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Environmental Management
Los Alamos Field Office
P.O. Box 1663, MS M984
Los Alamos, New Mexico 87545
(505) 257-7950/FAX (505) 606-2132

Date: DEC 2 3 2019
Refer To: N3B-19-0388

Esteban Herrera, Chief
Water Enforcement Branch (6EN-WS)
Compliance Assurance and Enforcement Division
U.S. Environmental Protection Agency, Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75270-2102

Subject: NPDES Permit No. NM0030759 – Completion of Corrective Action for 15 Sites in 12 Site Monitoring Areas Following Certificate of Completion from the New Mexico Environment Department

Dear Mr. Herrera:

This letter and enclosures are being submitted in accordance with the requirements of the U.S. Environmental Protection Agency's (EPA's) National Pollutant Discharge Elimination System (NPDES) Permit No. NM0030759 for discharges of storm water at Los Alamos National Laboratory. The permit was issued to Los Alamos National Security, LLC (LANS) and the U.S. Department of Energy, effective November 1, 2010. On April 30, 2018, responsibilities, coverage, and liability transferred from LANS to Newport News Nuclear BWXT-Los Alamos, LLC (N3B).

Completion of corrective action is being certified to EPA as specified in Part 1, Section E.2(d):

> The Site has achieved RCRA "corrective action complete without controls/corrective action complete with controls" status or a Certificate of Completion under NMED's Consent Order.

Enclosures 1 through 12 are documentation packages supporting completion of corrective action for each site. The packages include documents certifying that corrective action is complete and corresponding certificates of completion issued under the New Mexico Environment Department's (NMED's) Compliance Order on Consent (Consent Order). This submittal can also be accessed at the following website: https://ext.em-la.doe.gov/IPS/Home.

Table 1 includes information about the sites and site monitoring areas included in this certification package.

Table 1
Certificates of Completion for 15 Sites in 12 Site Monitoring Areas

Site Number	Associated SMA Number	Permitted Feature	Watershed	Site Priority
00-011(a)	R-SMA-2.5	R006	Los Alamos/Pueblo	Moderate
01-001(e)	LA-SMA-3.1	L008	Los Alamos/Pueblo	High
03-055(c)	LA-SMA-0.85	L001	Los Alamos/Pueblo	Moderate
04-001	T-SMA-7.1	T010	Mortandad	Moderate
04-002	T-SMA-7.1	T010	Mortandad	Moderate
04-003(b)	T-SMA-7	T009	Mortandad	Moderate
05-001(a)	M-SMA-12.8	M019	Mortandad	Moderate
05-002	M-SMA-12.8	M019	Mortandad	Moderate
05-005(b)	M-SMA-12.5	M016	Mortandad	Moderate
05-006(c)	M-SMA-12.5	M016	Mortandad	Moderate
15-009(c)	3M-SMA-0.5	H003	Pajarito	Moderate
21-006(b)	LA-SMA-6.3	L022	Los Alamos/Pueblo	Moderate
21-024(l)	DP-SMA-0.6	D003	Los Alamos/Pueblo	Moderate
32-002(b1)	LA-SMA-5.361	L017	Los Alamos/Pueblo	Moderate
35-014(g3)	T-SMA-2.5	T003	Mortandad	Moderate

If you have any questions, please contact Emily Day at (505) 695-4243 (emily.day@em-la.doe.gov) or David Nickless at (505) 257-7933 (david.nickless@em.doe.gov).

Sincerely,

Elizabeth Lowes
Program Manager
Environment, Safety and Health
N3B-Los Alamos

Sincerely,

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

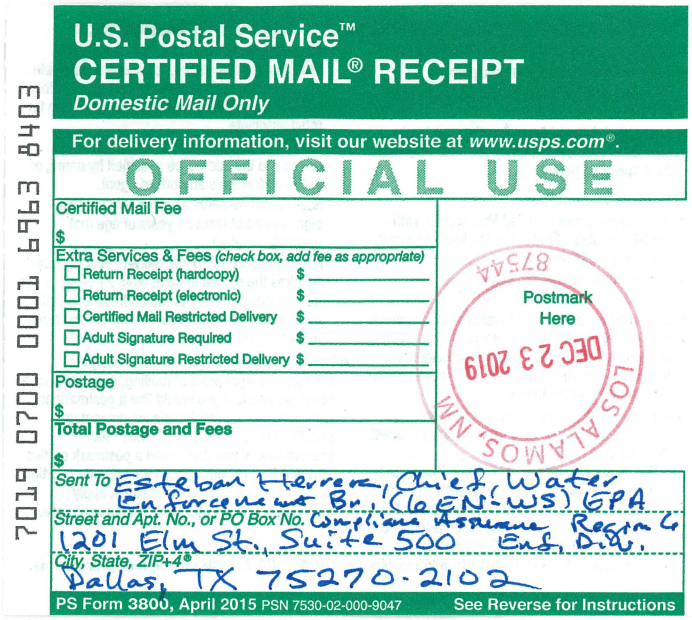
Enclosure(s): One hard copy with electronic files –

1. Completion of Corrective Action at Site 15-009(c) in 3M-SMA-0.5 (EM2019-0451)
2. Completion of Corrective Action at Site 21-024(l) in DP-SMA-0.6 (EM2019-0441)
3. Completion of Corrective Action at Site 03-055(c) in LA-SMA-0.85 (EM2019-0443)
4. Completion of Corrective Action at Site 01-001(e) in LA-SMA-3.1 (EM2019-0465)
5. Completion of Corrective Action at Site 32-002(b1) in LA-SMA-5.361 (EM2019-0444)
6. Completion of Corrective Action at Sites 21-006(b) in LA-SMA-6.3 (EM2019-0445)
7. Completion of Corrective Action at Sites 05-001(a) and 05-002 in M-SMA-12.8 (EM2019-0447)
8. Completion of Corrective Action at Sites 05-005(b) and 05-006(c) in M-SMA-12.5 (EM2019-0446)
9. Completion of Corrective Action at Site 00-011(a) in R-SMA-2.5 (EM2019-0448)
10. Completion of Corrective Action at Site 35-014(g3) in T-SMA-2.5 (EM2019-0449)

11. Completion of Corrective Action at Site 04-003(b) in T-SMA-7 (EM2019-0463)
12. Completion of Corrective Action at Sites 04-001 and 04-002 in T-SMA-7.1 (EM2019-0450)

cc (letter with enclosure[s]):
Sarah Holcomb, NMED-SWQB

cc (letter and enclosure[s] emailed)
Carol Johnson, EPA Region 6
Curry Jones, EPA Region 6
Laurie King, EPA Region 6
Brent Larsen, EPA Region 6
Steve Yanicak, NMED-DOE-OB
Arturo Duran, EM-LA
David Nickless, EM-LA
Cheryl Rodriguez, EM-LA
William Alexander, N3B
Don Carlson, N3B
Emily Day, N3B
Mary Erwin, N3B
Erich Evered, N3B
Debby Holgerson, N3B
Kim Lebak, N3B
Joseph Legare, N3B
Dana Lindsay, N3B
Frazer Lockhart, N3B
Elizabeth Lowes, N3B
Pamela Maestas, N3B
Jason Moore, N3B
Glenn Morgan, N3B
Joseph Noll, N3B
Lester Patten, N3B
Gary Pool, N3B
Bruce Robinson, N3B
Karly Rodriguez, N3B
Steve Veenis, N3B
Tashia Vigil, N3B
Amanda White, N3B
emla.docs@em.doe.gov
n3brecords@em-la.doe.gov
Public Reading Room (EPRR)
PRS Website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City, State, ZIP+4® Dallas, TX 75270-2102
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions
7019 0700 0001 6963 8403

Completion of Corrective Action at Site 15-009(c) in 3M-SMA-0.5

December 23, 2019

NPDES PERMIT NO. NM0030759

EM2019-0451

NPDES PERMIT NO. NM0030759 **EM2019-0451**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: H003 **3M-SMA-0.5** **Site: 15-009(c)**

The following certification was performed in accordance with NPDES Permit No. NM0030759, Part I.E.2, which requires the Permittees (U.S. Department of Energy and Newport News Nuclear BWXT-Los Alamos, LLC) to certify the completion of corrective action.

CERTIFICATION STATEMENT OF AUTHORIZATION

"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 there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

Elizabeth Lowes — 12-10-2019

Elizabeth Lowes, Program Manager
Environment, Safety and Health
Newport News Nuclear BWXT-Los Alamos, LLC

Date

David Nickless — 12/19/19

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

Date

NPDES PERMIT NO. NM0030759 **EM2019-0451**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: H003 **3M-SMA-0.5** **Site: 15-009(c)**

This document certifies completion of corrective action for Site 15-009(c) pursuant to Part 1, E.2(d) of the Individual Permit NM0030759. Accompanying this certification is a copy of the New Mexico Environment Department- (NMED-) issued certificate of completion (COC) letter for Site 15-009(c), which is designated as Solid Waste Management Unit 15-009(c) for the purposes of the 2016 Compliance Order on Consent (Consent Order). This site, listed in Table 1, has achieved Resource Conservation and Recovery Act "corrective action complete without controls" status under the Consent Order. This certification that corrective action is complete was prepared in accordance with 40 Code of Federal Regulations 122.22(b).

In July 2014, a baseline confirmation monitoring sample collected at Site Monitoring Area (SMA) 3M-SMA-0.5 exceeded target action levels for copper and gross alpha, causing the Permittees to initiate corrective action. Enhanced controls were installed and certified and the certification package was submitted to the U.S. Environmental Protection Agency in October 2015, entering the site into corrective action monitoring. The Permittees are certifying completion of corrective action at Site 15-009(c) through a demonstration that the site has achieved a COC, included with this submission, under Section XXI of the Consent Order. A copy of the COC from NMED is included in Attachment 1.

Table 1
Completion of Corrective Action for One Site in 3M-SMA-0.5

Site	Associated SMA Number	Watershed	Site Priority
15-009(c)	3M-SMA-0.5	Pajarito	Moderate

Attachment 1

Certificate of Completion for Solid Waste Management Unit 15-009(c) (3M-SMA-0.5)

EMID-700552

NEW MEXICO
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030
www.env.nm.gov

Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

August 27, 2019

Doug Hintze, Manager
Environmental Management
U.S. Department of Energy
Los Alamos Field Office
P.O. Box 1663 MS M984
Los Alamos, NM 87545

RE: APPROVAL
REQUEST FOR CERTIFICATES OF COMPLETION WITHOUT CONTROLS FOR 10 SOLID WASTE MANAGEMENT UNITS AND 10 AREAS OF CONCERN IN THE THREEMILE CANYON AGGREGATE AREA
LOS ALAMOS NATIONAL LABORATORY
EPA ID #NM0890010515
HWB-LANL-18-070

Dear Mr. Hintze:

The New Mexico Environment Department (NMED) has received the United States Department of Energy (DOE) *Request for Certificates of Completion Without Controls for 10 Solid Waste Management Units and 10 Area of Concern in the Threemile Canyon Aggregate Area* (Request) dated and received December 17, 2018, and referenced by EM-LA-40AD-00370.

These sites were investigated in 2009-2010, and the results were submitted to NMED in the *Supplemental Investigation Report for Threemile Canyon Aggregate Areas, Revision 1* (SIR), dated July 31, 2018, and approved by NMED on August 28, 2018.

Solid Waste Management Unit (SWMU) 12-001(a) was a below-ground hexagonal steel-lined firing pit, approximately 10.5 feet (ft) on each side and 11 ft deep, and included an above-ground steel cover approximately 20 ft long by 22 ft wide by 5 ft high that overlay the firing pit. Recovery shots (which involved uranium) were performed in the firing pit. Firing pit operations began in 1944 and it was decommissioned in 1953. The unit was surveyed for radiation in 1993, and in 1996 the DOE conducted a voluntary corrective action (VCA) to remove approximately 105 cubic ft of noncontaminated soil from within the firing pit, while leaving the firing pit in place. Investigations were conducted in 1995 and 2009-2010 to define the nature and extent of contamination. The current and reasonably foreseeable land use is industrial. The recreational land use scenario was also evaluated where trail users might be exposed to residual contamination. Human health and ecological risk were evaluated and presented in the 2018 SIR that indicated that SWMU 12-001(a) does not pose an unacceptable risk to human health under the residential, industrial, recreational land use, and construction worker scenario. The results of ecological risk screening indicate that the site does not pose an unacceptable risk to the environment.

SWMU 12-001(b) was a firing pit which consisted of an open pit measuring 5 ft long by 5 ft wide by 3 ft deep which was used for calorimetric experiments in 1945. From 1945-1950 the site was utilized to fire high explosive (HE) shots involving lead and uranium. Investigations were conducted in 1995 and 2009-2010 to define the nature and extent of contamination. The current and reasonably foreseeable land use is industrial. The recreational land use scenario was also evaluated where trail users might be exposed to residual contamination. Human health and ecological risk were evaluated and presented in the 2018 SIR that indicated that SWMU 12-001(b) does not pose an unacceptable risk to human health under the residential, industrial, recreational land use, and construction worker scenario. The results of ecological risk screening indicate that the site does not pose an unacceptable risk to the environment

SWMU 12-002 was an area of potential soil contamination at former TA-12, where 0.5 lbs of HE scrap was burned on one occasion in 1962. The area measures approximately 3 square ft and is a component of Consolidated Unit 12-001(a)-99 and is located approximately 40 ft southeast of SWMU 12-001(b). The site is currently inaccessible beneath Redondo Road. Investigations were conducted in 2009-2010 to define the nature and extent of contamination. The current and reasonably foreseeable land use is industrial. The recreational land use scenario was also evaluated where trail users might be exposed to residual contaminations. Human health and ecological risk were evaluated and presented in the 2018 SIR that indicated that SWMU 12-002 does not pose an unacceptable risk to human health under the residential, industrial, recreational land use, and construction worker scenario. The results of ecological risk screening indicate that the site does not pose an unacceptable risk to the environment.

Area of Concern (AOC) 12-004(a) was a radiation Test Facility (structure 15-8), the soil-bermed radiation shelter was utilized to conduct lanthanum experiments over a three-week period in 1950. The site originally consisted of a 6 ft by 6 ft long by 6 ft wide soil-bermed radiation

shelter which included three vertical poles. The shelter and poles were constructed in a line parallel to a drainage channel that flows southwest from Redondo Road into Threemile Canyon. The northmost pole was been removed and was located in a drainage 30 ft south of Redondo Road, the middle pole is located 58 ft south of the first pole location, and the radiation shelter and the third pole are located 40 ft south of the second pole. In 1959, DOE inspected the unit and surveyed it for radiation in 1966. Investigations were conducted in 1993, 1995, and 2009-2010 to define the nature and extent of contamination. The current and reasonably foreseeable land use is industrial. Human health and ecological risk were evaluated and presented in the 2018 SIR that indicated that SWMU 12-004(a) does not pose an unacceptable risk to human health under the residential, industrial land use, and construction worker scenario. The results of ecological risk screening indicate that the site does not pose an unacceptable risk to the environment.

AOC 12-004(b) was an aluminum pipe located at former TA-12 at the edge of Redondo Road approximately 78 ft north of a radiation shelter (12-8). The pipe was set vertically in the ground and protruded 8 inches above ground without a cover. The pipe was 7.5 inches thick in diameter and 3 ft long with an inner diameter of 18 inches. The pipe was filled with soil. Remnant fragments of HE were observed at the site in 1959. The pipe was removed in 2009, and confirmatory soil samples were collected beneath the pipe. Investigations were conducted in 1995 and 2009-2010 to define the nature and extent of contamination. The current and reasonably foreseeable land use is industrial. Human health and ecological risk were evaluated and presented in the 2018 SIR that indicated that SWMU 12-004(b) does not pose an unacceptable risk to human health under the residential, industrial land use, and construction worker scenario. The results of ecological risk screening indicate that the site does not pose an unacceptable risk to the environment.

AOC C-12-001 was an area of potential soil contamination at former TA-12 associated with a former HE trim building (12-1). The trim building was built in December 1944 and was used to prepare HE for detonation experiments. The building was 16 ft long by 16 ft wide by 9 ft high and was composed of wood-frame construction with a soil berm on three sides and on top. Activities at the former TA-12 ceased in 1953. In 1959, the DOE surveyed the building for contamination, and in 1960 intentionally burned the building. Investigations were conducted in 1995 and 2009-2010 to define the nature and extent of contamination. The current and reasonably foreseeable land use is industrial. Human health and ecological risk were evaluated and presented in the 2018 SIR that indicated that AOC C-12-001 does not pose an unacceptable risk to human health under the residential, industrial land use, and construction worker scenario. The results of ecological risk screening indicate that the site does not pose an unacceptable risk to the environment.

AOC C-12-002 was an area of potential soil contamination at former TA-12 and was associated with a former control building (12-2). The control building was built in 1945 and was built of wood frame construction measuring 8 ft long by 8 ft wide by 8 ft high, with a soil berm on three

sides and on top. Activities at former TA-12 ceased in the early 1950s. In 1959, the DOE surveyed the building for contamination, and in 1960 intentionally burned the building. Investigations were conducted in 1995 and 2009-2010 to define the nature and extent of contamination. The current and reasonably foreseeable land use is industrial. Human health and ecological risk were evaluated and presented in the 2018 SIR that indicated that AOC C-12-002 does not pose an unacceptable risk to human health under the residential, industrial land use, and construction worker scenario. The results of ecological risk screening indicate that the site does not pose un acceptable risk to the environment.

AOC C-12-003 was an area of potential soil contamination associated with a former HE magazine (building 12-3) at former TA-12. The magazine was built in 1944 and was of wood frame construction measuring 6 ft long by 6 ft wide by 7 ft high, with a soil berm on three sides and on top. Activities at former TA-12 ceased in the early 1950s. In 1959, the DOE surveyed the building (12-3) for contamination, and in 1960 intentionally burned the building. Investigations were conducted in 2009-2010 to define the nature and extent of contamination. The current and reasonably foreseeable land use is industrial. Human health and ecological risk were evaluated and presented in the 2018 SIR that indicated that AOC C-12-003 does not pose an unacceptable risk to human health under the residential, industrial land use, and construction worker scenario. The results of ecological risk screening indicate that the site does not pose an unacceptable risk to the environment.

AOC C-12-004 was an area of potential soil contamination at former TA-12 associated with a former generator building (12-5). The generator building was built of wood frame construction of unknown dimensions. The building was originally located next to a former junction box (12-6), but in 1952 the generator building was relocated 10 ft north of former control building (12-2). Activities at former TA-12 ceased in the early 1950s. In 1959, the DOE surveyed the building for contamination, and in 1960 intentionally burned the building. Investigations were conducted in 1995 and 2009-2010 to define the nature and extent of contamination. The current and reasonably foreseeable land use is industrial. Human health and ecological risk were evaluated and presented in the 2018 SIR that indicated that AOC C-12-004 does not pose an unacceptable risk to human health under the residential, industrial land use, and construction worker scenario. The results of ecological risk screening indicate that the site does not pose an unacceptable risk to the environment.

AOC C-12-005 is the location of a former junction box (12-6) at former TA-12. The junction box was used to support experiments conducted at the firing pits, SWMUs 12-001 (a) and (b). AOC C-12-005 is located approximately 70 ft southwest of SWMU 12-001(a). The building was constructed in 1945 and was built of wood frame construction measuring 3 ft long by 3 ft wide by 4 ft high and was surrounded on three sides by a soil berm. The junction box served as a relay between former control building 12-2 and the two firing pits and housed diagnostic equipment, signal cables, electrical wires, and detonation wires. The junction box was not used after 1953 and was intentionally burned in place in 1960. Investigations were conducted in

1995 and 2009-2010 to define the nature and extent of contamination. The current and reasonably foreseeable land use is industrial. The recreational land use scenario was also evaluated where trail users might be exposed to residual contaminations. Human health and ecological risk were evaluated and presented in the 2018 SIR that indicated that AOC C-12-005 does not pose an unacceptable risk to human health under the residential, industrial, recreational land use, and construction worker scenario. The results of ecological risk screening indicate that the site does not pose an unacceptable risk to the environment.

AOC C-14-006 was a site of potential soil contamination associated with a HE storage magazine (former building 14-9) at TA-14. The magazine was located 60 ft northwest of building 14-22. The magazine was built in 1945 and was of wood frame construction measuring 6 ft long by 6 ft wide by 6 ft high and was surrounded on three sides with a soil berm, and soil covering the top of the structure. The building was removed in 1952. Investigations were conducted in 2009-2010 to define the nature and extent of contamination. The current and reasonably foreseeable land use is industrial at TA-14. Human health and ecological risk were evaluated and presented in the 2018 SIR that indicated that AOC C-14-006 does not pose an unacceptable risk to human health under the residential, industrial land use, and construction worker scenario. The results of ecological risk screening indicate that the site does not pose an unacceptable risk to the environment.

AOC 15-005(c) was a former container storage area at building 15-41, located at TA-15 near Firing Site C. The area was used to store containers of scrap HE, and chem-wipes contaminated with acetone, ethanol, and mineral oil. The ground surface on the northern, western, and eastern sides of building 15-41 was unpaved, and an asphalt road (Pricilla Road) runs along the south side of the building. The date the storage area began to be used is not known, but the site was deactivated in 1996. Investigations were conducted in 1995 and 2009-2010 to define the nature and extent of contamination. The current and reasonably foreseeable land use is industrial at TA-15. Human health and ecological risk were evaluated and presented in the 2018 SIR that indicated that AOC 15-005(c) does not pose an unacceptable risk to human health under the residential, industrial land use, and construction worker scenario. The results of ecological risk screening indicate that the site does not pose an unacceptable risk to the environment.

SWMU 15-007(d) was an underground shaft (15-265) located at TA-15 approximately 300 ft east of building 15-263 and 100 ft north of underground shaft 15-264. The shaft measured approximately 6 ft in diameter, and 120 ft deep, and was situated within a 20 ft wide by 20 ft long concrete pad and covered with a wooden lid. In 1972, the shaft was used to conduct a single underground test involving beryllium, tritium and 500 lbs of HE. SWMU 15-007(d) was part of consolidated unit SWMU 15-007(c)-00. Investigations were conducted in 2009-2010 to define the nature and extent of contamination. The current and reasonably foreseeable land use is industrial at TA-15. Human health and ecological risk were evaluated and presented in the 2018 SIR that indicated that SWMU 15-007(d) does not pose an unacceptable risk to human

health under the residential land use and construction worker scenario. The industrial scenario was not evaluated because samples were not collected from the 0-1 ft depth interval. The results of ecological risk screening indicate that the site does not pose an unacceptable risk to the environment.

