



DEPARTMENT OF ENERGY
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Mr. John E. Kieling
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SEP 26 2019

Dear Mr. Kieling:

Subject: Submittal of the Technical Area 21 Delta Prime West Investigations Letter Report

Enclosed please find two hard copies with electronic files of the "Technical Area 21 Delta Prime West Investigations Letter Report." This letter report fulfills fiscal year 2019 Milestone #18 in Appendix B of the 2016 Compliance Order on Consent, Appendix B, under the Technical Area 21 (TA-21) Decontamination and Decommissioning and Cleanup Campaign. The specific milestone addressed by this deliverable is described as a letter report summarizing the initiation of investigation activities associated with waste lines at TA-21 Delta Prime West.

If you have any questions, please contact Duane Parsons at (505) 551-2961 (duane.parsons@em-la.doe.gov) or Cheryl Rodriguez at (505) 257-7941 (cheryl.rodriguez@em.doe.gov).

Sincerely,

Arturo Q. Duran
Compliance and Permitting Manager
Environmental Management
Los Alamos Field Office

Enclosures:

1. Two hard copies with electronic files – Technical Area 21 Delta Prime West Investigations Letter Report (EM2019-0321)

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N3B Records

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PRS Website

EM-LA-N3B-30AD-00510

September 2019
EM2019-0321

Technical Area 21

Delta Prime West Investigations


Letter Report

Newport News Nuclear BWXT-Los Alamos, LLC (N3B), under the U.S. Department of Energy Office of Environmental Management Contract No. 89303318CEM000007 (the Los Alamos Legacy Cleanup Contract), has prepared this document pursuant to the Compliance Order on Consent, signed June 24, 2016. The Compliance Order on Consent contains requirements for the investigation and cleanup, including corrective action, of contamination at Los Alamos National Laboratory. The U.S. government has rights to use, reproduce, and distribute this document. The public may copy and use this document without charge, provided that this notice and any statement of authorship are reproduced on all copies.


Technical Area 21 Delta Prime West Investigations Letter Report

September 2019


Responsible program director:

Michael O. Erickson		Program Director	RCRA Remediation Program	9/25/19
Printed Name	Signature	Title	Organization	Date

Responsible N3B representative:

Erich Evered		Program Manager	N3B Environmental Remediation Program	9/25/2019
Printed Name	Signature	Title	Organization	Date

Responsible DOE EM-LA representative:

Arturo Q. Duran		Compliance and Permitting Manager	Office of Quality and Regulatory Compliance	9/26/19
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Plate

Plate 1 DP East and DP West SWMU/AOC Planned Investigation Locations

1.0 PURPOSE

This letter report fulfills fiscal year (FY) 2019 Milestone #18 of the 2016 Compliance Order on Consent (Consent Order), Appendix B, under the Technical Area 21 (TA-21) Decontamination and Decommissioning (D&D) and Cleanup Campaign. The specific milestone addressed by this deliverable is described as a letter report summarizing the initiation of investigation activities associated with waste lines at Delta Prime (DP) West.

2.0 OVERVIEW

The U.S. Department of Energy (DOE) Environmental Management Los Alamos Field Office (EM-LA) and Newport News Nuclear BWXT-Los Alamos, LLC (N3B) are in the process of remediating the TA-21 DP Site Aggregate Area Delayed Sites. These sites are included in the 2016 Consent Order, under the TA-21 D&D and Cleanup Campaign. The solid waste management units (SWMUs) and areas of concern (AOCs) addressed in this investigation work are potentially contaminated with both hazardous and radioactive components.

The DP Site Aggregate Area Delayed Site SWMUs and AOCs are addressed in the "Investigation Work Plan for Delta Prime Site Aggregate Area Delayed Sites, Revision 1" (LANL 2009, 108166.9). These sites were previously referred to as deferred sites (LANL 2006, 092571.12), and are now referred to as delayed sites to avoid confusion with sites listed in the Consent Order as deferred sites. The following sites are being addressed as part of the DP Site Aggregate Area Delayed Sites Project.

The TA-21 D&D and Cleanup Campaign will include soil removal from investigated sites that have had hazardous contaminants identified at concentrations that exceed the target risk level of 10^{-5} for lifetime excess cancer risk for carcinogenic contaminants and a hazard index of 1 for non-carcinogenic contaminants. For radionuclides, the target dose is 25 mrem/yr as authorized by DOE Order 458.1. There are 22 SWMUs and 11 AOCs that will be investigated, remediated as necessary, and reported on as part of the TA-21 DP Site Aggregate Area Delayed Sites Project.

