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October 24, 2022

Arturo Duran,
Designated Agency Manager
U.S. Department of Energy-Environmental Management
Los Alamos Field Office
1200 Trinity Drive, Suite 400
Los Alamos, NM 87544

RE: REVIEW OF REQUEST FOR CERTIFICATES OF COMPLETION WITH CONTROLS FOR FIVE SOLID WASTE MANAGEMENT UNITS IN THE CANON DE VALLE AGGREGATE AREA AND ONE SOLID WASTE MANAGEMENT UNIT AND ONE AREA OF CONCERN IN THE S-SITE AGGREGATE AREA LOS ALAMOS NATIONAL LABORATORY
EPA ID#NM0890010515
HWB-LANL-21-016

Dear Mr. Duran:

On March 9, 2021, the New Mexico Environment Department (NMED) received the United States Department of Energy (DOE), *Request for Certificates of Completion for Five Solid Waste Management Units in the Canon De Valle Aggregate Area, and One Solid Waste Management Unit and One Area of Concern in the S-Site Aggregate Area* (Request) referenced by EMLA-2021-0152-02-001.

The Canon de Valle Aggregate Area was investigated, and the results were reported in the *Response to the Notice of Disapproval for the Phase 2 Investigation Report for the TA-16-340 Complex, Solid Waste Management Units 13-003(a), 16-003(n)-99, 16-003(o), 16-026(j2), 16-029(f), and Area of Concern 13-003(b) at Technical Area 16, Revision 1* (Phase 2 IR) dated and received January 22, 2009 (referenced by LA-UR-09-0309/EP2009-0016).

On February 9, 2009, NMED issued an Approval with Modification for the Phase 2 IR. The potential migration of contaminated sediments from solid waste management unit (SWMU) 16-003(o) was to be addressed through institutional controls and surface and ground water monitoring. NMED also noted that the evaluation of the inhalation risk to construction workers will be required for all SWMUs except SWMU 16-026(j2) and 16-029(f), in the event that these sites were developed.

For institutional controls, best management practices (BMPs) were installed in 2010, and annual periodic monitoring reports were submitted on Fishladder Canyon from 2010-2017 (SWMU 16-003(o)). In 2017, NMED approved the DOE's request to reduce the reporting frequency from annually to biennially due to stable site conditions. Surface water is currently being monitored under the storm water individual permit (IP) under the National Pollutant Discharge Elimination System (NPDES). Groundwater and alluvial water at SWMU 16-003(o) are also being monitored under the Interim Facility-Wide Groundwater Monitoring Plan (IFGMP).

SWMU 16-003(n), the sump which received high explosive waste from former building 16-0342 and was included in consolidated unit SWMU 16-003(n)-99. The sump was a rectangular tank with dimensions approximately 5 ft long by 3 ft wide by 4 ft deep. The sump walls and bottom were constructed of 6-in.-thick, steel-reinforced concrete and lined with 0.25-in.-thick aluminum. The sump also had a removable 0.25-in.-thick aluminum lid. The sump removed suspended solids from process water before it was discharged to the outfall. HE fines were collected in a cloth filter bag and secured inside a metal filter basket.

The SWMU was investigated in 1995, 2005, and 2008 to define the nature and extent of contamination at the site. The results presented in the Phase 2 IR indicate that SWMU 16-003(n), does pose a risk under a residential land use scenario. SWMU 16-003(n) had calculated hazard index (HI) of 2, which is greater than the NMED target HI of 1.0 and had an excess cancer risk of 2.0E-05, which is greater than the NMED target risk of 1.0E-05.SWMU 16-003(n), also poses a risk under the under the construction worker scenario. SWMU 16-003(n) had calculated hazard index (HI) of 6, which is greater than the NMED target HI of 1.0 but had an excess cancer risk of 2.0E-07, which is less than the NMED target risk of 1.0E-05.

The results presented in the Phase 2 IR indicate that SWMU 16-003(n) does not pose an unacceptable risk to human health under the industrial land use scenario and does not pose a risk to ecological receptors. However, since SWMU 16-003(n) poses risk under the construction worker and residential land use scenario, NMED is issuing a certificate of completion with controls. The control for the site is industrial land use only.

SWMU 16-026(j2), was a drainline and outfall which received HE contaminated waste from former building 16-345 and sump (SMWU 16-029(f)) which served as an HE rest house. The drainline consisted of vitrified clay pipe and discharged by washdown due to cleaning activities at the rest house.

The SWMU was investigated in 1995, 2005, and 2008 to define the nature and extent of contamination at the site.

