



September 2, 2021

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: APPROVAL  
REQUEST FOR CERTIFICATES OF COMPLETION FOR 11 SOLID WASTE MANAGEMENT UNITS  
AND 3 AREAS OF CONCERN IN THE UPPER LOS ALAMOS CANYON AGGREGATE AREA  
LOS ALAMOS NATIONAL LABORATORY  
EPA ID#NM0890010515  
HWB-LANL-21-033**

Dear Arturo Duran:

The New Mexico Environment Department (NMED) has received the United States Department of Energy (DOE) Environmental Management Los Alamos Field Office (EM-LA) *Request for Certificates of Completion for Eleven Solid Waste Management Units and Three Areas of Concern in the Upper Los Alamos Canyon Aggregate Area* dated and received June 25, 2021, and referenced by EMLA-2021-BF109-02-001/ EMID-7041495.

The proposed investigations for these solid waste management units (SWMUs) and areas of concern (AOCs) were included in the *Phase II Investigation Work Plan for Upper Los Alamos Canyon Aggregate Area*, submitted on October 21, 2010. On January 19, 2011, NMED approved the *Modified Phase II Investigation Work Plan for Upper Los Alamos Canyon Aggregate Area*. The second phase of sampling occurred in September 2017, and on September 27, 2018, NMED received the *Phase II Investigation Report for the Upper Los Alamos Canyon Aggregate Area* (IR) summarizing the results of investigations.

**NMED hereby issues certificates of completion without controls for the following sites:** AOC C-00-044, SWMU 01-001(a), SWMU 01-001(s2), SWMU 01-003(b2), AOC 01-006(e), SWMU 01-007(c), SWMU 03-038(a), SWMU 03-038(b), AOC C-43-001, SWMU 32-002(b2), and SWMU 32-002(b2).

**AOC C-00-044** was a site of surface contamination from the historic use of lead-based paint on Omega Bridge which was constructed in 1951. Historically, lead paint chips were periodically scraped off and left at the base of the bridge as part of maintenance operations. The AOC was identified in 1999 during the Resource Conservation and Recovery Act Facility Investigation (RFI) activities for the industrial waste line (SWMU 00-017) but after more research, the lead was attributed to maintenance on the bridge, and the site was designated as an area of concern, AOC C-00-044.

Investigations were conducted in 2011 and 2013 to define the nature and extent of contamination. The results of investigations provided in the IR indicate that the AOC C-00-044 does not pose an unacceptable risk to human health under the industrial, construction, and residential land use scenarios and does not pose an unacceptable risk to ecological receptors.

**SWMU 01-001(a)** was a former septic system that included former septic tank 134 and an outfall at former Technical Area (TA) 01. The septic tank served the sheet metal shop and was in use from 1949 to 1964, the septic tank was removed in 1975 during the Ahlquist Radiological Survey and found to have no radiological contamination and disposed of at Material Disposal Area (MDA) G.

Investigations were conducted in 1992, 2008, 2011- 2012 to define the nature and extent of contamination. The results of investigations provided in the IR indicate that the SWMU 01-001(a) does not pose an unacceptable risk to human health under the industrial, construction, and residential land use scenarios and does not pose an unacceptable risk to ecological receptors.

**SWMU 01-001(s2)** was a sanitary waste line that consisted of vitrified clay pipe and received effluent waste from former buildings: A, B, C, D, G, M, V, Sigma, and boiler house 1 at TA-01. The waste line and septic tank (SWMU 00-030(g)) were installed, but the year of installation was not recorded, it is believed to have been installed in "the early days of the laboratory". The tank and portions of the waste line were removed in 1960. Additional portions of the waste line were removed in 1970 and as part of the Ahlquist Radiological Survey. SWMU 01-001(s2) was originally part of SWMU 01-001(s) but was split into two SWMUs: 01-001(s1) and 01-001(s2). SWMU 01-001(s2) was later split into two different SWMUs: 01-00(s2) and 01-001(s3). The SWMU 01-001(s) was split into different SWMUs because each component is located on properties owned by different entities and were not accessible for investigation. The split was achieved through a permit modification request, which was approved by NMED in 2016.

Investigations were conducted in 1994, 1996, 2008, 2009, and 2012 to define the nature and extent of contamination. The results of investigations provided in the IR indicate that the SWMU 01-001(s2) does not pose an unacceptable risk to human health under the industrial, construction, and residential land use scenarios and does not pose an unacceptable risk to ecological receptors.

**AOC 01-003(b2)** was a suspected surface disposal site, when the site was surveyed pieces of piping were observed on the hillslope. AOC 01-003(b2) was originally part of former AOC 01-003(b) but was split into two AOCs: 01-003(b1) and 01-003(b2). AOC 01-003(b2) was split into different AOCs because each component is located on properties owned by different entities and the entire site was not accessible for investigation. The split was achieved through a permit modification request, which was approved by NMED in 2016.

