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Recieved SC/ 9/18/18

Date: SEP 18 2018
Refer To: N3B-18-0242

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

Subject: Land Transfer of Solid Waste Management Unit 21-027(d) at Technical Area 21

Dear Mr. Hintze:

Solid Waste Management Unit (SWMU) 21-027(d) consists of an outfall from a former storage tank secondary containment system located on the slope below Material Disposal Area (MDA) B. The property containing this SWMU was transferred from the U.S. Department of Energy (DOE) National Nuclear Security Administration (NNSA) to Los Alamos County with Tract A-16-a earlier this year (see Enclosure 1) before award of the Los Alamos Legacy Cleanup Contract to Newport News Nuclear BWXT – Los Alamos, LLC (N3B). It has come to N3B's attention that SWMU 21-027(d) has not been granted a certificate of completion (COC) from the New Mexico Environment Department (NMED).

A voluntary corrective measure (VCM) investigation of SWMU 21-027(d) was completed in 1999, and a VCM completion report was submitted to NMED in 2002. NMED approved the report in 2002 but also stated that nature and extent were not adequately defined for this SWMU. NMED directed further characterization of SWMU 21-027(d) take place with future investigations at MDA V. No evidence has been found of further characterization of SWMU 21-027(d). A recent search of Intellus NM (https://www.intellusnm.com/) provided no soil data that could be used to define nature and extent in the northern part of the SWMU.

In June 2015, Los Alamos National Laboratory (LANL) requested COCs for 12 SWMUs and 2 areas of concern, including SWMU 21-027(d) (see Enclosure 2). In 2016, NMED denied the COC request for SWMU 21-027(d) because of the still undefined nature and extent for this site (see Enclosure 3). Since then, there has been no LANL response to NMED regarding this issue. Therefore, N3B proposes the following:

1. Notify NNSA of the situation and other interested parties as appropriate.
2. Determine a path forward. This may involve collecting nature and extent samples in the near future or a reanalysis of the existing data.
3. Work with NMED to obtain a COC in a timely manner.

If you have any questions, please contact Frazer Lockhart at (505) 257-8049 (frazer.lockhart@em-la.doe.gov).

Sincerely,

for Nick Lombardo
Program Manager
N3B – Los Alamos

NL/FL:ed

Enclosure(s): One hard copy
1. Figure 1, Site map showing location of SWMU 21-027(d) within Tract A-16-a
2. Request for Certificates of Completion for Two Areas of Concern and Twelve Solid Waste Management Units in the Delta Prime Site Aggregate Area (ESHID-600502)
3. Certificates of Completion, Two Areas of Concern and Twelve Solid Waste Management Units in the Delta Prime Site Aggregate Area (ESHID-601146)

Cy: (letter and enclosure[s] emailed)
David Rhodes, DOE-EM-LA
Arturo Duran, DOE-EM-LA
Cheryl Rodriguez, DOE-EM-LA
Nick Lombardo, N3B
Frazer Lockhart, N3B
Dana Lindsay, N3B
Rob Nagel, N3B
Emily Day, N3B
Joe Legare, N3B
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Duane Parsons, N3B
N3B Records

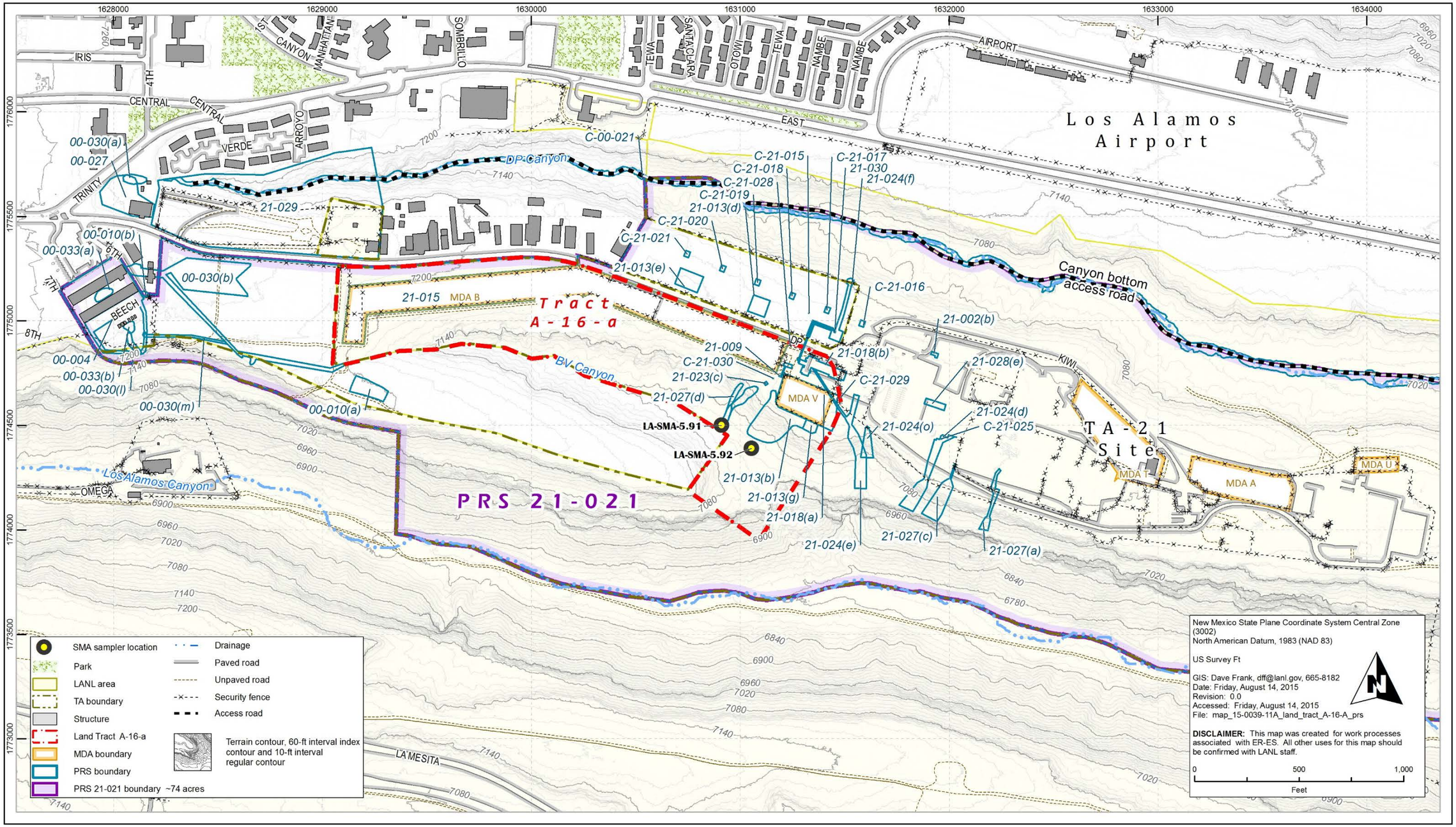

Figure 1 **Site map showing location of SWMU 21-027(d) within Tract A-16-a**

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NMED
Hazardous Waste Bureau

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Date: JUN 18 2015
Refer To: ADESH-15-085
LAUR: 15-23983
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 Certificates of Completion for Two Areas of Concern and Twelve Solid Waste Management Units in the Delta Prime Site Aggregate Area

Dear Mr. Kieling:

In accordance with Section VII.E.6.b of the Compliance Order on Consent (the Consent Order), the U.S. Department of Energy (DOE) and Los Alamos National Security, LLC (LANS) are requesting Certificates of Completion without Controls for the following solid waste management units (SWMUs) and areas of concern (AOCs) within the Delta Prime (DP) Site Aggregate Area:

- AOC 21-002(b), Container Storage Area
- AOC 21-009, Waste Treatment Laboratory
- SWMU 21-012(b), Dry well and System
- SWMU 21-013(c), Surface Disposal Area
- SWMU 21-022(f), Sump and Pipeline
- SWMU 21-024(a), Septic System
- SWMU 21-024(e), Septic System
- SWMU 21-024(h), Septic System
- SWMU 21-024(i), Septic System
- SWMU 21-024(j), Septic System
- SWMU 21-024(o), Drainline and Outfall

- SWMU 21-027(c), Pipeline and Outfall
- SWMU 21-027(d), Outfall
- SWMU 21-029, Tank Farm and Fueling Station

AOCs 21-002(b) and 21-009 and SWMUs 21-012(b), 21-013(c), 21-022(f), 21-024(a), 21-024(e), 21-024(h), 21-024(i), 21-024(j), 21-024(o), and 21-027(c) were recommended for corrective action complete without controls in the Phase II Investigation Report for Delta Prime Site Aggregate Area, Revision 1 (hereafter, the Phase II IR) (LA-UR-10-6478/EP2010-0325). This report, along with the Investigation Report for Delta Prime Site Aggregate Area, Revision 1 (LA-UR-08-1834/EP2008-0062), confirm that the nature and extent of contamination are defined at AOCs 21-002(b) and 21-009 and SWMUs 21-012(b), 21-013(c), 21-022(f), 21-024(a), 21-024(e), 21-024(h), 21-024(i), 21-024(j), 21-024(o), and 21-027(c). In addition, the Phase II IR demonstrates that the above-mentioned AOCs and SWMUs pose no potential unacceptable risks or doses to human health under the industrial, construction worker, and residential scenarios and pose no potential risk to ecological receptors. Therefore, neither site controls nor additional future actions under the Consent Order are necessary at these 12 sites.

The 2008 investigation report (IR) indicated that the extent of contamination was not defined at AOCs 21-002(b) and 21-009 and SWMUs 21-012(b), 21-013(c), 21-022(f), 21-024(a), 21-024(e), 21-024(h), 21-024(i), 21-024(j), 21-024(o), and 21-027(c) and identified specific constituents and locations where vertical and lateral extent were not defined. The 2008 IR was approved in the New Mexico Environment Department's (NMED's) June 27, 2008, letter, Notice of Approval [for the] Delta Prime Site Aggregate Area Investigation Report, Revision 1 (HWB-LANL-08-008). The sampling and analysis required to define extent at each site were specified in the Delta Prime Site Aggregate Area Phase II Work Plan, Revision 1 (LA-UR-08-7794/EP2008-0646), which was approved in NMED's January 12, 2009, letter, Approval [for the] Delta Prime Site Aggregate Area Phase II Work Plan, Revision 1 (LANL-08-031).

