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Date: JUN 22 2017
Refer To: ADEM-17-0146
LAUR: LA-UR-17-24798
Locates Action No.: n/a

John Kieling, Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Subject: Request for Certificate of Completion without Controls for Solid Waste Management Unit 01-001(s3) in the Upper Los Alamos Canyon Aggregate Area

Dear Mr. Kieling:

The U.S. Department of Energy (DOE) and Los Alamos National Security, LLC (LANS) have completed the investigation of Solid Waste Management Unit (SWMU) 01-001(s3) pursuant to the June 2016 Compliance Order on Consent (Consent Order). SWMU 01-001(s3) consists of that portion of former SWMU 01-001(s) located within the property owned by the Hutton Team, LLC, and the site of the former Chevron gas station within the Los Alamos townsite. SWMU 01-001(s3) was created by a modification to the Los Alamos National Laboratory (the Laboratory) hazardous waste facility permit, approved by the New Mexico Environment Department (NMED) on May 24, 2017 (HWB-LANL-17-025). SWMU 01-001(s3) was created to expedite obtaining a certificate of completion for this site in advance of the completion of corrective actions for the remainder of former SWMU 01-001(s). The Hutton Team, LLC, property is currently vacant and is being prepared for commercial development that is contingent upon obtaining a certificate of completion without controls, indicating no further corrective actions are required under the Consent Order. This property also contains a portion of SWMU 01-006(o). SWMU 01-006(o) received a certificate of completion without controls on September 10, 2010 (HWB-LANL-10-056).

Former SWMU 01-001(s) was initially investigated in 2008 under the 2005 Consent Order as part of the Upper Los Alamos Canyon Aggregate Area investigation. The results of the investigation were included in the Investigation Report for Upper Los Alamos Canyon Aggregate Area, Revision 1 (LA-UR-10-0422), submitted to NMED on February 2, 2010, and approved by NMED on April 21, 2010 (HWB-LANL-09-020). The investigation report concluded that the extent of contamination had not been defined for former SWMU 01-001(s). This conclusion, however, applied to former SWMU 01-001(s) in its entirety, not the portion of the SMWU on the Hutton Team, LLC, property. Because extent was not defined, the risk associated with former SWMU 01-001(s) was not evaluated. Additional sampling to define the extent of contamination for SWMU 01-001(s) was proposed in the Phase II Investigation Work Plan for Upper Los Alamos

Canyon Aggregate Area (LA-UR-10-6327), submitted to NMED on October 21, 2010, and approved by NMED on January 19, 2011 (HWB-LANL-10-080). The approved Phase II investigation work plan did not propose collecting additional samples from within the Hutton Team, LLC, property.

On November 9, 2016, NMED approved a modification to the Laboratory's hazardous waste facility permit (HWB-LANL-16-054) that included splitting former SWMU 01-001(s) into two new SWMUs designated as SWMU 01-001(s1) and SWMU 01-001(s2). The former consists of that portion of SWMU 01-001(s) on the former Los Alamos Inn property, and the latter consists of that portion of SWMU 01-001(s) on other private properties. This modification was made to expedite completion of Consent Order corrective actions at the former Los Alamos Inn property, which is also undergoing commercial development.

In early 2016, private parties began the process of acquiring the former Chevron gas station property for commercial development. DOE and LANS were informed by the parties that further development of the site was contingent upon receiving documentation that no further actions at the property were required under the 2005 Consent Order. On March 6, 2016, staff from NMED, DOE, and LANS met to discuss the process for expediting completion of 2005 Consent Order corrective actions at the portion of SWMU 01-001(s2) on the former Chevron gas station property, now owned by the Hutton Team, LLC. DOE and LANS proposed splitting SWMU 01-001(s2) into two new SWMUs, one of which would be that portion of the SWMU on the Hutton Team, LLC, property. NMED agreed to this approach. NMED, DOE, and LANS reviewed the data from the samples collected from the Hutton Team, LLC, property during the 2008 investigation and agreed these data would be sufficient to evaluate risk for the site. Because the site is small and not complex, NMED indicated it would not be necessary to submit a stand-alone investigation report for the site. Instead, a request for certificate of completion could be submitted with an accompanying risk assessment demonstrating the site does not pose an unacceptable risk to human health or the environment.