The DP Site Aggregate Area is located near the eastern perimeter of the Los Alamos townsite within TA-21 at Los Alamos National Laboratory (LANL or the Laboratory). In 2005, investigations of DP Site Aggregate Area Delayed Sites were approved for deferred action until collocated active/occupied buildings, Laboratory processes, and/or utilities were removed and/or taken out of service. These sites consist of a former outfall area, aboveground storage tanks, sumps, and industrial waste lines that transferred DP West and DP East industrial/radioactive liquid wastes to Material Disposal Area (MDA) T or building 21-257 for treatment and disposal. The DP West and DP East buildings have been removed and building 21-257 will be removed. Most TA-21 utilities have been taken out of service and the delayed site SWMUs and AOCs are now ready to be investigated.

Sites associated with the DP West and DP East industrial waste lines and structures include:

- SWMU 21-011(b) – sump
- SWMU 21-022(b) – soil contamination from former sump and waste line
- SWMU 21-022(c) – soil contamination from former sump and waste line
- SWMU 21-022(d) – soil contamination from former sump and waste line
- SWMU 21-022(e) – soil contamination from former sump and waste line

- SWMU 21-022(g) – soil contamination from former sump and waste line

Sites associated with the DP West structures:

- SWMU 21-022(i) – sump and waste line
- AOC C-21-001 – spill/non-intentional release area
- AOC C-21-006 – spill/non-intentional release area

Site associated with the DP East structures:

- AOC 21-028(d) – container storage area

Sites within MDA T, but outside the nuclear environmental site (NES) area boundary and associated with former building 21-035:

- SWMU 21-010(a) – soil contamination associated with former Waste Treatment Facility 21-35
- SWMU 21-010(b) – soil contamination from former manhole
- SWMU 21-010(c) – soil contamination from former underground tank
- SWMU 21-010(d) – soil contamination from former underground tank
- SWMU 21-010(e) – soil contamination from former septic tank
- SWMU 21-010(f) – soil contamination from former grit chamber
- SWMU 21-010(g) – soil contamination from former aboveground tank
- SWMU 21-010(h) – soil contamination from former manhole
- AOC C-21-034 – soil contamination associated with former tank
- AOC C-21-035 – soil contamination associated with former aboveground tank
- AOC C-21-036 – soil contamination associated with former aboveground tank
- AOC C-21-037 – soil contamination associated with former aboveground tank

Sites within MDA T, but outside the NES area boundary and associated with building 21-257:

- SWMU 21-011(a) – Waste Treatment Facility 21-257
- SWMUs 21-011(d and e) – holding tanks
- SWMUs 21-011(f and g) – holding tanks
- AOC 21-011(h) – soil contamination from former storage tank
- SWMU 21-011(i) – storage tank
- SWMU 21-011(j) – storage tank
- AOC 21-001 – container storage area
- AOC C-21-005 – spill/non-intentional release area
- AOC C-21-007 – spill/non-intentional release area

The approximate SWMU and AOC locations are depicted on Plate 1, DP East and DP West SWMU/AOC Planned Investigation Locations.

Although included in the Delayed Sites Investigation Work Plan, SWMUs 21-004(b) and 21-004(c) were investigated in the 2010/2011 timeframe per the “Investigation Work Plan for Delta Prime Site Aggregate Area Delayed Sites, Revision 1” (LANL 2009, 108166.9). Investigation results of these two SWMUs were reported in the “Investigation Report for DP Site Aggregate Area Sites at DP East, Revision 1” (N3B 2018, 700160). New Mexico Environment Department (NMED) approved this report on December 28, 2018 (NMED 2018, 700162), which proposed these sites for corrective action complete without controls.

3.0 SUMMARY OF WORK COMPLETED AND PLANNED

The following sections summarize the work completed in FY 2019 and the planned work in FY 2020 for the TA-21 DP Site Aggregate Area Delayed Sites Project.