Investigations were conducted in 2008 and 2016 to define the nature and extent of contamination. The results of investigations provided in the IR indicate that the AOC 01-003(b2) does not pose an unacceptable risk to human health under the industrial, construction, and residential land use scenarios and does not pose an unacceptable risk to ecological receptors.

**AOC 01-006(e)** consisted of two former drain lines and an outfall that discharged sanitary wastewater into Ashley Pond from building P at TA 01. Building P was removed in 1959 and replaced with a parking lot and the drain lines are currently located under Trinity Drive.

Investigations were conducted in 1992, 2008, 2012, and 2017 to define the nature and extent of contamination. The results of investigations provided in the IR indicate that the SWMU 01-006(e) does not pose an unacceptable risk to human health under the industrial, construction, and residential land use scenarios and does not pose an unacceptable risk to ecological receptors.

**SWMU 01-007(c)** was a site of potential soil contamination from a clay-tile waste line from former building D at TA 01. Plutonium contamination was discovered at the SWMU during the 1975 Ahlquist Radiological Survey and approximately 1300 cubic meters of contaminated soil were removed.

Investigations were conducted in 2008 and 2012 to define the nature and extent of contamination. The results of investigations provided in the IR indicate that the SWMU 01-007(c) does not pose an unacceptable risk to human health under the industrial, construction, and residential land use scenarios and does not pose an unacceptable risk to ecological receptors.

**SWMU 03-038(a)** was a former acid-neutralization and pumping building that received waste from buildings 03-0029, 03-0066 and transferred it to the Radioactive Liquid Waste Treatment Facility at TA 45. SWMU 03-038(a) was built in 1952 and was demolished in 1975, and contaminated soils were removed as a result of the Ahlquist survey in which gross alpha was detected at the site. The building, waste lines, pump station, concrete tanks, and structure 03-738 were removed and disposed of in 1981 at TA 54.

Investigations were conducted in 2008 and 2012 to define the nature and extent of contamination. The results of investigations provided in the IR indicate that the SWMU 03-038(a) does not pose an unacceptable risk to human health under the industrial, construction, and residential land use scenarios and does not pose an unacceptable risk to ecological receptors.

**SWMU 03-038(b)** was a waste holding tank that was used as part of an acid-neutralization and pumping building that received waste from buildings 03-0029, 03-0066 and transferred it to the Radioactive Liquid Waste Treatment Facility at TA 45. The tank (SWMU 03-038(b)) was built in 1952 and was demolished in 1975, and contaminated soils were removed as a result of the Ahlquist survey in which gross alpha was detected at the site. The concrete tank was removed and disposed of in 1981 at TA 54.

Investigations were conducted in 2008 to define the nature and extent of contamination. The results of investigations provided in the IR indicate that the SWMU 03-038(b) does not pose an unacceptable risk to human health under the industrial, construction, and residential land use scenarios and does not pose an unacceptable risk to ecological receptors.

**SWMU 32-002(b2)** was a septic tank that received waste from a medical research facility from 1944 to 1953. The tank was removed in 1988, and the drain line was removed in 1996. SWMU 32-002(b2) was originally part of former SWMU 32-002(b) but was split into two SWMUs: 32-002(b1) and 32-002(b2). SWMU 32-002(b) was split into two sites because each component is located on properties owned by different entities and to expedite clean-up of the accessible portions in 2013.

Investigations were conducted in 1996, 2008, 2013, 2015 to define the nature and extent of contamination. The results of investigations provided in the IR indicate that the SWMU 32-002(b) does not pose an unacceptable risk to human health under the industrial, construction, and residential land use scenarios and does not pose an unacceptable risk to ecological receptors.

**AOC C-43-001** was a storm drain outfall that collected runoff from the Health Research Laboratory (HRL) (building 43-0010) and discharged it into the Los Alamos Canyon at TA-43. AOC C-43-001 did not receive any effluent from other SWMUs or AOCs except the HRL but may have received radioactive non-sanitary waste from the cooling tower nearby.

Investigations were conducted in 2008, 2011, 2013, and 2015 to define the nature and extent of contamination. The results provided indicate that AOC C-43-001 does not pose an unacceptable risk to human health under the industrial, construction, and residential land use scenarios and does not pose an unacceptable risk to ecological receptors.

**NMED hereby issues certificates of completion with controls for the following sites:** SWMU 01-001(d3), SWMU 01-003(d), and SWMU 61-007. The control for these sites is industrial land use only.