SWMU 15-009(c) was a septic system located a Firing Site R-44 at TA-15. The septic system was constructed in 1951 and consisted of cast iron drain lines and a reinforced concrete septic tank. The septic system served restroom facilities in the firing site control building 15-44. The septic system drained into an outfall into the south fork of Threemile Canyon and operated until 2003 when it was plugged. Investigations were conducted in 1998 and 2009-2010 to define the nature and extent of contamination. The current and reasonably foreseeable land use is industrial at TA-15. Human health and ecological risk were evaluated and presented in the 2018 SIR that indicated that SWMU 15-009(c) does not pose an unacceptable risk to human health under the residential, industrial land use, and construction worker scenario. The results of ecological risk screening indicate that the site does not pose an unacceptable risk to the environment.

SWMU 15-009(h) was a septic system located at the Ector firing site and on the eastern side of TA-15. The septic system served restroom facilities in the Ector firing site control building 15-280. The septic system consisted of a reinforced concrete tank measuring 6 ft long by 4 ft wide by 5 ft deep, associated drain lines, and a drain field. The septic system was built in the late 1970s and operated up to 1990, when the drain lines were re-routed to discharge into the Sanitary Wastewater Systems Consolidation (SWSC). The septic tank and drain lines were proposed to be removed as part of the work plan (2009) but were left in place due to their proximity to active utility lines. Investigations were conducted in 2009-2010 to define the nature and extent of contamination. The current and reasonably foreseeable land use is industrial at TA-15. Human health and ecological risk were evaluated and presented in the 2018 SIR that indicated that SWMU 15-009(h) does not pose an unacceptable risk to human health under the residential land use and construction worker scenario. The industrial scenario was not evaluated because samples were not collected from the 0-1 ft depth interval. The results of ecological risk screening indicate that the site does not pose an unacceptable risk to the environment.

AOC 15-014(h) consisted of three outfalls located in the northwest corner at TA-15 which received discharge from a former photographic laboratory and office building (15-40). All three outfalls daylight north of former building 15-40 and discharge into Threemile Canyon. The westernmost outfall was a former National Pollutant Discharge Elimination System (NPDES) permitted outfall which was constructed from vitrified clay. The middle outfall is a former NPDES-permitted outfall that received noncontact cooling water, roof runoff, and a floor drain from former building 15-40, which was constructed from vitrified clay which extended approximately 100 ft north of the northeast corner of former building 15-40. The third and easternmost outfall was constructed from a 12-inch diameter corrugated metal pipe and

extended approximately 75 ft and then connected into a 60 ft long ditch. Investigations were conducted in 1995 and 2009-2010 to define the nature and extent of contamination. The current and reasonably foreseeable land use is industrial at TA-15. Human health and ecological risk were evaluated and presented in the 2018 SIR that indicated that AOC 15-014(h) does not pose an unacceptable risk to human health under the residential and construction worker scenario. The industrial scenario was not evaluated because samples were not collected from the 0-1 ft depth interval. The results of ecological risk screening indicate that the site does not pose an unacceptable risk to the environment.

SWMU 36-002 is a former sump that was located at TA-36, near the edge of Threemile Canyon and approximately 40 ft northwest of building 36-48. The sump measured 4 ft in diameter by 8 ft deep and was constructed in 1965. A 4 ft diameter corrugated metal pipe was placed vertically in the trench. The interior of the pipe was filled with 3-inch diameter gravel to a depth of 2 ft below ground surface (bgs). The sump had a metal cover, and the interior of the pipe was filled with rocks. The former sump received effluent from building 36-48 which had been used for shot assembly and temperature-controlled experiments. The sump received effluent from 1965 to 1993. The sinks were disconnected from the sump in 1993, and the sump was removed in 1994. Investigations were conducted in 1994 and 2009-2010 to define the nature and extent of contamination. The current and reasonably foreseeable land use is industrial at TA-36. Human health and ecological risk were evaluated and presented in the SIR that indicated that SWMU 36-002 does not pose an unacceptable risk to human health under the residential land use and construction worker scenario. The industrial scenario was not evaluated because samples were not collected from the 0-1 ft depth interval. The results of ecological risk screening indicate that the site does not pose an unacceptable risk to the environment.

SWMU 36-003(a) was a septic system located at TA-36 approximately 115 ft east of building 36-1. The septic system consisted of a septic tank (36-17), drain lines, a manhole (36-38), a distribution box/drain field, and a seepage pit. The septic tank was a single-chamber tank constructed of reinforced concrete. The septic system was constructed in 1949 and received effluent from the restroom and a photo-processing laboratory in building 36-1. The septic system operated from 1949 to 1992 when the septic system was disconnected from the sanitary waste drain lines and was rerouted into the SWSC. In 1995 the septic tank was decontaminated and was filled with concrete. Investigations were conducted in 1994, 1995, and 2009-2010 to define the nature and extent of contamination. The current and reasonably foreseeable land use is industrial at TA-36. Human health and ecological risk were evaluated and presented in the 2018 SIR that indicated that SWMU 36-003(a) does not pose an unacceptable risk to human health under the residential, industrial land use, and construction worker scenario. The results of ecological risk screening indicate that the site does not pose an unacceptable risk to the environment.

SWMU 36-008 was a surface disposal area located at TA-36 north of building 36-1 which included an office and photo-processing laboratory. The disposal area is on the south rim of Threemile Canyon and extends down the steeply sloping edge of the mesa. The disposal area measures approximately 1 acre in area, the exact dates of operation for the unit were not known, but the associated building 36-1 was constructed in 1949. The surface disposal area's existence was unknown prior to the Cerro Grande fire (June 2000) which revealed the site when the vegetation was burned. Investigations were conducted in 2009-2010 to define the nature and extent of contamination. The current and reasonably foreseeable land use is industrial at TA-36. Human health and ecological risk were evaluated and presented in the 2018 SIR that indicated that SWMU 36-008 does not pose an unacceptable risk to human health under the residential, land use, and construction worker scenario. The results of ecological risk screening indicate that the site does not pose an unacceptable risk to the environment.

SWMU C-36-003 was a former NPDES-permitted outfall which received effluent from a floor drain and a sink in a photo processing laboratory located in building 36-1. The outfall began operation in the 1950s. In 1993, the floor and sink drains were rerouted to the SWSC plant. The outfall was removed from the NPDES permit in 2001. Investigations were conducted in 1994 and 2009-2010 to define the nature and extent of contamination. The current and reasonably foreseeable land use is industrial at TA-36. Human health and ecological risk were evaluated and presented in the 2018 SIR that indicated that SWMU C-36-003 does not pose an unacceptable risk to human health under the residential, industrial land use, and construction worker scenario. The results of ecological risk screening indicate that the site does not pose an unacceptable risk to the environment.

NMED hereby issues certificates of completion without controls for SWMUs 12-001(a), 12-001(b), 12-002, 15-007(d), 15-009(c), 15-009(h), 36-002, 36-003(a), 36-008, C-36-003; and AOCs 12-004(a), 12-004(b), C-12-001, C-12-002, C-12-003, C-12-004, C-12-005, C-14-006, 15-005(c), and 15-014(h).

If new information becomes available that indicates that the sites may pose an unacceptable risk to human health or the environment, NMED may require the DOE to conduct additional corrective action at these sites.

If you have any questions regarding this letter, please contact Siona Briley at (505) 476-6049.

Sincerely,

John E. Kieling
Chief
Hazardous Waste Bureau
cc:

N. Dhawan, NMED HWB
S. Briley, NMED HWB
R. Murphy, NMED HWB
L. King, US EPA Region 6
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File: 2019 LANL, Certificate of Completion for 10 SWMUs and 10 AOCs in TA 12, 15, and 36. Threemile Canyon Aggregate Area, Technical Area 12
LANL-18-070

Completion of Corrective Action at Site 21-024(l) in DP-SMA-0.6

December 23, 2019

NPDES PERMIT NO. NM0030759

EM2019-0441

NPDES PERMIT NO. NM0030759 **EM2019-0441**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: D003 **DP-SMA-0.6** **Site: 21-024(l)**

The following certification was performed in accordance with NPDES Permit No. NM0030759, Part I.E.2, which requires the Permittees (U.S. Department of Energy and Newport News Nuclear BWXT-Los Alamos, LLC) to certify the completion of corrective action.

CERTIFICATION STATEMENT OF AUTHORIZATION

"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 there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

Elizabeth Lowes — 12-10-2019

Elizabeth Lowes, Program Manager
Environment, Safety and Health
Newport News Nuclear BWXT-Los Alamos, LLC

Date

David Nickless — 12/19/19

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

Date

NPDES PERMIT NO. NM0030759 **EM2019-0441**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: D003 **DP-SMA-0.6** **Site: 21-024(l)**

This document certifies completion of corrective action for Site 21-024(l) pursuant to Part 1, E.2(d) of the Individual Permit NM0030759. Accompanying this certification is a copy of the New Mexico Environment Department- (NMED-) issued certificate of completion (COC) letter for Site 21-024(l), which is designated as Solid Waste Management Unit 21-024(l) for the purposes of the 2016 Compliance Order on Consent (Consent Order). This site, listed in Table 1, has achieved Resource Conservation and Recovery Act "corrective action complete with controls" status under the Consent Order. This certification that corrective action is complete was prepared in accordance with 40 Code of Federal Regulations 122.22(b).

In July 2019, a baseline confirmation monitoring sample collected at Site Monitoring Area (SMA) DP-SMA-0.6 exceeded target action levels for gross alpha, causing the Permittees to initiate corrective action. The Permittees are certifying completion of corrective action at Site 21-024(l) through a demonstration that the site has achieved a COC, included with this submission, under Section XXI of the Consent Order. A copy of the COC from NMED is included in Attachment 1.

Table 1
Completion of Corrective Action for One Site in DP-SMA-0.6

Site	Associated SMA Number	Watershed	Site Priority
21-024(l)	DP-SMA-0.6	Los Alamos/Pueblo	Moderate

Attachment 1

Certificate of Completion for Solid Waste Management Unit 21-024(l) (DP-SMA-0.6)

State of New Mexico
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030
www.env.nm.gov

SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lieutenant Governor

BUTCH TONGATE
Cabinet Secretary

J. C. BORREGO
Deputy Secretary

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

September 4, 2018

Doug Hintze, Manager
Environmental Management
Los Alamos Field Office
P.O. Box 1663 MS-M984
Los Alamos, NM 87545

Nicholas Lombardo
Program Manager
Newport News Nuclear BWXT-LA
600 Sixth Street
Los Alamos, NM 87544

RE: REQUEST FOR CERTIFICATES OF COMPLETION FOR TWENTY-THREE SOLID WASTE MANAGEMENT UNITS AND FOUR AREAS OF CONCERN IN THE DELTA PRIME SITE AGGREGATE AREA
LOS ALAMOS NATIONAL LABORATORY
EPA ID#NM0890010515
HWB-LANL-18-006

Dear Messrs. Hintze and Lombardo:

The New Mexico Environment Department (NMED) has received the United States Department of Energy (DOE) and the Los Alamos National Security L.L.C.'s (LANS) *Request for Certificates of Completion for Twenty-Three Solid Waste Management Units and Four Areas of Concern in the Delta Prime Site Aggregate Area* (Request), dated February 2, 2018 and referenced by ADEM-18-0010. Subsequent to the submittal of the Request, DOE transferred this effort from LANS to DOE's contractor Newport News Nuclear BWXT-LA (N3B), which is also a permittee under EPA ID #NM0890010515. Hereafter, DOE and N3B are collectively referred to as the "Permittees."

Following submittal of the Request, the Permittees submitted *Clarification of Request for Certificates of Completion for Twenty-Two Solid Waste Management Units and Five Areas of Concern in the Delta Prime Site Aggregate Area* (Clarification), dated August 10, 2018 and referenced by N3B-18-0137. The Clarification provides additional information on the details of the anticipated land ownership transfer of the Technical Area-21 (TA-21) Delta Prime (DP) site. Specifically, the Permittees state that DOE anticipates that ownership of both the mesa top and

canyon slope portions of the sites will be transferred rather than the mesa tops only. The Permittees also state their intent to remediate lead contamination at SWMU 21-022(h) and have therefore withdrawn their request for Certificate of Completion for SWMU 21-022(h). The Permittees have requested that twelve SWMUs and one AOC be granted certificates of completion without controls and nine SWMUs and four AOCs be granted certificates of completion with controls.

Human health and ecological risk screening assessments were presented in the *Phase III Investigation Report for Delta Prime Site Aggregate Area at TA-21, Revision 1* for each consolidated unit (CU), individual SWMU, or individual AOC. Additional risk screening assessments were presented for the mesa-top portion only of CU 21-026(a)-99, SWMUs 21-022(h), 21-024(b), 21-027(a), and AOC C-21-027. The Permittees evaluated these five sites in this manner because the steep slope/cliff portions of the sites are inaccessible and therefore are not likely to result in exposure to human receptors. The bases for the no exposure condition are (1) the areas are on a steep slope/cliff, with 45- to 90-degree slopes; (2) the areas consist of unstable, highly weathered, fractured bedrock with approximately 15% to 30% soil filling fractures and voids between rocks; (3) the slope/cliff portions of the sites are inaccessible; (4) no trail or path is available for someone to traverse if he or she were to gain access to the slope/cliff; and (5) major safety concerns arise regarding any activity on the slope/cliff because of the steepness, the unstable bedrock, and the lack of any trail. The land use within and surrounding the Delta Prime Site Aggregate Area is currently industrial and is expected to remain industrial for the reasonably foreseeable future.

NMED hereby issues certificates of completion without controls for the following twelve SWMUs and one AOC pursuant to Section XXI of the 2016 Compliance Order on Consent (Consent Order).

SWMU 21-003 was consolidated with AOC 21-013(f) into CU 21-003-99. SWMU 21-003 was a polychlorinated biphenyl (PCB) container storage area. In 1988, an Environmental Restoration (ER) project was conducted to collect reconnaissance samples. In 1992-1993, surface and near-surface samples were collected as part of a TA-21 site-wide sampling program. In 1994, a Resource Conservation and Recovery Act (RCRA) facility investigation (RFI) was conducted to collect characterization samples. In 2006-2007, a Phase I investigation was conducted to collect additional characterization samples. In 2009, a Toxic Substance Control Act (TSCA) cleanup was performed to remove soil impacted by PCBs. A Phase II investigation was also conducted in 2009 to define the extent of contamination. The screening-assessment results for SWMU 21-003 presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-006(a) is one of four SWMUs that comprised CU 21-006(c)-99. SWMU 21-006(a) consists of an underground seepage pit. The seepage pit received various fluids including Hanford container wash water, bomb electrolytic decontamination solution (ethylene glycol, phosphoric acid, and plutonium), and chemical makeup room wastewater. Site investigations

conducted from 1991 to 2007 failed to definitively locate the seepage pit, but elevated concentrations of chemicals of potential concern (COPCs) from subsurface samples indicated contamination possibly related to a seepage pit. In 2009, a Phase II investigation was conducted to define the extent of contamination and determine whether the site posed potential unacceptable risk to human health or the environment. The screening-assessment results for SWMU 21-006(a) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-006(b) is one of four SWMUs that comprised CU 21-006(c)-99. SWMU 21-006(b) consists of a brick manhole placed within a trench, a drain line, and an outfall. SWMU 21-006(b) received ether waste from the ethyl ether extraction process used as part of the TA-21 plutonium purification process. In 1992, a Phase I RFI was conducted to collect characterization samples. In 2004, a radiological and geophysical survey located the manhole and pipelines. In 2006-2007, a Phase I investigation was performed to collect characterization and confirmation samples and remove the seepage pit and pipelines. In 2009, a Phase II investigation was conducted to define the extent of contamination and determine whether the site posed potential unacceptable risk to human health or the environment. The screening-assessment results for SWMU 21-006(b) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-006(c) is one of four SWMUs that comprised CU 21-006(c)-99. SWMU 21-006(c) consists of a seepage pit which received bomb electrolytic decontamination solution and chemical makeup room waste. Site investigations conducted from 1991 to 2007 failed to definitively locate the seepage pit, but elevated concentrations of COPCs from subsurface samples indicated contamination possibly related to a seepage pit. In 2009, a Phase II investigation was conducted to define the extent of contamination and determine whether the site posed potential unacceptable risk to human health or the environment. The screening-assessment results for SWMU 21-006(c) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-006(d) is one of four SWMUs that comprised CU 21-006(c)-99. SWMU 21-006(d) consists of a seepage pit which received bomb electrolytic decontamination solution and chemical makeup room waste. Site investigations conducted from 1991 to 2007 failed to definitively locate the seepage pit, but elevated concentrations of COPCs from subsurface samples indicated contamination possibly related to a seepage pit. In 2009, a Phase II investigation was conducted to define the extent of contamination and determine whether the site posed potential unacceptable risk to human health or the environment. The screening-assessment results for SWMU 21-006(d) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction

worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-022(j) is one of three SWMUs that comprised CU 21-022(h)-99. SWMU 21-022(j) consists of a sump that received drainage from an equipment room. In 1995, the sump was removed and confirmation samples were collected during voluntary corrective action (VCA) activities. In 2006-2007, a Phase I investigation was conducted to collect characterization samples. In 2009, a Phase II investigation was conducted to define the extent of contamination and determine whether the site posed potential unacceptable risk to human health or the environment. The screening-assessment results for SWMU 21-022(j) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-024(b) is a septic system consisting of a septic tank, pipelines, and an outfall. In 1992-1993, RFI activities collected characterization samples and performed a radiological survey. In 2004, a radiological and geophysical study identified the septic tank and pipelines. In 2006-2007, a Phase I investigation was conducted to collect characterization and confirmation samples and remove the septic tank and associated pipelines. In 2009, a Phase II investigation was conducted to define the extent of contamination. The screening-assessment results for SWMU 21-024(b) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-024(c) is a septic system consisting of a reinforced concrete septic tank and pipelines. In 1988, an ER project was conducted to collect reconnaissance samples. In 1992-1993, an RFI was conducted to collect characterization samples. In 2006-2007, a Phase I investigation was conducted to collect characterization and confirmation samples and remove the septic tank and pipelines. In 2009, a TSCA cleanup was performed to remove soil impacted by PCBs. A Phase II investigation was also conducted in 2009 to define the extent of contamination. The screening-assessment results for SWMU 21-024(c) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-024(d) is a septic system consisting of a septic tank, pipelines, and an outfall. In 1992-1993, a radiological survey was performed and characterization samples were collected. In 1995, VCA activities were conducted, which included characterization sampling, removal of tank contents, and a radiation survey. In 2004, radiological and geophysical surveys identified the septic tank, pipelines, and outfall. In 1992-1993, an RFI was conducted to collect characterization samples. In 2006-2007, a Phase I investigation was conducted to collect characterization and confirmation samples and remove the septic tank and pipelines. In 2009, a TSCA cleanup was performed to remove soil impacted by PCBs. A Phase II investigation was

also conducted in 2009 to define the extent of contamination. The screening-assessment results for SWMU 21-024(c) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-024(g) is a septic system which routed sewage into two drainage ditches. In 1992-1993, an RFI was conducted, which included characterization sampling, a radiological survey, and a land survey. In 2004, a radiological and geophysical survey identified the septic tank. In 2006-2007, a Phase I investigation was conducted to collect characterization and confirmation samples and remove the septic tank and pipelines. In 2009, a Phase II investigation was performed to define the extent of contamination and determine whether the site posed potential unacceptable risk to human health or the environment. The screening-assessment results for SWMU 21-024(g) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-024(k) is a septic system consisting of a septic tank, leach field, pipelines, and an outfall. In 1993, an RFI was performed to collect characterization samples. In 2004, a radiological and geophysical survey identified the septic tank, field, and pipelines. In 2006-2007, a Phase I investigation was conducted to collect characterization and confirmation samples and remove the septic tank, leach field, and pipelines. In 2009, a Phase II investigation was performed to define the extent of contamination. The screening-assessment results for SWMU 21-024(k) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-024(n) is a septic system consisting of metal pipelines and outfalls. In 1992, an RFI was performed, which included a radiological survey and characterization sampling. In 2004, radiological and geophysical surveys located several metal pipelines and a cast-iron drain. In 2006-2007, a Phase I investigation was conducted to collect characterization and confirmation samples and remove the pipelines and other structures associated with SWMU 21-024(n). In 2009, a Phase II investigation was performed to define the extent of contamination. The screening-assessment results for SWMU 21-024(n) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

AOC 21-013(f) is consolidated with SWMU 21-003 into CU 21-003-99. AOC 21-013(f) possibly consisted of a surface disposal area within the boundaries of SWMU 21-003. In 1988, an ER project was conducted to collect reconnaissance samples. In 1992-1993, surface and near-surface samples were collected as part of a TA-21 site-wide sampling program. In 1994, an RFI was conducted to collect characterization samples. In 2006-2007, a Phase I investigation was

conducted to collect additional characterization samples. In 2009, a TSCA cleanup was performed to remove soil impacted by PCBs. A Phase II investigation was also conducted in 2009 to define the extent of contamination. The screening-assessment results for AOC 21-013(f) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

NMED hereby issues certificates of completion with controls for the following nine SWMUs and four AOCs pursuant to Section XXI of the 2016 Consent Order.