3.1 Work Completed in FY 2019

On March 1, 2019, a subcontract was awarded to a remediation company to execute the “Investigation Work Plan for Delta Prime Site Aggregate Area Delayed Sites.” On June 28, 2019, a notice to proceed was issued to the subcontractor to begin fieldwork activities. During the week of July 8, 2019, the subcontractor mobilized to the TA-21 site and began planning and site preparation work to support fieldwork activities. On August 5, 2019, the subcontractor began potholing to locate the industrial waste lines associated with SWMUs 21-022(b), 21-022(c), 21-022(d), 21-022(e), and 21-022(g). Work continued during the months of August and September to locate and mark the industrial waste lines for SWMUs 21-022(b), 21-022(c), 21-022(d), 21-022(e), and 21-022(g), and relocate the MDA T fence. Building 21-257 interior equipment strip-out work also started in August and continued during September.

3.2 Planned Work in FY 2020

Additional investigation and remediation work will continue during FY 2020. Excavation and removal of the industrial waste lines will occur during the first quarter. Investigation and remediation work associated with former building 21-35 will occur during the second quarter. Building 21-257 strip-out and demolition work will occur during the first and second quarters. Investigation and remediation work associated with the building 21-257 footprint and surrounding sites will occur during the third quarter. The remaining sites associated with this project will be investigated and remediated during the fourth quarter. Analytical results for all investigation and field quality control samples collected during this project will be presented in a future investigation report.

4.0 REFERENCES AND MAP DATA SOURCES

4.1 References

The following reference list includes documents cited in this letter report. Parenthetical information following each reference provides the author(s), publication date, and ERID, ESHID, or EMID. This information is also included in text citations. ERIDs were assigned by the Laboratory’s Associate Directorate for Environmental Management (IDs through 599999); ESHIDs were assigned by the Laboratory’s Associate Directorate for Environment, Safety, and Health (IDs 600000 through 699999); and EMIDs are assigned by N3B (IDs 700000 and above). IDs are used to locate documents in N3B’s Records Management System and in the Master Reference Set. The NMED Hazardous Waste Bureau

and N3B maintain copies of the Master Reference Set. The set ensures that NMED has the references to review documents. The set is updated when new references are cited in documents.

LANL (Los Alamos National Laboratory), May 2006. "Investigation Work Plan for Middle Los Alamos Canyon Aggregate Area, Revision 1," Los Alamos National Laboratory document LA-UR-06-3015, Los Alamos, New Mexico. (LANL 2006, 092571.12)

LANL (Los Alamos National Laboratory), December 2009. "Investigation Work Plan for Delta Prime Site Aggregate Area Delayed Sites, Revision 1," Los Alamos National Laboratory document LA-UR-09-8180, Los Alamos, New Mexico. (LANL 2009, 108166.9)

N3B (Newport News Nuclear BWXT-Los Alamos, LLC), December 2018. "Investigation Report for DP Site Aggregate Area Sites at DP East, Revision 1," Newport News Nuclear BWXT-Los Alamos, LLC, document EM2018-0140, Los Alamos, New Mexico. (N3B 2018, 700160)

NMED (New Mexico Environment Department), December 28, 2018. "Approval, Investigation Report for DP Site Aggregate Area Sites at DP East, Revision 1," New Mexico Environment Department letter to D. Hintze (EM-LA) from J.E. Kielling (NMED-HWB), Santa Fe, New Mexico. (NMED 2018, 700162)

4.2 Map Data Sources

PUB.prs_all_reg_admin; Los Alamos National Laboratory, Database
Connections\GIS.PUB.PRD1.sde\PUB.Regulatory\PUB.prs_all_reg_admin

PUB.tecareas; Los Alamos National Laboratory, Database
Connections\GIS.PUB.PRD1.sde\PUB.Boundaries

NMLOSA18_Delivery.ecw; NM Los Alamos National Lab 2018 Accuplus Project,
Q:\Aerial\2018\ECW\NMLOSA18_Delivery.ecw

Plate 1

DP East and DP West
SWMU/AOC Planned
Investigation Locations

- Legend
- SWMU / AOC
 - TA-21 Boundary
 - Waste line

New Mexico StatePlane Coordinate System
Central Zone (3002)
North American Datum, 1983 (NAD 83)
US Survey Ft

DISCLAIMER: This map was created for work processes associated with the TA-21 Closure Project. All other uses for this map should be confirmed with N3B TA-21 Program Manager.

MAP: 19-0037_03_SWMU-AOC_Revised
TYPE: REGULAR
SIZE: 22x34 D

GIS: Jeffrey Lyon
EDITED: Joshua Sammons
DATE: 9/26/2019
REVISION NUMBER: 2.0

N

0 50 100 200 Feet