Based on the outcome of the March 6, 2016, meeting, DOE and LANS have evaluated the human health and ecological risk associated with SWMU 01-001(s3). As agreed during the March 6, 2016, meeting, this evaluation was made using existing data from the 2008 investigation. The risk evaluation was performed using the same process as is used for investigation reports prepared under the 2005 Consent Order. The human health and ecological risk-screening assessments for SWMU 01-001(s3) are provided in Attachment 1 to this request.

The results of the human health and ecological risk screening assessments indicate that SWMU 01-001(s3) does not pose an unacceptable human-health risk under the residential and construction worker scenarios and does not pose a potential risk to ecological receptors. Therefore, in accordance with Section XXI.D of the 2016 Consent Order, DOE and LANS request a certificate of completion without controls for SWMU 01-001(s3).

If you have any questions, please contact Todd Haagenstad at (505) 665-2936 (hth@lanl.gov) or Cheryl Rodriguez at (505) 665-5330 (cheryl.rodriguez@em.doe.gov).

Sincerely,

Bruce Robinson, Program Director
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Los Alamos National Laboratory

Sincerely,

David S. Rhodes, Director
Office of Quality and Regulatory Compliance
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Field Office

BR/DR/TH:sm

Attachment 1 – Risk-Screening Assessments for Solid Waste Management Unit 01-001(s3)

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Attachment 1
Risk-Screening Assessments for Solid Waste Management Unit 01-001(s3)

1.0 INTRODUCTION

Human-health and ecological risk-screening assessments have been performed for Solid Waste Management Unit (SWMU) 01-001(s3) to support a request for a certificate of completion without controls for the site under the 2016 Compliance Order on Consent (Consent Order). SWMU 01-001(s3) consists of the portion of former SWMU 01-001(s) located within the property owned by the Hutton Team, LLC, that is the site of the former Chevron gas station in the Los Alamos townsite. Former SWMU 01-001(s) was originally investigated under the Consent Order in 2008 as part of the Upper Los Alamos Canyon Aggregate Area investigation. Results of the investigation were included in the "Investigation Report for Upper Los Alamos Canyon Aggregate Area, Revision 1" (LANL 2010, 108528), submitted to the New Mexico Environment Department (NMED) on February 2, 2010, and approved by NMED on April 21, 2010 (NMED 2010, 109195). Based on the results of the investigation, additional sampling for extent of contamination was recommended for former SWMU 01-001(s). This sampling was to be performed under the Phase II investigation for Upper Los Alamos Canyon Aggregate Area, which is currently ongoing. The recommendation for additional sampling at former SWMU 01-001(s) applied to the SWMU in its entirety and not only to that portion on the Hutton Team, LLC, property. Additional sampling to define extent of contamination for SWU 01-001(s) was proposed in the "Phase II Investigation Work Plan for Upper Los Alamos Canyon Aggregate Area" (LANL 2010, 110860), submitted to NMED on October 21, 2010, and approved by NMED on January 19, 2011 (NMED 2011, 111674). The approved Phase II investigation work plan did not propose the collection of additional samples from within the Hutton Team, LLC, property.

The Hutton Team, LLC, property is currently undergoing commercial development. Further development of the site is contingent upon documentation that no further corrective actions are required under the Consent Order. Such documentation would normally have been included in the Phase II investigation report for Upper Los Alamos Canyon Aggregate Area, scheduled to be submitted to NMED by late 2018. Because of the time constraints associated with site development, however, it was necessary to complete this documentation in advance of the Phase II investigation report. NMED, the U.S. Department of Energy (DOE), and Los Alamos National Security, LLC (LANS) met and agreed that this documentation could be provided as a request for certificate of completion accompanied by human health and ecological risk assessments performed using the data from the 2008 Consent Order investigation. This attachment contains the risk assessments needed to support the request for certificate of completion. Figure 1 presents the location of the Hutton Team, LLC, property, SWMU 01-001(s3), sampling locations, and associated data. The CD included with this attachment all analytical data, including nondetects, for the site.