SWMU 21-013(a) is one of three SWMUs and two AOCs that comprised CU 21-026(a)-99. SWMU 21-013(a) consists of a surface disposal area that was part of a sewage treatment plant used to treat sanitary wastes and cooling water from TA-21 facilities. The disposal area was used from 1966-1992 for the periodic disposal of the top layers of sand removed from the filter beds at SWMU 21-026(b). In 1994, a radiological survey was conducted and samples were collected as part of initial RFI activities at TA-21. In 2006-2007, a Phase I investigation was conducted to collect additional characterization and confirmation samples, remove and inspect structures, and remove contaminated material. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination and to determine whether the site posed potential unacceptable risk or dose to human health or the environment. The screening-assessment results for CU 21-026(a)-99 presented in the Phase III IR indicate that no potential unacceptable risks exist from RCRA hazardous constituents for the industrial, construction worker, and residential land-use scenarios on the mesa top. There are also no potential unacceptable risks or doses for the industrial and construction worker land-use scenarios for the entire site. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. However, the elevated level of contamination is located on the slope/cliff portion of the site where human exposure to the contamination is restricted. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because CU 21-026(a)-99 poses a potential unacceptable risk under the residential scenario, site control is required for SWMU 21-013(a). The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

SWMU 21-022(a) is one of two SWMUs and one AOC that comprised CU 21-024(l)-99. SWMU 21-022(a) consists of a brick sump and associated drain lines connected to building 21-021 which was used as a secure vault to store special fissile material including uranium and plutonium metal. In 2004, radiological and geophysical surveys were completed to locate the sump and drainlines. In 2006-2007, a Phase I investigation was conducted and soil and tuff samples were collected. In 2009 a Phase II investigation was conducted to define the nature and extent of contamination for COPCs. Remediation to remove elevated concentrations of benzo(a)pyrene was conducted as part of the 2011 Phase III investigation. The screening-assessment results for CU 21-024(l)-99 presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the industrial and construction worker land-use scenarios for the entire site. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. The results of the ecological risk screening

assessment indicate no potential risk to ecological receptors at the site. Because CU 21-024(l)-99 poses a potential unacceptable risk under the residential land-use scenario, site control is required for SWMU 21-022(a). The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

SWMU 21-023(a) is one of three SWMUs that comprised CU-21-023(a)-99. SWMU 21-023(a) consists of a steel-reinforced concrete septic tank, an inlet line and outlet lines that connected to existing waste lines to the north and a manhole to the south. In 1998-1999, a radiological survey was conducted and a geophysical survey confirmed that the tank and associated drainlines had been removed. In 2006-2007, a Phase I investigation was conducted and soil and tuff samples were collected. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination for COPCs. The screening-assessment results for CU 21-023(a)-99 presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the construction worker land-use scenario. The industrial land-use scenario was not evaluated for the mesa top because samples were not collected in the 0.0-1.0-ft depth interval on the mesa top. Samples were collected in the 0.0-1.0-ft depth interval on the slope/cliff portion of the site; consequently, the industrial scenario was evaluated for the entire site. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because SWMU 21-023(a) poses a potential unacceptable risk under the residential land-use scenario, site control is required. The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

SWMU 21-023(b) is one of three SWMUs that comprised CU-21-023(a)-99. SWMU 21-023(b) consists of a steel-reinforced concrete septic tank, an inlet line and outlet lines that connected to existing waste lines to the north and a manhole to the south. In 1998-1999, a radiological survey was conducted and a geophysical survey confirmed that the tank and associated drainlines had been removed. In 2006-2007, a Phase I investigation was conducted and soil and tuff samples were collected. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination for COPCs. The screening-assessment results for CU 21-023(a)-99 presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the construction worker land-use scenario. The industrial land-use scenario was not evaluated because samples were not collected from the 0.0–1.0-ft depth interval. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because SWMU 21-023(b) poses a potential unacceptable risk under the residential land-use scenario, site control is required. The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

SWMU 21-023(d) was one of three SWMUs that comprised CU 21-023(a)-99. SWMU 21-023(d) consists of a steel-reinforced concrete septic tank, an inlet line and outlet lines that connected to existing waste lines to the north, leading to waste treatment facilities. In 1998-1999 a radiological survey was conducted and a geophysical survey confirmed that the tank had been

removed but the associated drain lines were still in place. In 2006-2007, a Phase I investigation was conducted and soil and tuff samples were collected. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination for COPCs. The screening-assessment results for CU 21-023(a)-99 presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the construction worker land-use scenario. The industrial land-use scenario was not evaluated because samples were not collected from the 0.0–1.0-ft depth interval. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because SWMU 21-023(d) poses a potential unacceptable risk under the residential land-use scenario, site control is required. The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

SWMU 21-024(l) is one of two SWMUs and one AOCs that comprised CU 21-024(l)-99. SWMU 21-024(l) consists of an outfall that received liquid waste from the machine room floor drain of a building used to store special fissile material including uranium and plutonium metal. In 2006-2007, a Phase I investigation was conducted and soil and tuff samples were collected. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination for COPCs. Remediation to remove elevated concentrations of benzo(a)pyrene was conducted as part of the 2011 Phase III investigation. The screening-assessment results for CU 21-024(l)-99 presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the industrial and construction worker land-use scenarios for the entire site. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because CU 21-024(l)-99 poses a potential unacceptable risk under the residential land-use scenario, site control is required for SWMU 21-024(l). The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

SWMU 21-026(a) is one of three SWMUs and two AOCs that comprised CU 21-026(a)-99. SWMU 21-026(a) consists of an extended aeration sanitary waste treatment plant with a grit chamber, comminuter, digester, aeration tank, and clarifier. The plant treated sanitary wastes and cooling water from TA-21 facilities and received water from decontamination activities, janitor's scrub water, and waste from other TA-21operations. In 1994 a radiological survey was conducted and samples were collected as part of initial RFI activities at TA-21. In 2006-2007, a Phase I investigation was conducted to collect additional characterization and confirmation samples, remove and inspect structures, and remove contaminated material. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination and to determine whether the site posed potential unacceptable risk or dose to human health or the environment. The screening-assessment results for CU 21-026(a)-99 presented in the Phase III IR indicate that no potential unacceptable risks exist from RCRA hazardous constituents for the industrial, construction worker, and residential land-use scenarios on the mesa top. There are also no potential unacceptable risks or doses for the industrial and construction worker land-use scenarios for the entire site. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. However, the elevated level of contamination is located on

the slope/cliff portion of the site where human exposure to the contamination is restricted. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because CU 21-026(a)-99 poses a potential unacceptable risk under the residential land-use scenario, site control is required for SWMU 21-026(a). The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

SWMU 21-026(b) is one of three SWMUs and two AOCs that comprised CU 21-026(a)-99. SWMU 21-026(b) consists of four sludge drying/sand filter beds with concrete walls. In 1994, a radiological survey was conducted and samples were collected as part of initial RFI activities at TA-21. In 2006-2007, a Phase I investigation was conducted to collect additional characterization and confirmation samples, remove and inspect structures, and remove contaminated material. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination and to determine whether the site posed potential unacceptable risk or dose to human health or the environment. The screening-assessment results for CU 21-026(a)-99 presented in the Phase III IR indicate that no potential unacceptable risks exist from RCRA hazardous constituents for the industrial, construction worker, and residential land-use scenarios on the mesa top. There are also no potential unacceptable risks or doses for the industrial and construction worker land-use scenarios for the entire site. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. However, the elevated level of contamination is located on the slope/cliff portion of the site where human exposure to the contamination is restricted. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because CU 21-026(a)-99 poses a potential unacceptable risk under the residential land-use scenario, site control is required for SWMU 21-026(b). The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

SWMU 21-027(a) consists of drain lines that received effluent from floor drains in former building 21-003, a surface drainage system, and an outfall that discharges to the mesa edge and into Los Alamos Canyon. In 1992, a radiological survey was conducted and surface samples were collected at 12 locations. In 1993, samples were collected from two 20-ft boreholes. In 2004, additional radiological and geophysical surveys were completed. In 2006-2007 a Phase I investigation was conducted and soil and tuff samples were collected. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination for COPCs. As part of the 2011 Phase III investigation contaminated soil was removed from two locations on the mesa to remediate elevated detections of dioxins/furans and plutonium-239/240. Soil removal was also proposed for the outfall area but was not conducted due to safety concerns associated with working on the unstable cliffside on which the outfall is located. The screening-assessment results for SWMU 21-027(a) presented in the Phase III IR indicate that no potential unacceptable risks exist from RCRA hazardous constituents for the construction worker and residential land-use scenarios on the mesa top. The industrial land-use scenario was not evaluated on the mesa top because samples were not collected from the 0.0–1.0-ft depth interval. There are potential unacceptable risks for the industrial, construction worker, and residential land-use scenarios for the entire site. However, the elevated level of contamination is located on the slope/cliff portion of the site where human exposure to the contamination is restricted. The results of the ecological

risk screening assessment indicate no potential risk to ecological receptors at the site. Because SWMU 21-027(a) poses a potential unacceptable risk under the residential land-use scenario, site control is required. The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

AOC 21-004(a) is one of two SWMUs and one AOCs that comprised CU 21-024(l)-99. AOC 21-004(a) consists of a 6000-gallon aboveground steel tank and a 6-inch cast-iron pipeline installed to receive liquid waste from a building used to store special fissile material including uranium and plutonium metal. In 1994, a radiological field survey was conducted and samples were collected from inside the tank. In 2006-2007, a Phase I investigation was conducted and soil and tuff samples were collected. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination for COPCs. Remediation to remove elevated concentrations of benzo(a)pyrene was conducted as part of the 2011 Phase III investigation. The screening-assessment results for CU 21-024(l)-99 presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the industrial and construction worker land-use scenarios for the entire site. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because CU 21-024(l)-99 poses a potential unacceptable risk under the residential land-use scenario, site control is required for AOC 21-004(a). The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

AOC 21-026(c) is one of three SWMUs and two AOCs that comprised CU 21-026(a)-99. AOC 21-026(c) consists of a concrete dosing siphon chamber tank. The dosing siphon chamber received effluent until the chamber was full at which point the effluent was pumped to the sludge drying/sand filter beds at SWMU 21-026(b). In 1994, a radiological survey was conducted and samples were collected as part of initial RFI activities at TA-21. In 2006-2007, a Phase I investigation was conducted to collect additional characterization and confirmation samples, remove and inspect structures, and remove contaminated material. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination and to determine whether the site posed potential unacceptable risk or dose to human health or the environment. The screening-assessment results for CU 21-026(a)-99 presented in the Phase III IR indicate that no potential unacceptable risks exist from RCRA hazardous constituents for the industrial, construction worker, and residential land-use scenarios on the mesa top. There are also no potential unacceptable risks or doses for the industrial and construction worker land-use scenarios for the entire site. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. However, the elevated level of contamination is located on the slope/cliff portion of the site where human exposure to the contamination is restricted. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because CU 21-026(a)-99 poses a potential unacceptable risk under the residential land-use scenario, site control is required for AOC 21-026(c). The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

AOC 21-026(d) was one of three SWMUs and two AOCs that comprised CU 21-026(a)-99. AOC 21-026(d) consists of an outfall located on the edge of DP Canyon that received discharge from the sewage treatment plant at SWMU 21-026(a). 1992 RFI activities at AOC 21-026(d) included a radiological survey and the collection of samples in the outfall area. In 2006-2007, a Phase I investigation was conducted to collect additional characterization and confirmation samples, remove and inspect structures, and remove contaminated material. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination and to determine whether the site posed potential unacceptable risk to human health or the environment. The screening-assessment results for CU 21-026(a)-99 presented in the Phase III IR indicate that no potential unacceptable risks exist from RCRA hazardous constituents for the industrial, construction worker, and residential land-use scenarios on the mesa top. There are also no potential unacceptable risks for the industrial and construction worker land-use scenarios for the entire site. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. However, the elevated level of contamination is located on the slope/cliff portion of the site where human exposure to the contamination is restricted. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because CU 21-026(a)-99 poses a potential unacceptable risk under the residential land-use scenario, site control is required for AOC 21-026(d). The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

AOC C-21-027 consists of a former cooling tower. The cooling tower was connected to an acid tank and also had a drain that discharged into Los Alamos Canyon. The cooling tower surface and subsurface structures were removed in 1994-1995. AOC C-21-027 was investigated as part of the 2009 a Phase II investigation to define the nature and extent of contamination. The screening-assessment results presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the industrial, construction worker, and residential land-use scenarios on the mesa top. There are potential unacceptable carcinogenic risks for the industrial and residential land-use scenarios for the entire site. However, the elevated dioxin and furan concentrations are on the slope/cliff portion of the site where human exposure to the contamination is restricted. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because AOC C-21-027 poses a potential unacceptable risk under the industrial and residential land-use scenarios, site control is required. The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

NMED has determined that the above-mentioned sites qualify for certificates of completion. Although corrective action is complete under the Consent Order, the Permittees must continue to comply with all applicable state and federal regulations. If new information becomes available that indicates that these sites potentially pose a risk to human health or the environment, NMED may require additional corrective action at these sites.

Please contact Robert Murphy at (505) 476-6022 should you have any questions or comments regarding this letter.

Sincerely,

John E. Kieling
Chief
Hazardous Waste Bureau

cc: N. Dhawan, NMED HWB
R. Murphy, NMED HWB
S. Yanicak, NMED DOE OB, MS M894
L. King, EPA Region 6, Dallas, TX
A. Duran, DOE-EM-LA, MS A316
C. Rodriguez, DOE-EM-LA, MS A216
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File: Reading and LANL 2018, DP Aggregate Area TA-21 Certificates of Completion

Completion of Corrective Action at Site 03-055(c) in LA-SMA-0.85

December 23, 2019

NPDES PERMIT NO. NM0030759

EM2019-0443

NPDES PERMIT NO. NM0030759 **EM2019-0443**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: L001 **LA-SMA-0.85** **Site: 03-055(c)**

The following certification was performed in accordance with NPDES Permit No. NM0030759, Part I.E.2, which requires the Permittees (U.S. Department of Energy and Newport News Nuclear BWXT-Los Alamos, LLC) to certify the completion of corrective action.

CERTIFICATION STATEMENT OF AUTHORIZATION

"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 there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

Elizabeth J Lowes 12-10-2019

Elizabeth Lowes, Program Manager
Environment, Safety and Health
Newport News Nuclear BWXT-Los Alamos, LLC

Date

David J Nickless 12/19/19

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

Date

NPDES PERMIT NO. NM0030759 **EM2019-0443**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: L001 **LA-SMA-0.85** **Site: 03-055(c)**

This document certifies completion of corrective action for Site 03-055(c) pursuant to Part 1, E.2(d) of the Individual Permit NM0030759. Accompanying this certification is a copy of the New Mexico Environment Department- (NMED-) issued certificate of completion (COC) letter for Site 03-055(c), which is designated as Solid Waste Management Unit 03-055(c) for the purposes of the 2016 Compliance Order on Consent (Consent Order). This site, listed in Table 1, has achieved Resource Conservation and Recovery Act "corrective action complete with controls" status under the Consent Order. This certification that corrective action is complete was prepared in accordance with 40 Code of Federal Regulations 122.22(b).

In July and August 2011, baseline confirmation monitoring samples collected at Site Monitoring Area (SMA) LA-SMA-0.85 exceeded target action levels (TALs) for aluminum, copper, lead, and zinc; causing the Permittees to initiate corrective action. Enhanced controls were installed and certified and the certification package was submitted to the U.S. Environmental Protection Agency in October 2012, entering the site into corrective action monitoring. In November 2012 and May 2013, corrective action monitoring samples collected at LA-SMA-0.85 exceeded TALs for copper, gross alpha, and zinc. The Permittees are certifying completion of corrective action at Site 03-055(c) through a demonstration that the site has achieved a COC, included with this submission, under Section XXI of the Consent Order. A copy of the COC from NMED is included in Attachment 1.

Table 1
Completion of Corrective Action for One Site in LA-SMA-0.85

Site	Associated SMA Number	Watershed	Site Priority
03-055(c)	LA-SMA-0.85	Los Alamos/Pueblo	Moderate

Attachment 1

Certificate of Completion for Solid Waste Management Unit 03-055(c) (LA-SMA-0.85)

NEW MEXICO
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030
www.env.nm.gov

Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

October 22, 2019

Doug Hintze, Manager
Environmental Management
U.S. Department of Energy
Los Alamos Field Office
P.O. Box 1663 MS M984
Los Alamos, NM 87545

RE: CLARIFICATION
CERTIFICATE OF COMPLETION WITH CONTROLS FOR SOLID WASTE MANAGEMENT UNIT 03-055(c) IN THE UPPER LOS ALAMOS CANYON AGGREGATE AREA
LOS ALAMOS NATIONAL LABORATORY
EPA ID #NM0890010515
HWB-LANL-19-041

Dear Mr. Hintze:

On September 3, 2019, the New Mexico Environment Department (NMED) issued an approval of the *Request for Certificate of Completion With Controls for Solid Waste Management Unit 03-055(c)* (Request), submitted by the United States Department of Energy (DOE) on July 23, 2019 (referenced by EM-LA-40AD-00475).

On October 10, 2019, the DOE requested via email that NMED provide clarification on whether the site was approved for the construction worker land use scenario. Based on the information provided by DOE in the Request, the Solid Waste Management Unit (SWMU) 03-055(c) does not pose an unacceptable risk under the construction worker and the industrial land use scenario. However, the site does pose an unacceptable risk under the residential land use scenario, and is therefore restricted from residential land use.

NMED clarifies that SWMU 03-055(c) is restricted to construction worker and industrial land use only, and it cannot be used for residential land use.

If you have any questions regarding this letter, please contact Siona Briley at (505) 476-6049.

Sincerely,

John E. Kieling
Chief
Hazardous Waste Bureau

cc:

N. Dhawan, NMED HWB
S. Briley, NMED HWB
L. King, US EPA Region 6
A. Duran, DOE-EM-LA
C. Rodriguez, DOE-EM-LA
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K. Rogers, DOE NNSA
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emla.docs@em.doe.gov

File: 2019 LANL, Clarification Certificate of Completion,03-055(c) Upper Los Alamos Canyon Aggregate Area, Technical Area 03
LANL-19-041

Completion of Corrective Action at Site 01-001(e) in LA-SMA-3.1

December 23, 2019

NPDES PERMIT NO. NM0030759

EM2019-0465

NPDES PERMIT NO. NM0030759 **EM2019-0465**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: L008 **LA-SMA-3.1** **Site: 01-001(e)**

The following certification was performed in accordance with NPDES Permit No. NM0030759, Part I.E.2, which requires the Permittees (U.S. Department of Energy and Newport News Nuclear BWXT-Los Alamos, LLC) to certify the completion of corrective action.

CERTIFICATION STATEMENT OF AUTHORIZATION

"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 there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

Elizabeth Lowes

12-10-2019

Elizabeth Lowes, Program Manager
Environment, Safety and Health
Newport News Nuclear BWXT-Los Alamos, LLC

Date

David Nickless

12/19/19

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

Date

NPDES PERMIT NO. NM0030759 **EM2019-0465**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: L008 **LA-SMA-3.1** **Site: 01-001(e)**

This document certifies completion of corrective action for Site 01-001(e) pursuant to Part 1, E.2(d) of the Individual Permit NM0030759. Accompanying this certification is a copy of the New Mexico Environment Department- (NMED-) issued certificate of completion (COC) letter for Site 01-001(e), which is designated as Solid Waste Management Unit 01-001(e) for the purposes of the 2016 Compliance Order on Consent (Consent Order). This site, listed in Table 1, has achieved Resource Conservation and Recovery Act "corrective action complete with controls" status under the Consent Order. This certification that corrective action is complete was prepared in accordance with 40 Code of Federal Regulations 122.22(b).

In October 2018, a baseline confirmation monitoring sample collected at Site Monitoring Area (SMA) LA-SMA-3.1 exceeded the target action level for total PCBs causing the Permittees to initiate corrective action. The Permittees are certifying completion of corrective action at Site 01-001(e) through a demonstration that the site has achieved a COC, included with this submission, under Section XXI of the Consent Order. A copy of the COC from NMED is included in Attachment 1.

Table 1
Completion of Corrective Action for One Site in LA-SMA-3.1

Site	Associated SMA Number	Watershed	Site Priority
01-001(e)	LA-SMA-3.1	Los Alamos/Pueblo	High

Attachment 1

Certificate of Completion for Solid Waste Management Unit 01-001(e) (LA-SMA-3.1)

NEW MEXICO ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
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BILL RICHARDSON
Governor

DIANE DENISH
Lieutenant Governor

RON CURRY
Secretary

SARAH COTTRELL
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

September 10, 2010

George J. Rael, Federal Projects Director
Environmental Projects Office
U.S. Department. of Energy / National
Nuclear Security Administration
Los Alamos Site Office
3747 West Jemez Road, MS A316
Los Alamos, NM 87544

Michael J. Graham, Associate Director
Environmental Programs
Los Alamos National Security, L.L.C.
P.O. Box 1663, MS M991
Los Alamos, NM 87545

RE: CERTIFICATES OF COMPLETION
UPPER LOS ALAMOS CANYON AGGREGATE AREA
LOS ALAMOS NATIONAL LABORATORY
EPA ID #NM0890010515
HWB-LANL-10-056

Dear Messrs. Rael and Graham:

The New Mexico Environment Department (NMED) has received the United States Department of Energy (DOE) and the Los Alamos National Security L.L.C.'s (LANS) (collectively, the Permittees) *Request for Certificates of Completion for Sixteen SWMUs and Nine AOCs in the Upper Los Alamos Canyon Aggregate Area* (Request), dated June 15, 2010 and referenced by EP2010-01284. Results of the site investigations were presented in the *Investigation Report for the Upper Los Alamos Canyon Aggregate Area, Revision 1,* dated February 2010.

The Permittees have satisfied the requirements of the March 1, 2005 Consent Order for corrective action at following solid waste management units/ areas of concern (SWMUs/AOCs). The sites qualify for Corrective Action Complete without Controls status.

1. AOC 00-031(a) is the potentially contaminated soil beneath a former service station. Historical information and investigations conducted during 2008-2009 confirmed that the

underground storage tanks (USTs) were no longer in place and the analytical results indicated that no residual contamination related to the tanks is present at the site. Evaluation of human health and ecological risks indicates that there is no potential unacceptable risk posed by AOC 00-031(a). NMED hereby issues this Certificate of Completion for AOC 00-031(a) pursuant to Section VII.E.6.b of the Consent Order. Based on the information provided, no controls are necessary for this site.

