Clean Water Act, e.g., so long as all treated wastewater discharges from the RLWTF through Outfall 051. The LANL HWP identifies five SWMUs or AOCs associated with the RLWTF.

The LANL 2016 Compliance Order on Consent (Consent Order or CO) references the Radioactive Liquid Waste Treatment System in Appendix A as SWMU 53-015 and identifies the SWMU as a "deferred site." NMED issued the CO to the DOE pursuant to Section 74-4-10 of New Mexico's Hazardous Waste Act (HWA) and Section 74-9-36(D) of New Mexico's Solid Waste Act (SWA) "for the limited purpose of addressing the corrective action activities," including requirements concerning groundwater contaminants listed at 20.6.2.3103 NMAC and toxic pollutants listed at 20.6.2.7.WW NMAC, and requirements associated with groundwater monitoring, groundwater characterization and groundwater corrective action activities. The CO explicitly exempts radionuclides from NMED regulation under the CO.

Air quality operating permits have not been required by the NMED Air Quality Bureau for the SET or the MES because potential emissions have been deemed insignificant with respect to regulatory thresholds.

II. Ground Water Discharge Permit History

Significant regulatory events associated with the RLWTF include:

- On August, 19, 1996, the Applicants submitted the original discharge permit application for the RLWTF.
- On November 20, 1996, NMED for the first time provided public notice of the availability of a draft discharge permit for the RLWTF.
- On July 31, 1998, LANL proposed to eliminate liquid discharge from the RLWTF.
- On June 30, 1999, NMED determined there was a significant public interest in the RLWTF draft discharge permit and informed interested parties that a hearing would be held. The hearing was not held and the record contains no explanation.
- August 1, 2007, the U.S. EPA reissued NPDES Permit for Outfall 051 to accept treated effluent from the RLWTF. Discharge from the Outfall ceased entirely at approximately this date.
- On May 5, 2017, NMED gave public notice of the most recent draft discharge permit for the RLWTF.

LANL had revised the RLWTF DP application thirteen times due to upgrades at the facility. NMED has requested additional information associated with the application approximately ten times and LANL has responded to each of these requests.

On June 5, 2017, NMED received a single letter requesting a hearing and providing technical comments on the draft discharge permit. The letter was received from Communities for Clean Water (CCW), representing Concerned Citizens for Nuclear Safety, Amigos Bravos, Tewa Women United, Partnership for Earth Spirituality, and Honor our Pueblo Existence. The letter's contents are summarized and analyzed in Attachment B.

The following table outlines the chronology of the Application and associated events.

NPDES Permit for Outfall 051 becomes effective	August 1, 1994
NMED informs LANL of an unauthorized discharge at the RLWTF	October 13, 1994
NMED informs LANL that a discharge plan is required for the RLWTF	April 3, 1996,
LANL submits original Discharge Plan Application	April 16, 1996
NMED provides public notice of a draft discharge permit for the RLWTF	November, 20, 1996; August 8, 2003; April 18, 2005; June 10, 2005; May 31, 2014;
NMED requests additional information.	April 21, 1997; August 6, 1998; January 16, 2002; March 4, 2004; August 18, 2004; November 3, 2004; December 2, 2005; May 23, 2008; June 11, 2008; September 8, 2011; August 12, 2014;
LANL responds to NMED's requests for additional information.	June 13, 1997; August 25, 1998; March 12, 1999; February 22, 2002; September 17, 2003; April 5, 2004; August 30, 2004; January 12, 2006; September 30, 2008;

	February 16, 2012; April 2012; August 10, 2012; August 22, 2014; September 11, 2014; June 3, 2016;
LANL revises DP application due to upgrades at the RLWTF	December 30, 1997; February 8, 2002; December 10, 2002; June 24, 2003; April 5, 2005; September 27, 2010; December 15, 2010; March 11, 2011; October 19, 2011; February 16, 2012; August 10, 2012; July 26, 2013; June 6, 2016;
LANL proposes to eliminate liquid discharge from the RLWTF.	July 31, 1998
NMED determines there is significant public interest in the draft DP for the RLWTF and informs interested parties that a hearing will be held.	June 30, 1999
CCNS/CCW submits comments on the draft DP.	August 4, 2005; June 12, 2013; July 3, 2013; June 1, 2015
LANL submits comments on the draft DP.	August 4, 2005; May 20, 2015
EPA reissues NPDES Permit for Outfall 051 to accept treated effluent from the RLWTF (discharge from the Outfall ceased entirely approximately this date).	August 1, 2007
LANL submits NOI for the evaporation tanks at TA-52.	November 8, 2007
NMED informs LANL that a comprehensive and up-to-date discharge plan is required for the RLWTF.	November 18, 2011
NMED organizes six meetings and one tour of the facility to resolve the concerns of public interest groups.	2014, 2015, and 2016
LANL submits most recent updated application.	June 6, 2016
NMED public notices most recent draft discharge permit for the RLWTF	May 5, 2017
CCW submits most recent comments on the draft DP.	June 5, 2017

III. Permit Specifics

The Facility, as it pertains to draft DP-1132, is a wastewater treatment facility that is authorized to discharge up to 40,000 gallons per day (gpd). In addition to the discharge units referenced above (MES, SET, Outfall 051), the DP addresses the influent collection and storage system (Waste Management Risk Mitigation Facility or WMRM); the low-level radioactive liquid waste treatment system; the transuranic waste-water treatment system; and the secondary treatment system. 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.WW NMAC.

Draft DP-1132 contains standard permit conditions regarding;

- Facility inspections
- Facility maintenance and repair
- Record keeping
- Effluent limits (i.e., all water contaminants and associated standards listed in 20.6.2.3103 NMAC)
- Effluent sampling (i.e., all water contaminants listed in 20.6.2.3103 NMAC and all toxic pollutants as defined in 20.6.2.7.WW NMAC)
- Contingency plans
- Closure procedures

Draft DP-1132 requires groundwater monitoring;

- Quarterly sampling and analyze for TKN, NO_3-N, TDS, Cl, F and perchlorate in two replacement alluvial wells located hydrologically downgradient of Outfall 051 and well MCOI-6 located in the intermediate aquifer hydrologically downgradient of Outfall 051.
- Annual sampling and analysis for all water contaminants listed in 20.6.2.3103 NMAC and all toxic pollutants listed in 20.6.2.7.WW NMAC in the replacement alluvial wells, MCOI-6, and regional wells R-46, R-60, R-1 and R-14.

Draft DP-1132 contains unique permit conditions regarding;

- Annual submission to NMED of an updated Facility Process Description
- Submission to NMED of a written notification of any changes in the Facility's collection, treatment or disposal systems
- Prohibition of the implementation of any expansion, process modification, or alteration of a system or unit that could constitute a discharge permit modification 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.
- Submission of a final construction report for NMED approval following completion of construction for a unit or system
- Submission of verification information demonstrating all existing units and systems intended to convey, store, treat or dispose of an untreated liquid or semi-liquid waste stream meet the requirements of secondary containment

- Submission of verification information demonstrating 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
- Maintenance of records of all waste streams conveyed to the Facility
- Posting all submissions to NMED on LANL's Electronic Public Reading Room

These conditions specify sufficient operational, monitoring, contingency and closure measures to protect groundwater quality, and to prevent the discharge of any contaminant which may result in a hazard to public health as defined in 20.6.2.7 NMAC.

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. Groundwater 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.

: 13811

SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lieutenant Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

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BUTCH TONGATE
Cabinet Secretary

J.C. BORREGO
Deputy Secretary

MEMORANDUM

To: Butch Tongate, Cabinet Secretary, NMED

Through: Bruce Yurdin, Director, Water Protection Division
Michelle Hunter, Bureau Chief, Ground Water Quality Bureau
Pam Homer, Reuse Team Leader, Ground Water Quality Bureau

From: Steve Pullen, Project Lead, Ground Water Quality Bureau

Subject: Request for Hearing Determination for the DOE/LANS Discharge Permit Application DP-1132, Discharges from the Radioactive Liquid Waste Treatment Facility (RLWTF)

Date: September 14, 2017

The Ground Water Quality Bureau (GWQB) respectfully requests a hearing determination in the matter of a draft groundwater discharge permit addressing an application from the U.S. Department of Energy (DOE) and Los Alamos National Security (LANS), together the "Applicants," for groundwater discharges associated with the Applicant's Radioactive Liquid Waste Disposal Facility (RLWTF). The Applicants propose to discharge treated effluent from the RLWTF utilizing a mechanical evaporation system (thermal evaporation), a passive evaporation system (evaporation impoundment or tank) and, if necessary, via a NPDES outfall.

Section 20.6.2.3108.K NMAC states that "a public hearing shall be held if the secretary determines there is substantial public interest." The GWQB believes that substantial public interest exists in this matter and that therefore a public hearing is warranted.

The GWQB deems the significance of public interest to be judged by the following criteria:

- Interest is primarily about protecting groundwater and related issues subject to the WQA and applicable regulations, 20.6.2 NMAC.
- Interest remains despite efforts to resolve the public's concerns
- Interest is from a sufficiently large enough portion of the potentially affected population

Brief chronology:

August, 19, 1996 - Applicants submitted the original discharge permit application for the RLWTF. The Applicants have since revised the RLWTF DP application thirteen times due to upgrades at the facility. NMED requested additional information associated with the application approximately ten times and the Applicants responded to each of these requests.

June 30, 1999 - NMED determined there existed a significant public interest in the RLWTF draft discharge permit and informed interested parties that a hearing would be held. The hearing was never held and the administrative record contains no explanation for the department's decision in the matter, although the discharge permit has never been issued.

August 1, 2007 - U.S. EPA issued a NPDES Permit for Outfall 051 to accept treated effluent from the RLWTF. Discharge from Outfall 051 ceased entirely on approximately this date, effectively making the RLWTF a zero-groundwater-discharge facility.

Years 2014, 2015 and 2016 - NMED organized six meetings and one tour of the facility to resolve the concerns of public interest groups.

On May 5, 2017 - GWQB published a public notice for draft Discharge Permit #1132 (DP-1132) for the second time.

June 5, 2017 - NMED received a single correspondence requesting a hearing and providing technical comments on the draft discharge permit In response to the public notice for draft DP-1132. The correspondence was received from Communities for Clean Water (CCW), representing Concerned Citizens for Nuclear Safety, Amigos Bravos, Tewa Women United, Partnership for Earth Spirituality, and Honor our Pueblo Existence. The correspondence states that CCW's constituent organizations represent approximately 4,000 people who live downwind and downstream of the emissions from operations at LANL. A compilation of these comments and the department's associated draft responses are contained in Attachment B. The comments principally address groundwater and associated issues.

A more complete description of the history of DP-1132 is provided in Attachment A. Attachment A also provides background information regarding the RLWTF, a description of the need for a discharge permit at the facility, and the relationship between draft DP-1132 and Los Alamos National Laboratory's (LANL) Hazardous Waste Permit and the Consent Order.

Although GWQB has addressed many of the public's concerns, there continues to be a large amount of public interest in the draft permit, as indicated by the continued involvement by CCW and the number of people the organization represents.

The Applicants did not comment or request a hearing in this matter.

The GWQB believes that public interest in this case meets the threshold of substantial, based on the criteria identified above, and recommends a positive determination regarding this hearing request.