2.0 SITE DESCRIPTION AND OPERATIONAL HISTORY

SWMU 01-001(s3), Portion of Western Sanitary Waste Line

Former SWMU 01-001(s) is the western sanitary waste line (WSWL). SWMU 01-001(s3) is the portion of the WSWL located within the property encompassing the Hutton Team, LLC, property. The buildings served by former SWMU 01-001(s) housed most of the processing and production operations in the early days of Los Alamos National Laboratory (LANL or the Laboratory). SWMU 01-001(s3), however, received discharges only from former Building A, which housed administrative offices. The other buildings, including process buildings and laboratories, discharged to SWMUs 01-001(s1) and 01-001(s2). Thus, any releases from SWMU 01-001(s3) would have originated from Building A and not in process buildings or laboratories.

Currently, the area is developed and SWMU 01-001(s3) is under asphalt and within the boundary of the Hutton Team, LLC, property.

3.0 SITE CONTAMINATION

3.1 Soil, Rock, and Sediment Sampling

As part of the Phase I investigation of the Upper Los Alamos Canyon Aggregate Area, the following characterization activities were conducted at SWMU 01-001(s3):

- A total of four samples were collected from locations 03-603868 and 03-603869. The samples were collected from 8.0 to 9.0 ft below ground surface (bgs) and 10.0 to 11.0 ft bgs at location 03-603868 and from 5.25 to 6.25 ft bgs and 7.25 to 8.25 ft bgs at location 03-603869.

Samples were analyzed for target analyte list (TAL) metals, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), nitrate, cyanide, perchlorate, isotopic uranium, isotopic plutonium, americium-241, strontium-90, tritium, and gamma-emitting radionuclides. Because former SWMU 01-001(s) is a former waste line, potential releases would occur below the waste line. Therefore, sample depths proposed in the approved investigation work plan (LANL 2006, 091916; NMED 2006, 095460) were below the depth of the former waste line and no samples were proposed at depths less than 5.25 ft bgs.

The sampling locations for SWMU 01-001(s3) are shown in Figure 1. Table 1 presents the samples collected and analyses requested.

3.2 Soil, Rock, and Sediment Sampling Analytical Results

Decision-level data at SWMU 01-001(s3) consist of results from four tuff samples collected from two locations. These data are evaluated below to identify chemicals of potential concern (COPCs) and to determine whether the extent of contamination of COPCs is defined or if further sampling is warranted.

Inorganic Chemicals

The number of samples collected is not sufficient to perform a statistical comparison to background data. Therefore, all inorganic chemicals detected above background values (BVs), detected without BVs, or not detected with detection limits above BV were retained as COPCs. Inorganic COPCs at SWMU 01-001(s3) include aluminum, antimony, barium, copper, cyanide, lead, nitrate, perchlorate, and selenium (Table 2).

The 2008 investigation of former SWMU 01-001(s) involved collecting samples at several depths beneath the former waste line to determine the vertical extent of potential releases.

Aluminum was detected above the Qbt 2,3,4 BV in one sample and decreased with depth. The vertical extent of aluminum is defined.

Antimony was not detected above the Qbt 2,3,4 BV but had detection limits above the BV in two samples. Antimony was detected below the BV in the other two samples. The residential soil screening level (SSL) was approximately 25 times the maximum detection limits above the BV. Further sampling for vertical extent of antimony is not warranted.

Barium was detected above the Qbt 2,3,4 BV in three samples and the concentrations increased with depth. The residential SSL was approximately 212 times to 307 times the barium concentrations. Further sampling for vertical extent of barium is not warranted.

Copper was detected above the Qbt 2,3,4 BV in one sample, and the concentration increased with depth. The copper concentration was similar to or below the two highest background concentrations and the residential SSL was approximately 549 times the concentration. Further sampling for vertical extent of copper is not warranted.

Cyanide was not detected above the Qbt 2,3,4 BV but had detection limits above the BV in two samples. Cyanide was not detected in any samples. The residential SSL was approximately 18 times the maximum detection limits. Further sampling for vertical extent of cyanide is not warranted.

Lead was detected above the Qbt 2,3,4 BV in one sample, and the concentration increased with depth. The concentration was only 0.3 mg/kg above the BV, below the two highest background concentrations, and the residential SSL was approximately 35 times the concentration. Further sampling for vertical extent of lead is not warranted.