The work scope in the approved Phase II work plan was implemented and the results reported in the Phase II IR. NMED issued a Direction to Modify [the] Phase II Investigation Report for the Delta Prime Site Aggregate Area, Technical Area 21, Revision 1 (HWB-LANL-10-025) on October 19, 2010. The direction to modify did not specifically approve the Phase II IR but directed DOE/LANS to prepare a Phase III work plan that addressed specific comments in NMED's letter. The direction to modify also did not identify any deficiencies related to AOCs 21-002(b) and 21-009 and SWMUs 21-012(b), 21-013(c), 21-022(f), 21-024(a), 21-024(e), 21-024(h), 21-024(i), 21-024(j), 21-024(o), and 21-027(c) or comment on the conclusions or recommendations in the Phase II IR for these 12 sites. Therefore, the letter did not provide additional corrective action requirements for these sites to be addressed in the Phase III investigation work plan.

The Phase III Letter Work Plan for DP Site Aggregate Area (LA-UR-11-2842/EP2011-0170) was prepared by DOE/LANS and approved in NMED's June 10, 2011, letter, Approval with Modifications [for the] Phase III Letter Work Plan for DP Site Aggregate Area (HWB-LANL-11-033). The approved Phase III work plan did not include any requirements related to AOCs 21-002(b) and 21-009 and SWMUs 21-012(b), 21-013(c), 21-022(f), 21-024(a), 21-024(e), 21-024(h), 21-024(i), 21-024(j), 21-024(o), and 21-027(c), and these 12 sites are appropriate for corrective action complete without controls.

SWMU 21-027(d) was previously recommended for no further action (NFA) in the Voluntary Corrective Measures Completion Report for Potential Release Site 21-027(d)-99 at Technical Area 21 (LA-UR-00-3950/ER2001-0117). Consolidated Unit 21-027(d)-99 consists of AOC C-21-028, a former fuel storage tank on the mesa top, and SWMU 21-027(d), the outfall from the storage tank secondary containment system located on the slope below Material Disposal Area (MDA) B. The voluntary corrective measures (VCM) report was approved by NMED in its September 10, 2002, letter, Approval of the Voluntary Corrective Measures Completion Repot for Potential Release Site 21-027(d)-99 at Technical Area 21 (HWB-LANL-02-009). Although NMED agreed that the nature and extent of hydrocarbon contamination at the site had been defined, the approval did not concur with the recommendation for NFA because inorganic chemicals and radionuclides had also been detected. NMED indicated that additional characterization of inorganic chemical and radionuclide contamination was required. NMED further indicated that additional investigation and risk-assessment activities for SWMU 21-027(d) could be addressed during the investigation of MDA V. Because additional investigation could be conducted during the MDA V investigation, the Investigation Work Plan for Delta Prime Site Aggregate Area at Technical Area 21 (LA-UR-04-5009/ER2004-0409) did not propose investigations at SWMU 21-027(d), and conclusions regarding SWMU 21-027(d) were not specifically presented in the MDA V IR. As described below, however, the data presented in the IR are sufficient to conclude that the site is appropriate for corrective action complete without controls.

SWMU 21-023(c), which is part of MDA V, is next to and overlaps SWMU 21-027(d), and the sites share a common drainage. SWMU 21-023(c) was investigated as part of the MDA V investigation and this investigation included collection of samples within SWMU 21-027(d). The Investigation Report for Consolidated Unit 21-018(a)-99, Material Disposal Area V, at Technical Area 21, Revision 1 (LA-UR-07-4390/EP2007-0355) concluded that the nature and extent of contamination were defined at SWMU 21-023(c), the site did not pose an unacceptable human health risk or dose under the residential scenario, and the site did not pose an unacceptable ecological risk. NMED's August 13, 2007, letter, Approval for the Investigation Report for Consolidated Unit 21-018(a)-99, at Technical Area 21 (HWB-LANL-06-021), approved the MDA V IR. A certificate of completion for SWMU 21-023(c) was issued by NMED on June 3, 2011 (HWB-LANL-11-030).

Because of the location of SWMU 21-027(d) with respect to SWMU 21-023(c), the conclusions reached in the MDA V investigation with respect to the nature and extent of contamination and risk at SWMU 21-023(c) should also apply to SWMU 21-027(d). The applicability of the MDA V investigation results to SWMU 21-027(d) is evaluated in Attachment A of this request. Attachment A also includes a human health screening evaluation based on the results of sampling within SWMU 21-027(d) during the MDA V investigation. Based on the location of SWMU 21-027(d) within the footprint of the SWMU 21-023(c) investigation area, the nature and extent of contamination for SWMU 21-027(d) are defined. The data for MDA V investigation samples collected within SWMU 21-027(d) show no unacceptable human health risk or dose for the residential scenario. The MDA V investigation evaluated human health risk associated with vapor intrusion and ecological risk for the entire consolidated unit rather than for each SWMU or AOC. Based on the location of SWMU 21-027(d) within the investigation area for Consolidated Unit 21-018(a)-99, the site does not pose an unacceptable human-health risk from vapor intrusion, nor does it pose a risk to ecological receptors.

SWMU 21-027(d) was identified as a SWMU because of the potential for releases of petroleum from spills at the AOC C-21-028 storage tank. NMED's September 10, 2002, approval of the VCM for SWMU 21-027(d) and AOC C-21-028 concurred that potential petroleum contamination had been addressed but required additional characterization of inorganic chemicals and radionuclides, which had been detected at the site. The NMED approval letter indicated this additional characterization could be performed as part of the MDA V investigation. The requirement for this additional characterization has been met by the sampling performed during the MDA V investigation. As described above and in Attachment A, the nature and extent of contamination are defined for SWMU 21-027(d), the site poses no unacceptable risk to human health for the residential scenario, and it does not pose a risk to ecological receptors. Neither site controls nor additional future actions under the Consent Order are necessary at SWMU 21-027(d).

SWMU 21-029 was previously recommended for NFA in the Phase II RFI Report for Potential Release Site 21-029, DP Tank Farm (LA-UR-01-5254/ER2001-0720). The Phase II Resource Conservation and Recovery Act facility investigation (RFI) report substantiated that the nature and extent of contamination had been defined at the site. The report also substantiated that the site did not pose an unacceptable human health risk under the residential scenario, and it did not pose an unacceptable risk to ecological receptors. The Phase II RFI report was approved by NMED in its January 14, 2002, letter, Approval of Phase II RFI Report for Potential Release Site 21-029, DP Tank Farm (HWB-LANL-01-016). On the basis of this approval, Los Alamos National Laboratory (the Laboratory) requested a modification to Module VIII of the Laboratory's Hazardous Waste Facility Permit to remove SWMU 21-029. NMED's August 6, 2003, letter, Approval of Class III Permit Modification to Remove Seven (7) Solid Waste Management Units from the Department of Energy Los Alamos National Laboratory RCRA Permit, denied the request for SWMU 21-029 but approved requests for seven other SWMUs. In denying the request, NMED stated it would not approve the permit modification request for SWMU 21-029 at that time because contamination from the site may have migrated to the canyons over time. NMED further stated it would not remove SWMU 21-029 from the permit until the extent of contamination downstream had been characterized and any risks associated with it is addressed.

The characterization of potential canyon contamination referenced in NMED's August 6, 2003, letter has since been completed and documented in the Los Alamos and Pueblo Canyons Investigation Report (LAPCIR) (LA-UR-04-2714/ER2004-0027). The LAPCIR investigation included sampling in canyon reaches upstream and downstream of SWMU 21-029 to characterize potential releases from this site. The LAPCIR substantiated that constituents in sediment downstream of SWMU 21-029 did not pose an unacceptable risk to human health under the residential scenario, and it did not pose an unacceptable risk to ecological receptors. The LAPCIR was approved by NMED in its May 11, 2005, letter, Approval as Modified [for the] Los Alamos and Pueblo Canyons Investigation Report (HWB-LANL-04-006). On the basis of the Phase II RFI report and LAPCIR, neither site controls nor additional future actions under the Consent Order are necessary at SWMU 21-029.

If you have any questions, please contact Kent Rich at (505) 665-4272 (krich@lanl.gov) or Arturo Duran at (505) 665-7772 (arturo.duran@em.doe.gov).

Sincerely,

Alison M. Dorries, Division Leader
Environmental Protection Division
Los Alamos National Laboratory

Sincerely,

Christine Gelles, Acting Manager
Environmental Management
Los Alamos Field Office

AD/CG/DM/KR:sm

Attachment: Evaluation of Data Collected at Solid Waste Management Unit 21-027(d) during Material Disposal Area V Investigation (EP2015-0096)

Cy: (date-stamped letter emailed)
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Kent Rich, ADEP ER Program
Dave McInroy, ADEP ER Program
Randy Erickson, ADEP
Jocelyn Buckley, ADESH-ENV-CP
Mike Saladen, ADESH-ENV-CP
Tony Grieggs, ADESH-ENV-CP
Alison Dorries, ADESH-ENV-DO
Michael Brandt, ADESH
Amy De Palma, PADOPS
Michael Lansing, PADOPS
PRS Database
Public Reading Room (EPRR)
ADESH Records

Attachment A

Evaluation of Data Collected at Solid Waste Management Unit 21-027(d) during Material Disposal Area V Investigation

Consolidated Unit 21-027(d)-99 consists of Area of Concern (AOC) C-21-028, a former fuel storage tank on the mesa top, and Solid Waste Management Unit (SWMU) 21-027(d), the outfall from the storage tank secondary containment system located on the slope below Material Disposal Area (MDA) B. A voluntary corrective measure (VCM) was performed at Consolidated Unit 21-027(d)-99 in 1999 to remediate petroleum contamination at the location of the former storage tank (AOC C-21-028) (LANL 2002, 073107). Confirmation samples collected at AOC C-21-028 following the cleanup were analyzed for target analyte list (TAL) metals, semivolatile organic compounds (SVOCs), total petroleum hydrocarbon–diesel range organics (TPH-DRO), polychlorinated biphenyls (PCBs), isotopic thorium, isotopic uranium, and strontium-90. Samples were also collected below the SWMU 21-027(d) outfall to characterize potential releases from the outfall. Samples were collected from depths of 0.0 to 0.3 ft below ground surface (bgs) at six locations in sediment packets below the outfall and one background location west of the drainage. Information on radioactive materials and radionuclides, including the results of sampling and analysis of radioactive constituents, is voluntarily provided to the New Mexico Environment Department (NMED) in accordance with U.S. Department of Energy policy.