Hearing Request Determination:

The request for hearing on the Draft Discharge Permit DP-1132

_____ Denied

__✓__ Approved

Butch Tongate

Butch Tongate, Secretary
New Mexico Environment Department

Date: 9/18/17

: 138144

DP-1132 Hearing Determination – Attachment B

Table - LANL draft DP-1132 Public Comment – CCW

1	*(ZERO DISCHARGE) CCW has contended since its initial comments that the RLWTF, as, in LANL's words, "a zero-liquid discharge" facility, is not properly regulated under the New Mexico Water Quality Act and implementing regulations.* *CCW notes that it may not be necessary to hold a hearing if the Environment Department specifically stipulates in writing on the record that: (a) the RLWTF has not made any discharges since at least late 2011; (b) the RLWTF is a "zero liquid discharge" facility and no liquid discharges are anticipated from this facility; (c) the new RLWTF Low-Level Radioactive Waste Water ("RLW") Treatment System facility adjacent to the current RLWTF will likewise be a "zero liquid discharge facility"; and (d) once operating, no liquid discharges are anticipated to take place from the new RLWTF RLW facility.*	CCW's legal argument is flawed for a number of reasons. First, the WQA only requires "the discharge of any water contaminant" for a permit to be required (NMSA 1978, § 74-5-5.A). There are many WWTPs in New Mexico with similar arrangements to the RLWTF, they discharge only to lined impoundments or to evaporative systems. All of these facilities are regulated by NMED pursuant to discharge permits. There are no WWTPs in New Mexico regulated under EIB regulations promulgated pursuant to the Hazardous Waste Act. Discharge permits are the appropriate mechanism for WWTPs (such as the RLWTF) because the permits contemplate a failure of one or more of the mechanical systems (either in treatment or impoundment) that protect groundwater from contamination as a result of the discharge. Were CCW to be correct in their assertion that the WQA does not apply to a WWTP that does not discharge directly to groundwater, there would be a great number of unregulated WWTPs in New Mexico. Any system failure at any of these facilities could then result in groundwater contamination. NMED prefers to retain and exercise its authority to regulate these facilities under regulations promulgated by the WQCC, pursuant to the WQA, in order to protect New Mexico's groundwater. Were CCW's assertion that the WQA does not authorize regulation of the RLWTF via a discharge permit, then it would certainly be contrary to law for NMED to proceed in the permitting process – including holding a public hearing on the proposed permit. Finally, CCW's comment amounts to a legal argument as to the authority of the WQCC. Even if that argument had merit, a public hearing before the Secretary of Environment is not the proper venue to decide matters related to the WQCC's authority. The proper venue would be before the WQCC, or in New Mexico state court, following issuance of the DP.
2	*(RCRA EXEMPTION – FACILITY EXPANSION/ALTERATION) CCW contends it is objectionable to have a permit apply to "subsequent*	NMED takes no position regarding the "the adequacy of the design, compliance with applicable State, Federal, local statute, code and requirements" of the RLW because those

	replacement systems," which have not undergone the required public notice, comment and hearing under the Resource Conservation and Recovery Act ("RCRA") and the New Mexico Hazardous Waste Act ("NMHWA"). The new RLW facility, absent an exemption from RCRA/NMHWA, is subject to the NMED facility-wide hazardous waste permit for LANL. *According to the NMED letter to LANL (October 3, 2014), LANL submitted plans and specifications to NMED for review. NMED did not provide written approval. NMED made no comment regarding "the adequacy of the design, compliance with applicable State, Federal, local statute, code and requirements." Furthermore, there was no permit then in place for the new facility, nor would one be effective as there was not (and is no) discharge planned. Thus, NMED had no authority to review the "subsequent replacement systems" plans and specifications. DP-1132 Condition 3 requires "prior written approval by NMED" before implementing "any expansion, process modification, or alternation of a system or unit that could constitute a discharge permit modification (as defined in 20.6.2.7.P NMAC) of the intended function, design or capacity of any of the systems, units or components of the Facility's collection, treatment or disposal systems." Building a new facility would require a Class 3 permit modification under RCRA/NMHWA and requires advance public notice, comments and public hearing on request. A non-discharging facility that is not subject to a National*	construction/building requirements are outside the scope of a permit to discharge to groundwater, and outside the scope of expertise of the GWQB. Per the second part of the October 3, 2014 letter, the purpose of the review was to ensure that "the design, construction specifications, proposed systems and calculations are generally appropriate, and include adequate safeguards to protect groundwater quality." That review is relevant to protection of groundwater, and therefore is part of the discharge permitting process rather than reviewing a design for compliance with building codes.

	Pollutant Discharge Elimination System ("NPDES") permit is covered under the RCRA/NMHWA permit.	
3	*(SIGNAGE) During discussions of DP-1132, LANL committed to working with CCW members to produce multi-language signage warning people to keep out of areas downstream of the RLWTF, but LANL has had no subsequent communication with CCW regarding the signage, despite the fact that CCW submitted draft copies of such signs.*	Permit Condition #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 – UNAUTHORZED PERSONNEL KEEP OUT (PELIGRO – SE PROHIBE LA ENTRADA A PERSONAS NO AUTORIZADAS). [20.6.2.3109.C NMAC] The comment is not clear whether the concern is insufficient languages on posted signs or the location of the signs (i.e., downstream of the RLWTF). Attached example language suggests the concern is the need for signage in Tewa. The comment does not specifically request NMED revise Permit Condition 6. Permit Condition 6 is standard language included in discharge permits for facilities utilizing surface application/treatment in association with a discharge. The comment does not provide justification for a change to the permit language. <u>No action by NMED is necessary.</u> (*** 3109.B references "conditions" in permits – this is the appropriate citation for requiring signage ***)
4	*(PUEPLO REPRESENTATION AT EOC) Based upon discussions of DP-1132, LANL needs to include representatives of potentially affected Pueblos in emergency incident planning and provide designated seats within the LANL Emergency Operations Center for Pueblo representatives during preparation drills and actual emergencies.*	The Discharge Permit does not address representation on the LANL Emergency Response Operations Center. There is no precedent within discharge permits for specifying representation on facility emergency operations team. Permit Condition 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. f. Conditions under which activation of <u>Los Alamos National Laboratory's Emergency Operations Center</u>

		(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 comment does not provide the justification for a change to the permit language. No action by NMED is necessary.
5	*(MONITORING EQUIPMENT INADAQUACIES) Despite CCW's provision of information concerning current standard industry practices for calibration and sensitivity of monitoring equipment, DP-1132 fails to require monitoring equipment accurate to current industry standards.*	The comment is unclear regarding what monitoring equipment is being referenced. Examples of monitoring equipment referenced in the discharge permit are: flow meters (PC#s 21, 22; corrosion protection equipment; leak detection systems (PC#7); water tightness testing of the liquid waste conveyance, storage and treatment systems (PC#8); influent tank volume sensors; soil moisture monitors for SWT (PC #30); groundwater monitoring wells (PC#36); Regarding flow meters, Permit Condition #22 requires effluent lines be calibrated to within plus or minus 5 percent of actual flow as measured under field conditions. Influent is to be calibrated to within plus or minus 10 percent of actual flow. The typical discharge permit specifies a 10% accuracy range. American Water Works Association manual, M6 Water Meters–Selection, Installation, Testing and Maintenance, gives industry guidelines for water meter testing. Most meters have a specific AWWA standard associated with them. Table 5-1 shows acceptable accuracy for meters in place over time. Table 5-3 shows accuracy requirements for new, rebuilt and repaired meters. Generally, all of the technologies are expected to be within 1.5% when new, or rebuilt. Table 5-1 allows up to 4% inaccuracy. However, these days production meters are typically magnetic or ultrasonic and the technology allows measurement within .5%, so 1.5% is more than generous. Meter type is critical. CCW Attachment 3 suggests a 0.1% accuracy. "On November 14, 2014 CCW, Gilkeson and Sanchez provided extensive research about how "ISO 17025-certified meters

		can achieve +/-0.05 percent accuracy" and "measuring uncertainties of +/- 0.1% of rate are achievable with modern flowmeters." The referenced guide appears to apply to "laboratories" which use precise meters and therefore may be inapplicable to a radioactive liquid waste treatment facility. ***<u>If the issue is raised at hearing, the department should consider revising permit condition, at a minimum to have influent and effluent flow measurement accuracy the same.</u> ***
6	*(DEFECTIVE MONITORING WELLS) Despite discussions and provisions of ample documentation on this issue, DP-1132 allows groundwater monitoring to be conducted with defective shallow, intermediate and regional wells.*	Comment is vague regarding specifics with DP-1132 monitoring wells. CCW Attachment 3 states "CCW objects to the use of the defective groundwater monitoring wells R-46, R-60, R-1 and R-14 ..." PC#32 - GROUND WATER FLOW- requires the submittal of an annual groundwater flow direction report addressing the regional, intermediate and alluvial aquifers. PC#33 - REPLACEMENT OF TWO EXISTING ALLUVIAL GROUND WATER MONITORING WELLS – requires the submittal of a work plan for the installation of two replacement monitoring wells in the alluvial aquifer at a location hydrologically downgradient of Outfall 051. The submittal shall be within 90 days of issuance of the DP. PC#34 - MONITORING WELL LOCATION – requires a replacement well or wells if ground water flow information indicates that a monitoring well is not located hydrologically downgradient of the discharge location. PC#35 -MONITORING WELL CONSTRUCTION – requires the installation of a replacement well or wells if information indicates that a well is not constructed in a manner consistent with Guidelines; contains insufficient water to effectively monitor ground water quality; or is not completed in a manner that is protective of ground water quality. PC#36 – GROUND WATER MONITORING - requires annual samples from two replacement alluvial wells downgradient of Outfall 051, from intermediate aquifer well MCOI-6, and from regional wells R-46, R-60, R-1, and R-14 for 3103 constituents and all toxic pollutants. It requires quarterly

		analysis for TKN, NO_3-N, TDS, Cl, F and perchlorate in the two replacement wells and MCOI-6. IFGMP requires periodic sampling of all these wells but for R-1. NMED DOEOB and GWQB staff consider the DP-1132 wells appropriate for collecting representative samples. <u>No action by NMED is necessary.</u>
7	*(EPRR POSTINGS) In the final version of DP-1132, at LANL's request, NMED unilaterally changed the time for posting its submittals to NMED to the LANL Electronic Public Reading Room from seven (7) days to thirty (30) days. LANL's change effectively eliminates public notice about the 30-day comment period. See Condition 42 (Closure Plan Amendments and Modifications). Moreover, the DP allows public review and comment on proposed amendments to the closure plan "30 days after the submittal." This means the public will likely only learn of a comment opportunity after it expires. See DP-1132 Condition 42.*	PC #49 ELECTRONIC POSTING - MANDATORY – "<u>within thirty calendar days</u> of submittal to NMED, post on LANL's Electronic Public Reading Room the following submittals to NMED. • Annual Update Report • Submittal of Plans and Specifications • Water Tightness Testing Failure • Damage to Structural Integrity • Exceedance of Effluent Standards • Soil Moisture Monitoring System Exceedance • Alluvial Monitoring Well Replacement Installation Report • Exceedance of Groundwater Quality Standard • Spill or Unauthorized Discharge • Failures in Discharge Plan • Closure Plan Amendments or Modifications • Final Closure Report • Termination ELECTRONIC POSTING – VOLUNTARY - post on LANL's Electronic Public Reading Room <u>within seven calendar days</u> after submission to NMED, the information listed below. • Notification of Changes • Construction Report • Verification of Secondary Containment • Summary Report for Settled Solids Removal • Freeboard Exceedance Corrective Action Plan • Emergency Response Procedures • Written Confirmation of Installation of Flow Meters • Monitoring Reports • Work plan for Replacement of Two Existing Ground Water Monitoring Wells • Monitoring Well Location Changes • Monitoring Well Construction Report • Stabilization of Individual Units and Systems