Nitrate was detected in two samples and the concentrations did not change substantially with depth (0.53 mg/kg). The residential SSL was approximately 46,000 times the maximum concentration. Although SWMU 01-001(s3) is a sanitary waste line and therefore a potential source of nitrate, further sampling for vertical extent of nitrate is not warranted.

Perchlorate was detected in one sample and the concentration increased with depth. The residential SSL was approximately 14,000 times the concentration. Further sampling for vertical extent of perchlorate is not warranted.

Selenium was not detected above the Qbt 2,3,4 BV but had detection limits above the BV in three samples. Selenium was detected below the BV in the other sample. The residential SSL was approximately 320 times the maximum detection limit. Further sampling for vertical extent of selenium is not warranted.

Organic Chemicals

All detected organic chemicals were retained as COPCs. The organic COPC at SWMU 01-001(s3) includes methylene chloride (Table 3), detected in three samples. Concentrations decreased with depth at one location and did not change substantially with depth at the other location (0.00075 mg/kg). The residential SSL was approximately 107,000 times the maximum concentration. Further sampling for vertical extent of methylene chloride is not warranted.

Radionuclides

No radionuclides were detected or detected above BVs at SWMU 01-001(s3). Therefore, no radionuclide COPCs were identified for SWMU 01-001(s3).

3.3 Human Health Risk-Screening Assessments

Human health risk-screening assessments were conducted for SWMU 01-001(s3). The industrial scenario was not evaluated because samples were collected below the depth interval of 0.0 to 1.0 ft bgs. The site was evaluated for the construction worker and residential scenarios using data from 0.0 to 10.0 ft bgs.

The exposure point concentrations (EPCs) represent upper bound concentrations of COPCs. For comparison with risk-screening levels, the maximum detected concentration (or the maximum detection limit) of the COPC was used as the EPC. The summary statistics, including the EPC for each COPC for the human health risk-screening assessments, are presented in Table 4.

Human health risk-screening assessments were conducted using the SSLs obtained from NMED guidance (NMED 2017, 602273). The SSLs are based on a carcinogenic risk level of one-in-one-hundred thousand (1×10^{-5}) and a noncarcinogenic hazard quotient (HQ) of 1.

3.4 Results of the Human Health Risk-Screening Evaluations

The EPC of each COPC was compared with the SSLs for the appropriate scenario and effect (i.e., carcinogenic or noncarcinogenic). A cancer risk was generated for each carcinogenic COPC by dividing the EPC by the SSL and multiplying by 1×10^{-5}. The cancer risks were summed to generate the total cancer risk. The cancer risk was compared with the NMED target risk of 1×10^{-5} (NMED 2017, 602273). An HQ was generated for each noncarcinogenic COPC by dividing the EPC by the SSL. The HQs were summed to generate a hazard index (HI). The HI was compared with the NMED target HI of 1 (NMED 2017, 602273). The results of the human health screening evaluations are presented in Tables 5 through 8.

Because SWMU 01-001(s3) consists of a former buried waste line, samples were collected at depths below the former waste line and are greater than 0.0 to 1.0 ft bgs. As a result, no surface samples were collected and the industrial scenario was not evaluated.

The results of the risk-screening assessments for the construction worker scenario are presented in Tables 5 and 6. The total excess cancer risk is 4×10^{-13}, which is less than the NMED target risk of 1×10^{-5} (NMED 2017, 602273). The construction worker HI is 0.3, which is below the NMED target HI of 1 (NMED 2017, 602273). No radionuclide COPCs were identified.

The results of the risk-screening assessments for the residential scenario are presented in Tables 7 and 8. The total excess cancer risk is 5×10^{-11}, which is less than the NMED target risk of 1×10^{-5} (NMED 2017, 602273). The residential HI is 0.2, which is below the NMED target HI of 1 (NMED 2017, 602273). No radionuclide COPCs were identified.

3.5 Vapor Intrusion Pathway

Former SWMU 01-001(s) was the WSWL. SWMU 01-001(s3) is the portion of the WSWL located within the Hutton Team, LLC, property on the mesa top. SWMU 01-001(s3) received only discharges from Building A, which housed administrative offices. Based on the operational history of the building and the removal of the building and waste line over 40 yr ago, SWMU 01-001(s3) is not a source of VOCs.