2. AOC 00-034(b) was a suspected pit identified from a 1946 aerial photograph. Based on interviews and examination of aerial photographs it was determined that the identified pit was actually a staging area for soil or tuff fill material used for building roads and home sites and it was never used for land disposal of waste. No documentation of the pit was found. Based on the information provided by the Permittees, NMED has determined that the site does not need further corrective action. NMED hereby issues this Certificate of Completion for AOC 00-034(b) pursuant to Section VII.E.6.b of the Consent Order. Based on the information provided, no controls are necessary for this site.

3. SWMU 01-001(t), known as the eastern sanitary waste line, served several former buildings. Currently, the entire SWMU area is either landscaped or beneath streets, parking lots, and commercial buildings. Investigations were conducted in 1993 and 2008-2009 to define the nature and extent of contamination. Evaluation of human health and ecological risk indicates that there is no potential unacceptable risk posed by SWMU 01-001(t). NMED hereby issues this Certificate of Completion for SWMU 01-001(t) pursuant to Section VII.E.6.b of the Consent Order. Based on the information provided, no controls are necessary for this site.

4. SWMU 01-001(u) is a branch of the western sanitary waste line that served former building J-2. Based on field screening and soil sample data collected during the radiological survey conducted in 1974-76, the site was not considered contaminated. Currently, the entire SWMU area is beneath residential buildings, parking lots, and a wooded area behind residential buildings. No piping was encountered during the 1994 borehole drilling. Investigations were conducted in 1994 and 2008-2009 to define the nature and extent of contamination. Evaluation of human health and ecological risk indicates that there is no potential unacceptable risk posed by SWMU 01-001(u). NMED hereby issues this Certificate of Completion for SWMU 01-001(u) pursuant to Section VII.E.6.b of the Consent Order. Based on the information provided, no controls are necessary for this site.

5. AOC 01-003(c) was a surface disposal area located below the north rim of Los Alamos Canyon. During 1988 and 1996 site visits, no debris was located. During 1996 a few scattered pieces of nonhazardous debris were found near the site. Another site visit was conducted during 2008-2009, revealing that the area is bare with boulders; no debris was observed on the cliff face. The site does not exist anymore. NMED hereby issues this Certificate of Completion for AOC 01-003(c) pursuant to Section VII.E.6.b of the

Consent Order. Based on the information provided, no controls are necessary for this site.

6. AOC 01-006(g) is a storm drainage system that served several buildings and discharged to Los Alamos Canyon. The entire area where drainlines were located has been regraded and developed for residential use. Investigations were conducted in 1992 and 2008-2009 to define the nature and extent of contamination. Evaluation of human health and ecological risk indicates that there is no potential unacceptable risk posed by AOC 01-006(g). NMED hereby issues this Certificate of Completion for AOC 01-006(g) pursuant to Section VII.E.6.b of the Consent Order. Based on the information provided, no controls are necessary for this site.

7. SWMU 01-006(o) is a storm drainage system that served several buildings and discharged to Los Alamos Canyon. The entire area where drainlines were located has been completely regraded and rebuilt. Currently, the majority of the SWMU area is located beneath pavement and residential buildings. Investigations were conducted in 1992 and 2008-2009 to define the nature and extent of contamination. Evaluation of human health and ecological risk indicates that there is no potential unacceptable risk posed by SWMU 01-006(o). NMED hereby issues this Certificate of Completion for SWMU 01-006(o) pursuant to Section VII.E.6.b of the Consent Order. Based on the information provided, no controls are necessary for this site.

8. SWMU 01-007(d) refers to four areas of suspected subsurface soil radiological contamination between buildings because of overflow of an industrial waste line in 1946. After the overflow all contaminated soil that could be removed was excavated and gravel was spread over the area. Investigations were conducted in 1994 and 2008-2009 to define the nature and extent of contamination. Evaluation of human health and ecological risk indicates that there is no potential unacceptable risk posed by SWMU 01-007(d). NMED hereby issues this Certificate of Completion for SWMU 01-007(d) pursuant to Section VII.E.6.b of the Consent Order. Based on the information provided, no controls are necessary for this site.

9. SWMU 01-007(e) refers to suspected subsurface soil radiological contamination within the footprint of the former Sigma Building. Contaminated soil was excavated from three small areas within the footprint of Sigma Building. Investigations were conducted in 2008-2009 to define the nature and extent of contamination. Evaluation of human health and ecological risk indicates that there is no potential unacceptable risk posed by SWMU 01-007(e). NMED hereby issues this Certificate of Completion for SWMU 01-007(e) pursuant to Section VII.E.6.b of the Consent Order. Based on the information provided, no controls are necessary for this site.

10. SWMU 03-009(j) is a surface disposal area located west of warehouse 03-142. Interviews with site workers indicated that the soil fill contained construction debris. The site was never used for management of hazardous waste or hazardous constituents. The

area is partially covered by a paved road/parking lot. Investigations were conducted in 2008-2009 to define the nature and extent of contamination. Evaluation of human health and ecological risk indicates that there is no potential unacceptable risk posed by SWMU 03-009(j). NMED hereby issues this Certificate of Completion for SWMU 03-009(j) pursuant to Section VII.E.6.b of the Consent Order. Based on the information provided, no controls are necessary for this site.

11. SWMU 32-001 is the location of a former incinerator that was removed in 1954. It received combustible wastes from a medical research facility; the ash from the incinerator was disposed off-site. Investigations were conducted in 1993, 1996, and 2008-2009 to define the nature and extent of contamination. Evaluation of human health and ecological risk indicates that there is no potential unacceptable risk posed by SWMU 32-001. NMED hereby issues this Certificate of Completion for SWMU 32-001 pursuant to Section VII.E.6.b of the Consent Order. Based on the information provided, no controls are necessary for this site.

12. SWMU 41-001 is an inactive septic system that received sanitary waste from a guard house. Investigations were conducted in 1995, 2000, and 2008-2009 to define the nature and extent of contamination. Evaluation of human health and ecological risk indicates that there is no potential unacceptable risk posed by SWMU 41-001. NMED hereby issues this Certificate of Completion for SWMU 41-001 pursuant to Section VII.E.6.b of the Consent Order. Based on the information provided, no controls are necessary for this site.

The following sites have been investigated and found to pose no unacceptable risk under current and proposed future land use. The sites require controls and are eligible for Corrective Action Complete status with Controls.

13. SWMU 01-001(b), septic tank 135, served two former buildings that were determined by the Laboratory to be free of contamination in 1964. A radiological survey was conducted in 1974-76 that indicated that the tank and drainlines were not contaminated. The tank and drainlines were removed during 1974-1976 survey. Further investigations were conducted in 1992 and 2008-2009 to define the nature and extent of contamination, if any. Evaluation of human health and ecological risks indicates that there is no potential unacceptable risk posed by the site. However, storm water discharge may mobilize residual contamination from the site. The Permittees must institute a control on the site by monitoring storm water discharge for potential transport of residual contamination. This is currently being accomplished under the National Pollutant Discharge Elimination System (NPDES) "Stormwater" Permit. NMED hereby issues this Certificate of Completion for Corrective Action Complete with Controls for SWMU 01-001(b) pursuant to Section VII.E.6.b of the Consent Order, subject to the aforementioned control.

14. SWMU 01-001(c), septic tank 137, served former building D-2. The tank and its outfall were removed in 1975. Contaminated soil around the tank, drainlines and building D-2

were also removed in 1975. Investigations to define the nature and extent were conducted in 1992, 1993, and 2008-2009. Evaluation of human health and ecological risk indicates that there is no potential unacceptable risk posed by SWMU 01-001(c). However, storm water discharge may mobilize residual contamination from the site. The Permittees must institute a control on the site by monitoring storm water discharge for potential transport of residual contamination. This is currently being accomplished under the NPDES "Stormwater" Permit. NMED hereby issues this Certificate of Completion for SWMU 01-001(c) pursuant to Section VII.E.6.b of the Consent Order, subject to the aforementioned control.

15. SWMU 01-001(e), septic tank 139, served three former buildings. The tank became inactive in 1965 and was left in place. The tank was not located during the 1974-76 radiological survey and it was concluded that the tank had been previously removed. The entire SWMU area is under roads, residential buildings, driveways and sidewalks. Investigations were conducted in 1992 and 2008-2009 of the accessible areas. Evaluation of human health and ecological risk conducted on samples collected from accessible areas indicates that there is no potential unacceptable risk posed by SWMU 01-001(e). However, storm water discharge may mobilize residual contamination from the site. The Permittees must monitor storm water discharge for potential transport of residual contamination. This is currently being accomplished under the NPDES "Stormwater" Permit. Additionally, the Permittees must investigate the areas of potential contamination that are currently inaccessible due to the presence of structures when they become accessible. The controls for the site are to monitor the storm water discharge for potential transport of contamination from the site, and to prevent exposure of receptors to potential subsurface contamination. This latter control is accomplished so long as the existing structures remain intact. NMED hereby issues this Certificate of Completion for SWMU 01-001(e) pursuant to Section VII.E.6.b of the Consent Order, subject to the aforementioned controls.

16. SWMU 01-003(e) was a surface disposal area located along the northern wall of Los Alamos Canyon. Concrete construction debris, piping, and other miscellaneous objects were observed at the site in the past. A major portion of this site is under fill material brought in by the private owner to extend the canyon rim farther south. Investigations were conducted in 1992 and 2008-2009 to define the nature and extent of contamination. Evaluation of human health and ecological risks indicate that there is no potential unacceptable risk posed by SWMU 01-003(e). However, storm water discharge may mobilize residual contamination from the site. The Permittees must institute a control on the site by monitoring storm water discharge for potential transport of residual contamination. This is currently being accomplished under the NPDES "Stormwater" Permit. NMED hereby issues this Certificate of Completion for SWMU 01-003(e) pursuant to Section VII.E.6.b of the Consent Order, subject to the aforementioned control.

17. SWMU 01-006(d) is a drainline and associated outfall that served Building D-3 and discharged to hillside 137. Investigations were conducted in 1992, 1993, and 2008-2009

to define the nature and extent of contamination. Evaluation of human health and ecological risk indicates that there is no potential unacceptable risk posed by SWMU 01-006(d). However, storm water discharge may mobilize residual contamination from the site. The Permittees must institute a control on the site by monitoring storm water discharge for potential transport of residual contamination. This is currently being accomplished under the NPDES "Stormwater" Permit. NMED hereby issues this Certificate of Completion for SWMU 01-006(d) pursuant to Section VII.E.6.b of the Consent Order, subject to the aforementioned control.

18. SWMU 01-007(j) consists of twelve areas of suspected subsurface soil radiological contamination. These are small isolated contaminated areas in former Technical Area 1 discovered during a radiological survey conducted in 1976. Most of the contaminated soil was removed. These areas are developed with buildings, sidewalks, and roads. Investigations were conducted in 2008-2009 to define the nature and extent of contamination of accessible areas. Evaluation of human health and ecological risk indicates that there is no potential unacceptable risk posed by SWMU 01-007(j). The Permittees must address the potential contamination beneath the structures when buildings and roadways are demolished or otherwise become accessible. The control for the site is to prevent exposure to receptors from potential subsurface contamination, which is accomplished so long as the existing structures remain intact. NMED hereby issues this Certificate of Completion for SWMU 01-007(j) pursuant to Section VII.E.6.b of the Consent Order, subject to the aforementioned control.

19. AOC 01-007(k) was a suspected soil contamination area located near the U and W buildings. The area is now developed and contains structures and parking lots. Investigations were conducted in 1993 and 2008-2009 to define the nature and extent of contamination in accessible areas. Evaluation of human health and ecological risk indicates that there is no potential unacceptable risk posed by AOC 01-007(k). The Permittees must investigate the areas beneath the structures for potential contamination at the time of demolition of these structures. The control for the site is to prevent exposure to receptors from potential subsurface contamination, which is accomplished so long as the existing structures remain intact. NMED hereby issues this Certificate of Completion for AOC 01-007(k) pursuant to Section VII.E.6.b of the Consent Order, subject to the aforementioned control.

20. AOC 03-008(a) is a firing site that was decommissioned in 1949. Review of engineering drawings and aerial photographs indicates that site would have been located near the intersection of Diamond Drive and Jemez Road and is no longer discernible. Currently the site is overlain by a parking garage. The Permittees must address the potential contamination beneath the site when the parking lot is decommissioned. The control for the site is to prevent exposure to receptors from potential subsurface contamination, which is accomplished so long as the existing structures remain intact. NMED hereby issues this Certificate of Completion for AOC 03-008(a) pursuant to Section VII.E.6.b of the Consent Order, subject to the aforementioned control.

21. AOC 43-001(b2) is a storm-drain outfall. It was permitted under the Laboratory's NPDES permit and was removed from the permit on January 11, 1999. Investigations conducted in 2008-2009 defined the nature and extent of contamination. Evaluation of human health and ecological risk indicates that there are potential unacceptable risks under the residential scenario. However, there is no potential unacceptable risk posed under the recreational scenario. The current and reasonably foreseeable future land use for the site is recreational; the control is that the site cannot be used for residential purposes. NMED hereby issues this Certificate of Completion for SWMU 43-001(b2) pursuant to Section VII.E.6.b of the Consent Order, subject to the aforementioned control.

Certificates of Completion are not issued for the following sites because the Permittees have not demonstrated that they do not pose unacceptable risk to human health or environment based on the current applicable standards.

22. AOC 00-031(b), is the potentially contaminated soil associated with the Zia Company motor pool facility. Two USTs and associated piping were removed in 1994. Soil contaminated with petroleum hydrocarbons was removed and the excavation was backfilled and compacted. The Permittees must submit human health and ecological risk evaluations for NMED review and approval. The results of the risk evaluations may be included in the Upper Los Alamos Canyon Aggregate Area Phase II investigation report. NMED hereby denies the Certificate of Completion for the site.

23. AOC C-00-042 was a 2500-gallon steel waste-oil UST associated with the former automotive maintenance hanger at the Zia Company motor pool facility. The hanger was decommissioned and removed in 1962, and the land was subsequently transferred to Los Alamos County in 1967. The area was covered with fill material and asphalt. The tank and surrounding soil were removed in 1995 during VCA activities. The Permittees must conduct human health and risk evaluations using current standards. The results of the risk evaluations may be included in the Upper Los Alamos Canyon Aggregate Area Phase II investigation report. NMED hereby denies the Certificate of Completion for the site.

24. SWMU 01-002 is an outfall and associated industrial waste line that is located in the southern and western portion of Technical Area 1. Several former buildings with various processes discharged waste to the industrial waste lines. In 2000, the SWMU was split into two portions: the waste line portion of the SWMU was designated SWMU 01-002(a)-00, and the outfall was designated as SWMU 01-002(b)-00. For investigation purposes SWMU 01-002(b)-00 was included in the consolidated unit 45-001-00. The Permittees have completed corrective action at SWMU 01-002(a)-00. However, NMED will not issue the Certificate of Completion for the site until risk assessments are conducted by comparing contaminant concentrations to current standards for both sites. NMED hereby denies the certificate of completion for SWMU 01-002.

25. SWMU 01-007(l) is an area of potentially contaminated fill material located under Trinity Drive. The fill material is suspected of containing construction debris and other potentially radioactively contaminated soil from the Building D area. Investigations were conducted in 1993 and 1996. Currently, the site is overlain by Trinity Drive. The Permittees must conduct risk assessments using current standards and demonstrate that the site does not pose an unacceptable threat to human health or the environment. NMED hereby denies the Certificate of Completion for the site.

If new information becomes available that indicates that these sites may pose a risk to human health or the environment, NMED may require the Permittees to conduct additional corrective action at these sites.

Please contact Neelam Dhawan at (505) 476-6042, if you have any questions.

Sincerely,

James P. Bearzi
Chief
Hazardous Waste Bureau

BRZ:nmd

cc: J. Kieling, NMED HWB
D. Cobrain, NMED HWB
N. Dhawan, NMED HWB
S. Yanicak, NMED DOE OB, MS J993
T. Skibitski, NMED DOE OB
L. King, EPA 6PD-N
C. Rodriguez, DOE LASO, MS A316

File: 2010 LANL, Certificates of Completion, Upper Los Alamos Canyon Aggregate Area SWMUs/AOCs

Completion of Corrective Action at Site 32-002(b1) in LA-SMA-5.361

December 23, 2019

NPDES PERMIT NO. NM0030759

EM2019-0444

NPDES PERMIT NO. NM0030759 **EM2019-0444**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: L017 **LA-SMA-5.361** **Site: 32-002(b1)**

The following certification was performed in accordance with NPDES Permit No. NM0030759, Part I.E.2, which requires the Permittees (U.S. Department of Energy and Newport News Nuclear BWXT-Los Alamos, LLC) to certify the completion of corrective action.

CERTIFICATION STATEMENT OF AUTHORIZATION

"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 there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

Elizabeth Lowes, Program Manager
Environment, Safety and Health
Newport News Nuclear BWXT-Los Alamos, LLC

12-10-2019
Date

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

12/19/19
Date

NPDES PERMIT NO. NM0030759 **EM2019-0444**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: L017 **LA-SMA-5.361** **Site: 32-002(b1)**

This document certifies completion of corrective action for Site 32-002(b1) pursuant to Part 1, E.2(d) of the Individual Permit NM0030759. Accompanying this certification is a copy of the New Mexico Environment Department- (NMED-) issued certificate of completion (COC) letter for Site 32-002(b1), which is designated as Solid Waste Management Unit 32-002(b1) for the purposes of the 2016 Compliance Order on Consent (Consent Order). This site, listed in Table 1, has achieved Resource Conservation and Recovery Act "corrective action complete with controls" status under the Consent Order. This certification that corrective action is complete was prepared in accordance with 40 Code of Federal Regulations 122.22(b).

In August 2019, a baseline confirmation monitoring sample collected at Site Monitoring Area (SMA) LA-SMA-5.361 exceeded target action levels for gross alpha and selenium, causing the Permittees to initiate corrective action. The Permittees are certifying completion of corrective action at Site 32-002(b1) through a demonstration that the site has achieved a COC, included with this submission, under Section XXI of the Consent Order. A copy of the COC from NMED is included in Attachment 1.

Table 1
Completion of Corrective Action for One Site in LA-SMA-5.361

Site	Associated SMA Number	Watershed	Site Priority
32-002(b1)	LA-SMA-5.361	Los Alamos/Pueblo	Moderate

Attachment 1

Certificate of Completion for Solid Waste Management Unit 32-002(b1) (LA-SMA-5.361)

ERID-521746

NEW MEXICO ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone (505) 476-6000 Fax (505) 476-6030
www.nmenv.state.nm.us

EP2013-5008

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

December 28, 2012

Pete Maggiore
Assistant Manager
Environmental Projects Office
National Nuclear Security Administration
Los Alamos Site Office
3747 West Jemez Road, MS A316
Los Alamos, NM 87544

Jeffrey D. Mousseau
Associate Director
Environmental Programs
Los Alamos National Security, L.L.C.
P.O. Box 1663, MS M991
Los Alamos, NM 87545

RE: CERTIFICATES OF COMPLETION
TWO SOLID WASTE MANAGEMENT UNITS AND ONE AREA OF CONCERN
IN THE UPPER LOS ALAMOS CANYON AGGREGATE AREA
EPA ID #NM0890010515
HWB-LANL-12-072

Dear Messrs. Maggiore and Mousseau:

The New Mexico Environment Department (NMED) has received the United States Department of Energy (DOE) and the Los Alamos National Security L.L.C.'s (LANS) (collectively, the Permittees) *Request for Certificates of Completion for Two Solid Waste Management Units and One Area of Concern in the Upper Los Alamos Canyon Aggregate Area*, dated December 20, 2012 and referenced by EP2012-0304.

1. **Solid waste management unit (SWMU) 32-002(b1)** is a part of a former septic system that served former buildings 32-01 and 32-02 at former technical area (TA) 32. Former TA-32 was decommissioned in 1954. SWMU 32-002(b1) is the portion of the former septic system (32-002(b)) that is located on property currently owned by Los Alamos County (LAC). The remainder of the septic system is located on the property owned by

DOE and is designated as 32-002(b2). SWMU 32-002(b) was split into two separate SWMU in December 2012 through a permit modification to facilitate commercial development of the property owned by LAC. The outfall for SWMU 32-002(b) is located at the edge of Los Alamos Canyon, which is now part of SWMU 32-002(b2). The septic tank was removed in 1998, and the influent drainline was removed in 1996. Research activities mainly involved radionuclides, but other inorganic and organic chemicals were likely also used at the laboratory. Investigations were conducted at the site in 1996, 2008, and 2010.

The results of the investigations are reported in the *Remedy Completion Report for Upper Los Alamos Canyon Aggregate Area, Former Technical Area 32, Revision 1* (dated February 2011 and referenced by LA-UR-11-1177/EP2011-0064) and *Supplemental Remedy Completion Report for Upper Los Alamos Canyon Aggregate Area, Former Technical Area 32* (dated December 2012 and referenced by LA-UR-12-27053/EP2012-0306). Based on the results of the risk screening assessments, no potential unacceptable risk from residual contamination exists for the recreational, industrial, and construction worker scenario. However, the site does pose potential unacceptable risk under a residential exposure scenario. The site does not pose potential risk to ecological receptors under the proposed land use scenario. SWMU 32-002(b1) qualifies for corrective action complete with controls status. The control for the site is that the land use must be maintained as industrial.

2. **Area of Concern (AOC) 32-004** consists of a former drainline and outfall that served building 32-03 and discharged to Los Alamos Canyon. Building 32-03 was an office building and contained a vault room where a radioactive source was stored. The drainline at AOC 32-004 led directly to an outfall at the edge of the mesa without passing through a septic tank. Building 32-03 was removed when TA-32 was decommissioned in 1954. A section of the drainline located on LAC property was removed in 1996. Investigations were conducted at the site in 1993, 1996, 2008, and 2010.