		PC#42 - 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 30 days after the submittal of a modified or amended closure plan prior to approval." The only DP reference to public comment is at PC#42. Comment is accurate – PC#42 should be altered to say, "Public comments will be accepted by NMED for a period of 30 days after the Permittees post the modified Closure Plan to LANL's Electronic Public Reading Room as required at Permit Condition 49. However, it really makes no difference that NMED changed the posting time from 7 to 30 days. *** If the issue is raised at hearing, the department should alter DP accordingly. ***
8	*(CLOSURE UNDER RCRA) The DP-1132 Closure Plan fails to state that closure and post-closure care will take place under the NMED Hazardous Waste Permit for LANL. See Sec. VII.A.2 of the 2016 NMED Consent Order for LANL (requiring this).*	Closure and post-closure care (PCC) of the RLWTF is governed by either the discharge permit or the Consent Order depending on whether the building/structure is a SWMU/AOC. The Hazardous Waste Permit does not address the closure/PCC of the RLWTF as suggested by the comment. The draft DP has a Closure Plan (CP). That CP discusses integration with the CO. Condition 42.i reiterates that the CP will coordinate with the CO for units addressed under the CO. This Condition also reiterates that the closure of the SWMUs and AOCs associated with the RLWTF will be integrated with actions taken under the CO. However, there are 6 SWMU/AOCs at the RLWTF and there are four non-SWMU/AOCs units not subject to regulation under the CO, as described in a LANL letter to the GWQB dated September 11, 2014. Those four non-subject units include the Mechanical Evaporator System (MES), the Solar Evaporative Tank System (SET), the Waste Mitigation and Risk Management Tanks (MMRM), and the Bottoms Disposal Tanks. APPARENTLY – the closure of these four units is governed by the CP in the draft DP. Relevant excerpt from the CO (emphasis added): VII. RELATIONSHIP TO PERMITS A. NMED has determined that all corrective action for releases of hazardous waste or hazardous constituents at the

		Facility, required by Sections 3004(u) and (v) and 3008(h) of 24 RCRA, 42 U.S.C. §§ 6924(u) and (v) and 6928(h), and Sections 74-4-4(A)(5)(h) and (i) and 74-4-4.2(B) of the HWA, shall be conducted solely under this Consent Order and not under the current or any future Hazardous Waste Facility Permit ("Permit"), with the exception of the following five items which will be addressed in the Permit and not in this Consent Order: ... 2) The closure and post-closure care requirements of 20.4.1.500 NMAC (incorporating 40 C.F.R. Part 264, Subpart G), as they apply to hazardous waste management units at the Facility. Sec. VII.A.2 of the 2016 NMED Consent Order for LANL does not apply to the RLWTF because the facility, though a hazardous waste management unit (HWMU), is not subject to the Hazardous Waste Permit. The LANL Hazardous Waste Permit, Attachment J, Table J-3, lists closed HWMUs at LANL "not considered units addressed under the Permit" (a misnomer but accurate regarding permit non-applicability). The RLWTF is included on this Table and therefore the closure of the RLWTF will not be addressed under the CO.
9	*(CLOSURE SCHEDULE) Even if closure would take place under the Consent Order, closure is deferred and there is no proposed schedule provided in the DP-1132 Closure Plan.*	A closure schedule is not required by 20.6.2 NMAC. There is no precedent for establishing a time when closure of a unit will occur. Instead NMED relies on a notification to occur 120 days prior to initiation of closure. Relevant rule(s): 20.6.2.3107 MONITORING, REPORTING, AND OTHER REQUIREMENTS: A. Each discharge plan shall provide for the following as the secretary may require: ... (11) a closure plan to prevent the exceedance of standards of 20.6.2.3103 NMAC or the presence of a toxic pollutant in ground water after the cessation of operation which includes: a description of closure measures, maintenance and monitoring plans, post-closure maintenance and monitoring plans, financial assurance and other measures necessary to prevent or abate such contamination ... Relevant Conditions: DP Condition 43 - FINAL CLOSURE - Permittee will notify the NMED a minimum of 120 days prior to initiation of closure activities at the facility.

		DP Condition 43 - 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.WW NMAC are not present in ground water. Such monitoring shall continue for a minimum of eight consecutive quarters. <u>No action by NMED is necessary.</u>
10	*(CLOSURE LIMITATIONS - TRU FACILITY) The DP-1132 Closure Plan is limited to the low-level radioactive liquid waste treatment facility. LANL omitted to provide closure plans for the transuranic treatment facilities, component systems and "replacement" facilities.*	NMED finds the Closure Plan to sufficiently address related activities at the transuranic and common portions of RLWTF. <u>No action by NMED is necessary.</u>
11	*(CLOSURE PERFORMANCE STANDARDS) The DP-1132 Closure Plan provides no performance standards that LANL must meet in order for NMED to assess whether LANL has met the standards so as to warrant closure. For example, it appears that underground pipe sections may be left in place, yet there is no justification provided for doing so, and no basis provided for assessing the safety of such a decision. See Attachment 14b (performance standards).*	Remedial action associated with the closure of the RLWTF or components thereof will be addressed under the Consent Order (CO) as specified at Condition 46. CO Section IX, Cleanup Objectives and Cleanup Levels, states that "corrective actions shall be conducted under this Consent Order so that contamination due to releases from SWMUs and AOCs does not result in unacceptable risk to human health and ecological receptors based on current and reasonably foreseeable land use. The Closure Plan (CP) does state at Section 3.1 that during the stabilization portion of closure, units or systems will undergo sufficient procedures to ensure that they will pose no threat to the environment or groundwater. This commitment is repeated at Section 3.2. Section 3.4 commits to restoring the unit or system area "for unrestricted use." Regarding groundwater mitigation, Section 5.6 commits to a minimum of eight consecutive quarters of achieving the standards of 20.6.2.3103 NMAC. To be subject to the CO, the unit must be listed on the Hazardous Waste Permit as a SWMU or AOC. CP Section 3.2 commits the Applicants to ensuring all units or systems at the RLWTF are SWMUs or AOCs.

		Regarding Attachment 14b, Lack of Closure Performance Standards (Pertinent portions of the draft permit, revised Closure Plan, the 2016 Consent Order, and the Hazardous Waste Permit), the Attachment does not specify the lack of performance standards. No action by NMED is necessary.
12	*(GW MONITORING DURING CLOSURE) The DP-1132 Closure Plan provides limited provisions for ground water monitoring; significantly, there is continued reliance on defective wells for monitoring purposes as noted above in ¶ 6.*	- See response to Comment 6 above
13	*(CLOSURE MONITORING OF COCS) The DP-1132 Closure Plan does not include required continued monitoring, sampling and reporting of contaminants of concern, e.g., perchlorates and radionuclides.*	The DP does not use the term "contaminants of concern." Permit Condition 36, Ground Water Monitoring, requires sampling and analysis of particular monitoring wells and for particular constituents. Those constituents include all water contaminants listed in 20.6.2.3103 NMAC and all toxic pollutants listed in 20.6.2.7.WW, including perchlorate and radionuclides. The detection of any of these constituents during the operational phase that are attributable to the RLWTF will trigger continued monitoring for the constituents during closure and post-closure. No action by NMED is necessary.

: 13825

NEW MEXICO ENVIRONMENT DEPARTMENT
INSPECTION OF PUBLIC RECORD REQUEST FORM

Please fill out the following information:

1. Date: October 12, 2017

2. Requestor's Name: Joni Arends

3. Requestor's Address: P. O. Box 31147, Santa Fe, NM 87594-1147

4. Phone No.: (505) 986-1973

5. Email: jarends@nuclearactive.org

6. Company Being Represented: Concerned Citizens for Nuclear Safety (CCNS)

7. Address: same as above

8. Document or File being requested to be reviewed or copied (please describe the records in sufficient detail to enable Department personnel to reasonably identify & locate the records:

   In the Matter of the Application of the United States Department of Energy and Los Alamos National Security, LLC for a Ground Water Discharge Permit (DP-1132) for the Radioactive Liquid Waste Treatment Facility, No. GWB 17-20 (P):

   All documentation of communications (including letters, emails, memos, telephone logs, etc.) from January 1, 2010 to the present, and through the proposed permit hearing, including the administrative record, the administrative record index, and filings in this matter.

   CCNS also requests to review the file and choose documents for copying; however, the request is intended to includes email, interoffice memos and other communication that may not be in the permit file, including communications with the New Mexico Environment Department Hazardous Waste Bureau, the Permittees (Department of Energy (DOE), National Nuclear Security Administration (NNSA), Los Alamos National Security, LLC (LANS) and any of their contractors) and counsel for DOE, NNSA and LANS and any of their contractors.

9. NMED Bureau where Document/File can be found (if known): Office of the Secretary, the Ground Water Quality Bureau, and Hazardous Waste Bureau.

_____
Signature

The cost for copying by NMED is as indicated on Attachment A. Please send this request to:
Melissa Y. Mascareñas

Revised 6/14/12

13826

Inspection of Public Records Officer
1190 St. Francis Drive, Ste. N-4050
Santa Fe, New Mexico 87505
fax: (505) 827-1628 or
email: melissa.mascarenas@state.nm.us

ATTACHMENT A

A. Copies of Paper Records: The Public Records Custodian may charge reasonable fees for copying public records, payable in advance, and, upon request, shall provide a receipt. NMSA 1978, § 14-2-9.B. Unless a different fee is otherwise prescribed by law or regulation, the following fees apply to producing copies of paper records.

(1) 8 ½" x 11" - $0.25 per page

B. Audio tape reproduction: $2.00 per tape if copied by the Department; if the Department does not have the capability to copy the tape with reasonable audio quality, the Department may charge the cost required to have the tape copied by an outside service.

C. Printed Copies of Records from Department Electronic Information Systems: Information contained in an electronic information system shall be disclosed in printed or typed format upon payment of a reasonable fee. NMSA 1978, §14-3-15.1.A. If an Inspection of Public Records Act request requires searching, manipulating, retrieving or reviewing data from an electronic information system, a fee shall be charged for the service. NMSA 1978, §14-3-15.1.F.

1 For requests resulting in less than 100 pages of records, the Department's reasonable fee shall be the copy cost set forth in Section IX.A. If the Department receives multiple requests from the same or related requestors, the Department may aggregate the requests and charge a fee under Section IX.C.2.

2. For requests of 100 or more pages of records, a reasonable fee shall be the actual staff salary multiplied by the staff time taken to complete the request plus the copy cost set forth in Section IX.A. For requests of 100 pages or more from information systems databases, the Department shall provide an estimate to the requestor and may require a down payment of the estimate before beginning to retrieve records. The Department may charge additional down payments as documents are retrieved and produced.

D. Electronic Format of Electronic Information: If an Inspection of Public Records Act request requires searching, manipulating, retrieving or reviewing data from an electronic information system, a fee shall be charged for the service. NMSA 1978, §14-3-15.1.F. The fee to produce information in electronic format is the actual staff salary multiplied by the staff time taken to complete the request.