One VOC (methylene chloride) was detected in three samples. Concentrations were not at significant levels (less than 0.004 mg/kg), were below the estimated quantitation limits, and decreased or did not change substantially with depth. The vapor intrusion pathway is therefore potentially complete based on NMED guidance (NMED 2017, 602273), but no additional evaluation is necessary.

3.6 Ecological Risk-Screening Assessment

Ecological risk was evaluated using the NMED-approved “Screening-Level Ecological Risk Assessment [SLERA] Methods, Revision 4” (LANL 2015, 600982; NMED 2016, 601533). In accordance with the SLERA, ecological risk is evaluated for the depth interval 0.0 to 5.0 ft bgs. Because SWMU 01-001(s3) consists of a former buried waste line, potential releases would be below the waste line and all samples were collected at depths below the waste line (i.e., at depths greater than 5.0 ft bgs). In addition, the SWMU is located within commercially developed area, covered by asphalt and buildings and provides no natural habitat for ecological receptors. Therefore, no complete exposure pathways to ecological receptors exist.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Nature and Extent of Contamination

The site is adequately characterized by the samples collected at the location of SWMU 01-001(s3) as part of the Phase I investigation of the Upper Los Alamos Canyon Aggregate Area. The vertical extent of contamination is defined or further sampling for vertical extent is not warranted. Therefore, further sampling at SWMU 01-001(s3) is not necessary.

4.2 Human Health

A risk-screening assessment was not conducted for industrial scenario because samples were not collected within the depth interval of 0.0 to 1.0 ft, relevant for exposure for this scenario. The risk-screening assessment results indicated no potential unacceptable risks from COPCs exist for the construction worker and residential scenarios at SWMU 01-001(s3). The total excess cancer risks are below the NMED target of 1×10^{-5} and HIs are below the NMED target HI of 1.

4.3 Ecology

A risk-screening assessment was not conducted for SWMU 01-001(s3) because the site consists of a former buried waste line and releases would have occurred below the depth interval of 0.0 to 5.0 ft, relevant for exposure to ecological receptors. In addition, the site is located within a commercially developed area covered by asphalt and buildings and provides no natural habitat for ecological receptors. Therefore, no potential risks to ecological receptors from COPCs exist at this site.

5.0 REFERENCES

The following reference list includes documents cited in this report. Parenthetical information following each reference provides the author(s), publication date, and ERID or ESHID. This information is also included in text citations. ERIDs were assigned by the Associate Directorate for Environmental Management's (ADEM's) Records Processing Facility (IDs through 599999), and ESHIDs are assigned by the Environment, Safety, and Health Directorate (IDs 600000 and above). IDs are used to locate documents in the Laboratory's Electronic Document Management System and in the Master Reference Set. The NMED Hazardous Waste Bureau and ADEM maintain copies of the Master Reference Set. The set ensures that NMED has the references to review documents. The set is updated when new references are cited in documents.

LANL (Los Alamos National Laboratory), September 22, 1998. "Inorganic and Radionuclide Background Data for Soils, Canyon Sediments, and Bandelier Tuff at Los Alamos National Laboratory," Los Alamos National Laboratory document LA-UR-98-4847, Los Alamos, New Mexico. (LANL 1998, 059730)

LANL (Los Alamos National Laboratory), February 2010. "Investigation Report for Upper Los Alamos Canyon Aggregate Area, Revision 1," Los Alamos National Laboratory document LA-UR-10-0422, Los Alamos, New Mexico. (LANL 2010, 108528)

LANL (Los Alamos National Laboratory), October 2010. "Phase II Investigation Work Plan for Upper Los Alamos Canyon Aggregate Area," Los Alamos National Laboratory document LA-UR-10-6327, Los Alamos, New Mexico. (LANL 2010, 110860)

LANL (Los Alamos National Laboratory), October 2015. "Screening-Level Ecological Risk Assessment Methods, Revision 4," Los Alamos National Laboratory document LA-UR-15-27577, Los Alamos, New Mexico. (LANL 2015, 600982)

NMED (New Mexico Environment Department), April 21, 2010. “Notice of Approval, Investigation Report for Upper Los Alamos Canyon Aggregate Area, Revision 1,” New Mexico Environment Department letter to G.J. Rael (DOE-LASO) and M.J. Graham (LANL) from J.P. Bearzi (NMED-HWB), Santa Fe, New Mexico. (NMED 2010, 109195)