The results presented in the Phase 2 IR indicate that SWMU 16-026(j2) (combined with 16-029(f)) poses a moderate risk under the residential land use scenario. SWMU 16-026(j2) had calculated maximum hazard index (HI) of 0.4, which is greater than the NMED target HI of 1.0 but had an excess cancer risk of 6.0E-05, which is greater than the NMED target risk of 1.0E-05. The results of the Phase 2 IR indicate that the SWMU 16-026(j2) does not pose an unacceptable risk to human health under the industrial land-use scenario and does not pose an unacceptable risk to ecological receptors. The site also poses an unacceptable to risk human health under the construction worker scenario, with a hazard index of 2.0, which is greater than the NMED target of 1.0.

Since the site poses an unacceptable risk under residential and construction worker scenarios the site must be used for industrial use only. The SWMU must continue to have erosional controls (BMPs) that must be maintained and regularly inspected by the DOE. The DOE must continue to monitor sediment deposition, surface water and groundwater contamination at this site. The DOE must continue to comply with all other applicable state and federal regulations. The control for the site is industrial land use only.

SWMU 16-029(f), was an inactive HE sump associated with former HE rest house 16-045. The sump was a rectangular tank with dimensions approximately 8 ft long by 4 ft wide by 5 ft deep. The walls and

bottom were constructed of 8-in.-thick, steel-reinforced concrete. The sump had a removable 0.25-in.-thick aluminum lid. The sump operations were the same as for Consolidated Unit 16-003(n)-99. The sump was connected to a 6-in. VCP, which discharged to an outfall (SWMU 16-026(j2)) that was not visible on the surface.

The SWMU was investigated in 1995, 2005, and 2008 to define the nature and extent of contamination at the site.

The results presented in the Phase 2 IR indicate that SWMU 16-029(f) (combined with 16-026(j2)) poses a moderate risk under the residential land use scenario. SWMU 16-026(j2) had calculated maximum hazard index (HI) of 0.4, which is greater than the NMED target HI of 1.0 but had an excess cancer risk of 6.0E-05, which is greater than the NMED target risk of 1.0E-05. The results of the Phase 2 IR indicate that the SWMU 16-029(f) does not pose an unacceptable risk to human health under the industrial land-use scenario and does not pose an unacceptable risk to the ecological receptors. The site also poses an unacceptable to risk human health under the construction worker scenario, with a hazard index of 2.0, which is greater than the NMED target of 1.0.

Since the site poses an unacceptable risk under residential and construction worker scenarios the site must continue to be used for industrial use only. The SWMU must continue to have erosional controls (BMPs) must be maintained and regularly inspected by the DOE. The DOE must continue to monitor sediment deposition, surface water and groundwater contamination at this site. The DOE must continue to comply with all other applicable state and federal regulations. The control for the site is industrial land use only.

SWMU 13-003(a), was septic tank which received liquids from an office and shop building (former building P-1 which was renumbered to 16-0375) which was associated with implosion and initiator testing. The septic tank received waste from the building's restroom and darkroom. The septic tank operated from the early 1940s to 1951 when then septic tank was decommissioned and removed to construct building 16-340. The soil near the septic tank was also leveled, as part of the construction work for building 16-340.

The SWMU was part of consolidated unit SWMU 13-003(a)-99 and which also included AOC 13-003(b). The consolidated unit was investigated in 1995, 2005, and 2008 to define the nature and extent of contamination at the site.

The results presented in the Phase 2 IR indicate that consolidated unit 13-003(a)-99 poses a moderate risk under the residential land use scenario. The consolidated unit 13-003(a)-99 had calculated maximum hazard index (HI) of 0.9, which is less than the NMED target HI of 1.0 but had an excess cancer risk of 2.0E-05, which is greater than the NMED target risk of 1.0E-05. The results of the Phase 2 IR indicate that the consolidated unit 13-003(a)-99 does not pose an unacceptable risk to human health under the industrial land-use scenario and does not pose an unacceptable risk to ecological receptors. NMED notes that the total excess cancer risk was 1.0E-5 under the industrial scenario which is equivalent to NMED target risk of 1.0E-05. The consolidated unit 13-003(a)-99 also poses an unacceptable to risk human health under the construction worker land use scenario, with a hazard index of 8.0, which is greater than the NMED target of 1.0.

Since the site poses an unacceptable risk under residential and construction worker scenarios the site must continue to be used for industrial use only. The SWMU must continue to have erosional controls (BMPs) must be maintained and regularly inspected by the DOE. The DOE must continue to monitor sediment deposition, surface water and groundwater contamination at this site. The DOE must

continue to comply with all other applicable state and federal regulations. The control for the site is industrial land use only.