The sampling locations, shown in Figure 2.3-4 of the VCM report, are included as Attachment A-1 of this evaluation. The samples were analyzed for TPH-DRO, americium-241, and isotopic plutonium. TPH-DRO was not detected in samples from the six locations below the outfall and was detected at 19 mg/kg at the background location (location 21-11100), which receives runoff from Technical Area 21 (TA-21). Americium-241 was detected in one of two collocated samples (location 21-11103) approximately 40 ft downgradient of the outfall and was not detected in any of the other samples. The detected activity (0.266 pCi/g) was greater than the fallout value (FV) for sediment (0.040 pCi/g) but less than the residential screening action level (SAL) (82 pCi/g). Plutonium-238 was not detected in any samples. Plutonium-239 was detected in all samples with the highest detected activities in two collocated samples approximately 40 ft downgradient of the outfall (3.3 pCi/g and 8.45 pCi/g at locations 21-11102 and 21-11103, respectively). All results were greater than the sediment FV (0.068 pCi/g) and less than the residential SAL (79 pCi/g), and activities decreased down the drainage.

The VCM completion report recommended no further action (NFA) for Consolidated Unit 21-027(d)-99 because the site met risk-based corrective action requirements for petroleum releases (LANL 2002, 073107). The VCM report also noted that inorganic chemical and radionuclide contaminants detected at the site would be addressed during future investigations and risk assessments for Consolidated Unit 21-018(a)-99 (MDA V), which overlaps the location of Consolidated Unit 21-027(d)-99 (LANL 2002, 073107, pp. 38–39).

NMED approved the VCM completion report but did not concur with the NFA recommendation (NMED 2002, 073750). NMED agreed that the nature and extent of hydrocarbon contamination at the site had been defined but indicated inorganic chemical and radionuclide contaminants detected at the site had not been adequately addressed. NMED also stated that inorganic chemicals and radionuclides could be addressed during future investigation and risk-assessment activities planned for MDA V.

As noted above, Consolidated Unit 21-027(d)-99 overlaps MDA V. Specifically, the SWMU 21-027(d) component of the consolidated unit overlaps the SWMU 21-023(c) component of MDA V. As described below, samples collected during the MDA V investigation to characterize SWMU 21-023(c) are also sufficient to characterize SWMU 21-027(d) and address the concerns noted in NMED's VCM completion report approval letter (NMED 2002, 073750).

SWMU 21-023(c) consists of a former septic system that is a component of the MDA V consolidated unit. As described in the MDA V investigation report (LANL 2007, 098942, p. 14), samples were collected from the following locations at and around SWMU 21-023(c):

- along the former septic system inlet line,
- along the former septic system outlet line,
- in the drainage below the septic system outfall,
- within Consolidated Unit 21-027(d)-99 [i.e., within SWMU 21-027(d)], and
- up- and downgradient of SWMU 21-023(c) in BV Canyon.

The samples collected to characterize SWMU 21-023(c) and the analyses requested are shown in Table B-2.1-1 of the MDA V investigation report, which is included as Attachment A-2. The sampling locations, shown in Figure B-1.2-2 of the MDA V investigation report, are included as Attachment A-3. Based on the data from these samples, the MDA V investigation report concluded that the objectives of the investigation had been met, the nature and extent of contamination were defined, the site did not pose an unacceptable human-health risk under the residential scenario, and the site did not pose an unacceptable risk to ecological receptors (LANL 2007, 098942, pp. 32–36). Because SWMU 21-027(d) lies within the footprint of the SWMU 21-023(c) investigation area, the conclusions for SWMU 21-023(c) should also apply to SWMU 21-027(d). That is, the sampling locations used to define the extent of contamination for SWMU 21-023(c) also encompass SWMU 21-027(d) and are appropriate for defining the extent of contamination for SWMU 21-027(d). The samples collected at SWMU 21-027(d) were included in the data set used to evaluate human health risk for SWMU 21-023(c) and, therefore, the risk evaluation for SMWU 21-023(c) includes contributions from SWMU 21-027(d). The only concern is whether concentrations of chemicals of potential concern (COPCs) detected in samples collected within SWMU 21-027(d) are higher than those detected in the remaining investigation area. If so, it is possible SWMU 21-027(d) might fail the risk screening if evaluated using only the SWMU 21-027(d) data. To address this concern, risk and dose screening evaluations for SWMU 21-027(d) were performed using the data from samples collected within SWMU 21-027(d).

As described in the MDA V investigation report, the sampling locations associated with SWMU 21-027(d) are 21-25415, 21-25417, 21-25418, 21-25419, 21-25420, and 21-25622 (LANL 2007, 098942, p. 14). As shown in Attachment A-3, these locations are within SWMU 21-027(d), including the common drainage shared with SWMU 21-023(c). Results for samples from these locations are presented in Tables A-1 through A-3 of this evaluation, along with applicable background values (BVs), FVs, residential soil screening levels (SSLs), and residential SALs. Table A-1 presents inorganic chemicals detected above BVs or not detected but having detection limits above BVs. Table A-2 presents detected organic chemicals. Table A-3 presents radionuclides detected or detected above BVs/FVs. The activities of radionuclides detected at SWMU 21-027(d) are similar to or less than those detected in the other SWMU 21-023(c) samples. Therefore, the radionuclides detected during the VCM sampling are likely associated with sources other than SWMU 21-027(d), which is consistent with the history of SWMU 21-027(d) as a petroleum release site.

Human-health risk and dose screening was performed using the maximum detected concentrations of COPCs (or the maximum detection limits of inorganic chemical COPCs that were not detected but had detection limits greater than BVs). Screening against maximum detected concentrations is a more simplified approach than screening against exposure point concentrations (EPCs) based on upper confidence limits and should generally be more conservative. The results of the screening evaluations for noncarcinogens, carcinogens, and radionuclides are presented in Tables A-4 through A-6, respectively. These results indicate no unacceptable risk or dose under the residential exposure scenario.

The MDA V investigation report also included a human health screening evaluation of the indoor air pathway for pore gas vapor intrusion and an ecological risk screening assessment (LANL 2007, 098942, Appendix H). Both these evaluations were conducted for Consolidated Unit 21-018(a)-99 as a whole rather than for the individual SWMUs and AOC comprising the consolidated unit. Because SWMU 21-027(d) lies within the consolidated unit investigation footprint associated with the data used in these evaluations, the results of these evaluations should also be applicable to SWMU 21-027(d). The MDA V investigation report concluded Consolidated Unit 21-018(a)-99 poses no unacceptable risk from vapor intrusion (LANL 2007, 098942, p. H-17) and poses no potential risk to ecological receptors (LANL 2007, 098942, p. H-32). These same conclusions are applicable to SWMU 21-027(d).

References

The following list includes all documents cited in this evaluation. Parenthetical information following each reference provides the author(s), publication date, and ER ID or ESH ID. This information is also included in text citations. ER IDs were assigned by the Environmental Programs Directorate's Records Processing Facility (IDs through 599999), and ESH IDs are assigned by the Environment, Safety, and Health (ESH) Directorate (IDs 600000 and above). IDs are used to locate documents in the Laboratory's Electronic Document Management System and, where applicable, in the master reference set.

Copies of the master reference set are maintained at the NMED Hazardous Waste Bureau and the ESH Directorate. The set was developed to ensure that the administrative authority has all material needed to review this document, and it is updated with every document submitted to the administrative authority. Documents previously submitted to the administrative authority are not included.

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), May 2002. "Voluntary Corrective Measures Completion Report for Potential Release Site 21-027(d)-99 at Technical Area 21," Los Alamos National Laboratory document LA-UR-00-3950, Los Alamos, New Mexico. (LANL 2002, 073107)

LANL (Los Alamos National Laboratory), July 2007. "Investigation Report for Consolidated Unit 21-018(a)-99, Material Disposal Area V, at Technical Area 21, Revision 1," Los Alamos National Laboratory document LA-UR-07-4390, Los Alamos, New Mexico. (LANL 2007, 098942)

LANL (Los Alamos National Laboratory), December 2014. "Derivation and Use of Radionuclide Screening Action Levels, Revision 3," Los Alamos National Laboratory document LA-UR-14-29225, Los Alamos, New Mexico. (LANL 2014, 600064)

NMED (New Mexico Environment Department), September 10, 2002. "Approval of the Voluntary Corrective Measures (VCM) Completion Report for Potential Release Site 21-027(d)-99, at Technical Area 21," New Mexico Environment Department letter to J.C. Brown (LANL Director) and E. Trollinger (DOE-LAAO) from V. Maranville (NMED-HWB), Santa Fe, New Mexico. (NMED 2002, 073750)

NMED (New Mexico Environment Department), December 2014. "Risk Assessment Guidance for Site Investigations and Remediation," Hazardous Waste Bureau and Ground Water Quality Bureau Voluntary Remediation Program, Santa Fe, New Mexico. (NMED 2014, 600115)

Table A-1
Inorganic Chemicals Above BVs for Samples Collected Within SWMU 21-027(d)

Sample ID	Location ID	Depth (ft bgs)	Media	Cadmium	Lead	Mercury	Nitrate	Perchlorate	Selenium
Soil BV[a]				**0.4**	**22.3**	**0.1**	**na**[b]	**na**	**1.53**
Residential SSL[c]				**70.5**	**400**	**23.5**[d]	**125000**	**54.8**	**391**
MD21-06-66267	21-52415	0.0–0.5	Soil	0.543 (U)[e]	—[f]	—	2.19 (J-)[g]	0.00161 (J)[h]	1.63 (U)
MD21-06-66268	21-52415	1.5–2.0	Soil	0.577 (U)	—	—	—	—	1.73 (U)
MD21-06-66273	21-52417	0.0–0.5	Soil	0.578 (U)	—	—	—	0.000669 (J)	1.73 (U)
MD21-06-66274	21-52417	1.5–2.0	Soil	0.53 (U)	—	—	—	—	1.59 (U)
MD21-06-66276	21-52418	0.0–0.5	Soil	0.505 (U)	—	—	2.58 (J-)	—	—
MD21-06-66277	21-52418	1.5–2.0	Soil	0.54 (U)	—	0.663	1.27 (J-)	—	1.62 (U)
MD21-06-66280	21-52419	0.0–0.5	Soil	0.555 (U)	—	—	0.653 (J-)	0.000593 (J)	1.66 (U)
MD21-06-66279	21-52419	1.5–2.0	Soil	0.532 (U)	—	—	1.45 (J-)	0.00159 (J)	1.59 (U)
MD21-06-66282	21-52420	0.0–0.5	Soil	0.504 (U)	—	—	1.9 (J-)	—	—
MD21-06-66283	21-52420	1.5–2.0	Soil	0.529 (U)	—	—	0.683 (J-)	—	1.59 (U)
MD21-06-68044	21-25622	0.0–0.5	Soil	—	—	—	1.98	—	1.56 (U)
MD21-06-68045	21-25622	1.5–2.0	Soil	—	24.3	—	1.19	—	1.62 (U)

Notes: Units in mg/kg.