E. Prints from digital images: 5" x 7" or 8" x 10" - $15.00 (ea.).

ATTACHMENT B

New Mexico Environment Department
Release of Public Information in Electronic Format

In accordance with the Public Records Act, NMSA 1978, Section 14-3-15.1(C), any person requesting of a public record from the New Mexico Environment Department in any electronic medium (e.g., spreadsheets, GIS layers, database extracts) or database agrees:

1. not to make unauthorized copies;
2. not to use the electronic information for any political or commercial purpose unless the purpose and use is approved in writing by the New Mexico Environment Department;
3. not to use the electronic information for solicitation or advertisement when it contains the name, address or telephone number of any person, unless such use is otherwise specifically authorized by law;
4. not to allow access to the electronic information by any other person unless the use is approved in writing by the New Mexico Environment Department; and
5. to pay a royalty or other consideration to the state of New Mexico as may be agreed upon by the New Mexico Environment Department.

If information contained in the electronic format is searched, manipulated, or retrieved or if an electronic copy is made for any private or nonpublic use, a fee shall be charged by the New Mexico Environment Department. NMSA 1978, §14-3-15.1.F.

Except as authorized by law or rule of the State Commission of Public Records, any person who reveals to any unauthorized personal information contained in a computer database or who uses or permits the unauthorized use or access to any computer database is guilty of a misdemeanor, and upon conviction the court shall sentence that person to jail for a definite term not to exceed one year or to payment of a fine not to exceed five thousand dollars ($5,000) or both. That person shall not be employed by the state for a period of five years after the date of conviction. NMSA 1978, § 14-3-15.1(G).

In order to determine whether the information requested will be used for solicitation, advertisement, political or commercial purpose, please indicate how the information will be used:

_____

_____

_____

_____

I, _____ (print name), have requested information in electronic format from the New Mexico Environment Department, and have read and certify that I comply with the conditions listed above.

_____
Signature

For NMED Use Only

Electronic Information Requested: _____
Format (e.g. database, spreadsheet, map, other) _____
Bureau: _____ Date: _____
Name of Individual Releasing electronic Information: _____

Revised 6/14/12

: 13829

: 13838

SUSANA MARTINEZ
Governor
JOHN A. SANCHEZ
Lt. Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

Harold Runnels Building
1190 Saint Francis Drive (87505)
PO Box 5469, Santa Fe, NM 87502-5469
Phone (505) 827-2990 Fax (505) 827-1628
www.env.nm.gov

BUTCH TONGATE
Cabinet Secretary
J.C. BORREGO
Deputy Secretary

October 19, 2017

VIA E-MAIL

Joni Arends
jarends@nuclearactive.org

Re: Request to Inspect Public Records

Dear Ms. Arends:

On October 12, 2017, this office received your request for public information pertaining to: GWB 17-20 (P).

Due to the extensive number of responsive records, as well as the need for the Administrative Record for GWB 17-20 (P) to be completed and organized chronologically, the NMED Ground Water Quality Bureau ("GWQB") will require an additional two weeks to respond to your request. The new date by which the GWQB will respond is November 9, 2017.

Should you have any questions, please contact John Verheul in the Department's Office of General Counsel at (505) 383-2063, or John.Verheul@state.nm.us.

Sincerely,

Melissa Y. Mascareñas
New Mexico Environment Department
Department Public Records Custodian

cc: John Verheul, Assistant General Counsel
Michelle Hunter, Chief, Ground Water Quality Bureau

: 13839

: 13840

Environmental Protection & Compliance Division
Los Alamos National Laboratory
PO Box 1663, K490
Los Alamos, New Mexico 87545
(505) 667-0666

National Nuclear Security Administration
Los Alamos Field Office
3747 West Jemez Road, A316
Los Alamos, New Mexico, 87545
(505) 667-5105/Fax (505) 667-5948

Date: OCT 3 0 2017
Symbol: EPC-DO: 17-424
LA-UR: 17-28573
Locates Action No.: *NA*

GROUND WATE
OCT 3 0 2017
BUREAU

Ms. Michelle Hunter, Chief
Ground Water Quality Bureau
New Mexico Environment Department
Harold Runnels Building, Room N2261
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, NM 87502

Subject: **Discharge Plan DP-1132 Quarterly Report, Third Quarter 2017, TA-50 Radioactive Liquid Waste Treatment Facility**

Dear Ms. Hunter:

This letter from the U.S. Department of Energy and Los Alamos National Security, LLC (DOE/LANS) is the third quarter 2017 Discharge Plan DP-1132 report for the Technical Area (TA)-50 Radioactive Liquid Waste Treatment Facility (RLWTF). Since the first quarter of 1999, DOE/LANS have provided the New Mexico Environment Department (NMED) with voluntary quarterly reports containing analytical results from effluent and groundwater monitoring.

During the third quarter of 2017, no effluent was discharged to either National Pollutant Discharge Elimination System (NPDES) Outfall 051 or to the solar evaporative tank system (SET) at TA-52; all effluent was evaporated on-site at the mechanical evaporator system (MES).

Quarterly Monitoring Results, Mortandad Canyon Alluvial Groundwater Wells
Table 1.0 presents the analytical results from sampling conducted at Mortandad Canyon alluvial wells MCO-6 and MCO-7 during the third quarter of 2017. No sample was collected from alluvial well MCO-4B because there was insufficient water. No sample was collected from alluvial well MCO-3 because the well was damaged beyond repair during a flood event in September 2013. Samples, including a duplicate sample from monitoring well MCO-7, were submitted to GEL Laboratories LLC for analysis. Analytical results from the sampling of intermediate and regional aquifer wells in Mortandad Canyon can be accessed online at the Intellus New Mexico environmental monitoring data web site (http://www.intellusnmdata.com).

TA-50 RLWTF Effluent Monitoring Results
No final weekly composite (FWC) samples were collected during the third quarter of 2017 because no effluent was discharged to Mortandad Canyon.

No final monthly composite (FMC) samples were collected during the third quarter of 2017 because no effluent was discharged to Mortandad Canyon.

Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at Karen.Armijo@nnsa.doe.gov, or Robert S. Beers by telephone at (505) 667-7969 or by email at bbeers@lanl.gov if you have questions regarding this report.

Sincerely,

Taunia S. Van Valkenburg
Group Leader

Sincerely,

Karen E. Armijo
Permitting and Compliance Program Manager

ARG:KEA:MTS:RSB/am

Copy: Shelly Lemon, NMED/SWQB, Santa Fe, NM, (E-File)
John E. Kieling, NMED/HWB, Santa Fe, NM, (E-File)
Stephen M. Yanicak, NMED/DOE/OB, (E-File)
Jody M. Pugh, NA-LA, (E-File)
Karen E. Armijo, NA-LA, (E-File)
Craig S. Leasure, PADOPS, (E-File)
William R. Mairson, PADOPS, (E-File)
Michael T. Brandt, ADESH, (E-File)
Randal S. Johnson, DESHF-TA55, (E-File)
Alvin M. Aragon, TA-55-RLW, (E-File)
John C. Del Signore, TA-55-RLW, (E-File)
Michael T. Saladen, EPC-CP, (E-File)
Robert S. Beers, EPC-CP, (E-File)
Ellena I. Martinez, EPC-CP, (E-File)
lasomailbox@nnsa.doe.gov, (E-File)
locateteam@lanl.gov, (E-File)
epc-correspondence@lanl.gov, (E-File)

Table 1.0. Mortandad Canyon Alluvial Well Sampling, 3rd Quarter 2017.

Sampling Location	Sample Field Prep (F/UF)[1]	Sample Date	Perchlorate (µg/L)	NO_3+NO_2-N (mg/L)	TKN (mg/L)	NH3-N (mg/L)	TDS (mg/L)	F (mg/L)
MCO-3		Damaged[4]	Damaged[4]	Damaged[4]	Damaged[4]	Damaged[4]	Damaged[4]	Damaged[4]
MCO-4B	F	7/1/2017	Dry[5]	Dry[5]	Dry[5]	Dry[5]	Dry[5]	Dry[5]
MCO-6	F	7/28/2017	4.1	0.75	0.22	0.02	423	0.82
MCO-7	F	8/7/2017	6.5	0.97	0.06	0.03J	299	0.96
MCO-7 duplicate sample	F	8/7/2017	6.7	0.92	0.11	0.09	293	1.0
NM WQCC 3103 Groundwater Standards			***NA*** [2]	***10 mg/L*** [3]	***NA*** [2]	***NA*** [2]	***1000 mg/L***	***1.6 mg/L***

Notes:

[1]F means the sample was filtered. UF means the sampled was not filtered.

[2]NA means that there is no NM WQCC 3103 standard for this analyte.

[3]The NM WQCC 3103 Groundwater Standard is for NO_3-N.

[4]Damaged means that the well was damaged beyond repair during a flood event in Mortandad Canyon in September 2013.

[5]Dry means there was not sufficient water for sampling.

J flag indicates an estimated value.

U flag means the result was less than the analytical laboratory's Method Detection Limit (MDL).

13813

: 13844

Pullen, Steve, NMENV

From: Deborah Reade <reade@nets.com>
Sent: Monday, October 30, 2017 6:47 PM
To: Hunter, Michelle, NMENV
Cc: Pullen, Steve, NMENV
Subject: MASE also signs on to the letter
Attachments: Letter-Michelle Hunter_DP-1817andDP-1132_rev1.pdf

Dear Michelle,

MASE (the Multicultural Alliance for a Safe Environment) also signed the DP-1132 and DP-1817 letter we sent. I've attached the revised letter with their addition. MASE consists of the following five groups:

Bluewater Valley Downstream Alliance (BVDA)
Eastern Navajo Diné Against Uranium Mining (ENDAUM)
Laguna/Acoma Coalition for a Safe Environment (LACSE)
Post-71 Uranium Workers Committee
Red Water Pond Road Community Association (RWPRCA)

Please add this email and the attached, revised letter, to the Records for DP-1817 and DP-1132.

Best wishes,
Deborah

Deborah Reade
117 Duran Street
Santa Fe NM 87501-1817
Phone/fax 505-986-9284
Reade@nets.com

: 13845

October 30, 2017

From: Janet Greenwald and Deborah Reade for
Citizens for Alternatives to Radioactive Dumping (CARD)

Judith Kidd for
Albuquerque Center for Peace and Justice

Dave McCoy for
Citizen Action

Sister Joan Brown, osf for
Partnership for Earth Spirituality (PES)

Graciela Avila-Robinson for
The Water Groups

John Buchser for
The Sierra Club (Rio Grande Chapter)

Joni Arends for
Concerned Citizens for Nuclear Safety (CCNS)

Scott Kovak for
Nuclear Watch

Rachel Conn for
Amigos Bravos

Jen Pelz for
Wild Earth Guardians

Paul Robinson for
Southwest Research and Information Center

Noel Marquez for
Alliance for Environmental Strategies (AFES)

Sister Marlene Perrotte

Susan Gordon for
Multicultural Alliance for a Safe Environment (MASE)

To: Michelle Hunter, Chief
Ground Water Quality Bureau
New Mexico Environment Department
NMED
P.O. Box 5469
Santa Fe, NM 87502-5469

Michelle.Hunter@state.nm.us
Steve.Pullen@state.nm.us

Re: Public processes for DP-1817 and DP-1132 must be stopped because they are proceeding in a discriminatory manner that does not meet the requirements of the EPA & NMED Resolution Agreement

Dear Michelle:

We appreciated your meeting with us previously and also the cooperation that you and Steve Pullen have extended to make it easy for CARD to review the WCS and URENCO discharge permit Administrative Records. However, we were disappointed when we saw that the comment period for the WCS discharge permit (DP-1817) had already started again without most of the changes we discussed in the meeting.