AOC 13-003(b) was a drain field associated with former septic tank SWMU 13-003(a) and received liquids from a from an office and shop building (former building P-1) which was later renumbered to 16-0375. Building 16-0375 was associated with implosion and initiator testing. The septic tank and drainlines received waste from the building's restroom and darkroom. The septic tank operated from the early 1940s to 1951 when the septic tank was decommissioned and removed to construct building 16-340. The soil near the drainlines was also leveled, as part of the construction work for building 16-340, but the drainlines were left in place.

The AOC was part of consolidated unit SWMU 13-003(a)-99 which also included SWMU 13-003(a). The consolidated unit was investigated in 1995, 2005, and 2008 to define the nature and extent of contamination at the site.

The results presented in the IR indicate that consolidated unit 13-003(b) poses a moderate risk under the residential land use scenario. The consolidated unit 13-003(b) had calculated maximum hazard index (HI) of 0.9, which is less than the NMED target HI of 1.0 but had an excess cancer risk of 2.0E-05, which is greater than the NMED target risk of 1.0E-05. The results of the Phase 2 IR indicate that the consolidated unit 13-003(b) does not pose an unacceptable risk to human health under the industrial land-use scenario and does not pose an unacceptable risk to ecological receptors. NMED notes that the total industrial excess cancer risk was 1.0E-5 under the industrial scenario which is equivalent to NMED target of 1.0E-05. The consolidated unit 13-003(b) also poses an unacceptable to risk human health under the construction worker land use scenario, with a hazard index of 8.0, which is greater than the NMED target of 1.0.

Since the site poses an unacceptable risk under residential and construction worker land use scenarios the site must continue to be used for industrial use only. The SWMU must continue to have erosional controls (BMPs) that must be maintained and regularly inspected by the DOE. The DOE must continue to monitor sediment deposition, surface water and groundwater contamination at this site. The DOE must continue to comply with all other applicable state and federal regulations. The control for the site is industrial land use only.

NMED hereby issues certificates of completion with controls for SWMU 16-003(n), SWMU 16-026(j2), SWMU 16-029(f), 13-003(a), and AOC 13-003(b). The controls for these sites are industrial land use only. NMED notes that the recreation land use scenario has not been evaluated for these sites.

SWMU 16-003(o), consisted of six (6) sumps which received high explosive plastic waste, royal demolition explosive (RDX) and Her Majesty's Explosive (HMX), as well as solvent contaminated waste from former building 16-0340 from 1955 to 1999. The sumps and drainlines discharged to the outfall 16-340, located in Fishladder Canyon. Outfall 16-340 was also known as 'Fishladder outfall', due to the air stripper installed in the 1980s which resembled a fishladder. In 2005, the building 16-0340, manhole covers, air stripper (fishladder), and vitrified clay drainlines were removed during excavation and sampling activities.

The SWMU was investigated in 1995, 2005, and 2008 to define the nature and extent of contamination at the site. Due to the site history, SWMU 16-003(o) specifically evaluated the vertical extent of contamination for isotopic uranium. NMED also notes that the Phase 2 IR did not evaluate recreational land use scenario.

The results presented in the Phase 2 IR indicate that SWMU 16-003(o), poses a moderate risk under the residential land use scenario. SWMU 16-003(o) had calculated HI of 2, which is greater than the NMED target HI of 1.0 and had an excess cancer risk of 3.0E-05, which is greater than the NMED target risk of 1.0E-05. The results of the Phase II IR indicate that the SWMU 16-003(o) poses an unacceptable risk to human health under the industrial land-use scenario since the site had an excess cancer risk of 3.0E-05 which is greater than the NMED target risk of 1.0E-05. The site also poses an unacceptable to risk human health under the construction worker land use scenario, with a hazard index of 3.0, which is greater than the NMED target of 1.0. However, SWMU 16-003(o) does not pose an unacceptable risk to ecological receptors.

NMED cannot issue a certificate of completion SWMU 16-003(o) at this time, since the site poses an unacceptable risk under residential, industrial, and construction worker land use scenarios. The SWMU must continue to have erosional controls (BMPs) that must be maintained and be regularly inspected by the DOE. The DOE must continue to monitor sediment deposition, surface water and groundwater contamination at this site. The DOE must continue to comply with all other applicable state and federal regulations.

If new information becomes available that indicates that the site may pose an unacceptable risk to human health or the environment, NMED may require additional investigations and/or corrective action at this site.

If you have any questions regarding this letter, please contact Siona Briley of my staff at (505) 690-5160 or via email at siona.briley@env.nm.gov.

Sincerely,

Rick Shean

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Rick Shean
Chief
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File: 2022 LANL TA-16, Approval Request for Certificate of Completion for 5 SWMU in the Canon De Valle Aggregate Area and 1 AOCs at S-Site Aggregate Area
LANL-21-016