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

[b] na = Not available.

[c] SSLs from NMED (2014, 600115).

[d] SSL for mercury salts.

[e] U = The analyte was analyzed for but not detected.

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

[g] J− = The analyte was positively identified, and the result is likely to be biased low.

[h] 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.

Table A-2
Organic Chemicals Detected in Samples Collected Within SWMU 21-027(d)

Sample ID	Location ID	Depth (ft bgs)	Media	Anthracene	Aroclor-1254	Aroclor-1260	Benzo(a)pyrenene	Benzo(b)fluoranthene	Bis(2-ethylhexyl)phthalate
Residential SSL[a]				**17400**	**1.14**	**2.43**	**0.153**	**1.53**	**380**
MD21-06-66267	21-52415	0.0–0.5	Soil	0.00918 (J)[b]	—[c]	—	0.0339 (J)	0.0216 (J)	—
MD21-06-66273	21-52417	0.0–0.5	Soil	—	—	—	—	—	—
MD21-06-66276	21-52418	0.0–0.5	Soil	—	—	—	—	0.0124 (J)	—
MD21-06-66277	21-52418	1.5–2.0	Soil	—	—	—	—	0.0234 (J)	—
MD21-06-66279	21-52419	1.5–2.0	Soil	—	—	—	—	0.0222 (J)	—
MD21-06-66283	21-52420	1.5–2.0	Soil	—	—	—	—	—	0.0921 (J)
MD21-06-68044	21-25622	0.0–0.5	Soil	—	0.002 (J)	0.0019 (J)	—	—	0.0912 (J)
MD21-06-68045	21-25622	1.5–2.0	Soil	—	0.0028 (J)	0.002 (J)	—	—	—

Table A-2 (continued)

Sample ID	Location ID	Depth (ft bgs)	Media	Chrysene	Fluoranthene	Phenanthrene	Pyrene
Residential SSL[a]				**153**	**2320**	**1740**	**1740**
MD21-06-66267	21-52415	0.0–0.5	Soil	0.0138 (J)	0.0189(J)	—	0.0167 (J)
MD21-06-66273	21-52417	0.0–0.5	Soil	—	0.0118 (J)	—	—
MD21-06-66276	21-52418	0.0–0.5	Soil	—	0.0134 (J)	—	0.0116 (J)
MD21-06-66277	21-52418	1.5–2.0	Soil	0.0189 (J)	—	—	0.016 (J)
MD21-06-66279	21-52419	1.5–2.0	Soil	0.0141 (J)	0.0208 (J)	—	0.0228 (J)
MD21-06-66283	21-52420	1.5–2.0	Soil	—	—	—	—
MD21-06-68044	21-25622	0.0–0.5	Soil	—	0.225 (J)	0.0131 (J)	0.0253 (J)
MD21-06-68045	21-25622	1.5–2.0	Soil	—	0.223 (J)	—	0.0119 (J)

Notes: Units in mg/kg.

[a] SSLs from NMED (2014, 600115).

[b] 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.

[c] — = Not detected.

Table A-3
Radionuclides Detected or Detected above BVs/FVs in Samples Collected Within SWMU 21-027(d)

Sample ID	Location ID	Depth (ft bgs)	Media	Americium-241	Cesium-137	Plutonium-238	Plutonium-239	Tritium
Soil FV[a]				**0.013**	**1.65**	**0.023**	**0.054**	**na[b]**
Residential SAL[c]				**82**	**11**	**84**	**79**	**850**
MD21-06-66267	21-52415	0.0–0.5	Soil	—[d]	—	—	0.396	—
MD21-06-66268	21-52415	1.5–2.0	Soil	—	0.158	—	1.25	—
MD21-06-66273	21-52417	0.0–0.5	Soil	1.02	—	—	1.59	—
MD21-06-66274	21-52417	1.5–2.0	Soil	0.18	—	—	0.375	—
MD21-06-66276	21-52418	0.0–0.5	Soil	5.56	—	—	4.87	—
MD21-06-66277	21-52418	1.5–2.0	Soil	9.14	0.225	0.0423	8.59	—
MD21-06-66280	21-52419	0.0–0.5	Soil	—	—	—	0.967	—
MD21-06-66279	21-52419	1.5–2.0	Soil	—	0.419	—	0.498	0.0212
MD21-06-66282	21-52420	0.0–0.5	Soil	4.31	—	—	4.79	0.00641
MD21-06-66283	21-52420	1.5–2.0	Soil	0.182	—	—	0.288	—
MD21-06-68044	21-25622	0.0–0.5	Soil	3.26	—	0.0303	3.87	0.0585
MD21-06-68045	21-25622	1.5–2.0	Soil	1.04	0.12	—	1.42	0.074

Notes: Units in pCi/g. Shaded values are detected activities greater than EPCs.

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

[b] na = Not available.

[c] SALs from LANL (2014, 600064).

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

Table A-4
Residential Noncarcinogenic Screening Evaluation for SWMU 21-027(d)

COPC	Maximum Detected Concentration or Detection Limit (mg/kg)	Residential SSL[a] (mg/kg)	Hazard Quotient
Anthracene	0.00918	17400	5.3E-07
Aroclor-1254	0.0028	1.14	2.5E-03
Cadmium	[0.578]	70.5	8.2E-03
Fluoranthene	0.225	2320	9.7E-05
Lead	24.3	400	6.1E-02
Mercury	0.663	23.5[b]	2.8E-02
Nitrate	2.58	125000	2.1E-05
Perchlorate	0.00161	54.8	2.9E-05
Phenanthrene	0.0131	1740	7.5E-06
Pyrene	0.0253	1740	1.5E-05
Selenium	[1.73]	391	4.4E-03
		Hazard Index	**0.10**

Note: Values in brackets are detection limits.

[a] SSLs from NMED (2014, 600115).

[b] SSL for mercury salts.

Table A-5
Residential Carcinogenic Screening Evaluation for SWMU 21-027(d)

COPC	Maximum Detected Concentration (mg/kg)	Residential SSL* (mg/kg)	Excess Cancer Risk
Aroclor-1260	0.002	2.43	8.2E-09
Benzo(a)pyrene	0.0339	0.153	2.2E-06
Benzo(b)fluoranthene	0.0234	1.53	1.5E-07
Bis(2-ethyl)hexylphthalate	0.0921	380	2.4E-09
Chrysene	0.0189	153	1.2E-09
		Total Excess Cancer Risk	**2.4E-06**

* SSLs from NMED (2014, 600115).

Table A-6
Residential Radionuclide Screening Evaluation for SWMU 21-027(d)

COPC	Maximum Detected Activity (pCi/g)	Residential SAL* (pCi/g)	Dose (mrem/yr)
Americium-241	9.14	82	2.8
Cesium-137	0.419	11	0.95
Plutonium-238	0.0423	84	0.01
Plutonium-239	8.59	79	2.7
Tritium	0.074	850	0.002
		Total Dose	**6.5**

* SALs from LANL (2014, 600064).

Attachment 1

Sampling Locations at Solid Waste Management Unit 21-027(d)

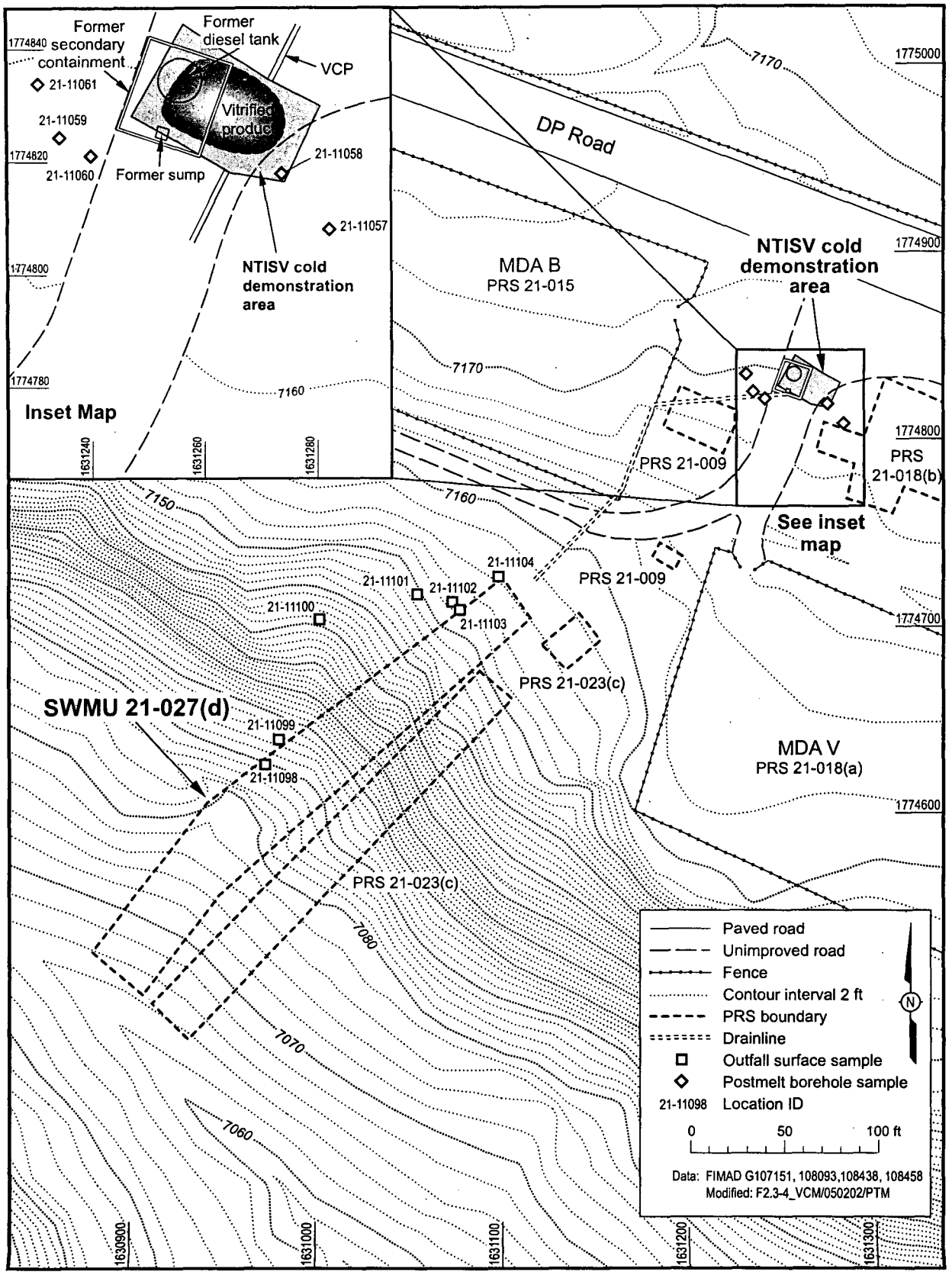

Figure 2.3-4. Postmelt borehole and outfall sample locations

Attachment 2

Samples Collected and Analyses Requested for Solid Waste Management Unit 21-023(c)