   The results of the investigations were reported in the *Remedy Completion Report for Upper Los Alamos Canyon Aggregate Area, Former Technical Area 32, Revision 1* (dated February 2011 and referenced by LA-UR-11-1177/EP2011-0064). Based on the results of the risk screening conducted at the site, AOC 32-004 does not pose a potential unacceptable risk for the industrial, recreational, and construction worker land use scenarios. No potential unacceptable risks to ecological receptors are present at the site under the proposed industrial/commercial land use scenario. However, potential unacceptable risk exists under a residential land use scenario. AOC 32-004 qualifies for corrective action complete with controls status. The control is to maintain the land use as industrial.

3. **SWMU 32-002(a)** is a former septic system that was installed in 1944 and served former building 32-01. The outlet drainline discharged to the edge of Los Alamos Canyon.

Former building 32-01 operated as a research laboratory from 1944-1954. Research activities mainly involved radionuclides, but inorganic and organic chemicals were likely also used at the laboratory. Former TA 32 was decommissioned in 1954. The septic tank was removed prior to 1996, but historical records of the removal activities are not available. The drainlines were removed in 1996. Investigations were conducted in 1996, 2008, 2010, and 2011.

The results of the investigations were reported in the *Remedy Completion Report for Upper Los Alamos Canyon Aggregate Area, Former Technical Area 32, Revision 1* (dated February 2011 and referenced by LA-UR-11-1177/EP2011-0064) and *Supplemental Remedy Completion Report for Upper Los Alamos Canyon Aggregate Area, Former Technical Area 32* (dated December 2012 and referenced by LA-UR-12-27053/EP2012-0306). Results of the investigations were used to evaluate the risk posed by the site. The site does not pose any unaceptable risk under an industrial land use scenario. However, the construction worker scenario was not evaluated. The Permittees must evaluate the risk posed to a construction worker by residual contamination at the site. The ecological risk evaluation indicated that the site does not pose unacceptable risk to the ecological receptors under the proposed land use scenario. NMED will make the corrective action completion determination after reviewing the results of evaluation of potential risk posed to a construction worker to be submitted by the Permittees.

NMED hereby issues a Certificate of Completion with Controls for SWMU 32-002(b1) and AOC 32-004. If new information becomes available that indicates that any of these sites may pose a risk to human health or the environment, NMED may require the Permittees to conduct additional corrective action.

Please contact Neelam Dhawan at (505) 476-6042, if you have any questions.

Sincerely,

John E. Kieling
Chief
Hazardous Waste Bureau

cc:

J. Davis, NMED HWB
D. Cobrain, NMED HWB
N. Dhawan, NMED HWB
S. Yanicak, NMED DOE OB, MS J993
T. Skibitski, NMED DOE OB
L. King, EPA 6PD-N

E. Worth, DOE LASO, MS A316
T. Haagenstad, EP-CAP, MS M992

File: 2012 LANL, Certificates of Completion for TA-32, Upper Los Alamos Canyon AA Sites (LANL 12-072)

Completion of Corrective Action at Site 21-006(b) in LA-SMA-6.3

December 23, 2019

NPDES PERMIT NO. NM0030759

EM2019-0445

NPDES PERMIT NO. NM0030759 **EM2019-0445**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: L022 **LA-SMA-6.3** **Site: 21-006(b)**

The following certification was performed in accordance with NPDES Permit No. NM0030759, Part I.E.2, which requires the Permittees (U.S. Department of Energy and Newport News Nuclear BWXT-Los Alamos, LLC) to certify the completion of corrective action.

CERTIFICATION STATEMENT OF AUTHORIZATION

"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 there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

Elizabeth Lowes, Program Manager
Environment, Safety and Health
Newport News Nuclear BWXT-Los Alamos, LLC

12-10-2019
Date

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

12/19/19
Date

NPDES PERMIT NO. NM0030759 **EM2019-0445**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: L022 **LA-SMA-6.3** **Site: 21-006(b)**

This document certifies completion of corrective action for Site 21-006(b) pursuant to Part 1, E.2(d) of the Individual Permit NM0030759. Accompanying this certification is a copy of the New Mexico Environment Department- (NMED-) issued certificate of completion (COC) letter for Site 21-006(b), which is designated as Solid Waste Management Unit 21-006(b) for the purposes of the 2016 Compliance Order on Consent (Consent Order). This site, listed in Table 1, has achieved Resource Conservation and Recovery Act "corrective action complete without controls" status under the Consent Order. This certification that corrective action is complete was prepared in accordance with 40 Code of Federal Regulations 122.22(b).

In July 2019, a baseline confirmation monitoring sample collected at Site Monitoring Area (SMA) LA-SMA-6.3 exceeded target action levels for aluminum, gross alpha, and selenium, causing the Permittees to initiate corrective action. The Permittees are certifying completion of corrective action at Site 21-006(b) through a demonstration that the site has achieved a COC, included with this submission, under Section XXI of the Consent Order. A copy of the COC from NMED is included in Attachment 1.

Table 1
Completion of Corrective Action for One Site in LA-SMA-6.3

Site	Associated SMA Number	Watershed	Site Priority
21-006(b)	LA-SMA-6.3	Los Alamos/Pueblo	Moderate

Attachment 1

Certificate of Completion for Solid Waste Management Unit 21-006(b) (LA-SMA-6.3)

State of New Mexico
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030
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SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lieutenant Governor

BUTCH TONGATE
Cabinet Secretary

J. C. BORREGO
Deputy Secretary

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

September 4, 2018

Doug Hintze, Manager
Environmental Management
Los Alamos Field Office
P.O. Box 1663 MS-M984
Los Alamos, NM 87545

Nicholas Lombardo
Program Manager
Newport News Nuclear BWXT-LA
600 Sixth Street
Los Alamos, NM 87544

RE: REQUEST FOR CERTIFICATES OF COMPLETION FOR TWENTY-THREE SOLID WASTE MANAGEMENT UNITS AND FOUR AREAS OF CONCERN IN THE DELTA PRIME SITE AGGREGATE AREA
LOS ALAMOS NATIONAL LABORATORY
EPA ID#NM0890010515
HWB-LANL-18-006

Dear Messrs. Hintze and Lombardo:

The New Mexico Environment Department (NMED) has received the United States Department of Energy (DOE) and the Los Alamos National Security L.L.C.'s (LANS) *Request for Certificates of Completion for Twenty-Three Solid Waste Management Units and Four Areas of Concern in the Delta Prime Site Aggregate Area* (Request), dated February 2, 2018 and referenced by ADEM-18-0010. Subsequent to the submittal of the Request, DOE transferred this effort from LANS to DOE's contractor Newport News Nuclear BWXT-LA (N3B), which is also a permittee under EPA ID #NM0890010515. Hereafter, DOE and N3B are collectively referred to as the "Permittees."

Following submittal of the Request, the Permittees submitted *Clarification of Request for Certificates of Completion for Twenty-Two Solid Waste Management Units and Five Areas of Concern in the Delta Prime Site Aggregate Area* (Clarification), dated August 10, 2018 and referenced by N3B-18-0137. The Clarification provides additional information on the details of the anticipated land ownership transfer of the Technical Area-21 (TA-21) Delta Prime (DP) site. Specifically, the Permittees state that DOE anticipates that ownership of both the mesa top and

canyon slope portions of the sites will be transferred rather than the mesa tops only. The Permittees also state their intent to remediate lead contamination at SWMU 21-022(h) and have therefore withdrawn their request for Certificate of Completion for SWMU 21-022(h). The Permittees have requested that twelve SWMUs and one AOC be granted certificates of completion without controls and nine SWMUs and four AOCs be granted certificates of completion with controls.

Human health and ecological risk screening assessments were presented in the *Phase III Investigation Report for Delta Prime Site Aggregate Area at TA-21, Revision 1* for each consolidated unit (CU), individual SWMU, or individual AOC. Additional risk screening assessments were presented for the mesa-top portion only of CU 21-026(a)-99, SWMUs 21-022(h), 21-024(b), 21-027(a), and AOC C-21-027. The Permittees evaluated these five sites in this manner because the steep slope/cliff portions of the sites are inaccessible and therefore are not likely to result in exposure to human receptors. The bases for the no exposure condition are (1) the areas are on a steep slope/cliff, with 45- to 90-degree slopes; (2) the areas consist of unstable, highly weathered, fractured bedrock with approximately 15% to 30% soil filling fractures and voids between rocks; (3) the slope/cliff portions of the sites are inaccessible; (4) no trail or path is available for someone to traverse if he or she were to gain access to the slope/cliff; and (5) major safety concerns arise regarding any activity on the slope/cliff because of the steepness, the unstable bedrock, and the lack of any trail. The land use within and surrounding the Delta Prime Site Aggregate Area is currently industrial and is expected to remain industrial for the reasonably foreseeable future.

NMED hereby issues certificates of completion without controls for the following twelve SWMUs and one AOC pursuant to Section XXI of the 2016 Compliance Order on Consent (Consent Order).

SWMU 21-003 was consolidated with AOC 21-013(f) into CU 21-003-99. SWMU 21-003 was a polychlorinated biphenyl (PCB) container storage area. In 1988, an Environmental Restoration (ER) project was conducted to collect reconnaissance samples. In 1992-1993, surface and near-surface samples were collected as part of a TA-21 site-wide sampling program. In 1994, a Resource Conservation and Recovery Act (RCRA) facility investigation (RFI) was conducted to collect characterization samples. In 2006-2007, a Phase I investigation was conducted to collect additional characterization samples. In 2009, a Toxic Substance Control Act (TSCA) cleanup was performed to remove soil impacted by PCBs. A Phase II investigation was also conducted in 2009 to define the extent of contamination. The screening-assessment results for SWMU 21-003 presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-006(a) is one of four SWMUs that comprised CU 21-006(c)-99. SWMU 21-006(a) consists of an underground seepage pit. The seepage pit received various fluids including Hanford container wash water, bomb electrolytic decontamination solution (ethylene glycol, phosphoric acid, and plutonium), and chemical makeup room wastewater. Site investigations

conducted from 1991 to 2007 failed to definitively locate the seepage pit, but elevated concentrations of chemicals of potential concern (COPCs) from subsurface samples indicated contamination possibly related to a seepage pit. In 2009, a Phase II investigation was conducted to define the extent of contamination and determine whether the site posed potential unacceptable risk to human health or the environment. The screening-assessment results for SWMU 21-006(a) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-006(b) is one of four SWMUs that comprised CU 21-006(c)-99. SWMU 21-006(b) consists of a brick manhole placed within a trench, a drain line, and an outfall. SWMU 21-006(b) received ether waste from the ethyl ether extraction process used as part of the TA-21 plutonium purification process. In 1992, a Phase I RFI was conducted to collect characterization samples. In 2004, a radiological and geophysical survey located the manhole and pipelines. In 2006-2007, a Phase I investigation was performed to collect characterization and confirmation samples and remove the seepage pit and pipelines. In 2009, a Phase II investigation was conducted to define the extent of contamination and determine whether the site posed potential unacceptable risk to human health or the environment. The screening-assessment results for SWMU 21-006(b) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-006(c) is one of four SWMUs that comprised CU 21-006(c)-99. SWMU 21-006(c) consists of a seepage pit which received bomb electrolytic decontamination solution and chemical makeup room waste. Site investigations conducted from 1991 to 2007 failed to definitively locate the seepage pit, but elevated concentrations of COPCs from subsurface samples indicated contamination possibly related to a seepage pit. In 2009, a Phase II investigation was conducted to define the extent of contamination and determine whether the site posed potential unacceptable risk to human health or the environment. The screening-assessment results for SWMU 21-006(c) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-006(d) is one of four SWMUs that comprised CU 21-006(c)-99. SWMU 21-006(d) consists of a seepage pit which received bomb electrolytic decontamination solution and chemical makeup room waste. Site investigations conducted from 1991 to 2007 failed to definitively locate the seepage pit, but elevated concentrations of COPCs from subsurface samples indicated contamination possibly related to a seepage pit. In 2009, a Phase II investigation was conducted to define the extent of contamination and determine whether the site posed potential unacceptable risk to human health or the environment. The screening-assessment results for SWMU 21-006(d) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction

worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-022(j) is one of three SWMUs that comprised CU 21-022(h)-99. SWMU 21-022(j) consists of a sump that received drainage from an equipment room. In 1995, the sump was removed and confirmation samples were collected during voluntary corrective action (VCA) activities. In 2006-2007, a Phase I investigation was conducted to collect characterization samples. In 2009, a Phase II investigation was conducted to define the extent of contamination and determine whether the site posed potential unacceptable risk to human health or the environment. The screening-assessment results for SWMU 21-022(j) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-024(b) is a septic system consisting of a septic tank, pipelines, and an outfall. In 1992-1993, RFI activities collected characterization samples and performed a radiological survey. In 2004, a radiological and geophysical study identified the septic tank and pipelines. In 2006-2007, a Phase I investigation was conducted to collect characterization and confirmation samples and remove the septic tank and associated pipelines. In 2009, a Phase II investigation was conducted to define the extent of contamination. The screening-assessment results for SWMU 21-024(b) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-024(c) is a septic system consisting of a reinforced concrete septic tank and pipelines. In 1988, an ER project was conducted to collect reconnaissance samples. In 1992-1993, an RFI was conducted to collect characterization samples. In 2006-2007, a Phase I investigation was conducted to collect characterization and confirmation samples and remove the septic tank and pipelines. In 2009, a TSCA cleanup was performed to remove soil impacted by PCBs. A Phase II investigation was also conducted in 2009 to define the extent of contamination. The screening-assessment results for SWMU 21-024(c) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-024(d) is a septic system consisting of a septic tank, pipelines, and an outfall. In 1992-1993, a radiological survey was performed and characterization samples were collected. In 1995, VCA activities were conducted, which included characterization sampling, removal of tank contents, and a radiation survey. In 2004, radiological and geophysical surveys identified the septic tank, pipelines, and outfall. In 1992-1993, an RFI was conducted to collect characterization samples. In 2006-2007, a Phase I investigation was conducted to collect characterization and confirmation samples and remove the septic tank and pipelines. In 2009, a TSCA cleanup was performed to remove soil impacted by PCBs. A Phase II investigation was

also conducted in 2009 to define the extent of contamination. The screening-assessment results for SWMU 21-024(c) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-024(g) is a septic system which routed sewage into two drainage ditches. In 1992-1993, an RFI was conducted, which included characterization sampling, a radiological survey, and a land survey. In 2004, a radiological and geophysical survey identified the septic tank. In 2006-2007, a Phase I investigation was conducted to collect characterization and confirmation samples and remove the septic tank and pipelines. In 2009, a Phase II investigation was performed to define the extent of contamination and determine whether the site posed potential unacceptable risk to human health or the environment. The screening-assessment results for SWMU 21-024(g) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-024(k) is a septic system consisting of a septic tank, leach field, pipelines, and an outfall. In 1993, an RFI was performed to collect characterization samples. In 2004, a radiological and geophysical survey identified the septic tank, field, and pipelines. In 2006-2007, a Phase I investigation was conducted to collect characterization and confirmation samples and remove the septic tank, leach field, and pipelines. In 2009, a Phase II investigation was performed to define the extent of contamination. The screening-assessment results for SWMU 21-024(k) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

SWMU 21-024(n) is a septic system consisting of metal pipelines and outfalls. In 1992, an RFI was performed, which included a radiological survey and characterization sampling. In 2004, radiological and geophysical surveys located several metal pipelines and a cast-iron drain. In 2006-2007, a Phase I investigation was conducted to collect characterization and confirmation samples and remove the pipelines and other structures associated with SWMU 21-024(n). In 2009, a Phase II investigation was performed to define the extent of contamination. The screening-assessment results for SWMU 21-024(n) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

AOC 21-013(f) is consolidated with SWMU 21-003 into CU 21-003-99. AOC 21-013(f) possibly consisted of a surface disposal area within the boundaries of SWMU 21-003. In 1988, an ER project was conducted to collect reconnaissance samples. In 1992-1993, surface and near-surface samples were collected as part of a TA-21 site-wide sampling program. In 1994, an RFI was conducted to collect characterization samples. In 2006-2007, a Phase I investigation was

conducted to collect additional characterization samples. In 2009, a TSCA cleanup was performed to remove soil impacted by PCBs. A Phase II investigation was also conducted in 2009 to define the extent of contamination. The screening-assessment results for AOC 21-013(f) presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the residential, industrial, and construction worker land-use scenarios for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site.

NMED hereby issues certificates of completion with controls for the following nine SWMUs and four AOCs pursuant to Section XXI of the 2016 Consent Order.

SWMU 21-013(a) is one of three SWMUs and two AOCs that comprised CU 21-026(a)-99. SWMU 21-013(a) consists of a surface disposal area that was part of a sewage treatment plant used to treat sanitary wastes and cooling water from TA-21 facilities. The disposal area was used from 1966-1992 for the periodic disposal of the top layers of sand removed from the filter beds at SWMU 21-026(b). In 1994, a radiological survey was conducted and samples were collected as part of initial RFI activities at TA-21. In 2006-2007, a Phase I investigation was conducted to collect additional characterization and confirmation samples, remove and inspect structures, and remove contaminated material. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination and to determine whether the site posed potential unacceptable risk or dose to human health or the environment. The screening-assessment results for CU 21-026(a)-99 presented in the Phase III IR indicate that no potential unacceptable risks exist from RCRA hazardous constituents for the industrial, construction worker, and residential land-use scenarios on the mesa top. There are also no potential unacceptable risks or doses for the industrial and construction worker land-use scenarios for the entire site. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. However, the elevated level of contamination is located on the slope/cliff portion of the site where human exposure to the contamination is restricted. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because CU 21-026(a)-99 poses a potential unacceptable risk under the residential scenario, site control is required for SWMU 21-013(a). The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

SWMU 21-022(a) is one of two SWMUs and one AOC that comprised CU 21-024(l)-99. SWMU 21-022(a) consists of a brick sump and associated drain lines connected to building 21-021 which was used as a secure vault to store special fissile material including uranium and plutonium metal. In 2004, radiological and geophysical surveys were completed to locate the sump and drainlines. In 2006-2007, a Phase I investigation was conducted and soil and tuff samples were collected. In 2009 a Phase II investigation was conducted to define the nature and extent of contamination for COPCs. Remediation to remove elevated concentrations of benzo(a)pyrene was conducted as part of the 2011 Phase III investigation. The screening-assessment results for CU 21-024(l)-99 presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the industrial and construction worker land-use scenarios for the entire site. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. The results of the ecological risk screening

assessment indicate no potential risk to ecological receptors at the site. Because CU 21-024(l)-99 poses a potential unacceptable risk under the residential land-use scenario, site control is required for SWMU 21-022(a). The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

SWMU 21-023(a) is one of three SWMUs that comprised CU-21-023(a)-99. SWMU 21-023(a) consists of a steel-reinforced concrete septic tank, an inlet line and outlet lines that connected to existing waste lines to the north and a manhole to the south. In 1998-1999, a radiological survey was conducted and a geophysical survey confirmed that the tank and associated drainlines had been removed. In 2006-2007, a Phase I investigation was conducted and soil and tuff samples were collected. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination for COPCs. The screening-assessment results for CU 21-023(a)-99 presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the construction worker land-use scenario. The industrial land-use scenario was not evaluated for the mesa top because samples were not collected in the 0.0-1.0-ft depth interval on the mesa top. Samples were collected in the 0.0-1.0-ft depth interval on the slope/cliff portion of the site; consequently, the industrial scenario was evaluated for the entire site. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because SWMU 21-023(a) poses a potential unacceptable risk under the residential land-use scenario, site control is required. The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

SWMU 21-023(b) is one of three SWMUs that comprised CU-21-023(a)-99. SWMU 21-023(b) consists of a steel-reinforced concrete septic tank, an inlet line and outlet lines that connected to existing waste lines to the north and a manhole to the south. In 1998-1999, a radiological survey was conducted and a geophysical survey confirmed that the tank and associated drainlines had been removed. In 2006-2007, a Phase I investigation was conducted and soil and tuff samples were collected. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination for COPCs. The screening-assessment results for CU 21-023(a)-99 presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the construction worker land-use scenario. The industrial land-use scenario was not evaluated because samples were not collected from the 0.0–1.0-ft depth interval. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because SWMU 21-023(b) poses a potential unacceptable risk under the residential land-use scenario, site control is required. The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

SWMU 21-023(d) was one of three SWMUs that comprised CU 21-023(a)-99. SWMU 21-023(d) consists of a steel-reinforced concrete septic tank, an inlet line and outlet lines that connected to existing waste lines to the north, leading to waste treatment facilities. In 1998-1999 a radiological survey was conducted and a geophysical survey confirmed that the tank had been

removed but the associated drain lines were still in place. In 2006-2007, a Phase I investigation was conducted and soil and tuff samples were collected. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination for COPCs. The screening-assessment results for CU 21-023(a)-99 presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the construction worker land-use scenario. The industrial land-use scenario was not evaluated because samples were not collected from the 0.0–1.0-ft depth interval. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because SWMU 21-023(d) poses a potential unacceptable risk under the residential land-use scenario, site control is required. The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

SWMU 21-024(l) is one of two SWMUs and one AOCs that comprised CU 21-024(l)-99. SWMU 21-024(l) consists of an outfall that received liquid waste from the machine room floor drain of a building used to store special fissile material including uranium and plutonium metal. In 2006-2007, a Phase I investigation was conducted and soil and tuff samples were collected. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination for COPCs. Remediation to remove elevated concentrations of benzo(a)pyrene was conducted as part of the 2011 Phase III investigation. The screening-assessment results for CU 21-024(l)-99 presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the industrial and construction worker land-use scenarios for the entire site. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because CU 21-024(l)-99 poses a potential unacceptable risk under the residential land-use scenario, site control is required for SWMU 21-024(l). The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