NMED (New Mexico Environment Department), January 19, 2011. “Approval with Modifications, Phase II Investigation Work Plan for Upper Los Alamos Canyon Aggregate Area,” New Mexico Environment Department letter to G.J. Rael (DOE-LASO) and M.J. Graham (LANL) from J.P. Bearzi (NMED-HWB), Santa Fe, New Mexico. (NMED 2011, 111674)

NMED (New Mexico Environment Department), June 7, 2016. “Approval, Screening-Level Ecological Risk Assessment Methods, Revision 4,” New Mexico Environment Department letter to D. Hintze (DOE-EM) and M.T. Brandt (LANL) from J.E. Kieling (NMED-HWB), Santa Fe, New Mexico. (NMED 2016, 601533)

NMED (New Mexico Environment Department), March 2017. “Risk Assessment Guidance for Site Investigations and Remediation, Volume 1, Soil Screening Guidance for Human Health Risk Assessments,” Hazardous Waste Bureau and Ground Water Quality Bureau, Santa Fe, New Mexico. (NMED 2017, 602273)

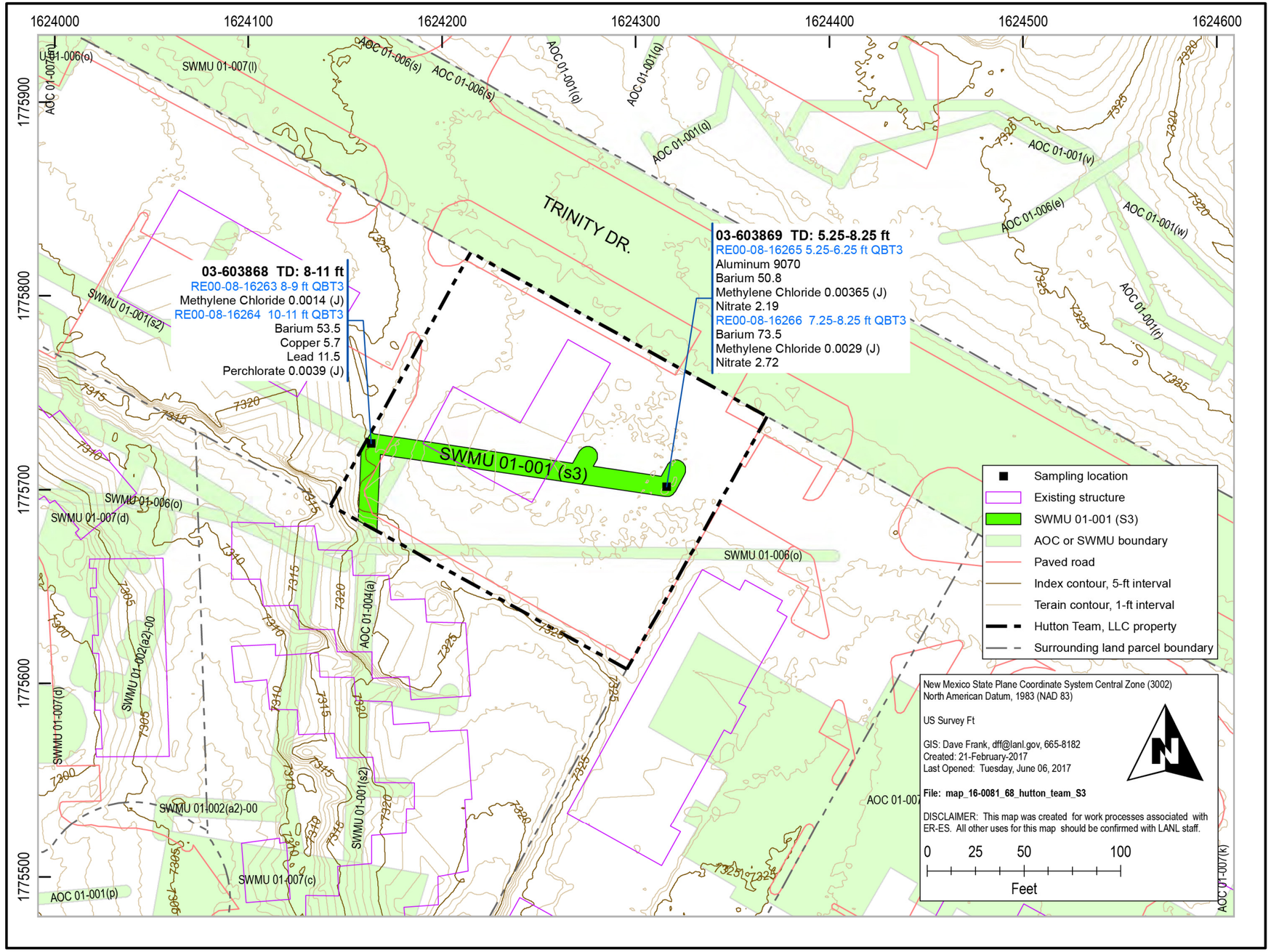

Figure 1 **Location of the Hutton Team, LLC, property, SWMU 01-001(s3), sampling locations, and associated data**

Table 1
Samples Collected and Analyses Requested at SWMU 01-001(s3)

Sample ID	Location ID	Depth (ft)	Media	Americium-241	Nitrate	Gamma-Emitting Radionuclides	Tritium	Isotopic Plutonium	Isotopic Uranium	TAL Metals	PCBs	Perchlorate	Strontium-90	SVOCs	VOCs	Cyanide (total)
RE00-08-16263	03-603868	8.00–9.00	QBT3	09-644	09-643	09-644	09-644	09-644	09-644	09-643	09-642	09-643	09-644	09-642	09-642	09-643
RE00-08-16264	03-603868	10.00–11.00	QBT3	09-644	09-643	09-644	09-644	09-644	09-644	09-643	09-642	09-643	09-644	09-642	09-642	09-643