There was one definite improvement for the second comment period—the Public Notice has been translated into Spanish. However, as far as we can tell, none of the other items to increase community involvement and to deal with community concerns that we discussed appear to have been done. In fact, since our original comments on May 2nd, 2017 informing the Bureau about the need to meet the Resolution Agreement requirements, the Ground Water Quality Bureau (GWQB) has issued or re-issued public Notices on at least 30 discharge permits for comment. At least thirteen new notices were issued after our meeting. In fact, it appears that over 100 discharge permits have been put out for public process *after* the Resolution Agreement was issued. Only the WCS permit Public Notice has been issued in a language other than English.

Many of these permits are probably mundane and only of interest to the applicants and the Department. However, at least two (and possibly more) of these are highly controversial and potentially damaging to large numbers of people of color and LEP (Low English Proficiency) persons. These are the Waste Control Specialists (WCS) discharge permit (DP-1817) and the Los Alamos National Laboratory (LANL) Radioactive Liquid Waste Treatment Plant permit (DP-1132). DP-1817 is, as we said, in the middle of a comment period that ends October 31st and DP-1132 has closed out their comment period and is proceeding rapidly toward a hearing. Unfortunately, it appears that little or no community research has been done for either permit, nor has information been provided in a language other than English except for the most recent notification for DP-1817 and disclaimers of non-discrimination in Spanish in recent notifications for both. LANL has the highest concentration of people of color around it of all Department of Energy (DOE) sites. Because a variety of languages are spoken downstream and downwind of LANL, notifications and disclaimers may need to be provided in a variety of languages as well.

As we have described in our previous comments, emails and in our meeting with you,"...each time [NMED engages] in an action that triggers the public participation process..." the Resolution Agreement requires NMED to carry out each of the following steps:

a) an overview of your plan of action for addressing the community's needs and concerns
b) a description of the community (including demographics, history and background)
c) a contact list of agency officials with phone numbers and email addresses
d) a detailed plan of action (outreach activities) you will use to address community concerns
e) a contingency plan for unexpected events
f) locations where public meetings will be held taking public transportation into consideration
g) Contact names for obtaining language assistance for LEP persons
h) appropriate local media contacts (based on the culture and linguistic needs of the community)
J) location of the information repository

This applies to all the permits when they are in a public process including notification, comments and more. Since we already know that the WCS permit could affect an LEP community, all decision documents and vital scientific documents must be translated in their entirety or summarized and translated. It is likely that

any study of the communities surrounding LANL and potentially affected by DP-1132 will show the same result.

Finally, to meet the requirements resulting from the New Mexico State Appeals Court decision in *Colonias Development Council vs. Rhino Environmental Services, Inc.,* a disparate impact study of effects on potentially affected communities could also be required for both permits.

Because a) b) and d) above have not been done, NMED doesn't truly know what the communities' needs and concerns are and has not created plans to address those concerns. Although one meeting with concerned citizens is not at all definitive to explain all needs and concerns, when we met with you we did suggest some possible actions that could be taken. Though we were talking of the WCS permit at the time, this could apply to DP-1132 and possibly other permits as well. These suggestions included enhanced posting of notices and the addition of radio notices in Spanish since there are no Spanish language newspapers in the area, a Spanish as well as English sign posted by the applicants, a Fact Sheet in English and Spanish outlining not only technical information about the permit including hydrology and geology, possible effects on residents, but also the complex history of the NMED's interaction with WCS and Texas regulators over this discharge permit.

We also discussed in the meeting and elsewhere that the GWQB has essentially made it impossible for LEP persons living in the local area to participate. This would also include persons of Spanish descent who are fluent in English because not only is there absolutely no information about the discharge permit in Spanish but it is impossible for persons of Hispanic descent living near the site to get information in *any* language. Since there appears to be a majority of Spanish speakers in Eunice, the closest town to the site, this would clearly discriminate against the Spanish community.

All documents are in English and all documents are at NMED's office in Santa Fe. They are also only available during working hours, Monday through Friday. Despite requests, even the Index of the Public Record is not available in hard copy near the site or online. It is almost a 700 mile round trip between Eunice and Santa Fe which would cost almost $100 in gas plus at least one overnight stay and meals—and taking time off of work. This is prohibitively expensive for the Hispanic community in Southeast New Mexico. NMED has made no effort to provide printed copies of any documents locally—as we said, not even the Record Index—and seems content that it is impossible for local LEP persons and other Spanish-speakers to participate.

In addition, there are no Index entries after early February 2017 even though two public comment periods , including the one we are in now, have been run after that. Even information from the first comment period is not indexed. Hopefully it is all actually present in the Record, but the public has no way of knowing for sure. Multiple entries are also missing from the Index even before February 2017 and many items are entered years out of order. And everything in the Index before mid-2012 (about 57 items) appears to be missing from the Record itself. It is difficult for a fluent English speaker to use the Index, let alone someone with Limited English Proficiency. Public notification for a comment period or other public process shouldn't even be issued until all the documents are in place, properly indexed, translated, and summarized and with printed copies available locally, if necessary.

As far as we can see, the only thing that has been changed since the comment period was stopped the first time for the WCS permit is that now the Notice of the new comment period is available in Spanish as well as English. Nothing has changed for the LANL discharge permit at all since before the Resolution Agreement was issued.

It is disturbing that the Ground Water Quality Bureau continues to proceed in the same manner as they have always done in the issuing of discharge permits; that is, continues to proceed in the same

discriminatory manner as before the Resolution Agreement was issued—even after they have been told multiple times that this is not acceptable. We are concerned because it appears there are many—possibly more than 100—discharge permits that have been proceeding in this way since NMED signed the Resolution Agreement with EPA in January of this year.

Furthermore, it is irrelevant for all of these permits that NMED's plans to meet the Resolution Agreement requirements are not finalized. The Agreement sets up the steps that NMED needs to take to make sure they are not discriminating in the public participation process. However, even if everything is not in place, *it is still illegal to discriminate—period.* It is not okay to discriminate "one last time," or in the case of the GWQB possibly 100 or more "last times."

The WCS discharge permit is controversial and is in an area that is already deluged with polluting facilities. There is a long history of the community expressing its concerns. It's time that NMED study these concerns and respond to them. The same is true of the LANL permit. Pollution from LANL is so bad that some dark leafy greens grown in Española and traditionally irrigated with water from the Rio Grande are better used to remediate the garden soil and then to be discarded as hazardous waste than to be eaten. (http://sacredtrustnm.org/red-dust-contamination-in-northern-new-mexico/)

We feel that the comment period must be stopped yet again for DP-1817 and the hearing process stopped for DP-1132 until NMED has:

- Finalized the steps in a-j above including "enhanced" notifications similar to the process used for the recent Triassic Park permit
- Created a Fact Sheet in English, Spanish and possibly in other languages to be posted with notifications
- Updated the Record Index
- Copied all relevant documents from nearby site Records into the DP-1817 Public Record (URENCO, Lea County Landfill, etc.)
- Translated all vital documents or summaries into Spanish (or other languages) including the Public Record Index
- Investigated whether a Disparate Impact Study is necessary and if it is, finished the study
- Put at least a copy of the updated and translated Public Record Index online
- Put hardcopy in English and Spanish of the updated Public Record Index, all vital documents and/or summaries in the Eunice Public Library or another community center where they can be viewed outside of working hours (for DP-1817)

We may find that other discharge permits also require this full treatment once we are able to review the 100+ permits that have been put out for public process this year. Just getting the Public Notice translated is where we started 15 years ago with Triassic Park and the original Title VI Discrimination Complaint that resulted in the Resolution Agreement. Do we have to repeat that long, complicated and expensive process with at least two more Title VI and NMED discrimination complaints? This is not something we look forward to, as many resources, both NMED's and our own could be so much better put to use protecting the environment and the potentially affected communities instead.

In order for NMED to comply fully with Title VI of the Civil Rights Act and the Resolution Agreement, we respectfully request that the DP-1817 comment period and the DP-1132 hearing process be stopped until NMED fully complies with the Resolution Agreement requirements.

Thank you for your careful consideration of our comments.
Sincerely,

Janet Greenwald and Deborah Reade
contactus@cardnm.com and reade@nets.com
Citizens for Alternatives to Radioactive Dumping (CARD)

Judith Kidd
abqpeaceandjusticecenter@gmail.com
Albuquerque Center for Peace and Justice

Dave McCoy
dave@radfreenm.org
Citizen Action

Sister Joan Brown, osf
joankansas@swcp.com
Partnership for Earth Spirituality (PES)

Graciela Avila-Robinson
Avila-Robinson.Graciela@gmail.com
The Water Groups

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jbuchser@comcast.net
The Sierra Club (Rio Grande Chapter)

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Southwest Research and Information Center (SRIC)

Noel Marquez
marquezarts@yahoo.com
Alliance for Environmental Strategies (AFES)

Sister Marlene Perrotte
marlenep@swcp.com

Susan Gordon
sgordon@swuraniumimpacts.org
Multicultural Alliance for a Safe Environment (MASE)

: 13851

LANL DP 1132
Solar Subp Tracks

EJSCREEN ACS Summary Report

Location: User-specified point center at 35.866200, -106.296800
Ring (buffer): 4-mile radius
Description:

Summary of ACS Estimates	2011 - 2015
Population	12,012
Population Density (per sq. mile)	277
Minority Population	3,390
% Minority	28%
Households	5,314
Housing Units	5,926
Housing Units Built Before 1950	723
Per Capita Income	45,164
Land Area (sq. miles) (Source: SF1)	43.31
% Land Area	100%
Water Area (sq. miles) (Source: SF1)	0.02
% Water Area	0%

	2011 - 2015 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	12,012	100%	312
Population Reporting One Race	11,808	98%	786
White	10,217	85%	297
Black	44	0%	25
American Indian	98	1%	82
Asian	1,098	9%	229
Pacific Islander	17	0%	25
Some Other Race	334	3%	128
Population Reporting Two or More Races	204	2%	74
Total Hispanic Population	1,993	17%	224
Total Non-Hispanic Population	10,019		
White Alone	8,622	72%	276
Black Alone	44	0%	25
American Indian Alone	89	1%	82
Non-Hispanic Asian Alone	1,098	9%	229
Pacific Islander Alone	17	0%	25
Other Race Alone	15	0%	24
Two or More Races Alone	134	1%	49
Population by Sex			
Male	6,100	51%	189
Female	5,912	49%	194
Population by Age			
Age 0-4	726	6%	90
Age 0-17	2,621	22%	150
Age 18+	9,391	78%	231
Age 65+	1,909	16%	98

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available.
Source: U.S. Census Bureau, American Community Survey (ACS) 2011 - 2015.

: 13852

EJSCREEN ACS Summary Report

Location: User-specified point center at 35.866200, -106.296800
Ring (buffer): 4-mile radius
Description:

	2011 - 2015 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	8,742	100%	181
Less than 9th Grade	181	2%	60
9th - 12th Grade, No Diploma	128	1%	55
High School Graduate	997	11%	99
Some College, No Degree	1,698	19%	120
Associate Degree	570	7%	75
Bachelor's Degree or more	5,738	66%	187
Population Age 5+ Years by Ability to Speak English			
Total	11,286	100%	276
Speak only English	8,938	79%	252
Non-English at Home[1+2+3+4]	2,348	21%	185
[1]Speak English "very well"	1,762	16%	169
[2]Speak English "well"	253	2%	74
[3]Speak English "not well"	169	1%	80
[4]Speak English "not at all"	164	1%	137
[3+4]Speak English "less than well"	333	3%	154
[2+3+4]Speak English "less than very well"	586	5%	157
Linguistically Isolated Households*			
Total	183	100%	90
Speak Spanish	115	63%	89
Speak Other Indo-European Languages	8	4%	13
Speak Asian-Pacific Island Languages	60	33%	37
Speak Other Languages	0	0%	11
Households by Household Income			
Household Income Base	5,314	100%	117
< $15,000	387	7%	61
$15,000 - $25,000	207	4%	42
$25,000 - $50,000	893	17%	119
$50,000 - $75,000	504	9%	65
$75,000 +	3,323	63%	124
Occupied Housing Units by Tenure			
Total	5,314	100%	117
Owner Occupied	3,553	67%	114
Renter Occupied	1,761	33%	119
Employed Population Age 16+ Years			
Total	9,773	100%	232
In Labor Force	6,598	68%	210
Civilian Unemployed in Labor Force	275	3%	51
Not In Labor Force	3,175	32%	136

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2011 - 2015.