SWMU 21-026(a) is one of three SWMUs and two AOCs that comprised CU 21-026(a)-99. SWMU 21-026(a) consists of an extended aeration sanitary waste treatment plant with a grit chamber, comminuter, digester, aeration tank, and clarifier. The plant treated sanitary wastes and cooling water from TA-21 facilities and received water from decontamination activities, janitor's scrub water, and waste from other TA-21operations. In 1994 a radiological survey was conducted and samples were collected as part of initial RFI activities at TA-21. In 2006-2007, a Phase I investigation was conducted to collect additional characterization and confirmation samples, remove and inspect structures, and remove contaminated material. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination and to determine whether the site posed potential unacceptable risk or dose to human health or the environment. The screening-assessment results for CU 21-026(a)-99 presented in the Phase III IR indicate that no potential unacceptable risks exist from RCRA hazardous constituents for the industrial, construction worker, and residential land-use scenarios on the mesa top. There are also no potential unacceptable risks or doses for the industrial and construction worker land-use scenarios for the entire site. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. However, the elevated level of contamination is located on

the slope/cliff portion of the site where human exposure to the contamination is restricted. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because CU 21-026(a)-99 poses a potential unacceptable risk under the residential land-use scenario, site control is required for SWMU 21-026(a). The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

SWMU 21-026(b) is one of three SWMUs and two AOCs that comprised CU 21-026(a)-99. SWMU 21-026(b) consists of four sludge drying/sand filter beds with concrete walls. In 1994, a radiological survey was conducted and samples were collected as part of initial RFI activities at TA-21. In 2006-2007, a Phase I investigation was conducted to collect additional characterization and confirmation samples, remove and inspect structures, and remove contaminated material. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination and to determine whether the site posed potential unacceptable risk or dose to human health or the environment. The screening-assessment results for CU 21-026(a)-99 presented in the Phase III IR indicate that no potential unacceptable risks exist from RCRA hazardous constituents for the industrial, construction worker, and residential land-use scenarios on the mesa top. There are also no potential unacceptable risks or doses for the industrial and construction worker land-use scenarios for the entire site. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. However, the elevated level of contamination is located on the slope/cliff portion of the site where human exposure to the contamination is restricted. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because CU 21-026(a)-99 poses a potential unacceptable risk under the residential land-use scenario, site control is required for SWMU 21-026(b). The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

SWMU 21-027(a) consists of drain lines that received effluent from floor drains in former building 21-003, a surface drainage system, and an outfall that discharges to the mesa edge and into Los Alamos Canyon. In 1992, a radiological survey was conducted and surface samples were collected at 12 locations. In 1993, samples were collected from two 20-ft boreholes. In 2004, additional radiological and geophysical surveys were completed. In 2006-2007 a Phase I investigation was conducted and soil and tuff samples were collected. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination for COPCs. As part of the 2011 Phase III investigation contaminated soil was removed from two locations on the mesa to remediate elevated detections of dioxins/furans and plutonium-239/240. Soil removal was also proposed for the outfall area but was not conducted due to safety concerns associated with working on the unstable cliffside on which the outfall is located. The screening-assessment results for SWMU 21-027(a) presented in the Phase III IR indicate that no potential unacceptable risks exist from RCRA hazardous constituents for the construction worker and residential land-use scenarios on the mesa top. The industrial land-use scenario was not evaluated on the mesa top because samples were not collected from the 0.0–1.0-ft depth interval. There are potential unacceptable risks for the industrial, construction worker, and residential land-use scenarios for the entire site. However, the elevated level of contamination is located on the slope/cliff portion of the site where human exposure to the contamination is restricted. The results of the ecological

risk screening assessment indicate no potential risk to ecological receptors at the site. Because SWMU 21-027(a) poses a potential unacceptable risk under the residential land-use scenario, site control is required. The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

AOC 21-004(a) is one of two SWMUs and one AOCs that comprised CU 21-024(l)-99. AOC 21-004(a) consists of a 6000-gallon aboveground steel tank and a 6-inch cast-iron pipeline installed to receive liquid waste from a building used to store special fissile material including uranium and plutonium metal. In 1994, a radiological field survey was conducted and samples were collected from inside the tank. In 2006-2007, a Phase I investigation was conducted and soil and tuff samples were collected. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination for COPCs. Remediation to remove elevated concentrations of benzo(a)pyrene was conducted as part of the 2011 Phase III investigation. The screening-assessment results for CU 21-024(l)-99 presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the industrial and construction worker land-use scenarios for the entire site. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because CU 21-024(l)-99 poses a potential unacceptable risk under the residential land-use scenario, site control is required for AOC 21-004(a). The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

AOC 21-026(c) is one of three SWMUs and two AOCs that comprised CU 21-026(a)-99. AOC 21-026(c) consists of a concrete dosing siphon chamber tank. The dosing siphon chamber received effluent until the chamber was full at which point the effluent was pumped to the sludge drying/sand filter beds at SWMU 21-026(b). In 1994, a radiological survey was conducted and samples were collected as part of initial RFI activities at TA-21. In 2006-2007, a Phase I investigation was conducted to collect additional characterization and confirmation samples, remove and inspect structures, and remove contaminated material. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination and to determine whether the site posed potential unacceptable risk or dose to human health or the environment. The screening-assessment results for CU 21-026(a)-99 presented in the Phase III IR indicate that no potential unacceptable risks exist from RCRA hazardous constituents for the industrial, construction worker, and residential land-use scenarios on the mesa top. There are also no potential unacceptable risks or doses for the industrial and construction worker land-use scenarios for the entire site. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. However, the elevated level of contamination is located on the slope/cliff portion of the site where human exposure to the contamination is restricted. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because CU 21-026(a)-99 poses a potential unacceptable risk under the residential land-use scenario, site control is required for AOC 21-026(c). The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

AOC 21-026(d) was one of three SWMUs and two AOCs that comprised CU 21-026(a)-99. AOC 21-026(d) consists of an outfall located on the edge of DP Canyon that received discharge from the sewage treatment plant at SWMU 21-026(a). 1992 RFI activities at AOC 21-026(d) included a radiological survey and the collection of samples in the outfall area. In 2006-2007, a Phase I investigation was conducted to collect additional characterization and confirmation samples, remove and inspect structures, and remove contaminated material. In 2009, a Phase II investigation was conducted to define the nature and extent of contamination and to determine whether the site posed potential unacceptable risk to human health or the environment. The screening-assessment results for CU 21-026(a)-99 presented in the Phase III IR indicate that no potential unacceptable risks exist from RCRA hazardous constituents for the industrial, construction worker, and residential land-use scenarios on the mesa top. There are also no potential unacceptable risks for the industrial and construction worker land-use scenarios for the entire site. There is a potential unacceptable carcinogenic risk for the residential land-use scenario for the entire site. However, the elevated level of contamination is located on the slope/cliff portion of the site where human exposure to the contamination is restricted. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because CU 21-026(a)-99 poses a potential unacceptable risk under the residential land-use scenario, site control is required for AOC 21-026(d). The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

AOC C-21-027 consists of a former cooling tower. The cooling tower was connected to an acid tank and also had a drain that discharged into Los Alamos Canyon. The cooling tower surface and subsurface structures were removed in 1994-1995. AOC C-21-027 was investigated as part of the 2009 a Phase II investigation to define the nature and extent of contamination. The screening-assessment results presented in the Phase III IR indicate that no potential unacceptable risks from RCRA hazardous constituents exist for the industrial, construction worker, and residential land-use scenarios on the mesa top. There are potential unacceptable carcinogenic risks for the industrial and residential land-use scenarios for the entire site. However, the elevated dioxin and furan concentrations are on the slope/cliff portion of the site where human exposure to the contamination is restricted. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at the site. Because AOC C-21-027 poses a potential unacceptable risk under the industrial and residential land-use scenarios, site control is required. The current and reasonably foreseeable land use of the site is industrial and the Permittees must restrict the land use to industrial use only.

NMED has determined that the above-mentioned sites qualify for certificates of completion. Although corrective action is complete under the Consent Order, the Permittees must continue to comply with all applicable state and federal regulations. If new information becomes available that indicates that these sites potentially pose a risk to human health or the environment, NMED may require additional corrective action at these sites.

Please contact Robert Murphy at (505) 476-6022 should you have any questions or comments regarding this letter.

Sincerely,

John E. Kieling
Chief
Hazardous Waste Bureau

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File: Reading and LANL 2018, DP Aggregate Area TA-21 Certificates of Completion

Completion of Corrective Action at Sites 05-005(b) and 05-006(c) in M-SMA-12.5

December 23, 2019

NPDES PERMIT NO. NM0030759

EM2019-0446

NPDES PERMIT NO. NM0030759 **EM2019-0446**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: M016 **M-SMA-12.5** **Sites: 05-005(b)**
05-006(c)

The following certification was performed in accordance with NPDES Permit No. NM0030759, Part I.E.2, which requires the Permittees (U.S. Department of Energy and Newport News Nuclear BWXT-Los Alamos, LLC) to certify the completion of corrective action.

CERTIFICATION STATEMENT OF AUTHORIZATION

"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 there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

Elizabeth Lowes — 12-10-2019

Elizabeth Lowes, Program Manager
Environment, Safety and Health
Newport News Nuclear BWXT-Los Alamos, LLC

Date

David Nickless — 12/19/19

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

Date

NPDES PERMIT NO. NM0030759 **EM2019-0446**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: M016 **M-SMA-12.5** **Sites: 05-005(b)**
05-006(c)

This document certifies completion of corrective action for Sites 05-005(b) and 05-006(c) pursuant to Part 1, E.2(d) of the Individual Permit NM0030759. Accompanying this certification is a copy of the New Mexico Environment Department- (NMED-) issued certificate of completion (COC) letter for Sites 05-005(b) and 05-006(c), which are designated as Solid Waste Management Units 05-005(b) and 05-006(c) for the purposes of the 2016 Compliance Order on Consent (Consent Order). These sites, listed in Table 1, have achieved Resource Conservation and Recovery Act "corrective action complete without controls" status under the Consent Order. This certification that corrective action is complete was prepared in accordance with 40 Code of Federal Regulations 122.22(b).

In July 2019, a baseline confirmation monitoring sample collected at Site Monitoring Area (SMA) M-SMA-12.5 exceeded target action levels for gross alpha and selenium, causing the Permittees to initiate corrective action. The Permittees are certifying completion of corrective action at Sites 05-005(b) and 05-006(c) through a demonstration that the sites have achieved COCs, included with this submission, under Section XXI of the Consent Order. A copy of the COCs from NMED is included in Attachment 1.

Table 1
Completion of Corrective Action for Two Sites in M-SMA-12.5

Site	Associated SMA Number	Watershed	Site Priority
05-005(b)	M-SMA-12.5	Mortandad	Moderate
05-006(c)	M-SMA-12.5	Mortandad	Moderate

Attachment 1

Certificate of Completion for Solid Waste Management Units 05-005(b) and 05-006(c) (M-SMA-12.5)

NEW MEXICO
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

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Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

March 20, 2019

Doug Hintze, Manager
U.S. Department of Energy
Environmental Management
Los Alamos Field Office
P.O. Box 1663 MS-M984
Los Alamos, NM 87545

RE: REQUEST FOR CERTIFICATES OF COMPLETION FOR FOUR SOLID WASTE MANAGEMENT UNITS IN THE LOWER MORTANDAD/CEDRO CANYONS AGGREGATE AREA
LOS ALAMOS NATIONAL LABORATORY
EPA ID#NM0890010515
HWB-LANL-18-067

Dear Mr. Hintze:

The New Mexico Environment Department (NMED) has received the United States Department of Energy's (DOE) *Request for Certificates of Completion for Four Solid Waste Management Units in the Lower Mortandad/Cedro Canyons Aggregate Area* (Request), dated and received December 17, 2018, and referenced by EM-LA-40AD-00365.

The DOE recommended four solid waste management units (SWMUs), 05-003, 05-004, 05-005(b), and 05-006(c), for corrective action complete without controls in the "*Investigation Report for Lower Mortandad/Cedro Canyons Aggregate Area, Revision 1* (Report), dated August 2012 (LA-UR-12-2397/EP2012-188). NMED issued an Approval with Modifications letter for the Report on September 10, 2012. The Approval letter directed the DOE to "conduct and submit a human health risk assessment which considers a construction worker scenario in the event of future development of sites located with Technical Area 5."

NMED received the DOE *Request for Certificates of Completion for Four Solid Waste Management Units in the Lower Mortandad/Cedro Canyons Aggregate Area* (Letter), on June

15, 2015 (ADESH-15-087). The Letter did not address the Approval with Modification request for the human health risk assessment for the construction worker scenario. The NMED response Letter, dated October 28, 2015 stated that the DOE "must submit results of the human health risk assessment for the construction worker scenario for these sites before NMED can evaluate whether these sites qualify for corrective action complete under the Consent Order."

To satisfy NMED's request, DOE evaluated human health risk for construction worker scenario for SWMUs 05-003, 05-004, 05-005(b), and 05-006(c). The results of the human health risk for the construction worker were included in the Request.

NMED hereby issues certificates of completion without controls for the following four SWMUs in accordance with Section XXI of the 2016 *Compliance Order of Consent* (Consent Order).

SWMU 05-003 is a former underground calibration facility located at the west end of Technical Area (TA) 05. The facility consisted of two structures, 05-0020 and 05-0021, an aboveground shed and underground chamber, respectively. The aboveground shed was constructed over a 35-ft-deep access shaft to provide facility personnel access to the calibration chamber (structure 05-0021), located belowground to the west of the access shaft. The belowground chamber was used to calibrate neutron detector systems for experiments at TA-49. The neutron source used in the calibration chamber was a critical assembly called Godiva. The assembly used highly enriched uranium and was used in the chamber for approximately one month from November to December 1959. A radiation survey of structure 05-0020 was conducted in May 1976. This survey showed no detectable radioactivity. Investigations were conducted in 1995 and 2011. Results of investigations done in 2011 indicate no potential risk or doses exist from residual contamination for construction worker and residential land use scenarios. No potential unacceptable risk or dose for ecological receptors is expected at the site because the contamination source was 35 ft below ground surface (bgs). NMED notes because the calibration chamber was located 35 ft bgs, no potential exposure pathway exists, samples were not collected between 0-1 ft bgs. Therefore, no risk-screening assessment was performed for the industrial scenario (see 2012 IR, revision 1).

SWMU 05-004 is a former septic tank, associated drain lines, and outfall that were located at the west end of TA-05. The tank was constructed in 1948 and received industrial waste from a laboratory (building 05-0001) it served. The outlet from the tank discharged into an unnamed tributary of the Mortandad Canyon. The laboratory was removed during the 1985 Los Alamos Site Characterization Program (LASCP). The tank and associated drain lines had been removed before the 1985 LASCP. Previous investigations include a 1995 Resource Conservation and Recovery Act (RCRA) facility investigation (RFI) and investigations conducted in 1998 and 2011. The 2011 investigations indicate that nature and extent are defined for all chemicals of potential concern (COPCs). No potential unacceptable risks or doses exist for the industrial, construction worker, and residential land use scenarios based on the 2011 investigation. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at this site

SWMU 05-005(b) is an area of potentially contaminated soil associated with a former outfall

located in TA-05 at the edge of Mortandad Canyon. The outfall served a building (1944 to 1959) used as a shop and darkroom, and a for a brief period in 1952, for calibrating high range radiation meters. A Phase I RFI was performed in 1994 and 1995. The outfall was surveyed for high explosives (HE) contamination in 1995, no contamination was found. The 2011 investigations indicate that nature and extent is defined for all COPCs. No potential unacceptable risks and doses exist for the industrial, construction worker, and residential land use scenarios at this site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at this site.

SWMU 05-006(c) is and area of potentially contaminated soil associated with the location of former building 05-0005, a shop and darkroom. The building operated from about 1944 to 1959. The building was originally used to support firing-site activities, including processing photographs of experiments. In 1952, the building was temporarily used to calibrate high-range radiation meters. A 1959 memorandum indicates that the building was contaminated with HE. The building was destroyed in 1960 by an intentional burning. Phase I RFI sampling was performed in 1995. The 2011 investigations indicate that the nature and extent is defined for all COPCs at this site. The investigation found no potential unacceptable risks and doses for the industrial, construction worker, and residential land uses scenarios at this site. The results of the ecological risk screening assessment indicate no potential risk to ecological receptors at this site.

NMED has determined that the above-mentioned sites qualify for certificates of completion without controls. Although corrective action is complete under the 2016 Consent Order, DOE must continue to comply with all applicable state and federal regulations. If new information becomes available that indicates that these sites potentially pose a risk to human health or the environment, NMED may require additional corrective action at these sites.

If you have any questions regarding this letter, please contact Mitchell Schatz (505) 476-6051.

Sincerely,

John E. Kieling
Chief
Hazardous Waste Bureau

cc:

N. Dhawan, NMED HWB
M. Schatz, NMED HWB
L. King, EPA Region 6, Dallas TX
C. Rodriguez, DOE EM-LA
A. Duran, DOE EM-LA
J. Legare, N3B
K. Rich, N3B
S. Yanicak, NMED DOE OB, MS 894
K. Ellers, N3B.
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emla.docs@em.doe.gov

File: 2019 LANL, TA-05, Approval, Request for Certificates of Completion for Four SWMUs in the Lower Mortandad/Cedro Canyons Aggregate Area
LANL-18-067

Completion of Corrective Action at Sites 05-001(a) and 05-002 in M-SMA-12.8

December 23, 2019

NPDES PERMIT NO. NM0030759

EM2019-0447

NPDES PERMIT NO. NM0030759 **EM2019-0447**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: M019 **M-SMA-12.8** **Sites: 05-001(a)**
05-002

The following certification was performed in accordance with NPDES Permit No. NM0030759, Part I.E.2, which requires the Permittees (U.S. Department of Energy and Newport News Nuclear BWXT-Los Alamos, LLC) to certify the completion of corrective action.

CERTIFICATION STATEMENT OF AUTHORIZATION

"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 there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

Elizabeth Lowes, Program Manager
Environment, Safety and Health
Newport News Nuclear BWXT-Los Alamos, LLC

12-10-2019
Date

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

12/19/19
Date

NPDES PERMIT NO. NM0030759 **EM2019-0447**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: M019 **M-SMA-12.8** **Sites: 05-001(a)**
05-002

This document certifies completion of corrective action for Sites 05-001(a) and 05-002 pursuant to Part 1, E.2(d) of the Individual Permit NM0030759. Accompanying this certification is a copy of the New Mexico Environment Department- (NMED-) issued certificate of completion (COC) letter for Sites 05-001(a) and 05-002, which are designated as Solid Waste Management Units 05-001(a) and 05-002 for the purposes of the 2016 Compliance Order on Consent (Consent Order). These sites, listed in Table 1, have achieved Resource Conservation and Recovery Act "corrective action complete without controls" status under the Consent Order. This certification that corrective action is complete was prepared in accordance with 40 Code of Federal Regulations 122.22(b).

In July 2019, a baseline confirmation monitoring sample collected at Site Monitoring Area (SMA) M-SMA-12.8 exceeded target action levels for aluminum, gross alpha, and selenium, causing the Permittees to initiate corrective action. The Permittees are certifying completion of corrective action at Sites 05-001(a) and 05-002 through a demonstration that the sites have achieved a COC, included with this submission, under Section XXI of the Consent Order. A copy of the COCs from NMED is included in Attachment 1.

Table 1
Completion of Corrective Action for Two Sites in M-SMA-12.8

Site	Associated SMA Number	Watershed	Site Priority
05-001(a)	M-SMA-12.8	Mortandad	Moderate
05-002	M-SMA-12.8	Mortandad	Moderate

Attachment 1

Certificate of Completion for Solid Waste Management Units 05-001(a) and 05-002 (M-SMA-12.8)

NEW MEXICO
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Governor
JOHN A. SANCHEZ
Lieutenant Governor

RYAN FLYNN
Cabinet Secretary
BUTCH TONGATE
Deputy Secretary

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

September 16, 2015

Christine Gelles, Acting Manager
U.S. Department of Energy
Los Alamos Field Office, DOE
3747 West Jemez Rd, MS A316
Los Alamos, NM 87544

Michael Brandt, Associate Director
Environment, Safety, Health
Los Alamos National Laboratory
P.O. Box 1663, MS K491
Los Alamos, NM 87545

RE: CERTIFICATES OF COMPLETION
SIX SOLID WASTE MANAGEMENT UNITS AND ONE AREA OF CONCERN
AT TECHNICAL AREA 5
MIDDLE MORTANDAD/TEN SITE AGGREGATE AREA
EPA ID #NM0890010515
HWB-LANL-11-068

Dear Ms. Gelles and Mr. Brandt:

The New Mexico Environment Department (NMED) has received the United States Department of Energy (DOE) and the Los Alamos National Security L.L.C.'s (LANS) (collectively, the Permittees) *Request for Certificates of Completion for Twenty-Seven Solid Waste Management Units and Ten Areas of Concern in the Middle Mortandad/Ten Site Aggregate Area*, dated August 31, 2011 and referenced by EP2011-0297.

Several solid waste management units (SWMUs) and areas of concern (AOC) were recommended for corrective action complete in the *Investigation Report for the Middle Mortandad/Ten Site Aggregate Area, Revision 2* (Report), dated February 2008 (LA-UR-08-0336/EP2008-0035). NMED issued an Approval with Direction (AWD) for the Report on April 1, 2008.

NMED hereby issues certificates of completion without controls for the following sites pursuant to Section VII.E.6.b of the Consent Order.

SWMU 05-001(a) is steel barricaded firing pit #1 (structure TA-05-07), used for implosion tests from 1944-1947. The firing pit structure (8 feet(ft) x 5.5 ft x 3 ft) contained an intra-structure made from plate steel and concrete. Experimental shots, using high explosives (HE) as the energy source, were set up at the site and fired on open ground. The debris from the shots was bulldozed to the edge of Mortandad Canyon. In 1959, the pit was abandoned in place. Decommissioning and decontamination (D&D) activities were conducted in 1985. No contamination was detected on the surface of the structures or in soils located directly beneath the firing pit. The site was included in the investigation of CU 05-001(a)-99. Potential contaminants of concern at the site include HE, natural and depleted uranium, and metals. Investigations conducted during 1995 and 2004 indicated that there are no potential unacceptable risks or doses from the residual contamination for the industrial or residential land use scenarios. The results of the ecological risk-screening assessment indicated no potential unacceptable risk to ecological receptors at the site.