RE00-08-16265	03-603869	5.25–6.25	QBT3	09-992	09-992	09-992	09-992	09-992	09-992	09-992	09-992	09-992	09-992	09-992	09-992	09-992
RE00-08-16266	03-603869	7.25–8.25	QBT3	09-992	09-992	09-992	09-992	09-992	09-992	09-992	09-992	09-992	09-992	09-992	09-992	09-992

Note: Numbers in analyte columns are request numbers.

Table 2
Inorganic Chemicals above BVs at SWMU 01-001(s3)

Sample ID	Location ID	Depth (ft)	Media	Aluminum	Antimony	Barium	Copper	Cyanide (Total)	Lead	Nitrate	Perchlorate	Selenium
Qbt 2,3,4 BV[a]				**7340**	**0.5**	**46**	**4.66**	**0.5**	**11.2**	**na[b]**	**na**	**0.3**
Construction Worker SSL[c]				**41,400**	**142**	**4390**	**14,200**	**12**	**800**	**566,000**	**248**	**1750**
Residential SSL[c]				**78,000**	**31.3**	**15,600**	**3130**	**11.1**	**400**	**125,000**	**54.8**	**391**
RE00-08-16263	03-603868	8.00–9.00	QBT3	—[d]	—	—	—	0.62 (U)	—	—	—	0.62 (U)
RE00-08-16264	03-603868	10.00–11.00	QBT3	—	—	53.5	5.7	0.62 (U)	11.5	—	0.0039 (J)	—
RE00-08-16265	03-603869	5.25–6.25	QBT3	9070	1.24 (U)	50.8	—	—	—	2.19	—	1.22 (U)
RE00-08-16266	03-603869	7.25–8.25	QBT3	—	1.14 (U)	73.5	—	—	—	2.72	—	1.16 (U)

Notes: Results are in mg/kg. U = The analyte was analyzed for but not detected. J = The analyte was positively identified, and the associated numerical value is estimated to be more uncertain than would normally be expected for that analysis.

[a] BVs from LANL (1998, 059730).

[b] na = Not available.

[c] SSLs from NMED (2017, 602273).

[d] — = Not detected or not detected above BV.