*Households in which no one 14 and over speaks English "very well" or speaks English only.

: 13853

EJSCREEN ACS Summary Report

Location: User-specified point center at 35.866200, -106.296800
Ring (buffer): 4-mile radius
Description:

	2011 - 2015 ACS Estimates	Percent	MOE (±)
Population by Language Spoken at Home*			
Total (persons age 5 and above)	11,286	100%	276
English	N/A	N/A	N/A
Spanish	N/A	N/A	N/A
French	N/A	N/A	N/A
French Creole	N/A	N/A	N/A
Italian	N/A	N/A	N/A
Portuguese	N/A	N/A	N/A
German	N/A	N/A	N/A
Yiddish	N/A	N/A	N/A
Other West Germanic	N/A	N/A	N/A
Scandinavian	N/A	N/A	N/A
Greek	N/A	N/A	N/A
Russian	N/A	N/A	N/A
Polish	N/A	N/A	N/A
Serbo-Croatian	N/A	N/A	N/A
Other Slavic	N/A	N/A	N/A
Armenian	N/A	N/A	N/A
Persian	N/A	N/A	N/A
Gujarathi	N/A	N/A	N/A
Hindi	N/A	N/A	N/A
Urdu	N/A	N/A	N/A
Other Indic	N/A	N/A	N/A
Other Indo-European	N/A	N/A	N/A
Chinese	N/A	N/A	N/A
Japanese	N/A	N/A	N/A
Korean	N/A	N/A	N/A
Mon-Khmer, Cambodian	N/A	N/A	N/A
Hmong	N/A	N/A	N/A
Thai	N/A	N/A	N/A
Laotian	N/A	N/A	N/A
Vietnamese	N/A	N/A	N/A
Other Asian	N/A	N/A	N/A
Tagalog	N/A	N/A	N/A
Other Pacific Island	N/A	N/A	N/A
Navajo	N/A	N/A	N/A
Other Native American	N/A	N/A	N/A
Hungarian	N/A	N/A	N/A
Arabic	N/A	N/A	N/A
Hebrew	N/A	N/A	N/A
African	N/A	N/A	N/A
Other and non-specified	N/A	N/A	N/A
Total Non-English	N/A	N/A	N/A

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2011 - 2015.
*Population by Language Spoken at Home is available at the census tract summary level and up.

: 13854

LAND DP.1132
Runoff Mech Sump.

EJSCREEN ACS Summary Report

Location: User-specified point center at 35.865000, -106.297800
Ring (buffer): 4-mile radius
Description:

Summary of ACS Estimates	2011 - 2015
Population	12,012
Population Density (per sq. mile)	277
Minority Population	3,390
% Minority	28%
Households	5,314
Housing Units	5,926
Housing Units Built Before 1950	723
Per Capita Income	45,164
Land Area (sq. miles) (Source: SF1)	43.36
% Land Area	100%
Water Area (sq. miles) (Source: SF1)	0.02
% Water Area	0%

	2011 - 2015 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	12,012	100%	312
Population Reporting One Race	11,808	98%	786
White	10,217	85%	297
Black	44	0%	25
American Indian	98	1%	82
Asian	1,098	9%	229
Pacific Islander	17	0%	25
Some Other Race	334	3%	128
Population Reporting Two or More Races	204	2%	74
Total Hispanic Population	1,993	17%	224
Total Non-Hispanic Population	10,019		
White Alone	8,622	72%	276
Black Alone	44	0%	25
American Indian Alone	89	1%	82
Non-Hispanic Asian Alone	1,098	9%	229
Pacific Islander Alone	17	0%	25
Other Race Alone	15	0%	24
Two or More Races Alone	134	1%	49
Population by Sex			
Male	6,100	51%	189
Female	5,912	49%	194
Population by Age			
Age 0-4	726	6%	90
Age 0-17	2,621	22%	150
Age 18+	9,391	78%	231
Age 65+	1,909	16%	98

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available.
Source: U.S. Census Bureau, American Community Survey (ACS) 2011 - 2015.

: 13855

EJSCREEN ACS Summary Report

Location: User-specified point center at 35.865000, -106.297800
Ring (buffer): 4-mile radius
Description:

	2011 - 2015 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	8,742	100%	181
Less than 9th Grade	181	2%	60
9th - 12th Grade, No Diploma	128	1%	55
High School Graduate	997	11%	99
Some College, No Degree	1,698	19%	120
Associate Degree	570	7%	75
Bachelor's Degree or more	5,738	66%	187
Population Age 5+ Years by Ability to Speak English			
Total	11,286	100%	276
Speak only English	8,938	79%	252
Non-English at Home[1+2+3+4]	2,348	21%	185
[1]Speak English "very well"	1,762	16%	169
[2]Speak English "well"	253	2%	74
[3]Speak English "not well"	169	1%	80
[4]Speak English "not at all"	164	1%	137
[3+4]Speak English "less than well"	333	3%	154
[2+3+4]Speak English "less than very well"	586	5%	157
Linguistically Isolated Households*			
Total	183	100%	90
Speak Spanish	115	63%	89
Speak Other Indo-European Languages	8	4%	13
Speak Asian-Pacific Island Languages	60	33%	37
Speak Other Languages	0	0%	11
Households by Household Income			
Household Income Base	5,314	100%	117
< $15,000	387	7%	61
$15,000 - $25,000	207	4%	42
$25,000 - $50,000	893	17%	119
$50,000 - $75,000	504	9%	65
$75,000 +	3,323	63%	124
Occupied Housing Units by Tenure			
Total	5,314	100%	117
Owner Occupied	3,553	67%	114
Renter Occupied	1,761	33%	119
Employed Population Age 16+ Years			
Total	9,773	100%	232
In Labor Force	6,598	68%	210
Civilian Unemployed in Labor Force	275	3%	51
Not In Labor Force	3,175	32%	136

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2011 - 2015.

*Households in which no one 14 and over speaks English "very well" or speaks English only.

: 13856

EJSCREEN ACS Summary Report

Location: User-specified point center at 35.865000, -106.297800
Ring (buffer): 4-mile radius
Description:

	2011 - 2015 ACS Estimates	Percent	MOE (±)
Population by Language Spoken at Home*			
Total (persons age 5 and above)	11,286	100%	276
English	N/A	N/A	N/A
Spanish	N/A	N/A	N/A
French	N/A	N/A	N/A
French Creole	N/A	N/A	N/A
Italian	N/A	N/A	N/A
Portuguese	N/A	N/A	N/A
German	N/A	N/A	N/A
Yiddish	N/A	N/A	N/A
Other West Germanic	N/A	N/A	N/A
Scandinavian	N/A	N/A	N/A
Greek	N/A	N/A	N/A
Russian	N/A	N/A	N/A
Polish	N/A	N/A	N/A
Serbo-Croatian	N/A	N/A	N/A
Other Slavic	N/A	N/A	N/A
Armenian	N/A	N/A	N/A
Persian	N/A	N/A	N/A
Gujarathi	N/A	N/A	N/A
Hindi	N/A	N/A	N/A
Urdu	N/A	N/A	N/A
Other Indic	N/A	N/A	N/A
Other Indo-European	N/A	N/A	N/A
Chinese	N/A	N/A	N/A
Japanese	N/A	N/A	N/A
Korean	N/A	N/A	N/A
Mon-Khmer, Cambodian	N/A	N/A	N/A
Hmong	N/A	N/A	N/A
Thai	N/A	N/A	N/A
Laotian	N/A	N/A	N/A
Vietnamese	N/A	N/A	N/A
Other Asian	N/A	N/A	N/A
Tagalog	N/A	N/A	N/A
Other Pacific Island	N/A	N/A	N/A
Navajo	N/A	N/A	N/A
Other Native American	N/A	N/A	N/A
Hungarian	N/A	N/A	N/A
Arabic	N/A	N/A	N/A
Hebrew	N/A	N/A	N/A
African	N/A	N/A	N/A
Other and non-specified	N/A	N/A	N/A
Total Non-English	N/A	N/A	N/A

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2011 - 2015.
*Population by Language Spoken at Home is available at the census tract summary level and up.

13857

LANL DP1132
NPDES outfall 51

EJSCREEN ACS Summary Report

Location: User-specified point center at 35.860000, -106.286700
Ring (buffer): 4-mile radius
Description:

Summary of ACS Estimates	2011 - 2015
Population	12,012
Population Density (per sq. mile)	262
Minority Population	3,390
% Minority	28%
Households	5,314
Housing Units	5,926
Housing Units Built Before 1950	723
Per Capita Income	45,164
Land Area (sq. miles) (Source: SF1)	45.81
% Land Area	100%
Water Area (sq. miles) (Source: SF1)	0.03
% Water Area	0%

	2011 - 2015 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	12,012	100%	312
Population Reporting One Race	11,808	98%	786
White	10,217	85%	297
Black	44	0%	25
American Indian	98	1%	82
Asian	1,098	9%	229
Pacific Islander	17	0%	25
Some Other Race	334	3%	128
Population Reporting Two or More Races	204	2%	74
Total Hispanic Population	1,993	17%	224
Total Non-Hispanic Population	10,019		
White Alone	8,622	72%	276
Black Alone	44	0%	25
American Indian Alone	89	1%	82
Non-Hispanic Asian Alone	1,098	9%	229
Pacific Islander Alone	17	0%	25
Other Race Alone	15	0%	24
Two or More Races Alone	134	1%	49
Population by Sex			
Male	6,100	51%	189
Female	5,912	49%	194
Population by Age			
Age 0-4	726	6%	90
Age 0-17	2,621	22%	150
Age 18+	9,391	78%	231
Age 65+	1,909	16%	98

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available.
Source: U.S. Census Bureau, American Community Survey (ACS) 2011 - 2015.

: 13858

EJSCREEN ACS Summary Report

Location: User-specified point center at 35.860000, -106.286700
Ring (buffer): 4-mile radius
Description:

	2011 - 2015 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	8,742	100%	181
Less than 9th Grade	181	2%	60
9th - 12th Grade, No Diploma	128	1%	55
High School Graduate	997	11%	99
Some College, No Degree	1,698	19%	120
Associate Degree	570	7%	75
Bachelor's Degree or more	5,738	66%	187
Population Age 5+ Years by Ability to Speak English			
Total	11,286	100%	276
Speak only English	8,938	79%	252
Non-English at Home[1+2+3+4]	2,348	21%	185
[1]Speak English "very well"	1,762	16%	169
[2]Speak English "well"	253	2%	74
[3]Speak English "not well"	169	1%	80
[4]Speak English "not at all"	164	1%	137
[3+4]Speak English "less than well"	333	3%	154
[2+3+4]Speak English "less than very well"	586	5%	157
Linguistically Isolated Households*			
Total	183	100%	90
Speak Spanish	115	63%	89
Speak Other Indo-European Languages	8	4%	13
Speak Asian-Pacific Island Languages	60	33%	37
Speak Other Languages	0	0%	11
Households by Household Income			
Household Income Base	5,314	100%	117
< $15,000	387	7%	61
$15,000 - $25,000	207	4%	42
$25,000 - $50,000	893	17%	119
$50,000 - $75,000	504	9%	65
$75,000 +	3,323	63%	124
Occupied Housing Units by Tenure			
Total	5,314	100%	117
Owner Occupied	3,553	67%	114
Renter Occupied	1,761	33%	119
Employed Population Age 16+ Years			
Total	9,773	100%	232
In Labor Force	6,598	68%	210
Civilian Unemployed in Labor Force	275	3%	51
Not In Labor Force	3,175	32%	136

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2011 - 2015.

