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**Environmental Management**  
Los Alamos Field Office  
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(505) 257-7950/FAX (505) 606-2132

Date: **MAR 19 2020**  
Refer To: N3B-2020-0091

Michelle Hunter, Chief  
Ground Water Quality Bureau  
New Mexico Environment Department  
1190 S. St. Francis Drive  
Santa Fe, NM 87502-5469

Kevin Pierard, Chief  
Hazardous Waste Bureau  
New Mexico Environment Department  
2905 Rodeo Park Drive East, Bldg. 1  
Santa Fe, NM 87505-6313

**Subject: Land Application of Groundwater Decision Tree Annual Report for 2019**

Dear Ms. Hunter and Mr. Pierard:

On December 2, 2016, the New Mexico Environment Department (NMED) approved the revised "Decision Tree for Land Application of Groundwater," dated November 2016 (hereafter, Decision Tree). The Decision Tree provides direction regarding the discharge of groundwater associated with the drilling, development, rehabilitation, and purging of monitoring wells. Enclosed is the U.S. Department of Energy (DOE) Environmental Management Los Alamos Field Office (EM-LA) and Newport News Nuclear BWXT-Los Alamos, LLC (N3B) submittal of the annual report required by Decision Tree reporting point R1. Under R1, EM-LA/N3B are required to report annually by March 31 to NMED the following information:

1. Source and type of water
2. Determination of fate based on pass/fail criteria (for decision point 6) for land application
3. Date, volume, and location of each discharge (land application)
4. Statement certifying that the water was disposed of in accordance with the Decision Tree
5. Identification of all wells whose land application status changed during the reporting period

The enclosed annual report, including certification statement, provides the information required above.

As shown in the enclosed annual report, purge water was land applied in the vicinity of the well from which it was generated. The purge water did not meet the criteria for decision point 6 of the Decision Tree. When the purge water was land applied, it was believed that the purge water met the criteria of the Decision Tree. Amendments to the ground and surface water protection regulations (20.6.2 New Mexico Administrative Code [NMAC]) took effect on December 21, 2018, and these amendments were not evaluated in respect to purge water that was land applied from January 8 to January 15, 2019. EM-LA/N3B did not sample and analyze for new regulated contaminants provided in the amended 20.6.2 NMAC regulations. EM-LA/N3B suspended the land application of



sampling purge water upon determining that newly regulated contaminants were not being sampled and analyzed in accordance with the Decision Tree; EM-LA/N3B notified the NMED Ground Water Quality Bureau (GWQB) on April 18, 2019.

On April 18, 2019, a meeting was held with NMED-GWQB, EM-LA, and N3B to discuss the land application of sampling purge water in relation to the Decision Tree and the monitoring year (MY) 2019 version of the Interim Facility-Wide Groundwater Monitoring Plan (IFGMP). It was agreed that land application of sampling purge water could continue, and sampling purge water would be sampled for the constituents identified in the MY 2019 IFGMP. It was also agreed that upon issuance of the MY 2020 IFGMP, EM-LA/N3B will perform sampling during the first scheduled sampling event at each monitoring location for analyses of the applicable amended 20.6.2 NMAC contaminants. EM-LA/N3B will conduct a comparison of the new standards at the wells where sampling purge water was land applied under the Decision Tree in 2019. EM-LA/N3B will notify NMED-GWQB of any exceedances of the newly regulated 20.6.2 NMAC contaminants.

In accordance with the requirements of the Decision Tree, EM-LA/N3B discharged approximately 5,758 gal. of groundwater to the land surface during 2019. During 2019, no wells that have previously met land-application criteria had a change in status.

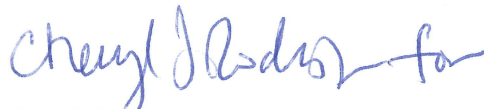
If you have questions, please contact Christian Maupin at (505) 695-4281 ([christian.maupin@em-la.doe.gov](mailto:christian.maupin@em-la.doe.gov)) or Cheryl Rodriguez at (505) 257-7941 ([cheryl.rodriguez@em.doe.gov](mailto:cheryl.rodriguez@em.doe.gov)).