Table 3
Organic Chemicals Detected at SWMU 01-001(s3)

Sample ID	Location ID	Depth (ft)	Media	Methylene Chloride
Construction Worker SSL*				**1200**
Residential SSL*				**409**
RE00-08-16263	03-603868	8.00–9.00	QBT3	0.0014 (J)
RE00-08-16265	03-603869	5.25–6.25	QBT3	0.00365 (J)
RE00-08-16266	03-603869	7.25–8.25	QBT3	0.0029 (J)

Notes: Results are in mg/kg. J = The analyte was positively identified, and the associated numerical value is estimated to be more uncertain than would normally be expected for that analysis.

* SSLs from NMED (2017, 602273) and represent the lower of the carcinogenic and noncarcinogenic SSLs if both are presented.

Table 4
EPCs at SWMU 01-001(s3) for the Construction Worker and Residential Scenarios

COPC	Number of Analyses	Number of Detects	Minimum Concentration	Maximum Concentration	Distribution	EPC	EPC Method
Inorganic Chemicals (mg/kg)							
Aluminum	4	4	4590	9070	n/a*	9070	Maximum detected concentration
Antimony	4	2	0.16(J)	1.24(U)	n/a	0.21	Maximum detected concentration
Barium	4	4	46	73.5	n/a	73.5	Maximum detected concentration
Copper	4	4	2.97	5.7	n/a	5.7	Maximum detected concentration
Cyanide (Total)	4	0	0.3(U)	0.62(U)	n/a	0.62(U)	Maximum detection limit
Lead	4	4	4.59	11.5	n/a	11.5	Maximum detected concentration
Nitrate	4	2	0.25(U)	2.72	n/a	2.72	Maximum detected concentration
Perchlorate	4	1	0.0024(U)	0.0062(U)	n/a	0.0039	Maximum detected concentration
Selenium	4	1	0.21(J)	1.22(U)	n/a	0.21	Maximum detected concentration
Organic Chemicals (mg/kg)							
Methylene chloride	4	3	0.0014(J)	0.0062(U)	n/a	0.00365	Maximum detected concentration

Notes: U = The analyte was analyzed for but not detected. J = The analyte was positively identified, and the associated numerical value is estimated to be more uncertain than would normally be expected for that analysis.

* n/a = Not applicable.

Table 5
Construction Worker Carcinogenic Screening Evaluation for SWMU 01-001(s3)

COPC	EPC (mg/kg)	Construction Worker SSL* (mg/kg)	Cancer Risk
Methylene chloride	0.00365	89,300	4.08E-13
		HI	**4E-13**

* SSLs from NMED (2017, 602273).

Table 6
Construction Worker Noncarcinogenic Screening Evaluation for SWMU 01-001(s3)

COPC	EPC (mg/kg)	Construction Worker SSL* (mg/kg)	HQ
Aluminum	9070	41,400	0.22
Antimony	0.21	142	0.0015
Barium	73.5	4390	0.017
Copper	5.7	14,200	0.0004
Cyanide (Total)	0.62(U)	12	0.052
Lead	11.5	800	0.014
Nitrate	2.72	566,000	0.0000048
Perchlorate	0.0039	248	0.000016
Selenium	0.21	1750	0.00012
Methylene chloride	0.00365	1200	0.000003
		HI	**0.3**

Note: U = The analyte was analyzed for but not detected.
* SSLs from NMED (2017, 602273).

Table 7
Residential Carcinogenic Screening Evaluation for SWMU 01-001(s3)

COPC	EPC (mg/kg)	Residential SSL* (mg/kg)	Cancer Risk
Methylene chloride	0.00365	766	4.76E-11
		HI	**5E-11**

* SSLs from NMED (2017, 602273).

Table 8
Residential Noncarcinogenic Screening Evaluation for SWMU 01-001(s3)

COPC	EPC (mg/kg)	Residential SSL* (mg/kg)	HQ
Aluminum	9070	78,000	0.12
Antimony	0.21	31.3	0.0067
Barium	73.5	15,600	0.0047
Copper	5.7	3130	0.0018
Cyanide (Total)	0.62(U)	11.1	0.056
Lead	11.5	400	0.029
Nitrate	2.72	125,000	0.000022
Perchlorate	0.0039	54.8	0.000071
Selenium	0.21	391	0.00054
Methylene chloride	0.00365	409	0.0000089
		HI	**0.2**

* SSLs from NMED (2017, 602273).