SWMU 05-001(b) is steel barricaded firing pit # 2 (structure TA-05-15), used from 1945 until the late 1940s. The firing pit structure (8 ft x 5.5 ft x 3 ft) contained an intra-structure made from plate steel and concrete and was located 200 ft from SWMU 05-001(a). Experimental shots, using HE as the energy source, were set up at the site and fired on open ground. The debris from the shots was bulldozed to the edge of Mortandad Canyon. In 1959, the pit was abandoned in place. D&D activities were conducted in 1985. Structure TA-05-15 contained uranium, and when the metal structure was removed from the ground, contamination was found. The contamination was traced vertically to a depth of about 15 ft. When the area was decontaminated, the pit was backfilled with clean soil. The site was included in the investigation of CU 05-001(a)-99. Potential contaminants of concern at the site include HE, natural and depleted uranium, and metals. Investigations conducted during 1995 and 2004 indicated that there are no potential unacceptable risks or doses from the residual contamination for the industrial or residential land use scenarios. The results of the ecological risk-screening assessment indicated no potential unacceptable risk to ecological receptors at the site.

AOC 05-001(c) is an inactive firing site located at the end of a spur road south of Puye Road approximately 20 to 30 ft below the eastern edge of the mesa. Gravel and metal shrapnel was found off the edge of the mesa in a small erosion gully just east of the end of the spur road. Between 1944 and 1945, two to three tests were conducted at the site, each involving approximately 2500 lbs of HE. The site was closed in the spring of 1945. Potential contaminants of concern at the site include HE, natural and depleted uranium, and metals. Investigations conducted during 1995 and 2004 indicated that there are no potential unacceptable risks or doses from the residual contamination for the industrial or residential land use scenarios. The results of the ecological risk-screening assessment indicated no potential unacceptable risk to ecological receptors at the site.

SWMU 05-002 is a canyon-side disposal site that was created by bulldozing shot debris from firing pits [SWMUs 05-001(a) and 05-001(b)] over the north facing slope of Mortandad Canyon. The debris zone extended to the canyon bottom. In 1985, shot debris that was visible on the surface was removed, but the side of the canyon was not monitored for radioactivity or decontaminated. Waste materials potentially disposed of at the site include shot debris, cables,

wire, trace amounts of uranium, lead, beryllium, cadmium, and uranium-contaminated aluminum or steel. The site was included in the investigation of CU 05-001(a)-99. Investigations conducted during 1995 and 2004 indicated that there are no potential unacceptable risks or doses from the residual contamination for the industrial or residential land use scenarios scenario. The results of the ecological risk-screening assessment indicated no potential unacceptable risk to ecological receptors at the site.

SWMU 05-005(a) is a former French drain from control building TA-05-04, was constructed in 1945 and abandoned, along with the control building, in 1959. It was used to discharge waste from the control building; the types of waste discharged into the French drain are unknown. The control building was removed in 1960. The French drain and affected soil was removed in 1985 during the D&D operations. The site was included in the investigation of CU 05-005(a)-00. Investigations conducted during 1995 and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the industrial or residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 05-006(b) is potentially contaminated soil at the location of former structure TA-05-04. During 1985 D&D activities, uranium-contaminated soil was found at the former site of TA-05-04. Contamination in the area of the control building was believed to have entered the environment through the French drain. A radiation survey conducted in 1988 depicted radiation levels above background. The site was included in the investigation of CU 05-005(a)-00. Investigations conducted during 1995 and 2004 indicated that there are no potential unacceptable risks or doses from the residual contamination for the industrial or residential land use scenarios. The results of the ecological risk-screening assessment indicated no potential unacceptable risk to ecological receptors at the site.

SWMU 05-006(e) is potentially contaminated soil associated with a former platform (TA-05-19) that was adjacent to Building 05-04. The platform was 6 ft x 6 ft wooden structure mounted 26 ft above the ground on two wooden poles. It was built around 1953 and abandoned in place in 1959. The entire area was demolished when Building 05-04 was removed in 1985. The site was included in the investigation of CU 05-005(a)-00. Investigations conducted during 1995 and 2004 indicated that there are no potential unacceptable risks or doses from the residual contamination for the industrial or residential land use scenarios. The results of the ecological risk-screening assessment indicated no potential unacceptable risk to ecological receptors at the site.

NMED has determined that SWMUs 05-001(a), 05-001(b), 05-002, 05-005(a), 05-006(b), 05-006(e), and AOC 05-001(c) qualify for certificates of completion indicating that additional corrective action under the Consent Order is not required. Although corrective action is complete under the Consent Order, the Permittees must continue to comply with all applicable state and federal regulations. If new information becomes available that indicates that these sites may pose a risk to human health or the environment, NMED may require additional investigations and corrective action at these sites.

Please contact Neelam Dhawan at (505) 476-6042, if you have any questions.

Sincerely,

John E. Kieling
Chief
Hazardous Waste Bureau

cc: K. Roberts, NMED-RPD
D. Cobrain, NMED HWB
N. Dhawan, NMED HWB
S. Yanicak, NMED DOE OB, MS J993
L. King, EPA 6PD-N
C. Rodriguez, DOE LASO, MS A316
T. Haagenstad, EP-CAP, MS M992

File: 2015 LANL, Certificates of Completion for SWMUs in TA-5, MMTS
LANL 11-068

Completion of Corrective Action at Site 00-011(a) in R-SMA-2.5

December 23, 2019

NPDES PERMIT NO. NM0030759

EM2019-0448

NPDES PERMIT NO. NM0030759 **EM2019-0448**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: R006 **R-SMA-2.5** **Site: 00-011(a)**

The following certification was performed in accordance with NPDES Permit No. NM0030759, Part I.E.2, which requires the Permittees (U.S. Department of Energy and Newport News Nuclear BWXT-Los Alamos, LLC) to certify the completion of corrective action.

CERTIFICATION STATEMENT OF AUTHORIZATION

"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 there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

Elizabeth Lowes, Program Manager
Environment, Safety and Health
Newport News Nuclear BWXT-Los Alamos, LLC

12-10-2019
Date

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

12/19/19
Date

NPDES PERMIT NO. NM0030759 **EM2019-0448**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: R006 **R-SMA-2.5** **Site: 00-011(a)**

This document certifies completion of corrective action for Site 00-011(a) pursuant to Part 1, E.2(d) of the Individual Permit NM0030759. Accompanying this certification is a copy of the New Mexico Environment Department- (NMED-) issued certificate of completion (COC) letter for Site 00-011(a), which is designated as Solid Waste Management Unit 00-011(a) for the purposes of the 2016 Compliance Order on Consent (Consent Order). This site, listed in Table 1, have achieved Resource Conservation and Recovery Act "corrective action complete with controls" status under the Consent Order. This certification that corrective action is complete was prepared in accordance with 40 Code of Federal Regulations 122.22(b).

In August 2019, a baseline confirmation monitoring sample collected at Site Monitoring Area (SMA) R-SMA-2.5 exceeded target action levels for aluminum and gross alpha, causing the Permittees to initiate corrective action. The Permittees are certifying completion of corrective action at Site 00-011(a) through a demonstration that the site has achieved a COC, included with this submission, under Section XXI of the Consent Order. A copy of the COCs from NMED is included in Attachment 1.

Table 1
Completion of Corrective Action for One Site in R-SMA-2.5

Site	Associated SMA Number	Watershed	Site Priority
00-011(a)	R-SMA-2.5	Los Alamos/Pueblo	Moderate

Attachment 1

Certificate of Completion for Solid Waste Management Unit 00-011(a) (R-SMA-2.5)

ERID-522505

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JOHN A. SANCHEZ
Lieutenant Governor

RYAN FLYNN
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BUTCH TONGATE
Deputy Secretary

THOMAS SKIBITSKI
Acting Director
Resource Protection Division

EP2013-5097

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

May 7, 2013

Pete Maggiore
Assistant Manager
Environmental Projects Office
National Nuclear Security Administration
Los Alamos Site Office
3747 West Jemez Road, MS A316
Los Alamos, NM 87544

Jeffrey D. Mousseau
Associate Director
Environmental Programs
Los Alamos National Security, L.L.C.
P.O. Box 1663, MS M991
Los Alamos, NM 87545

RE: CERTIFICATE OF COMPLETION
THREE SOLID WASTE MANAGEMENT UNITS [00-011(A), 00-011(D), 00-011(E)] IN GUAJE/BARRANCAS/RENDIJA CANYONS AGGREGATE AREA
EPA ID #NM0890010515
HWB-LANL-12-039

Dear Messrs. Maggiore and Mousseau:

The New Mexico Environment Department (NMED) has received the United States Department of Energy (DOE) and the Los Alamos National Security L.L.C.'s (LANS) (collectively, the Permittees) *Request for Certificates of Completion for Three Solid Waste Management Units in the Guaje/Barrancas/Rendija Canyons Aggregate Area*, dated June 28, 2012 and referenced by EP2012-0155. The results of the investigations were summarized in the *Investigation Report for Guaje/Barrancas/Rendija Canyons Aggregate Area at technical Area 00, Revision 1* (IR) (dated November 2007 and referenced by LA-UR-07-7820/EP2007-0720).

SWMU 00-011(a) is a 28.5 acre former mortar impact area that is located on United States Forest Service (USFS) land approximately 0.4 miles east of the Sportsmen's club small arms firing range (SAFR) in Rendija Canyon. The site was used as a mortar impact area in 1940s.

The site is bisected east to west by Rendija Road. On the north side of the road, the site has a gradual to steep slope to the ephemeral Rendija Canyon stream channel. The slope is covered by downed trees that burned during the Cerro Grande fire in 2000. Currently, the site is fenced and posted with DOE "No Trespassing" signs. However, site is being used for recreational purposes by the public.

SWMU 00-011(d) is a former bazooka firing area located largely in Los Alamos County, except for a small section on private property. The area is in a small north-trending tributary of Bayo Canyon northeast of the intersection of San Ildefonso Road and Diamond Drive. The area is comprised of approximately 5 acres and was used as a target area for 2.36-in. bazooka rounds in the mid-1940s.

SWMU 00-011(e) is a former ammunition impact area located on USFS land in a tributary of Rendija Canyon north-northeast of the Sportsmen's Club SAFR. The area extends north along the tributary to the top of a cliff face. The area is roughly rectangular and consists of approximately 14 acres and was used as an ammunition impact area in the mid-1940s. The site is fenced with barbwire and posted with "Explosives No Trespassing" signs.

The IR recommended that the sites be granted corrective action complete without controls because they do not pose a threat to human health and the environment under the residential land use scenario. NMED issued an Approval with Directions (AWD) for the IR on December 20, 2007. The AWD directed the Permittees to conduct biennial visual surveys at these sites and to remove any munitions and explosives of concern (MEC) or munitions debris (MD) found during the surveys. In addition, the Permittees were directed to conduct storm water monitoring at these sites and implement institutional controls such as posting warning signs.

NMED received a letter from DOE Los Alamos Field Office on February 19, 2013. The letter states that based on discussions between DOE, NMED, and Los Alamos County (LAC), the DOE requests that these sites now be considered for corrective action complete with controls status. Request was made to expedite the transfer of Rendija Canyon tracts (Tract A-14a, -14c, and -14d) to LAC. The controls proposed by DOE and approved by NMED are:

- Conduct one additional biennial survey in December 2013;
- Install a kiosk sign at the entrance to Rendija Canyon that describes the history of the site and identifies the types of potential ordnance and associated debris that may be encountered, safety precautions and contact information, if ordnance encountered;
- Install signage within the Rendija parcel to guide and communicate safety practices to visitors;
- Conduct explosive and unexploded ordnance awareness training to LAC officials.

DOE also proposed to conduct one additional biennial survey in December 2013. Given the uncertainty associated with MEC/MD surveys NMED does not concur with this proposal.

However, the frequency may be reduced from biennial to triennial surveys after conducting the next biennial survey in 2013.

NMED approves the above-mentioned controls and hereby issues these Certificates of Completion with Controls for SWMUs 00-011(a), 00-011(d), and 00-011(e). These controls must be implemented and the documentation submitted to NMED by September 30, 2013. In addition, these sites must be monitored under the National Pollutant Discharge Elimination System individual stormwater permit. DOE indicated (July 13, 2012) that LAC intends to use the property for recreational purposes only and construction activities are not planned for the site. Land use controls must also be maintained.

If new information becomes available that indicates that the site may pose a risk to human health or the environment, NMED may require additional corrective action at these sites. Please contact Neelam Dhawan at (505) 476-6042, if you have any questions.

Sincerely,

John E. Kieling
Chief
Hazardous Waste Bureau

cc: T. Skibitski, NMED RPD
D. Cobrain, NMED HWB
N. Dhawan, NMED HWB
S. Yanicak, NMED DOE OB, MS J993
L. King, EPA 6PD-N
C. Rodriguez, DOE LASO, MS A316
T. Haagenstad, EP-CAP, MS M992

File: 2012 LANL, Certificates of Completion for SWMUs 00-001(a), 00-001(d), and 00-001(e) in Guaje/Barrancas/Rendija Canyons AA Sites (LANL 12-039)

Completion of Corrective Action at Site 35-014(g3) in T-SMA-2.5

December 23, 2019

NPDES PERMIT NO. NM0030759

EM2019-0449

NPDES PERMIT NO. NM0030759 **EM2019-0449**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: T003 **T-SMA-2.5** **Site: 35-014(g3)**

The following certification was performed in accordance with NPDES Permit No. NM0030759, Part I.E.2, which requires the Permittees (U.S. Department of Energy and Newport News Nuclear BWXT-Los Alamos, LLC) to certify the completion of corrective action.

CERTIFICATION STATEMENT OF AUTHORIZATION

"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 there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

Elizabeth Lowes, Program Manager
Environment, Safety and Health
Newport News Nuclear BWXT-Los Alamos, LLC

12-10-2019
Date

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

12/19/19
Date

NPDES PERMIT NO. NM0030759 **EM2019-0449**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: T003 **T-SMA-2.5** **Site: 35-014(g3)**

This document certifies completion of corrective action for Site 35-014(g3) pursuant to Part 1, E.2(d) of the Individual Permit NM0030759. Accompanying this certification is a copy of the New Mexico Environment Department- (NMED-) issued certificate of completion (COC) letter for Site 35-014(g3), which is designated as Area of Concern 35-014(g3) for the purposes of the 2016 Compliance Order on Consent (Consent Order). This site, listed in Table 1, has achieved Resource Conservation and Recovery Act "corrective action complete with controls" status under the Consent Order. This certification that corrective action is complete was prepared in accordance with 40 Code of Federal Regulations 122.22(b).

In July 2019, a baseline confirmation monitoring sample collected at Site Monitoring Area (SMA) T-SMA-2.5 exceeded target action levels for gross alpha and selenium, causing the Permittees to initiate corrective action. The Permittees are certifying completion of corrective action at Site 35-014(g3) through a demonstration that the site has achieved a COC, included with this submission, under Section XXI of the Consent Order. A copy of the COC from NMED is included in Attachment 1.

Table 1
Completion of Corrective Action for One Site in T-SMA-2.5

Site	Associated SMA Number	Watershed	Site Priority
35-014(g3)	T-SMA-2.5	Mortandad	Moderate

Attachment 1

Certificate of Completion for Area of Concern 35-014(g3)
(T-SMA-2.5)

35

NEW MEXICO ENVIRONMENT DEPARTMENT

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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

October 14, 2015

Doug Hintze, Manager
U.S. Department of Energy
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Los Alamos, NM 87544

Michael Brandt, Associate Director
Environment, Safety, Health
Los Alamos National Laboratory
P.O. Box 1663, MS K491
Los Alamos, NM 87545

RE: CERTIFICATES OF COMPLETION
SEVENTEEN SOLID WASTE MANAGEMENT UNITS AND EIGHT AREAS OF CONCERN AT TECHNICAL AREA 35
MIDDLE MORTANDAD/TEN SITE AGGREGATE AREA
EPA ID #NM0890010515
HWB-LANL-11-068

Dear Messrs. Hintze and Brandt:

The New Mexico Environment Department (NMED) has received the United States Department of Energy (DOE) and the Los Alamos National Security L.L.C.'s (LANS) (collectively, the Permittees) *Request for Certificates of Completion for Twenty-Seven Solid Waste Management Units and Ten Areas of Concern in the Middle Mortandad/Ten Site Aggregate Area*, dated August 31, 2011 and referenced by EP2011-0297.

Several solid waste management units (SWMUs) and areas of concern (AOC) were recommended for corrective action complete in the *Investigation Report for the Middle Mortandad/Ten Site Aggregate Area, Revision 2* (Report), dated February 2008 (LA-UR-08-0336/EP2008-0035). NMED issued an Approval with Direction (AWD) for the Report on April 1, 2008. To date, NMED has issued certificates of completion for ten solid waste management units (SWMUs) and two areas of concern (AOCs).

NMED hereby issues certificates of completion for the following twenty-five sites pursuant to Section VII.E.6.b of the Consent Order.

37185

SWMU 35-003(h) is the site of a former exchange concrete retention tank. This tank was constructed in 1961 and added as a component of the waste treatment plant (WWTP). The tank had dimensions of 8 ft x 12 ft x10 ft deep and was connected to buildings TA-35-41 and TA-35-10 by 4-in diameter stainless steel underground pipes. The retention tank and associated piping was removed in February 1985. The tank and excavated soil were screened for radioactive contamination during the removal. No detection of radionuclides was documented. The site was included in the investigation of CU 35-003(a)-99 that included components of the former WWTP. Investigations conducted during 1995, 1996, 1997, and 2004-2005 indicate that there are no potential unacceptable risks or doses from the residual contamination for the industrial scenario. However, under the residential land use scenarios, the site poses an unacceptable risk to human health. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The site use must be restricted to industrial activities.

SWMU 35-003(p) is the former site of the Air Filter Building, TA-35-7. Radioactive air was filtered in this building and cleaning filters were washed by tap water and/or long-decayed wastewater from the tank farms. This long-decayed wastewater was contaminated with strontium-89 and strontium-90. Build-up of strontium in the air filters became a problem and required numerous washings, which produced more radioactive wastewater. The large volumes of water overwhelmed the storage capacity of the system and led to spills, overflows, and other unplanned releases to Pratt Canyon. The Air Filter Building underwent D&D first in 1980, and again in 1996. The building and associated piping was removed in 1996. The site was included in the investigation of CU 35-003(a)-99 that also included components of the former WWTP. Investigations conducted during 1995, 1996, 1997, and 2004-2005 indicate that there are no potential unacceptable risks or doses from the residual contamination for the industrial land use scenario. However, under the residential land use scenario, the site poses an unacceptable risk to human health. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The site use must be restricted to industrial activities.

AOC 35-003(r) is the site of a canyon disposal area for liquid sludge effluent associated with the former WWTP. The AOC is located in Pratt Canyon and extends from eastern edge of Ten Site Mesa to the confluence of Pratt and Ten Site Canyons. Pratt Canyon is contaminated with radionuclides. The WWTP that released the effluent ceased operation in 1963. The site was included in the investigation of CU 35-003(d)-00. Investigations conducted during 1995, 1997, 1998, 2005, and 2007 indicate that there are no potential unacceptable risks or doses from the residual contamination for the recreational land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The site use must be restricted to recreational activities.

SWMU 35-004(a) is made up of outdoor storage areas previously used to store drums of oil and drums containing organic chemicals. These areas are located south and east of building TA-35-25. Stained soil was observed at the site during a 1988 reconnaissance. In 1995, contaminated soil was removed from the storage area. Investigations conducted during 2004 indicate that there

are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-004(h) is an area, near the northeast corner of building TA-35-7, which was formerly used to store containers of oil, capacitors, and organic chemicals like freon. The area is no longer used as a storage area and the date of closure is not documented. The disposition of the containers is not documented. Stained soil was observed at the site during a 1988 reconnaissance. Building TA-35-7 underwent first D&D in 1980 and a second D&D in 1996 at which time the building and associated piping were removed. Investigations conducted during 2005 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-008 is a former canyon-side disposal area for debris, which includes scrap metal and piping, paint cans, 55-gal drums, and miscellaneous building materials. It is located along the rim of the north-facing slope of Mortandad Canyon. The debris extends from the canyon rim to the canyon floor. No releases of hazardous materials have been documented from this disposal area. The site was included in the investigation of CU 35-008-00. Investigations conducted during 1995, 1997, and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-009(a) is a septic system that operated from 1951 to 1975. The septic system includes a 1500-gallon septic tank, dosing chamber, and a distribution box. These structures were abandoned in place when new sanitary sewer lines were routed to sewage lagoons located east of TA-35 in Ten Site Canyon. The septic system discharged to drain fields on the south-facing slope of Ten Site canyon. The septic system received sanitary wastes and possibly industrial and radiological wastes from building TA-35-2. Specific waste stream information is not available. The site was cleaned up during a voluntary corrective action (VCA) reported in September 1996. The VCA included removal and disposal of the tank contents and filling the tank with concrete. Investigations conducted during 1996, 1997, and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the industrial land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The site use must be restricted to industrial activities.