*Households in which no one 14 and over speaks English "very well" or speaks English only.

EJSCREEN ACS Summary Report

Location: User-specified point center at 35.860000, -106.286700
Ring (buffer): 4-mile radius
Description:

	2011 - 2015 ACS Estimates	Percent	MOE (±)
Population by Language Spoken at Home*			
Total (persons age 5 and above)	11,286	100%	276
English	N/A	N/A	N/A
Spanish	N/A	N/A	N/A
French	N/A	N/A	N/A
French Creole	N/A	N/A	N/A
Italian	N/A	N/A	N/A
Portuguese	N/A	N/A	N/A
German	N/A	N/A	N/A
Yiddish	N/A	N/A	N/A
Other West Germanic	N/A	N/A	N/A
Scandinavian	N/A	N/A	N/A
Greek	N/A	N/A	N/A
Russian	N/A	N/A	N/A
Polish	N/A	N/A	N/A
Serbo-Croatian	N/A	N/A	N/A
Other Slavic	N/A	N/A	N/A
Armenian	N/A	N/A	N/A
Persian	N/A	N/A	N/A
Gujarathi	N/A	N/A	N/A
Hindi	N/A	N/A	N/A
Urdu	N/A	N/A	N/A
Other Indic	N/A	N/A	N/A
Other Indo-European	N/A	N/A	N/A
Chinese	N/A	N/A	N/A
Japanese	N/A	N/A	N/A
Korean	N/A	N/A	N/A
Mon-Khmer, Cambodian	N/A	N/A	N/A
Hmong	N/A	N/A	N/A
Thai	N/A	N/A	N/A
Laotian	N/A	N/A	N/A
Vietnamese	N/A	N/A	N/A
Other Asian	N/A	N/A	N/A
Tagalog	N/A	N/A	N/A
Other Pacific Island	N/A	N/A	N/A
Navajo	N/A	N/A	N/A
Other Native American	N/A	N/A	N/A
Hungarian	N/A	N/A	N/A
Arabic	N/A	N/A	N/A
Hebrew	N/A	N/A	N/A
African	N/A	N/A	N/A
Other and non-specified	N/A	N/A	N/A
Total Non-English	N/A	N/A	N/A

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2011 - 2015.
*Population by Language Spoken at Home is available at the census tract summary level and up.

: 13860

13861

Pullen, Steve, NMENV

From: Joni Arends <jarends@nuclearactive.org>
Sent: Monday, October 30, 2017 12:45 PM
To: Pullen, Steve, NMENV
Subject: DP-1132 - Center for Public Integrity: Nuclear Negligence

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Steve,

We spoke about DP-1132 when I was in your office on Wednesday of last week. I said I would email you the link to the Center for Public Integrity's six-part series called "Nuclear Negligence." https://apps.publicintegrity.org/nuclear-negligence/ The stories cover the Department of Energy nuclear weapons industrial complex, with a special focus on Los Alamos National Laboratory (LANL).

The series documents many of the concerns raised by Concerned Citizens for Nuclear Safety over the years about DP-1132, including emergency preparedness, LANL sloppiness, critical problems with basic chemistry, and well as the need for the pipes transporting liquids to be double lined.

Please print out the articles and include them in the administrative record. Thank you in advance for your time.

Sincerely,

Joni Arends

Concerned Citizens for Nuclear Safety

P. O. Box 31147

Santa Fe, NM 87594

505 986-1973

: 13862

: 13863

Pullen, Steve, NMENV

From: Pullen, Steve, NMENV
Sent: Monday, October 30, 2017 1:40 PM
To: Pullen, Steve, NMENV
Subject: FW: Request to stop the comment period for DP-1817 and the hearing process for DP-1132

From: Deborah Reade [mailto:reade@nets.com]
Sent: Saturday, October 28, 2017 2:56 PM
To: Hunter, Michelle, NMENV <Michelle.Hunter@state.nm.us>
Cc: Noel Marquez <marquezarts@yahoo.com>; Pullen, Steve, NMENV <steve.pullen@state.nm.us>
Subject: Re: Request to stop the comment period for DP-1817 and the hearing process for DP-1132

Hello Michelle,

As I said on the phone, we are very happy that there is a 60 day extension of the comment period and that you will be going to SE New Mexico on Monday. I know that Noel really would like to talk with you and he hopes you can swing by Artesia to meet with him while you're there. You probably have it already, but his phone number is 575-626-9306 and I hope you will both be able to set up a time to talk. Unfortunately, I won't be able to go down to the South East on Monday but hope we could talk sometime soon on these issues here in Santa Fe.

Rose Gardner in Eunice is the best one to show you around though she often works during the day. Hopefully she will be available on Monday. Her number is 575-390-9634. Last month she gave me a few ideas of good places to post notices though I don't have addresses.

Senior Centers in Hobbs, Lovington and Eunice
County Courthouse (which I believe is in Lovington?)
Hobbs Public Library
New Mexico Junior College Library
University of the Southwest Library
Possibly the Lea Regional Medical Center in Hobbs (local hospital)
Other community centers??

She may have additional ideas when you speak with her.

Because there is no Spanish language newspaper, information should be also posted on local Spanish radio stations and possibly the Country station which has a lot of Spanish listeners (could be in English too there just to cover everyone) I think the letters for these stations are KZOR and KLMA for Spanish and KPER for Country. Again, Rose can give you better information on this.

We do greatly appreciate the efforts to do enhanced notification. However, it is unfortunate that NMED has still not created a Fact Sheet in both English and Spanish for this controversial permit so you could be posting that along with the Public Notice. Information on the permit is still completely lacking and almost totally inaccessible for the affected local community (The 4-sentence description in the Public Notice and the link to the draft permit online are still inadequate to inform the public.)

We are aware of the importance of getting a permit in place so New Mexico can regulate the WCS discharge. However, it is important that the permit is a robust one that is truly protective and that the affected community is informed and involved so that their needs and concerns are addressed. We are still uncomfortable that NMED seems to see no need in making sure that both discharge permits, DP-1132 and DP-1817 involve and listen to the communities most affected by these permits. I know

: 13864

NMED has worked with many of the Pueblos downwind and downstream from LANL but investigation and connections with the affected Spanish-speaking communities near the Lab are less clear. And where are the disparate impact studies for these downstream and downwind communities? To our way of thinking, there are still a lot of problems here.

Best wishes,
Deborah

Deborah Reade
117 Duran Street
Santa Fe NM 87501-1817
Phone/fax 505-986-9284
Reade@nets.com

From: Michelle Hunter <Michelle.Hunter@state.nm.us>
Date: Friday, October 27, 2017 at 5:12 PM
To: Deborah Reade <reade@nets.com>
Cc: Steve Pullen <steve.pullen@state.nm.us>
Subject: RE: Request to stop the comment period for DP-1817 and the hearing process for DP-1132

Dear Deborah:
Thank you for your email.

With respect to DP-1132, the GWQB has analyzed the community of concern surrounding the facility, and the amount of outreach performed thus far has been appropriate, and consistent with historical outreach activities done by the Department for actions related to this facility. We are currently in the process of scheduling a date, time, and location for a public hearing for DP-1132, and look forward to many of the signatories (to your letter) participating, either by providing technical testimony or public comment. Please be on the lookout for the public notice for that hearing. As a courtesy, I will send you an e-mail letting you know when the hearing has been noticed.

With respect to the draft WCS permit, I agree that this is a contentious permit with a lot of public interest. Please recall our conversation in which I reiterated the importance of this permit, and the lengths the Department has gone to in order to issue this draft permit.

To ensure that we capture as much public comment as possible, I am extending the public comment period for another 60 days. I am traveling to Eunice on Monday to post the new English and Spanish public notice at various locations and to deliver copies of the permit to the Eunice library. I am wondering if you would like to meet me down there. I will contact Noel to see if he is available, as well. I am unfamiliar with the best locations in Eunice to post notices and could use a tour guide.

Thanks again for the information you provided; I have passed your e-mail on to other bureau chiefs for their education during this transition time.

I hope to hear from you about next week.

Best,
Michelle

Michelle Hunter

: 13867

Pullen, Steve, NMENV

From: Pullen, Steve, NMENV
Sent: Monday, October 30, 2017 1:47 PM
To: Pullen, Steve, NMENV
Subject: FW: Request to stop the comment period for DP-1817 and the hearing process for DP-1132

From: Hunter, Michelle, NMENV
Sent: Friday, October 27, 2017 5:13 PM
To: Deborah Reade <reade@nets.com>
Cc: Pullen, Steve, NMENV <steve.pullen@state.nm.us>
Subject: RE: Request to stop the comment period for DP-1817 and the hearing process for DP-1132

Dear Deborah:
Thank you for your email.

With respect to DP-1132, the GWQB has analyzed the community of concern surrounding the facility, and the amount of outreach performed thus far has been appropriate, and consistent with historical outreach activities done by the Department for actions related to this facility. We are currently in the process of scheduling a date, time, and location for a public hearing for DP-1132, and look forward to many of the signatories (to your letter) participating, either by providing technical testimony or public comment. Please be on the lookout for the public notice for that hearing. As a courtesy, I will send you an e-mail letting you know when the hearing has been noticed.

With respect to the draft WCS permit, I agree that this is a contentious permit with a lot of public interest. Please recall our conversation in which I reiterated the importance of this permit, and the lengths the Department has gone to in order to issue this draft permit.

To ensure that we capture as much public comment as possible, I am extending the public comment period for another 60 days. I am traveling to Eunice on Monday to post the new English and Spanish public notice at various locations and to deliver copies of the permit to the Eunice library. I am wondering if you would like to meet me down there. I will contact Noel to see if he is available, as well. I am unfamiliar with the best locations in Eunice to post notices and could use a tour guide.

Thanks again for the information you provided; I have passed your e-mail on to other bureau chiefs for their education during this transition time.

I hope to hear from you about next week.

Best,
Michelle

Michelle Hunter
Chief
Ground Water Quality Bureau
New Mexico Environment Department
505.827.2919 desk

: 13868

505.231.3773 cell

From: Deborah Reade [mailto:reade@nets.com]
Sent: Thursday, October 26, 2017 2:56 PM
To: Hunter, Michelle, NMENV <Michelle.Hunter@state.nm.us>
Cc: Pullen, Steve, NMENV <steve.pullen@state.nm.us>
Subject: Re: Request to stop the comment period for DP-1817 and the hearing process for DP-1132

Dear Michelle,

I sent this email yesterday, but because of my computer problems you may not have been able to open the pdf or might not even have received the email at all. We think we have solved the pdf problem, but *please confirm* that you received the email and are able to open the pdf. I also sent the letter in the text of another email but you might have wondered what that was if you never got the first email.

Attached please find a letter from CARD and 11 other groups requesting that the public processes for DP-1817 and DP-1132 be stopped until they can proceed in a non-discriminatory manner and until the Administrative Record and Index are updated.

