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RFI Report for Material Disposal Area H at Technical Area 54



Los Alamos
NATIONAL LABORATORY

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1.0 INTRODUCTION

1.1 Background

Los Alamos National Laboratory (the Laboratory) is a multidisciplinary research facility owned by the Department of Energy (DOE) and managed by the University of California. The Laboratory is located in north-central New Mexico approximately 60 miles northeast of Albuquerque and 20 miles northwest of Santa Fe. The Laboratory site covers 43 square miles of the Pajarito Plateau, which consists of a series of finger-like mesas that are separated by deep canyons containing perennial and intermittent streams running from west to east. Mesa tops range in elevation between approximately 6200 ft and 7800 ft. The eastern portion of the plateau stands 300 ft to 900 ft above the Rio Grande.

The Laboratory's Environmental Restoration (ER) Project is involved in a national effort by the DOE to clean up sites and facilities that were formerly involved in weapons research and production. The goal of the ER Project is to ensure that DOE's past operations do not threaten human or environmental health and safety in and around Los Alamos County, New Mexico. To achieve that goal, the ER Project is currently investigating sites potentially contaminated by past Laboratory operations. The sites under investigation are either solid waste management units (SWMUs) or areas of concern (AOCs). In the ER Project, SWMUs and AOCs are collectively referred to as potential release sites (PRSs).

Depending on the type of contaminant(s) and the history of a PRS, the New Mexico Environment Department (NMED) or the DOE has administrative authority over work performed by the ER Project. NMED, under the auspices of the State of New Mexico, has authority over cleanup of sites with hazardous waste or hazardous constituents, including the hazardous waste portion of mixed waste (i.e., waste contaminated with both radioactive and hazardous constituents). Hazardous constituents are regulated under the Resource Conservation and Recovery Act (RCRA). The DOE has authority over cleanup of sites with radioactive contamination; radionuclides are regulated under DOE Order 5400.5, "Radiation Protection of the Public and the Environment," and DOE Order 435.1, "Radioactive Waste Management." The PRS in this report contains both hazardous and radioactive components.

NMED enforces the Hazardous and Solid Waste Amendments (HSWA) Module VIII of the Laboratory's Hazardous Waste Facility Permit, hereafter referred to as the HSWA Module (EPA 1990, 1585). The HSWA Module specifies conditions and requirements for performing ER activities. The Environmental Protection Agency issued the HSWA Module on May 23, 1990, and revised it on May 19, 1994; the permit is currently under revision by NMED.

In accordance with the HSWA Module, appropriate corrective actions are determined through the RFI process. The purposes of an RFI are to

- identify site information and collect environmental data, as necessary;
- characterize the nature and extent of any contaminant release(s) to air, groundwater, surface water, bedrock, and soil;
- evaluate the potential risk to human health and the environment; and
- support corrective measures proposals, if appropriate, for the site.

This report describes the results of the RFI of Material Disposal Area (MDA) H, PRS 54-004, at Technical Area (TA) 54 at the Laboratory. Results of the RFI are used to support recommendations for future ER activities at this PRS. The report includes site history, environmental setting, data collection and analysis,

and risk assessments. Appendix A includes a list of acronyms and defines terms used in this report. Appendix B gives details of the operational and environmental setting. Appendix C describes the results of the quality control/quality assurance process. Appendix D includes the analytical suites and results. Appendix E describes statistical analyses, and Appendix F gives the risk assessment calculations. Appendix G presents a documentation of the regulatory history and status and a summary of RFI activities, assessments, and recommendations for this PRS. Appendix H includes borehole profiles and logs. Appendix I includes cross sections of stratigraphy beneath MDA H.