Sincerely,



Frazer Lockhart  
Program Manager  
Regulatory and Stakeholder Interface  
N3B-Los Alamos

Sincerely,



David Nickless, Acting Director  
Office of Quality and Regulatory Compliance  
Environmental Management  
Los Alamos Field Office

Enclosure(s): Hard copies:

1. Land Application of Groundwater Decision Tree Annual Report for 2019 (EM2020-0126)

cc (letter and enclosure[s] emailed):

Laurie King, EPA Region 6, Dallas, TX  
Raymond Martinez, San Ildefonso Pueblo, NM  
Dino Chavarria, Santa Clara Pueblo, NM  
Steve Pullen, NMED-GWQB  
Andrew Romero, NMED-GWQB  
Shelly Lemon, NMED-SWQB  
Chris Catechis, NMED-DOE-OB  
Steve Yanicak, NMED-DOE-OB  
Arturo Duran, EM-LA  
David Nickless, EM-LA  
Cheryl Rodriguez, EM-LA  
Hai Shen, EM-LA



Ben Underwood, EM-LA  
William Alexander, N3B  
Emily Day, N3B  
Lori Huntoon, N3B  
Danny Katzman, N3B  
Kim Lebak, N3B  
Joseph Legare, N3B  
Pamela Maestas, N3B  
Christian Maupin, N3B  
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Public Reading Room (EPRR)  
PRS Website



# **ENCLOSURE 1**

Land Application of Groundwater Decision Tree  
Annual Report for 2019



## CERTIFICATION

### NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC

#### Land Application of Groundwater Decision Tree Annual Report for 2019

#### CERTIFICATION STATEMENT OF AUTHORIZATION

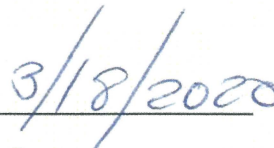
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In accordance with the New Mexico Administrative Code Title 20, Chapter 4, Part 1 (incorporating the Code of Federal Regulations, Title 40 CFR § 270.11):

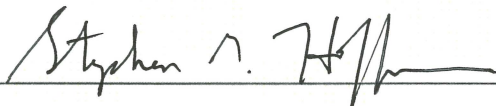
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."



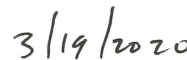
Frazer Lockhart, Program Manager  
Regulatory and Stakeholder Interface  
Newport News Nuclear BWXT-Los Alamos, LLC



Date

For: 

David Nickless, Acting Director  
Office of Quality and Regulatory Compliance  
Environmental Management  
Los Alamos Field Office



Date



### Land Application of Groundwater Decision Tree Annual Report for 2019

Item	Well Name	Well Type	Watershed	Description	Volume (gal.)	Generation Date	Decision Point D6 Compliant (Y/N)	Method	Location	Land Application Date
1	R-50 S2	Regional	Mortandad	Purge Water	363.50	11/1/2018	N	Sprinkler	Vicinity of well	1/8/2019
2	R-50 S2	Regional	Mortandad	Purge Water	408.20	9/12/2018	N	Sprinkler	Vicinity of well	1/8/2019
3	R-45 S2	Regional	Mortandad	Purge Water	318.23	10/30/2018	N	Sprinkler	Vicinity of well	1/8/2019
4	R-67	Regional	Sandia	Purge Water	229.35	11/5/2018	N	Sprinkler	Vicinity of well	1/8/2019
5	R-67	Regional	Sandia	Purge Water	217.83	7/19/2018	N	Sprinkler	Vicinity of well	1/8/2019
6	R-67	Regional	Sandia	Purge Water	283.14	5/21/2018	N	Sprinkler	Vicinity of well	1/8/2019
7	R-44 S1	Regional	Mortandad	Purge Water	244.76	11/20/2018	N	Sprinkler	Vicinity of well	1/10/2019
8	R-44 S1	Regional	Mortandad	Purge Water	226.10	10/29/2018	N	Sprinkler	Vicinity of well	1/10/2019
9	R-44 S2	Regional	Mortandad	Purge Water	300.30	11/20/2018	N	Sprinkler	Vicinity of well	1/10/2019
10	R-44 S2	Regional	Mortandad	Purge Water	297.16	10/29/2018	N	Sprinkler	Vicinity of well	1/10/2019
11	R-45 S2	Regional	Mortandad	Purge Water	364.87	11/19/2018	N	Sprinkler	Vicinity of well	1/10/2019
12	R-50 S2	Regional	Mortandad	Purge Water	375.88	11/19/2018	N	Sprinkler	Vicinity of well	1/10/2019
13	R-35a	Regional	Sandia	Purge Water	799.50	11/16/2018	N	Sprinkler	Vicinity of well	1/15/2019
14	R-35a	Regional	Sandia	Purge Water	808.50	10/31/2018	N	Sprinkler	Vicinity of well	1/15/2019
15	R-35b	Regional	Sandia	Purge Water	255.47	11/16/2018	N	Sprinkler	Vicinity of well	1/15/2019
16	R-35b	Regional	Sandia	Purge Water	265.44	11/1/2018	N	Sprinkler	Vicinity of well	1/15/2019