Please add the letter as a comment to the DP-1817 and DP-1132 Records.

Best wishes,
Deborah Reade

Deborah Reade
117 Duran Street
Santa Fe NM 87501-1817
Phone/fax 505-986-9284
Reade@nets.com

: 13870

Pullen, Steve, NMENV

From: Deborah Reade <reade@nets.com>
Sent: Monday, October 30, 2017 6:47 PM
To: Hunter, Michelle, NMENV
Cc: Pullen, Steve, NMENV
Subject: MASE also signs on to the letter
Attachments: Letter-Michelle Hunter_DP-1817andDP-1132_rev1.pdf

Dear Michelle,

MASE (the Multicultural Alliance for a Safe Environment) also signed the DP-1132 and DP-1817 letter we sent. I've attached the revised letter with their addition. MASE consists of the following five groups:

Bluewater Valley Downstream Alliance (BVDA)
Eastern Navajo Diné Against Uranium Mining (ENDAUM)
Laguna/Acoma Coalition for a Safe Environment (LACSE)
Post-71 Uranium Workers Committee
Red Water Pond Road Community Association (RWPRCA)

Please add this email and the attached, revised letter, to the Records for DP-1817 and DP-1132.

Best wishes,
Deborah

Deborah Reade
117 Duran Street
Santa Fe NM 87501-1817
Phone/fax 505-986-9284
Reade@nets.com

: 13871

October 30, 2017

From: Janet Greenwald and Deborah Reade for
Citizens for Alternatives to Radioactive Dumping (CARD)

Judith Kidd for
Albuquerque Center for Peace and Justice

Dave McCoy for
Citizen Action

Sister Joan Brown, osf for
Partnership for Earth Spirituality (PES)

Graciela Avila-Robinson for
The Water Groups

John Buchser for
The Sierra Club (Rio Grande Chapter)

Joni Arends for
Concerned Citizens for Nuclear Safety (CCNS)

Scott Kovak for
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Rachel Conn for
Amigos Bravos

Jen Pelz for
Wild Earth Guardians

Paul Robinson for
Southwest Research and Information Center

Noel Marquez for
Alliance for Environmental Strategies (AFES)

Sister Marlene Perrotte

Susan Gordon for
Multicultural Alliance for a Safe Environment (MASE)

To: Michelle Hunter, Chief
Ground Water Quality Bureau
New Mexico Environment Department
NMED
P.O. Box 5469
Santa Fe, NM 87502-5469

Michelle.Hunter@state.nm.us
Steve.Pullen@state.nm.us

Re: Public processes for DP-1817 and DP-1132 must be stopped because they are proceeding in a discriminatory manner that does not meet the requirements of the EPA & NMED Resolution Agreement

Dear Michelle:

We appreciated your meeting with us previously and also the cooperation that you and Steve Pullen have extended to make it easy for CARD to review the WCS and URENCO discharge permit Administrative Records. However, we were disappointed when we saw that the comment period for the WCS discharge permit (DP-1817) had already started again without most of the changes we discussed in the meeting.

There was one definite improvement for the second comment period—the Public Notice has been translated into Spanish. However, as far as we can tell, none of the other items to increase community involvement and to deal with community concerns that we discussed appear to have been done. In fact, since our original comments on May 2nd, 2017 informing the Bureau about the need to meet the Resolution Agreement requirements, the Ground Water Quality Bureau (GWQB) has issued or re-issued public Notices on at least 30 discharge permits for comment. At least thirteen new notices were issued after our meeting. In fact, it appears that over 100 discharge permits have been put out for public process *after* the Resolution Agreement was issued. Only the WCS permit Public Notice has been issued in a language other than English.

Many of these permits are probably mundane and only of interest to the applicants and the Department. However, at least two (and possibly more) of these are highly controversial and potentially damaging to large numbers of people of color and LEP (Low English Proficiency) persons. These are the Waste Control Specialists (WCS) discharge permit (DP-1817) and the Los Alamos National Laboratory (LANL) Radioactive Liquid Waste Treatment Plant permit (DP-1132). DP-1817 is, as we said, in the middle of a comment period that ends October 31st and DP-1132 has closed out their comment period and is proceeding rapidly toward a hearing. Unfortunately, it appears that little or no community research has been done for either permit, nor has information been provided in a language other than English except for the most recent notification for DP-1817 and disclaimers of non-discrimination in Spanish in recent notifications for both. LANL has the highest concentration of people of color around it of all Department of Energy (DOE) sites. Because a variety of languages are spoken downstream and downwind of LANL, notifications and disclaimers may need to be provided in a variety of languages as well.

As we have described in our previous comments, emails and in our meeting with you,"...each time [NMED engages] in an action that triggers the public participation process..." the Resolution Agreement requires NMED to carry out each of the following steps:

a) an overview of your plan of action for addressing the community's needs and concerns
b) a description of the community (including demographics, history and background)
c) a contact list of agency officials with phone numbers and email addresses
d) a detailed plan of action (outreach activities) you will use to address community concerns
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f) locations where public meetings will be held taking public transportation into consideration
g) Contact names for obtaining language assistance for LEP persons
h) appropriate local media contacts (based on the culture and linguistic needs of the community)
J) location of the information repository

This applies to all the permits when they are in a public process including notification, comments and more. Since we already know that the WCS permit could affect an LEP community, all decision documents and vital scientific documents must be translated in their entirety or summarized and translated. It is likely that

any study of the communities surrounding LANL and potentially affected by DP-1132 will show the same result.

Finally, to meet the requirements resulting from the New Mexico State Appeals Court decision in *Colonias Development Council vs. Rhino Environmental Services, Inc.,* a disparate impact study of effects on potentially affected communities could also be required for both permits.

Because a) b) and d) above have not been done, NMED doesn't truly know what the communities' needs and concerns are and has not created plans to address those concerns. Although one meeting with concerned citizens is not at all definitive to explain all needs and concerns, when we met with you we did suggest some possible actions that could be taken. Though we were talking of the WCS permit at the time, this could apply to DP-1132 and possibly other permits as well. These suggestions included enhanced posting of notices and the addition of radio notices in Spanish since there are no Spanish language newspapers in the area, a Spanish as well as English sign posted by the applicants, a Fact Sheet in English and Spanish outlining not only technical information about the permit including hydrology and geology, possible effects on residents, but also the complex history of the NMED's interaction with WCS and Texas regulators over this discharge permit.

We also discussed in the meeting and elsewhere that the GWQB has essentially made it impossible for LEP persons living in the local area to participate. This would also include persons of Spanish descent who are fluent in English because not only is there absolutely no information about the discharge permit in Spanish but it is impossible for persons of Hispanic descent living near the site to get information in *any* language. Since there appears to be a majority of Spanish speakers in Eunice, the closest town to the site, this would clearly discriminate against the Spanish community.

All documents are in English and all documents are at NMED's office in Santa Fe. They are also only available during working hours, Monday through Friday. Despite requests, even the Index of the Public Record is not available in hard copy near the site or online. It is almost a 700 mile round trip between Eunice and Santa Fe which would cost almost $100 in gas plus at least one overnight stay and meals—and taking time off of work. This is prohibitively expensive for the Hispanic community in Southeast New Mexico. NMED has made no effort to provide printed copies of any documents locally—as we said, not even the Record Index—and seems content that it is impossible for local LEP persons and other Spanish-speakers to participate.

In addition, there are no Index entries after early February 2017 even though two public comment periods , including the one we are in now, have been run after that. Even information from the first comment period is not indexed. Hopefully it is all actually present in the Record, but the public has no way of knowing for sure. Multiple entries are also missing from the Index even before February 2017 and many items are entered years out of order. And everything in the Index before mid-2012 (about 57 items) appears to be missing from the Record itself. It is difficult for a fluent English speaker to use the Index, let alone someone with Limited English Proficiency. Public notification for a comment period or other public process shouldn't even be issued until all the documents are in place, properly indexed, translated, and summarized and with printed copies available locally, if necessary.

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It is disturbing that the Ground Water Quality Bureau continues to proceed in the same manner as they have always done in the issuing of discharge permits; that is, continues to proceed in the same

LANL DP 1139

October 30, 2017

From: Janet Greenwald and Deborah Reade for
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Michelle.Hunter@state.nm.us
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: 13875

Re: Public processes for DP-1817 and DP-1132 must be stopped because they are proceeding in a discriminatory manner that does not meet the requirements of the EPA & NMED Resolution Agreement

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It is disturbing that the Ground Water Quality Bureau continues to proceed in the same manner as they have always done in the issuing of discharge permits; that is, continues to proceed in the same

discriminatory manner as before the Resolution Agreement was issued—even after they have been told multiple times that this is not acceptable. We are concerned because it appears there are many—possibly more than 100—discharge permits that have been proceeding in this way since NMED signed the Resolution Agreement with EPA in January of this year.

Furthermore, it is irrelevant for all of these permits that NMED's plans to meet the Resolution Agreement requirements are not finalized. The Agreement sets up the steps that NMED needs to take to make sure they are not discriminating in the public participation process. However, even if everything is not in place, *it is still illegal to discriminate—period.* It is not okay to discriminate "one last time," or in the case of the GWQB possibly 100 or more "last times."

The WCS discharge permit is controversial and is in an area that is already deluged with polluting facilities. There is a long history of the community expressing its concerns. It's time that NMED study these concerns and respond to them. The same is true of the LANL permit. Pollution from LANL is so bad that some dark leafy greens grown in Española and traditionally irrigated with water from the Rio Grande are better used to remediate the garden soil and then to be discarded as hazardous waste than to be eaten. (http://sacredtrustnm.org/red-dust-contamination-in-northern-new-mexico/)

We feel that the comment period must be stopped yet again for DP-1817 and the hearing process stopped for DP-1132 until NMED has:

- Finalized the steps in a-j above including "enhanced" notifications similar to the process used for the recent Triassic Park permit
- Created a Fact Sheet in English, Spanish and possibly in other languages to be posted with notifications
- Updated the Record Index
- Copied all relevant documents from nearby site Records into the DP-1817 Public Record (URENCO, Lea County Landfill, etc.)
- Translated all vital documents or summaries into Spanish (or other languages) including the Public Record Index
- Investigated whether a Disparate Impact Study is necessary and if it is, finished the study
- Put at least a copy of the updated and translated Public Record Index online
- Put hardcopy in English and Spanish of the updated Public Record Index, all vital documents and/or summaries in the Eunice Public Library or another community center where they can be viewed outside of working hours (for DP-1817)

We may find that other discharge permits also require this full treatment once we are able to review the 100+ permits that have been put out for public process this year. Just getting the Public Notice translated is where we started 15 years ago with Triassic Park and the original Title VI Discrimination Complaint that resulted in the Resolution Agreement. Do we have to repeat that long, complicated and expensive process with at least two more Title VI and NMED discrimination complaints? This is not something we look forward to, as many resources, both NMED's and our own could be so much better put to use protecting the environment and the potentially affected communities instead.

In order for NMED to comply fully with Title VI of the Civil Rights Act and the Resolution Agreement, we respectfully request that the DP-1817 comment period and the DP-1132 hearing process be stopped until NMED fully complies with the Resolution Agreement requirements.

Thank you for your careful consideration of our comments.
Sincerely,

Janet Greenwald and Deborah Reade
contactus@cardnm.com and reade@nets.com
Citizens for Alternatives to Radioactive Dumping (CARD)

Judith Kidd
abqpeaceandjusticecenter@gmail.com
Albuquerque Center for Peace and Justice

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