Table B-2.1-1
Summary of Samples Collected and Requested Analyses at SWMUs 21-013(b), 21-018(a), 21-018(b), 21-023(c), AOC 21-013(g), and Consolidated Unit 21-018(a)-99

Sample ID	Location ID	Depth (ft bgs)	Media	Anions	Cyanide	Metals	Perchlorate	SVOCs	Uranium	PCBs	SVOCs	VOCs	Americium-241	Gamma Spectroscopy	Tritium	Isotopic Plutonium	Isotopic Thorium	Isotopic Uranium	Strontium-90
SWMU 21-013(b)																			
AAA0225	21-01056	0–0.08	Soil	—[a]	—	—	—	—	—	—	—	—	—	—	—	X[b]	—	—	X
AAA0226	21-01056	0–0.5	Soil	—	—	—	—	—	—	—	—	—	X	—	—	X	X	X	X
AAA0235	21-01063	0–0.08	Soil	—	—	—	—	—	—	—	—	—	X	—	—	X	—	—	X
AAA0227	21-01292	0–0.08	Soil	—	—	—	—	—	—	—	—	—	X	—	—	X	—	—	X
AAA0228	21-01292	0–0.5	Soil	—	—	—	—	—	—	—	—	—	X	—	—	X	X	X	X
AAA7528	21-01866	0–0.25	Soil	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAA7529	21-01866	0.25–0.5	Soil	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAA7530	21-01866	0.5–1	Soil	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAA7531	21-01867	0–0.25	Soil	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAA7532	21-01867	0.25–0.5	Soil	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAA7533	21-01867	0.5–1	Soil	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAA7534	21-01868	0–0.25	Soil	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAA7535	21-01868	0.25–0.5	Soil	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAA7536	21-01868	0.5–1	Soil	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAB8916	21-01875	0–0.42	Soil	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	X
AAB8932	21-01878	0–0.33	Soil	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	X
AAB8936	21-01879	0–0.42	Soil	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	X
AAB8946	21-01881	0–0.5	Soil	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	X
AAB8947	21-01881	0.5–0.83	Soil	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	X
AAB8956	21-01883	0–0.5	Soil	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	X
AAB8957	21-01883	0.5–1	Soil	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	X
AAB7287	21-02572	0–0.25	Soil	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAB7288	21-02572	0.25–0.5	Soil	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAB7289	21-02572	0.5–1	Soil	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
MD21-05-60367	21-24639	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60368	21-24639	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60370	21-24640	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60371	21-24640	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60373	21-24641	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60374	21-24641	0.5–1	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60375	21-24642	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60377	21-24642	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60379	21-24643	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60380	21-24643	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X

Table B-2.1-1 (continued)

Sample ID	Location ID	Depth (ft bgs)	Media	Anions	Cyanide	Metals	Perchlorate	SVOCs	Uranium	PCBs	SVOCs	VOCs	Americium-241	Gamma Spectroscopy	Tritium	Isotopic Plutonium	Isotopic Thorium	Isotopic Uranium	Strontium-90
MD21-05-60382	21-24644	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60383	21-24644	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60385	21-24645	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60386	21-24645	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60388	21-24646	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60389	21-24646	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60391	21-24647	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60392	21-24647	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60395	21-24648	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60397	21-24649	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60398	21-24649	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60401	21-24650	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60403	21-24651	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60404	21-24651	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60406	21-24652	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60407	21-24652	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60409	21-24653	0–0.6	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60410	21-24653	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60413	21-24654	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60418	21-24656	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60419	21-24656	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60421	21-24657	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60422	21-24657	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60424	21-24658	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60425	21-24658	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60437	21-24659	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60436	21-24659	1–1.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60440	21-24660	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60443	21-24661	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60445	21-24662	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60394	21-24648	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60446	21-24662	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60448	21-24663	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60449	21-24663	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60451	21-24664	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60452	21-24664	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60454	21-24665	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X

Table B-2.1-1 (continued)

Sample ID	Location ID	Depth (ft bgs)	Media	Anions	Cyanide	Metals	Perchlorate	SVOCs	Uranium	PCBs	SVOCs	VOCs	Americium-241	Gamma Spectroscopy	Tritium	Isotopic Plutonium	Isotopic Thorium	Isotopic Uranium	Strontium-90
MD21-05-60455	21-24665	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60457	21-24666	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60458	21-24666	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60460	21-24667	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60461	21-24667	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60464	21-24668	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60466	21-24669	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60467	21-24669	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60469	21-24670	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60470	21-24670	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60472	21-24671	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60473	21-24671	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60475	21-24672	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60476	21-24672	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60478	21-24673	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60479	21-24673	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60481	21-24674	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60482	21-24674	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60484	21-24675	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60485	21-24675	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60487	21-24676	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60490	21-24677	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60491	21-24677	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60493	21-24678	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60494	21-24678	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60568	21-24679	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60569	21-24679	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60571	21-24680	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60572	21-24680	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60574	21-24681	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60575	21-24681	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60577	21-24682	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60578	21-24682	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60580	21-24683	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60581	21-24683	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
RE21-07-595	21-24650	0–0.5	Soil	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—

Table B-2.1-1 (continued)

Sample ID	Location ID	Depth (ft bgs)	Media	Anions	Cyanide	Metals	Perchlorate	SVOCs	Uranium	PCBs	SVOCs	VOCs	Americium-241	Gamma Spectroscopy	Tritium	Isotopic Plutonium	Isotopic Thorium	Isotopic Uranium	Strontium-90
RE21-07-596	21-24650	1.5–2.0	Soil	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—
RE21-07-597	21-600102	0–0.5	Soil	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—
RE21-07-608	21-600102	1.5–2.0	Soil	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—
RE21-07-598	21-600103	0–0.5	Soil	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—
RE21-07-609	21-600103	1.5–2.0	Soil	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—
RE21-07-599	21-600104	0–0.5	Soil	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—
RE21-07-610	21-600104	1.5–2.0	Soil	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—
AOC 21-013(g)																			
AAA0236	21-01069	0–0.08	Soil	—	—	—	—	—	—	—	—	—	X	—	—	X	—	—	X
AAA0237	21-01069	0–0.5	Soil	—	—	—	—	—	—	—	—	—	X	—	—	X	—	—	X
AAB8911	21-01874	0–0.5	Soil	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	X
AAB8912	21-01874	0.5–1	Soil	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	X
AAB8913	21-01874	1–1.33	Soil	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	X
AAB9021	21-01896	0–0.5	Soil	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	X
AAB9022	21-01896	0.5–1	Soil	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	X
0121-96-0212	21-02517	5–7.5	Qbt 3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—
0121-96-0213	21-02517	25–30	Qbt 3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—
AAB7290	21-02573	0–0.25	Sediment	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAB7291	21-02573	0.25–0.5	Sediment	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAB7292	21-02573	0.5–1	Sediment	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
0121-96-0214	21-04501	1–1.5	Fill	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—
0121-96-0215	21-04502	1–1.5	Fill	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—
0121-96-0216	21-04503	1–1.5	Fill	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—
0121-96-0217	21-04504	1–1.5	Fill	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—
MD21-05-60415	21-24655	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60416	21-24655	1.5–2	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60442	21-24661	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-05-60463	21-24668	0–0.5	Soil	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
SWMU 21-018(a)																			
AAB6976	21-01974	0–0.5	Soil	—	—	X	—	—	—	—	X	—	X	X	X	X	—	X	—
AAA7567	21-02517	0–2.5	Soil	—	—	X	—	—	X	—	X	X	—	X	X	X	—	X	—
AAA7568	21-02517	2.5–5	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	X	—
AAA7569	21-02517	5–7.5	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAA7570	21-02517	7.5–10	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAA7571	21-02517	10–12.5	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAA7572	21-02517	12.5–15	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAA7573	21-02517	15–17.5	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	X	—

Table B-2.1-1 (continued)

Sample ID	Location ID	Depth (ft bgs)	Media	Anions	Cyanide	Metals	Perchlorate	SVOCs	Uranium	PCBs	SVOCs	VOCs	Americium-241	Gamma Spectroscopy	Tritium	Isotopic Plutonium	Isotopic Thorium	Isotopic Uranium	Strontium-90
AAA7574	21-02517	20–25	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAA7575	21-02517	25–30	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAA7576	21-02517	30–35	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	X	—
AAA7577	21-02517	35–40	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAA7578	21-02517	40–45	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAA7579	21-02517	45–50	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	X	—
AAA7580	21-02517	50–55	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	X	—
AAA7581	21-02517	55–60	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAA7582	21-02517	60–65	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAA7583	21-02517	65–70	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	X	—
AAA7584	21-02517	70–75	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	X	—
AAA7589	21-02517	95–100	Qbt 2	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAA7594	21-02517	120–125	Qbt 2	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAB6660	21-02518	12.5–15	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6661	21-02518	15–20	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6662	21-02518	20–25	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6663	21-02518	25–30	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6664	21-02518	30–35	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6665	21-02518	35–40	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6666	21-02518	40–45	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6667	21-02518	45–50	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6668	21-02518	50–55	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6669	21-02518	55–60	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6670	21-02518	60–65	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6671	21-02518	65–70	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6672	21-02518	70–75	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6678	21-02519	12.5–15	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6679	21-02519	15–20	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6680	21-02519	20–25	Qbt 3	—	—	X	—	—	—	—	X	X	—	X	X	X	—	X	—
AAB6681	21-02519	25–30	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	—	—
AAB6682	21-02519	30–35	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	—	—
AAB6683	21-02519	35–40	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6684	21-02519	40–45	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6685	21-02519	45–50	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6686	21-02519	50–55	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	—	—
AAB6687	21-02519	55–60	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6688	21-02519	60–65	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—

Table B-2.1-1 (continued)