**SWMU 01-001(d3)** was a site of potential soil contamination from septic tank 138, that received wastewater from former buildings K, Y, and V at TA 41. The waste lines and tank 138 were installed in 1943 and the tank was removed in 1975 during the Ahlquist Radiological Survey. SWMU 01-001(d3) was originally part of former SWMU 01-001(d) but was split into three SWMUs: SWMU 01-001(d1), SWMU 01-001(d2), and SWMU 01-001(d3). The SWMU 01-001(d) was split into 3 sites because each component is located on properties owned by different entities and the entire site not being accessible for investigations. The split was done through a permit modification request, which was approved by NMED in 2016.

Investigations were conducted in 1992, 2008-2009, 2011- 2012, 2013, and 2017 to define the nature and extent of contamination. The results of investigations provided in the IR indicate that the SWMU 01-001(d3) does not pose an unacceptable risk to human health under the industrial and construction land use scenarios and does not pose an unacceptable risk to ecological receptors. However, SWMU 01-001(d3) does pose an unacceptable risk under the residential land use scenario with a Hazard Index (HI) of 2, which is greater than the NMED target HI of 1. The site is also reported to have an unacceptable dose of 43 mrem/yr., which is greater than the DOE's recommended dose of 25 mrem/yr. due to the presence of plutonium-239/240 and strontium-90.

**SWMU 01-003(d)** was a former surface disposal site, previously known as Can Dump Site which was used for the surface disposal of empty lead-based paint cans in the 1940s-1950s.

Investigations were conducted in 1992, 1995, 2008, and 2017 to define the nature and extent of contamination. The results of investigations provided in the IR indicate that the SWMU 01-003(d) does not pose an unacceptable risk to human health under the industrial and construction land use scenarios and does not pose an unacceptable risk to ecological receptors. However, SWMU 01-003(d) does pose an unacceptable risk under the residential land use scenario with an HI of 3, which is greater than the NMED target HI of 1.

**SWMU 61-007** was a former transformer staging site, but the years of use are not known. The site was discovered during an inspection in 1989, and the presence of polychlorinated biphenyl (PCBs) in soil was confirmed through soil samples collected from the site. The site is currently under a paved road and parking area which serves a municipal landfill for Los Alamos County.

Investigations were conducted in 2009 and 2014 to define the nature and extent of contamination. The results of investigations provided in the IR indicate that the SWMU 61-007 does not pose an unacceptable risk to human health under the industrial and construction land use scenarios and does not pose an unacceptable risk to ecological receptors. However, SWMU 61-007 does pose an unacceptable risk under the residential land use scenario with a total excess cancer risk of  $4.0 \text{ E}^{-5}$ , which is greater than the NMED target excess cancer risk value of  $1.0 \text{ E}^{-5}$  and is due to the presence of organic contaminants and PCBs.

**NMED cannot make a determination of corrective action complete at site SWMU 01-006(a) at this time.**

**SWMU 01-006(a)** was a former drain line and outfall which served cooling tower 80 at TA 01. The cooling tower was installed in 1944 and removed in 1954, but the drain line was left in place. Biocides containing chromium were commonly used at the time of operation. A portion of the drain line is located under one of the Los Arboles condominium buildings.

Investigations were conducted in 1987, 1992, 2008, 2012, and 2017 to define the nature and extent of contamination. The results provided for the area that was accessible for investigation indicate that the SWMU 01-006(a) does not pose an unacceptable risk to human health under the industrial, construction, and residential land use scenarios and does not pose an unacceptable risk to ecological receptors in the portions which accessible and investigated. However, since portion of the drain lines that is located under the condominium building, was not accessible and has not been investigated NMED cannot make a determination of corrective action complete at this time and cannot approve a certificate of completion for this site.

If any new information becomes available that indicates that the 10 SWMUs and 3 AOCs that are approved for corrective action complete in this letter may pose an unacceptable risk to human health or the environment, NMED may require additional investigations and/or corrective action.

If you have any questions regarding this letter, please contact Siona Briley (505) 690-5160.

Sincerely,

**Ricardo Maestas** Digitally signed by Ricardo Maestas  
Date: 2021.09.02 14:13:24 -06'00'

Ricardo Maestas  
Acting Chief  
Hazardous Waste Bureau

cc:

N. Dhawan, NMED HWB  
M. Schatz, NMED HWB

Arturo Duran

Page 6

K. Rich, N3B

C. Rodriguez, EM-LA

E. Day, EM-LA

W. Alexander, EM-LA

P. Maestas, EM-LA

[emla.docs@em.doe.gov](mailto:emla.docs@em.doe.gov)

[n3brecords@em-la.doe.gov](mailto:n3brecords@em-la.doe.gov)

File: 2021 LANL, Approval for COCs for 10 SWMUs and 3 AOC in the Upper Los Alamos Canyon AA  
LANL-21-033