SWMU 35-009(d) is an abandoned 1600-gal septic tank and associated leach field. The tank is located at the northeast corner of Ten Site Mesa, and the leach field extends from the tank towards the east. The leach field covers an area of approximately 1800 ft^2 and consists of fine- to coarse-grained sandstone and cobble filter bed material. The septic system served TA-35 from 1966 to 1990. It handled sanitary waste and possibly industrial waste including radionuclides from building TA-35-27 and other laboratory buildings. During a 1996 VCA, the tank was pumped out, filled with concrete. No releases of hazardous materials are documented

for the site. Investigations conducted during 1996 and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

AOC 35-010(e) is the NPDES permitted outfall EPA-SSS-10S from the sand filter beds that discharged into Ten Site Canyon. A depth-recording gauge station is located at the outfall that measured the effluent levels. A rock dissipater apron is present at the discharge point. Flow records of the NPDES outfall were used to estimate how much effluent was discharged during a significant portion of the life of sewage lagoons and filter beds. The average flow rate was approximately 45, 000 gallons per day (gpd). The planned capacity of the facility was 12,000 gpd. The site was included in the investigations of CU 35-010(a)-99. Investigations conducted during 1995, 1997, and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-014(e) is a dielectric oil spill that was bulldozed off the mesa top. The oil spill occurred when a forklift punctured an aboveground oil storage tank. The storage tank was removed in 1992. The site was included in the investigation of CU 35-008-00. Investigations conducted during 1995, 1997, and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-014(g) is the site of a former oil spill on concrete adjacent to an asphalt-paved catchment basin located at the northeast corner of building TA-35-207. The catchment basin directs storm water flow to AOC 35-016(n), a corrugated metal pipe outfall and daylight drainage channel. A small oil stain was visible on the concrete; however, no obvious oil staining was apparent in the catchment basin or the outfall. The origin and the date of the spill are not known. Currently there are no visible signs of spill, as it was reportedly cleaned up in the late 1980s. The site was included in the investigation of CU 35-014(g)-00. Investigations conducted during 1995, 1998, and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

AOC 35-014(g3) is an oil stained area resulting from a major oil spill that occurred near the former tank farm (SWMU 35-015(a)) on the west side of TA-35-86. The amount of oil that was released is not known, but the source of the spill was reportedly an oil tank truck. The spill flowed southward through a culvert under the road on the south side of TA-35-86, across the parking lot west of TA-35-207, and south through a natural drainage pathway into Ten Site Canyon. The spill occurred prior to May 9, 1984, the date of documentation photographs. The path of the spill was clearly visible in 1986 aerial photograph. The stained area was also observed in 1991. At that time, all vegetation in the path of the spill was dead and the area still

smelled strongly of oil. The tank farm underwent D&D in 1988/1989. Investigations conducted during 1995 and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the recreational land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The site use must be restricted to recreational activities.

SWMU 35-016(a) is an inactive outfall that was established in 1958 to discharge noncontact cooling water from TA-35-34. The outfall discharged into Ten Site Canyon. The SWMU included an approximately 70-ft-long drainline of undocumented construction, between TA-35-34 and the outfall. The outfall was included on NPDES Permit No. 04A089 until 1985 when it was eliminated from the permit. The volume of cooling water discharged through the outfall is not documented. The site was included in the investigation of CU 35-016(a)-00. Investigations conducted during 1996 and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

AOC 35-016(b) is an inactive outfall, established in 1977, which discharged photographic processing effluents and storm water from roof drains associated with building TA-35-87. The outfall was permitted as NPDES outfall No. 06A132. The effluent discharge volume was limited to 3000 gal/day, released to Ten Site Canyon. Formerly photographic fluids were processed through a silver and cyanide recovery process before being released. The photographic laboratory waste drains that discharged to this outfall were either plugged or rerouted to the sanitary sewer system. Investigations conducted during 1995, 1997, and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-016(c) consists of two inactive outfalls established in 1964 to discharge noncontact cooling water from warehouse TA-35-67. The outfalls were operated under former NPDES Permit No. 04A088 and Permit No. 04A012. The two outfalls were combined prior to 1985 under Permit No. 04A012 and deactivated in 1987. The site was included in the investigation of CU 35-016(c)-00. Investigations conducted during 1996 and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the recreational land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The site use must be restricted to recreational activities.

SWMU 35-016(d) is an inactive outfall that was constructed in 1962 to discharge noncontact cooling water from the Reactor Components Development Building, TA-35-46. This outfall was listed as active on NPDES Permit No. 04A087 in 1985. The outfall became inactive on April 10, 1987. The site was included in the investigation of CU 35-016(c)-00. Investigations conducted during 1996 and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the recreational land use scenario. The results of the ecological risk-

screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The site use must be restricted to recreational activities.

AOC 35-016(e) is an inactive outfall, established in 1977, which discharged noncontact cooling water from building TA-35-85. This outfall was deleted from NPDES Permit No. 04A090 in April 1987. The outfall is located north of TA-35-85 on the rim of Mortandad Canyon and discharged to the steep slope. The volume of water released is not documented, but the erosion that has taken place below the outfall suggests that significant amounts of water were released. The investigations for this site were conducted with the investigation of CU 35-008-00. Investigations conducted during 1995, 1997, and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

AOC 35-016(f) is an active storm drain located north of TA-35-85. The outfall consists of corrugated metal pipe 18 in. in diameter that discharges into small channel cut into backfill material on the south slope of Mortandad Canyon. Documented releases, consisting of oil spills, have occurred near the source area for the storm drain. The volume of spills is not documented. Soil samples from the stained areas contained detectable concentrations of PCBs. Investigations conducted during 1995 and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-016(k) is the site of an inactive outfall that discharged noncontact cooling water from the Gas Laser Building, TA-35-29. The outfall was included on NPDES Permit No. 04A116 and was operational from 1961 to 1987. The outfall discharges into a steep channel lined with riprap that drains into Pratt Canyon. The site was included in the investigation of CU 35-016(k)-00. Investigations conducted during 1994, 1997, 2004, 2005, and 2007 indicate that there are no potential unacceptable risks or doses from the residual contamination for the recreational land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The site use must be restricted to recreational activities.

AOC 35-016(l) is the site of surface discharge channels. The channels were established in 1961 to discharge rainwater runoff from TA-35-29 and water leaks from an ultraviolet water sterilizer in TA-35-29. Stained areas from past dielectric oil spills are present in the source areas for these channels. Radiation data collected from the concrete catch basin for these drains was at levels 50% greater than background gamma radiation readings during 1988 site visit. These drainage channels discharge to the same riprap-lined channel as SWMU 35-016(k). The site was included in the investigation of CU 35-016(k)-00. Investigations conducted during 1994, 1997, 2004, 2005, and 2007 indicate that there are no potential unacceptable risks or doses from the residual contamination for the recreational land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The site use must be restricted to recreational activities.

SWMU 35-016(m) is an inactive noncontact cooling tower outfall. The outfall was included on NPDES Permit No. 03A039 and was intended for discharging treated cooling tower blowdown from two planned reactors in building TA-35-33. The reactors were never installed, the cooling tower never operated, and the outfall never served its intended purpose; instead it discharged storm water runoff from parking areas at the east end of TA-35 mesa top. Investigations conducted during 1994 and 2005 indicate that there are no potential unacceptable risks or doses from the residual contamination for the recreational and residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

AOC 35-016(n) is comprised of a 10 inch diameter corrugated metal pipe outfall, and natural drainage channel installed around 1997 to receive storm water runoff from the roof and paved area south of TA-35-86, and a grassy slope adjacent to building TA-35-207. The source of the outfall is a drainage channel that leads to asphalt-paved catchment basin. The outfall receives flow from the catchment basin via an intake grate. The site was included in the investigation of CU 35-014(g)-00. Investigations conducted during 1995, 1998, and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-016(o) consists of four distinct and active storm drains established in 1951 to handle storm water runoff from TA-35-02. This SWMU also possibly handled TA-35-02 floor drain effluent from rooms A-10, A-13, and A-22. These four outfalls comprising SWMU 35-016(o) are located on the eastern side of the mesa, on the south slope of Mortandad Canyon, approximately 20 ft below the mesa edge. The outfalls consist of cast-iron drainpipes. No documented releases of hazardous materials have occurred at these outfalls. Investigations conducted during 1997, 2004, and 2007 indicate that there are no potential unacceptable risks or doses from the residual contamination for the recreational land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site. The site use must be restricted to recreational activities.

SWMU 35-016(p) is an unpermitted and active outfall established in 1968 to discharge noncontact cooling water condensate from TA-35-27. A separate reference states that this outfall discharges only stormwater runoff from the roof of TA-35-27. The outfall is located north and slightly east of TA-35-27 on the south slope of Mortandad Canyon. No documented releases of hazardous materials have occurred at this outfall. Investigations conducted during 2004 and 2007 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 35-016(q) is an active stormwater outfall and associated trench located southeast of TA-35-34, the Sodium Testing Building. The site was included in the investigation of CU 35-016(a)-00. Investigations conducted during 1996 and 2004 indicate that there are no potential unacceptable risks or doses from the residual contamination for the residential land use scenario.

The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

NMED has determined that the above mentioned sites qualify for certificates of completion indicating that additional corrective action under the Consent Order is not required. Although corrective action is complete under the Consent Order, the Permittees must continue to comply with all applicable state and federal regulations. If new information becomes available that indicates that these sites may pose a risk to human health or the environment, NMED may require additional investigations and corrective action at these sites.

Please contact Neelam Dhawan at (505) 476-6042, if you have any questions.

Sincerely,

John E. Kieling
Chief
Hazardous Waste Bureau

cc: K. Roberts, NMED-RPD
D. Cobrain, NMED HWB
N. Dhawan, NMED HWB
S. Yanicak, NMED DOE OB, MS J993
L. King, EPA 6PD-N
C. Rodriguez, DOE LASO, MS A316
T. Haagenstad, EP-CAP, MS M992

File: 2015 LANL, Certificates of Completion for SWMUs in TA-35, MMTS
LANL 11-068

Completion of Corrective Action at Sites 04-001 and 04-002 in T-SMA-7.1

December 23, 2019

NPDES PERMIT NO. NM0030759

EM2019-0450

NPDES PERMIT NO. NM0030759 **EM2019-0450**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: T010 **T-SMA-7.1** **Sites: 04-001**
04-002

The following certification was performed in accordance with NPDES Permit No. NM0030759, Part I.E.2, which requires the Permittees (U.S. Department of Energy and Newport News Nuclear BWXT-Los Alamos, LLC) to certify the completion of corrective action.

CERTIFICATION STATEMENT OF AUTHORIZATION

"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 there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

Elizabeth Lowes

12-10-2019

Elizabeth Lowes, Program Manager
Environment, Safety and Health
Newport News Nuclear BWXT-Los Alamos, LLC

Date

David Nickless

12/19/19

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

Date

NPDES PERMIT NO. NM0030759 **EM2019-0450**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: T010 **T-SMA-7.1** **Sites: 04-001**
04-002

This document certifies completion of corrective action for Sites 04-001 and 04-002 pursuant to Part 1, E.2(d) of the Individual Permit NM0030759. Accompanying this certification is a copy of the New Mexico Environment Department- (NMED-) issued certificate of completion (COC) letter for Sites 04-001 and 04-002, which are designated as Solid Waste Management Units 04-001 and 04-002 for the purposes of the 2016 Compliance Order on Consent (Consent Order). These sites, listed in Table 1, have achieved Resource Conservation and Recovery Act "corrective action complete without controls" status under the Consent Order. This certification that corrective action is complete was prepared in accordance with 40 Code of Federal Regulations 122.22(b).

In July 2019, a baseline confirmation monitoring sample collected at Site Monitoring Area (SMA) T-SMA-7.1 exceeded target action levels for copper and gross alpha, causing the Permittees to initiate corrective action. The Permittees are certifying completion of corrective action at Sites 04-001 and 04-002 through a demonstration that the sites have achieved a COC, included with this submission, under Section XXI of the Consent Order. A copy of the COCs from NMED is included in Attachment 1.

Table 1
Completion of Corrective Action for Two Sites in T-SMA-7.1

Site	Associated SMA Number	Watershed	Site Priority
04-001	T-SMA-7.1	Mortandad	Moderate
04-002	T-SMA-7.1	Mortandad	Moderate

Attachment 1

Certificate of Completion for Solid Waste Management Units 04-001 and 04-002 (T-SMA-7.1)

ESHID-600446

NEW MEXICO
ENVIRONMENT DEPARTMENT

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SUSANA MARTINEZ
Governor
JOHN A. SANCHEZ
Lieutenant Governor

RYAN FLYNN
Cabinet Secretary
BUTCH TONGATE
Deputy Secretary

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

May 18, 2015

Christine Gelles, Acting Manager
Environmental Projects Office
Los Alamos Field Office, DOE
3747 West Jemez Rd, MS A316
Los Alamos, NM 87544

Michael Brandt, Associate Director
Environment, Safety, Health
Los Alamos National Laboratory
P.O. Box 1663, MS K491
Los Alamos, NM 87545

RE: CERTIFICATES OF COMPLETION
THREE SOLID WASTE MANAGEMENT UNITS
MIDDLE MORTANDAD/TEN SITE AGGREGATE AREA
EPA ID #NM0890010515
HWB-LANL-11-068

Dear Ms. Gelles and Mr. Brandt:

The New Mexico Environment Department (NMED) has received the United States Department of Energy (DOE) and the Los Alamos National Security L.L.C.'s (LANS) (collectively, the Permittees) *Request for Certificates of Completion for Twenty-Seven Solid Waste Management Units and Ten Areas of Concern in the Middle Mortandad/Ten Site Aggregate Area*, dated August 31, 2011 and referenced by EP2011-0297.

Several solid waste management units (SWMUs) and areas of concern (AOC) were recommended for corrective action complete in the *Investigation Report for the Middle Mortandad/Ten Site Aggregate Area, Revision 2* (Report), dated February 2008 (LA-UR-08-0336/EP2008-0035). NMED issued an Approval with Direction (AWD) for the Report on April 1, 2008.

NMED hereby issues certificates of completion without controls for the following sites pursuant to Section VII.E.6.b of the Consent Order.

SWMU 04-001 is an inactive firing pit that was constructed in 1945 and abandoned in 1946 located in former Technical Area (TA) 04. Former TA-04, also known as Alpha Site, lies within the current boundaries of TA-63 and TA-52. The firing pit measured approximately 10 ft. x 10 ft. High explosives (HE) were used as an energy source in firing experiments, and the shots ranged in size from 0.5 to 200 lbs. The debris in the vicinity of the firing pit included wire and sharpnel. Potential contaminants included HE, natural and depleted uranium, lead, and beryllium. In 1985, the pit was cleaned of all debris, backfilled, and contoured. No radioactive soil contamination was detected, non-radioactive contamination was not addressed at that time. The site was subsequently included in the investigation of Consolidated Unit (CU) 04-001-99. Investigations were conducted in 1995, 1998, and 2004 to define the nature and extent of contamination. The results of the investigations indicate that there are no potential unacceptable risks or doses from residual contamination for the industrial and residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 04-002 is a 20-ft. wide canyon-side surface disposal area associated with SWMU 04-001. The site is located on the north-facing slope of Mortandad Canyon, immediately north of SWMU 04-001. After a shot was fired the residual material from the firing site was bulldozed over the edge of the canyon and into the area designated as the surface disposal site. The shot debris consisted of cables, wires, and possibly small amounts of uranium, beryllium, lead, aluminum, and HE. The site was included in the investigation of CU 04-001-99. Investigations were conducted in 1995 and 2004 to define the nature and extent of contamination. The results of investigations indicate that there are no potential unacceptable risks or doses from residual contamination for the industrial and residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 04-003(b) is the former drainline and outfall from a laboratory control building located at former TA-04. The outfall discharged into Mortandad Canyon. The building was demolished and partially removed in 1956. A concrete storm drain, debris, and the drainpipe were removed during a cleanup action conducted in 1985. No radioactive contamination was detected in soils. The site was included in the investigation of CU 04-001-99. Investigations were conducted in 1994, 1995, and 2004 to define the nature and extent of contamination. The results of the investigations indicate that there are no potential unacceptable risks or doses from residual contamination for the industrial and residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

NMED has determined that SWMUs 04-001, 04-002, and 04-003(b) qualify for corrective action complete without controls status. Although corrective action is complete under the Consent Order, the Permittees must continue to comply with all applicable state and federal regulations. If new information becomes available that indicates that these sites may pose a risk to human health or the environment, NMED may require additional investigations and corrective action at these sites.

Please contact Neelam Dhawan at (505) 476-6042, if you have any questions.

Sincerely,

John E. Kieling
Chief
Hazardous Waste Bureau

cc: K. Roberts, NMED-RPD
D. Cobrain, NMED HWB
N. Dhawan, NMED HWB
S. Yanicak, NMED DOE OB, MS J993
L. King, EPA 6PD-N
C. Rodriguez, DOE LASO, MS A316
T. Haagenstad, EP-CAP, MS M992

File: 2015 LANL, Certificates of Completion for SWMUs in MMTS
LANL 11-068

Completion of Corrective Action at Site 04-003(b) in T-SMA-7

December 23, 2019

NPDES PERMIT NO. NM0030759

EM2019-0463

NPDES PERMIT NO. NM0030759 **EM2019-0463**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: T009 **T-SMA-7** **Site: 04-003(b)**

The following certification was performed in accordance with NPDES Permit No. NM0030759, Part I.E.2, which requires the Permittees (U.S. Department of Energy and Newport News Nuclear BWXT-Los Alamos, LLC) to certify the completion of corrective action.

CERTIFICATION STATEMENT OF AUTHORIZATION

"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 there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

Elizabeth Lowes, Program Manager
Environment, Safety and Health
Newport News Nuclear BWXT-Los Alamos, LLC

12-10-2019
Date

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

12/19/19
Date

NPDES PERMIT NO. NM0030759 **EM2019-0463**

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC
CERTIFICATION OF COMPLETION OF CORRECTIVE ACTION

PF: T009 **T-SMA-7** **Site: 04-003(b)**

This document certifies completion of corrective action for Site 04-003(b) pursuant to Part 1, E.2(d) of the Individual Permit NM0030759. Accompanying this certification is a copy of the New Mexico Environment Department- (NMED-) issued certificate of completion (COC) letter for Site 04-003(b), which is designated as Solid Waste Management Unit 04-003(b) for the purposes of the 2016 Compliance Order on Consent (Consent Order). This site, listed in Table 1, has achieved Resource Conservation and Recovery Act "corrective action complete without controls" status under the Consent Order. This certification that corrective action is complete was prepared in accordance with 40 Code of Federal Regulations 122.22(b).

In September 2017, a baseline confirmation monitoring sample collected at Site Monitoring Area (SMA) T-SMA-7 exceeded target action levels for gross alpha, causing the Permittees to initiate corrective action. The Permittees are certifying completion of corrective action at Site 04-003(b) through a demonstration that the site has achieved a COC, included with this submission, under Section XXI of the Consent Order. A copy of the COC from NMED is included in Attachment 1.

Table 1
Completion of Corrective Action for One Site in T-SMA-7

Site	Associated SMA Number	Watershed	Site Priority
04-003(b)	T-SMA-7	Mortandad	Moderate

Attachment 1

Certificate of Completion for Solid Waste Management Unit 04-003(b) (T-SMA-7)

ESHID-600446

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Cabinet Secretary
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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

May 18, 2015

Christine Gelles, Acting Manager
Environmental Projects Office
Los Alamos Field Office, DOE
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Los Alamos, NM 87544

Michael Brandt, Associate Director
Environment, Safety, Health
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RE: CERTIFICATES OF COMPLETION
THREE SOLID WASTE MANAGEMENT UNITS
MIDDLE MORTANDAD/TEN SITE AGGREGATE AREA
EPA ID #NM0890010515
HWB-LANL-11-068

Dear Ms. Gelles and Mr. Brandt:

The New Mexico Environment Department (NMED) has received the United States Department of Energy (DOE) and the Los Alamos National Security L.L.C.'s (LANS) (collectively, the Permittees) *Request for Certificates of Completion for Twenty-Seven Solid Waste Management Units and Ten Areas of Concern in the Middle Mortandad/Ten Site Aggregate Area*, dated August 31, 2011 and referenced by EP2011-0297.

Several solid waste management units (SWMUs) and areas of concern (AOC) were recommended for corrective action complete in the *Investigation Report for the Middle Mortandad/Ten Site Aggregate Area, Revision 2* (Report), dated February 2008 (LA-UR-08-0336/EP2008-0035). NMED issued an Approval with Direction (AWD) for the Report on April 1, 2008.

NMED hereby issues certificates of completion without controls for the following sites pursuant to Section VII.E.6.b of the Consent Order.

SWMU 04-001 is an inactive firing pit that was constructed in 1945 and abandoned in 1946 located in former Technical Area (TA) 04. Former TA-04, also known as Alpha Site, lies within the current boundaries of TA-63 and TA-52. The firing pit measured approximately 10 ft. x 10 ft. High explosives (HE) were used as an energy source in firing experiments, and the shots ranged in size from 0.5 to 200 lbs. The debris in the vicinity of the firing pit included wire and sharpnel. Potential contaminants included HE, natural and depleted uranium, lead, and beryllium. In 1985, the pit was cleaned of all debris, backfilled, and contoured. No radioactive soil contamination was detected, non-radioactive contamination was not addressed at that time. The site was subsequently included in the investigation of Consolidated Unit (CU) 04-001-99. Investigations were conducted in 1995, 1998, and 2004 to define the nature and extent of contamination. The results of the investigations indicate that there are no potential unacceptable risks or doses from residual contamination for the industrial and residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 04-002 is a 20-ft. wide canyon-side surface disposal area associated with SWMU 04-001. The site is located on the north-facing slope of Mortandad Canyon, immediately north of SWMU 04-001. After a shot was fired the residual material from the firing site was bulldozed over the edge of the canyon and into the area designated as the surface disposal site. The shot debris consisted of cables, wires, and possibly small amounts of uranium, beryllium, lead, aluminum, and HE. The site was included in the investigation of CU 04-001-99. Investigations were conducted in 1995 and 2004 to define the nature and extent of contamination. The results of investigations indicate that there are no potential unacceptable risks or doses from residual contamination for the industrial and residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 04-003(b) is the former drainline and outfall from a laboratory control building located at former TA-04. The outfall discharged into Mortandad Canyon. The building was demolished and partially removed in 1956. A concrete storm drain, debris, and the drainpipe were removed during a cleanup action conducted in 1985. No radioactive contamination was detected in soils. The site was included in the investigation of CU 04-001-99. Investigations were conducted in 1994, 1995, and 2004 to define the nature and extent of contamination. The results of the investigations indicate that there are no potential unacceptable risks or doses from residual contamination for the industrial and residential land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

NMED has determined that SWMUs 04-001, 04-002, and 04-003(b) qualify for corrective action complete without controls status. Although corrective action is complete under the Consent Order, the Permittees must continue to comply with all applicable state and federal regulations. If new information becomes available that indicates that these sites may pose a risk to human health or the environment, NMED may require additional investigations and corrective action at these sites.

Please contact Neelam Dhawan at (505) 476-6042, if you have any questions.

Sincerely,

John E. Kieling
Chief
Hazardous Waste Bureau

cc: K. Roberts, NMED-RPD
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File: 2015 LANL, Certificates of Completion for SWMUs in MMTS
LANL 11-068