Sample ID	Location ID	Depth (ft bgs)	Media	Anions	Cyanide	Metals	Perchlorate	SVOCs	Uranium	PCBs	SVOCs	VOCs	Americium-241	Gamma Spectroscopy	Tritium	Isotopic Plutonium	Isotopic Thorium	Isotopic Uranium	Strontium-90
AAB6689	21-02519	65–70	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6690	21-02519	70–75	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6696	21-02520	12.5–15	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6697	21-02520	15–20	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	—	—
AAB6698	21-02520	20–25	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6699	21-02520	25–30	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6700	21-02520	30–35	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	—	—
AAB6701	21-02520	35–40	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	—	—
AAB6702	21-02520	40–45	Qbt 3	—	—	X	—	—	—	—	X	X	X	X	X	X	—	X	—
AAB6703	21-02520	45–50	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAB6704	21-02520	50–55	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAB6705	21-02520	55–60	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAB6706	21-02520	60–65	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAB6707	21-02520	65–70	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	X	—
AAB6708	21-02520	70–75	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAB6714	21-02521	12.5–15	Qbt 3	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAB6715	21-02521	15–20	Qbt 3	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAB6716	21-02521	20–25	Qbt 3	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAB6717	21-02521	25–30	Qbt 3	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAB6718	21-02521	30–35	Qbt 3	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAB6719	21-02521	35–40	Qbt 3	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAB6720	21-02521	40–45	Qbt 3	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAB6721	21-02521	45–50	Qbt 3	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAB6722	21-02521	50–55	Qbt 3	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAB6723	21-02521	55–60	Qbt 3	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAB6724	21-02521	60–65	Qbt 3	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAB6725	21-02521	65–70	Qbt 3	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAB6726	21-02521	70–75	Qbt 3	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAC0094	21-02522	12.5–15	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAC0095	21-02522	15–20	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	X	—
AAC0096	21-02522	20–25	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAC0097	21-02522	25–30	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	X	—
AAC0098	21-02522	30–35	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAC0099	21-02522	35–40	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	X	—
AAC0100	21-02522	40–45	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAC0101	21-02522	45–50	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	X	—
AAC0102	21-02522	50–55	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—

Table B-2.1-1 (continued)

Sample ID	Location ID	Depth (ft bgs)	Media	Anions	Cyanide	Metals	Perchlorate	SVOCs	Uranium	PCBs	SVOCs	VOCs	Americium-241	Gamma Spectroscopy	Tritium	Isotopic Plutonium	Isotopic Thorium	Isotopic Uranium	Strontium-90
AAC0103	21-02522	55–60	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAC0104	21-02522	60–65	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	X	—
AAC0105	21-02522	65–70	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	X	—
AAC0106	21-02522	70–75	Qbt 3	—	—	X	—	—	X	—	X	X	—	X	X	X	—	—	—
AAB7043	21-02523	70–75	Qbt 3	—	—	X	—	—	—	—	—	—	—	X	X	—	—	—	—
AAB7063	21-02523	170–175	Qbt 1v	—	—	X	—	—	X	—	—	—	—	X	X	X	—	—	—
AAC0555	21-02523	225.2–227.5	Qbt 1g	—	—	X	—	—	X	—	—	—	—	X	X	X	—	X	—
AAB7078	21-02523	245–250	Qbt 1g	—	—	X	—	—	X	—	—	—	—	X	X	X	—	—	—
MD21-05-59560	21-24524	8–10	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59561	21-24524	11–13	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59562	21-24524	23–25	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59563	21-24524	33–35	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59564	21-24524	43–45	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59565	21-24524	93–95	Qbt 2	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59566	21-24524	98–100	Qbt 2	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59567	21-24524	168–170	Qbt 2	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-60609	21-24524	339.5–340	Qct	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-60610	21-24524	378–380	Qbo	—	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59596	21-24528	3–5	Fill	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59597	21-24528	14–16	Fill	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59598	21-24528	32.5–34.5	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59599	21-24528	36–38	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59600	21-24528	38–40	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59655	21-24531	3–5	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59656	21-24531	12–14	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59657	21-24531	62–64	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59658	21-24531	78–80	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59664	21-24532	20–22	Fill	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59665	21-24532	28–30	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59666	21-24532	31.5–33.5	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59667	21-24532	38–40	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59673	21-24533	10–12	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59674	21-24533	28–30	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59675	21-24533	30–32	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59676	21-24533	58–60	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59677	21-24533	83–85	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59682	21-24534	3–5	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X

Table B-2.1-1 (continued)

Sample ID	Location ID	Depth (ft bgs)	Media	Anions	Cyanide	Metals	Perchlorate	SVOCs	Uranium	PCBs	SVOCs	VOCs	Americium-241	Gamma Spectroscopy	Tritium	Isotopic Plutonium	Isotopic Thorium	Isotopic Uranium	Strontium-90
MD21-05-59683	21-24534	8–10	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59684	21-24534	13–15	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59685	21-24534	38–40	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59691	21-24535	8–10	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59692	21-24535	13–15	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59693	21-24535	20–22	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59694	21-24535	30–32	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59695	21-24535	78–80	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59750	21-24538	13–15	Qbt 3	—	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59751	21-24538	15–17	Qbt 3	—	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59752	21-24538	28–30	Qbt 3	—	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59753	21-24538	37–39	Qbt 3	—	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59754	21-24538	42–44	Qbt 3	—	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59755	21-24538	53–55	Qbt 3	—	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59759	21-24539	12–14	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59760	21-24539	28–30	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59761	21-24539	40–42	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59762	21-24539	78–80	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59768	21-24540	9–11	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59769	21-24540	26–28	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59770	21-24540	31–33	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59771	21-24540	38–40	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59777	21-24541	20–22	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59778	21-24541	28–30	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59779	21-24541	31–33	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59780	21-24541	42–44	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59781	21-24541	47–49	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59782	21-24541	78–80	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59786	21-24542	2–4	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59787	21-24542	13–15	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59788	21-24542	32–34	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59789	21-24542	38–40	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59934	21-24554	2–3	Fill	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59935	21-24554	4–5	Fill	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59984	21-24569	2–2.5	Soil	X	X	X	—	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59985	21-24569	2.5–3	Soil	X	X	X	—	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-70163	21-24585	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X

Table B-2.1-1 (continued)

Sample ID	Location ID	Depth (ft bgs)	Media	Anions	Cyanide	Metals	Perchlorate	SVOCs	Uranium	PCBs	SVOCs	VOCs	Americium-241	Gamma Spectroscopy	Tritium	Isotopic Plutonium	Isotopic Thorium	Isotopic Uranium	Strontium-90
MD21-06-70164	21-24593	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-70165	21-24595	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66647	21-25431	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66648	21-25432	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66649	21-25433	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66650	21-25434	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66651	21-25435	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66652	21-25436	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66653	21-25437	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66654	21-25438	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66655	21-25439	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66656	21-25440	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66657	21-25441	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66658	21-25442	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66659	21-25443	15–15.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66660	21-25444	15.5–16	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66661	21-25445	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66662	21-25446	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66663	21-25447	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66664	21-25448	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66665	21-25449	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66666	21-25450	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-70162	21-26273	12–12.5	Qbt 3	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
Consolidated Unit 21-018(a)-99																			
MD21-05-61752	21-24524	14–15	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71202	21-24524	14–15	Pore Gas	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—
MD21-05-61753	21-24524	330–335	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71201	21-24524	379–380	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61755	21-24525	4–5	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71204	21-24525	4–5	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61754	21-24525	26–27	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71203	21-24525	39–40	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61757	21-24526	4–5	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71206	21-24526	4–5	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61756	21-24526	24.2–25.2	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71205	21-24526	39–40	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61759	21-24527	4.5–5.5	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—

Table B-2.1-1 (continued)

Sample ID	Location ID	Depth (ft bgs)	Media	Anions	Cyanide	Metals	Perchlorate	SVOCs	Uranium	PCBs	SVOCs	VOCs	Americium-241	Gamma Spectroscopy	Tritium	Isotopic Plutonium	Isotopic Thorium	Isotopic Uranium	Strontium-90
MD21-06-71208	21-24527	4.5–5.5	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61758	21-24527	28–29	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71207	21-24527	39–40	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61761	21-24528	4–5	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71210	21-24528	4–5	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61760	21-24528	26–27	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71209	21-24528	39–40	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61763	21-24531	14–15	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71212	21-24531	14–15	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61762	21-24531	51–52	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71211	21-24531	79–80	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61765	21-24532	14–15	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71214	21-24532	14–15	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61764	21-24532	23.5–24.5	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71213	21-24532	39–40	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61767	21-24533	11–12	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71216	21-24533	11–12	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61766	21-24533	55–56	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71215	21-24533	84–85	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61769	21-24534	14–15	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71218	21-24534	14–15	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61768	21-24534	22.5–23.5	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71217	21-24534	39–40	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61771	21-24535	14–15	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71220	21-24535	14–15	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61770	21-24535	45.2–46.2	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71219	21-24535	79–80	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61773	21-24538	14–15	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71222	21-24538	14–15	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61772	21-24538	34.5–35.5	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71221	21-24538	84–85	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61775	21-24539	14–15	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71224	21-24539	14–15	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61774	21-24539	57.5–58.5	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71223	21-24539	79–80	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61777	21-24540	11–12	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71226	21-24540	11–12	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—

Table B-2.1-1 (continued)

Sample ID	Location ID	Depth (ft bgs)	Media	Anions	Cyanide	Metals	Perchlorate	SVOCs	Uranium	PCBs	SVOCs	VOCs	Americium-241	Gamma Spectroscopy	Tritium	Isotopic Plutonium	Isotopic Thorium	Isotopic Uranium	Strontium-90
MD21-05-61776	21-24540	24–25	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71225	21-24540	39–40	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61779	21-24541	19–20	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71228	21-24541	19–20	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61778	21-24541	55–56	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71227	21-24541	79–80	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61781	21-24542	14–15	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71230	21-24542	14–15	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-05-61780	21-24542	23.5–24.5	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
MD21-06-71229	21-24542	39–40	Pore Gas	—	—	—	—	—	—	—	—	X	—	—	X	—	—	—	—
SWMU 21-018(b)																			
AAB6974	21-01972	0–0.5	Soil	—	—	X	—	—	X	—	X	—	—	X	X	X	—	—	—
AAB6975	21-01973	0–0.5	Soil	—	—	X	—	—	—	—	X	—	X	X	X	X	—	X	—
MD21-05-59570	21-24525	3–5	Fill	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59571	21-24525	13–15	Fill	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59572	21-24525	20–22	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59573	21-24525	37–39	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59581	21-24526	3–5	Fill	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59578	21-24526	9–11	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59579	21-24526	32–34	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59580	21-24526	38–40	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59591	21-24527	3–5	Fill	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59592	21-24527	8.5–10	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59593	21-24527	12–14	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59594	21-24527	38–40	Qbt 3	X	X	X	—	X	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59925	21-24551	3–4	Fill	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59926	21-24551	5–6	Fill	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59928	21-24552	2.5–3.5	Fill	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59929	21-24552	4.5–5.5	Fill	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59931	21-24553	3–4	Fill	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59932	21-24553	5–6	Fill	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59937	21-24555	3–4	Fill	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59938	21-24555	5–6	Fill	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59940	21-24556	3–4	Fill	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59941	21-24556	5–6	Fill	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X

Table B-2.1-1 (continued)

Sample ID	Location ID	Depth (ft bgs)	Media	Anions	Cyanide	Metals	Perchlorate	SVOCs	Uranium	PCBs	SVOCs	VOCs	Americium-241	Gamma Spectroscopy	Tritium	Isotopic Plutonium	Isotopic Thorium	Isotopic Uranium	Strontium-90
SWMU 21-023(c)																			
AAA0223	21-01055	0–0.08	Soil	—	—	—	—	—	—	—	—	—	X	—	—	X	—	—	X
AAA0224	21-01055	0–0.5	Soil	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	X
MD21-06-73257	21-01337	3.7–4	Qbt 3	—	—	—	—	—	—	—	—	—	—	X	—	X	—	—	—
AAA0629	21-01340	0–0.5	Soil	—	—	X	—	—	—	—	—	—	X	—	—	X	—	—	X
MD21-06-73256	21-01607	3–3.3	Qbt 3	—	—	—	—	—	—	—	—	—	—	X	—	X	—	—	—
AAA4042	21-01608	0–0.33	Soil	—	—	—	—	—	—	—	X	—	X	X	X	X	—	X	—
AAA4043	21-01609	0–0.42	Soil	—	—	—	—	—	—	—	X	—	X	X	X	X	—	X	—
MD21-06-73254	21-01610	3.5–3.8	Qbt 3	—	—	—	—	—	—	—	—	—	—	X	—	X	—	—	—
MD21-06-70174	21-01611	0.7–1.2	Qbt 3	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
AAA4048	21-01612	0.5–1	Soil	—	—	—	—	—	—	—	X	—	X	X	X	X	—	X	—
AAA4049	21-01612	1–1.5	Soil	—	—	—	—	—	—	—	X	—	X	X	X	X	—	X	—
AAA4050	21-01613	0–0.5	Soil	—	—	—	—	—	—	—	X	—	X	X	X	X	—	X	—
AAA4051	21-01613	0.5–1	Soil	—	—	—	—	—	—	—	X	—	X	X	X	X	—	X	—
AAA4054	21-01613	1–1.5	Soil	—	—	—	—	—	—	—	X	—	X	X	X	X	—	X	—
MD21-06-73255	21-01614	4.2–4.5	Qbt 3	—	—	—	—	—	—	—	—	—	—	X	—	X	—	—	—
AAA4093	21-01665	0–5	Soil	—	—	X	—	—	—	—	X	—	X	X	X	X	—	X	—
AAA4094	21-01665	5–9	Qbt 3	—	—	X	—	—	—	—	X	—	X	X	X	X	—	X	—
AAA4095	21-01665	10–15	Qbt 3	—	—	X	—	—	—	—	X	—	X	X	X	X	—	X	—
AAA4096	21-01665	15–20	Qbt 3	—	—	X	—	—	—	—	X	—	X	X	X	X	—	X	—
AAB6979	21-01977	0–0.5	Soil	—	—	X	—	—	—	—	X	—	X	X	X	X	—	X	—
AAB6981	21-01979	0–0.5	Soil	—	—	X	—	—	—	—	X	—	X	X	X	X	—	X	—
AAB6982	21-01980	0–0.5	Soil	—	—	X	—	—	—	—	X	—	X	X	X	X	—	X	—
MD21-05-59987	21-24570	2.5–3	Soil	X	X	X	—	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59988	21-24570	3–3.5	Soil	X	X	X	—	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59990	21-24571	2.5–3	Soil	X	X	X	—	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59991	21-24571	3–3.5	Soil	X	X	X	—	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59993	21-24572	2–2.5	Soil	X	X	X	—	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59994	21-24572	2.5–3	Soil	X	X	X	—	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59996	21-24573	2–2.5	Soil	X	X	X	—	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59997	21-24573	2.5–3	Soil	X	X	X	—	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-59999	21-24574	3–3.5	Soil	X	X	X	—	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-60000	21-24574	3.5–4	Soil	X	X	X	—	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-60002	21-24575	2–2.5	Soil	X	X	X	—	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-60003	21-24575	2.5–3	Soil	X	X	X	—	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-60005	21-24576	0–0.5	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-60006	21-24576	1.5–2	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X

Table B-2.1-1 (continued)

Sample ID	Location ID	Depth (ft bgs)	Media	Anions	Cyanide	Metals	Perchlorate	SVOCs	Uranium	PCBs	SVOCs	VOCs	Americium-241	Gamma Spectroscopy	Tritium	Isotopic Plutonium	Isotopic Thorium	Isotopic Uranium	Strontium-90
MD21-05-60008	21-24577	0–0.5	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-60009	21-24577	1.5–2	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-60011	21-24578	0–0.5	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-05-60012	21-24578	1.5–2	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-70177	21-24579	2–2.5	Qbt 3	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-06-73253	21-25411	4–4.3	Qbt 3	—	—	—	—	—	—	—	—	—	—	X	—	X	—	—	—
MD21-06-70170	21-25412	2–2.5	Qbt 3	X	X	X	X	—	—	X	X	—	X	X	X	X	—	X	X
MD21-06-66261	21-25413	0–0.5	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66262	21-25413	1.5–2	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66264	21-25414	0–0.5	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66265	21-25414	1.5–2	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66267	21-25415	0–0.5	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66268	21-25415	1.5–2	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66270	21-25416	0–0.5	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66271	21-25416	1.5–2	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66273	21-25417	0–0.5	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66274	21-25417	1.5–2	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66276	21-25418	0–0.5	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66277	21-25418	1.5–2	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66280	21-25419	0–0.5	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66279	21-25419	1.5–2	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66282	21-25420	0–0.5	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66283	21-25420	1.5–2	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66285	21-25421	0–0.5	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66286	21-25421	1.5–2	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66288	21-25422	0–0.5	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66289	21-25422	1.5–2	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66291	21-25423	0–0.5	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-66292	21-25423	1.5–2	Soil	X	X	X	X	—	—	—	X	—	X	X	X	X	—	X	X
MD21-06-68044	21-25622	0–0.5	Soil	X	X	X	—	—	—	X	X	—	X	X	X	X	—	X	X
MD21-06-68045	21-25622	1.5–2	Soil	X	X	X	—	—	—	X	X	—	X	X	X	X	—	X	X
MD21-06-68046	21-25623	0–0.5	Soil	X	X	X	—	—	—	X	X	—	X	X	X	X	—	X	X
MD21-06-68047	21-25623	1.5–2	Soil	X	X	X	—	—	—	X	X	—	X	X	X	X	—	X	X
MD21-06-68048	21-25624	0–0.5	Soil	X	X	X	—	—	—	X	X	—	X	X	X	X	—	X	X
MD21-06-68049	21-25624	1.5–2	Soil	X	X	X	—	—	—	X	X	—	X	X	X	X	—	X	X
MD21-06-68050	21-25625	0–0.5	Soil	X	X	X	—	—	—	X	X	—	X	X	X	X	—	X	X
MD21-06-68051	21-25625	1.5–2	Soil	X	X	X	—	—	—	X	X	—	X	X	X	X	—	X	X

Table B-2.1-1 (continued)

Sample ID	Location ID	Depth (ft bgs)	Media	Anions	Cyanide	Metals	Perchlorate	SVOCs	Uranium	PCBs	SVOCs	VOCs	Americium-241	Gamma Spectroscopy	Tritium	Isotopic Plutonium	Isotopic Thorium	Isotopic Uranium	Strontium-90
MD21-06-68052	21-25626	0–0.5	Soil	X	X	X	—	—	—	X	X	—	X	X	X	X	—	X	X
MD21-06-68053	21-25626	1.5–2	Soil	X	X	X	—	—	—	X	X	—	X	X	X	X	—	X	X

[a] A dash indicates that analysis was not requested.

[b] An "X" indicates that analysis was performed.

Attachment 3

Sampling Locations at Solid Waste Management Unit 21-023(c)

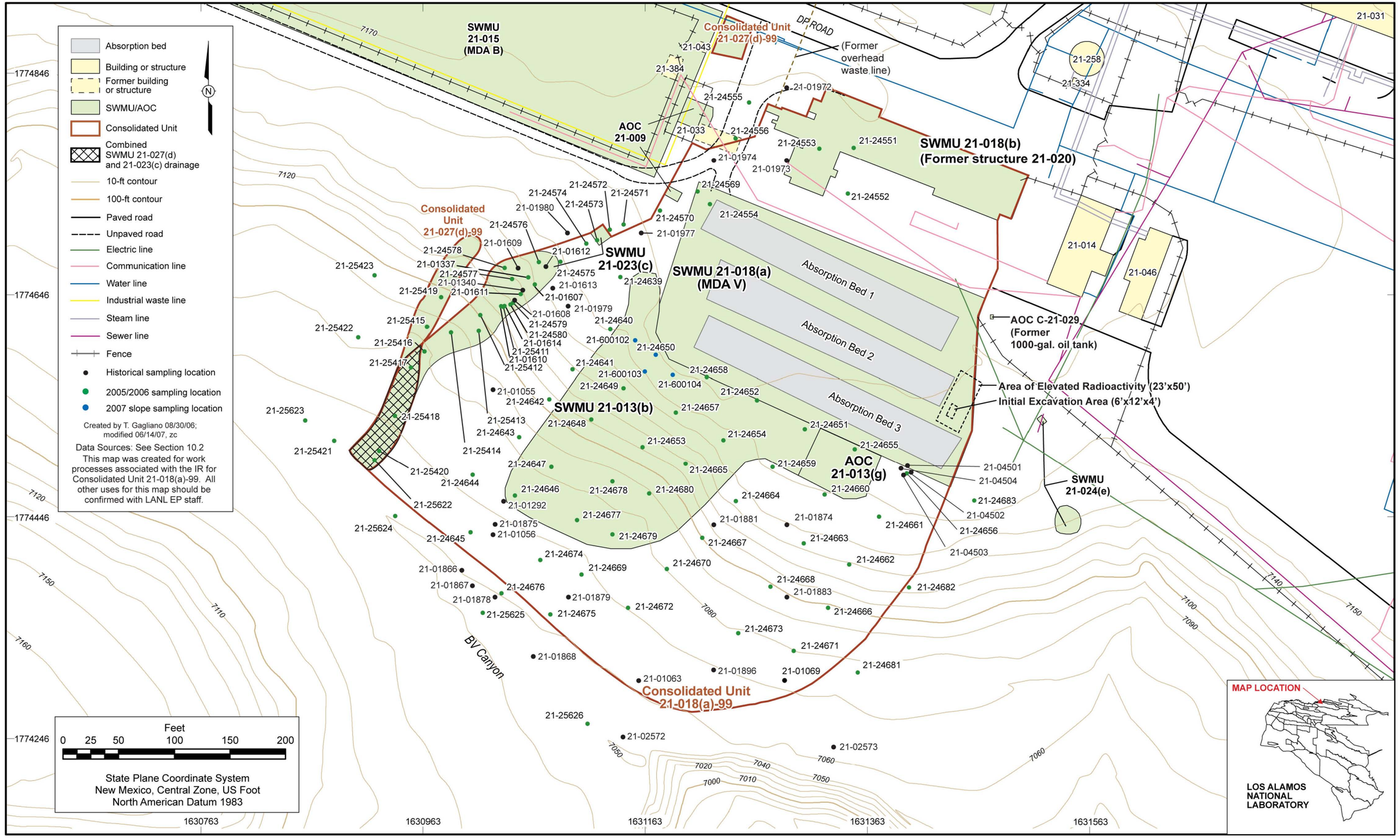

Figure B-1.1-2 Locations of surface and shallow subsurface samples collected at Consolidated Unit 21-018(a)-99

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RYAN FLYNN
Cabinet Secretary
BUTCH TONGATE
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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

January 19, 2016

Doug Hintze, Manager
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U1600578

RE: CERTIFICATES OF COMPLETION
TWO AREAS OF CONCERN AND TWELVE SOLID WASTE MANAGEMENT UNITS IN THE DELTA PRIME SITE AGGREGATE AREA
EPA ID #NM0890010515
HWB-LANL-15-032

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 Two Areas of Concern and Twelve Solid Waste Management Units in the Delta Prime Site Aggregate Area* (Request), dated June 18, 2015 and referenced by ADESH-15-085/LAUR 15-23983.

These twelve solid waste management units (SWMUs) and two areas of concern (AOC) were recommended for corrective action complete in the *Phase II Investigation Report for Delta Prime Site Aggregate Area, Revision 1* (Report), dated October 2010 (LA-UR-10-6478/EP2010-0325). A Notice of Disapproval (NOD) was issued for the Report on June 24, 2010. NMED issued a Direction to Modify (DTM) for the Report on October 19, 2010.

NMED hereby issues certificates of completion for the following twelve sites pursuant to Section VII.E.6.b of the Consent Order. The nature and extent is not defined at two sites that require either additional information or additional investigations.

AOC 21-002(b) is a former drum storage structure that consisted of three tin-sided walls, a roof and a concrete floor was built in 1945. Fifty-five gallon drums with unknown contents were stored at the site. The site underwent decontamination and decommissioning (D&D) in 1966. The investigations conducted at the site indicate that the site does not pose unacceptable risk under residential, construction, and industrial land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

AOC 21-009 is a former waste treatment laboratory that was constructed in 1948. The site underwent D&D in 1965. The investigations conducted at the site indicate that the site does not pose unacceptable risk under residential, construction, and industrial land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 21-012(b) consists of two concrete steam blowdown pits, a separate drainline that drained each pit towards the southern edge of the DP Mesa, a seepage pit filled with river stones, a drywell, an outfall pipe associated with floor drains, and piping conveying effluent between structures. It was built in 1945 to serve as a steam plant. The building was removed in 1985 and replaced with a new steam plant. The area was regraded. The investigations conducted at the site indicate that the site does not pose unacceptable risk under residential, construction, and industrial land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 21-013(c) is a former surface disposal area located at the eastern end of DP Mesa. The site consisted of mounds of earth, an excavated trench, and an earthen berm that contained scattered concrete, asphalt, and metal debris. Other surface debris included glass, scrap metal, wood, cans, paper, and plastic. The dates of operation are not known. The investigations conducted at the site indicate that the site does not pose unacceptable risk under residential, construction, and industrial land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 21-022(f) is an inactive sump and a pipeline. The sump received industrial waste from laboratory sinks in a research building and a mechanical equipment building. The building was built in 1945 and the sump was built to convey laboratory liquid effluent to material disposal area U. The depth of the sump is a minimum of 6-10 inches below ground surface. The sump was connected to a manhole in 1965 which connects to the Waste Disposal Plant. The investigations conducted at the site indicate that the site does not pose unacceptable risk under residential and industrial land use scenario. However, the site poses an unacceptable risk under the construction worker scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 21-024(a) is an inactive septic system that previously routed sewage from the old steam plant through a septic tank to the surface on the south rim of DP Mesa. The septic system was constructed in 1945. The septic system was not used after 1966 and was left in place. The associated building was removed in 1985, but there is no available documentation indicating if

the piping or tank was removed. The investigations conducted at the site indicate that the site does not pose unacceptable risk under residential, construction, and industrial land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 21-024(e) is an inactive septic system that routed sewage from the former TA-21 laundry and a former diesel plant and shop through a septic tank to the surface on the south rim of DP Mesa. The septic system was constructed in 1945. The laundry went through D&D in 1965 and the diesel power plant underwent D&D in 2006. In 1996, the septic was emptied and filled with pea gravel, inlet and outlet lines were grouted with cement and the surrounding area was restored and reseeded. The investigations conducted at the site indicate that the site does not pose unacceptable risk under residential, construction, and industrial land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 21-024(h) is a septic tank, pipelines, and associated outfall that originally received sewage from an administrative building, shop and a polonium-processing laboratory. The septic system was constructed in 1945. The septic system use was discontinued in 1966 and was left in place. The investigations conducted at the site indicate that the site does not pose unacceptable risk under residential, construction, and industrial land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 21-024(i) is an inactive septic tank, pipelines, and associated outfall. The only portion of the septic system remaining at the site is the inlet line from a chemistry building to the fence line that is overlain currently by a building. The portion of the inlet line from the fence to the septic tank, the septic tank, the outlet line, and the outfall were removed in 2001. The septic system was constructed in 1945 to serve a laboratory. The septic system was not used after 1965 but was left in place. The investigations conducted at the site indicate that the site does not pose unacceptable risk to human health under residential, construction, and industrial land use scenarios. However, the total dose from radionuclide contamination for a residential land use scenario is approximately 26 mrem/yr which is higher than the DOE target dose of 15 mrem/yr. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 21-024(j) is an inactive septic tank, pipelines, and associated outfall that received sewage from a warehouse and a laboratory. The septic system was constructed in 1961 to serve the warehouse/laboratory. The septic was not used after 1966 and was left in place. The investigations conducted at the site indicate that the site does not pose unacceptable risk under residential, construction, and industrial land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 21-024(o) is thought to have been a 4 inch vitrified clay pipe drainline that served the old diesel power plant and an associated outfall. The diesel power plant was built in 1947-1948. The pipe discharged south into Los Alamos canyon. The building was removed in 2006 and the

foundation was left in place. The investigations conducted at the site indicate that the site does not pose unacceptable risk under residential, construction, and industrial land use scenarios. The results of the ecological risk-screening assessment indicate no potential unacceptable risk to ecological receptors at the site.

SWMU 21-029, DP Tank Farm was located on the western edge of TA-21 and was the primary fueling station supporting Laboratory operations from January 1946 until February 1985. Structures included fuel tanks, fill ports, valve boxes, and the East and West Fill Stations. Investigations were conducted in 2001 and an RFI was approved in 2002. In 2003, NMED did not approve the site for No Further Action because potential offsite contaminant migration to the canyon had not been addressed. The Permittees have completed investigation of the canyon reaches upstream and downstream of SWMU 21-029 and the results were documented in the Los Alamos and Pueblo Canyons Investigation Report (2004) which was approved by NMED on May 11, 2005. The Report indicated that the constituents in sediment downstream of SWMU 21-029 did not pose an unacceptable risk to human health and the environment.

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.

The Permittees must provide additional information for the following two sites before a corrective action complete determination can be made.

SWMU 21-027(c) is a 4 inch vitrified clay pipe that exited a former machine shop and cafeteria and discharged south on DP Mesa. The building was removed in 1966 and the pipe was left in place. The Request incorrectly states that the Direction to Modify (DTM) letter did not identify any deficiencies at SWMU 21-027(c), please refer to 'Comment 15 Response' on page 3 of the DTM (October 19, 2010). The NOD (i.e., Comment #15) stated that NMED did not consider that the extent of lead contamination was defined at the site. In responding to the NOD comment, the Permittees utilized data from down-canyon reach LA-2W of the Los Alamos Canyon to define the lateral extent of lead. NMED stated in the DTM that "[R]each LA-2W does not provide data acceptable for use in determining the extent of lead contamination specifically related to SWMU 21-027(c)." The Request does not provide any information on whether the Permittees were subsequently able to demonstrate that the extent of lead contamination is defined at this site. NMED cannot evaluate the site for corrective action complete until the nature and extent of contamination is defined for the site and it is demonstrated that the site does not pose an unacceptable risk to human health and the environment.

SWMU 21-027(d) is an outfall from the storage tank secondary containment system located on the slope below material disposal area B. A voluntary corrective measure (VCM) was conducted at consolidated unit (CU) 21-027(d)-99 (consisting of SWMU 21-027(d) and AOC C-21-028) in 1999 to remediate petroleum contamination at the location of former storage tank, AOC C-21-

028. The VCM report was approved by NMED (September 10, 2002) and the approval stated that the nature and extent was not adequately defined for this site. Because the areas of investigations for SWMU 21-027(d) and MDA V overlap, the Permittees were directed to combine further characterization of this site with future investigations at MDA V. The Permittees did not address SWMU 21-027 in the MDA V investigation report; however, the data relevant to 21-027(d) from MDA V investigations is provided in Attachment A of the Request. Review of the information provided in Attachment A (Figure B-1.1-2) indicates that no samples were collected from the upper approximately 60 feet of the drainage. It is not clear if data from this area of the drainage is available from previous investigations. The Permittees must demonstrate that the nature and extent of contamination is defined for all of SWMU 21-027(d) and the site does not pose an unacceptable threat to human health and the environment before the site can be evaluated for a certificate of completion.

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

Sincerely,

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