1.2 Technical Area 54

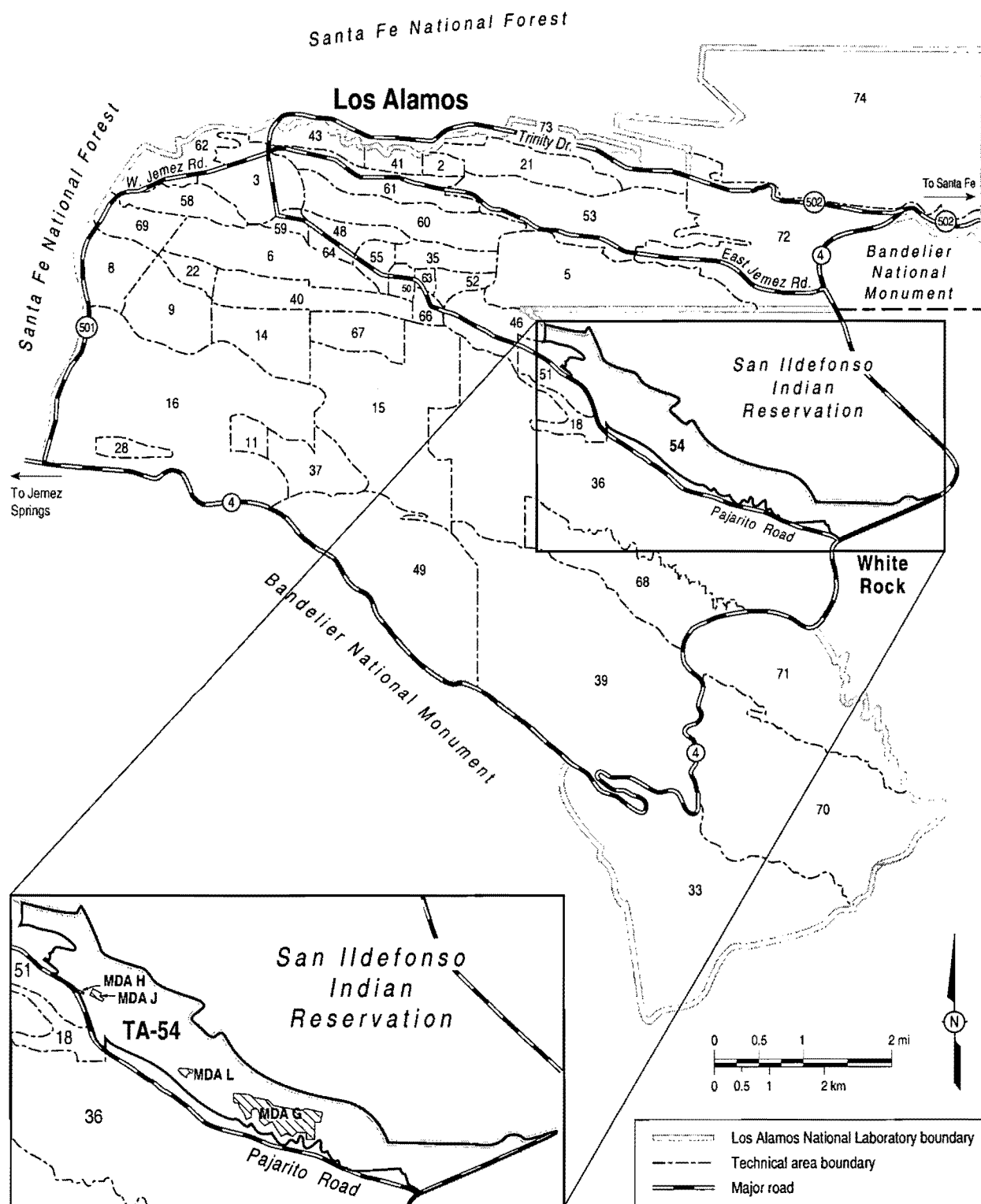
TA-54 is located in the east-central portion of the Laboratory (Figure 1.2-1) on Mesita del Buey between Pajarito Canyon (south) and Cañada del Buey (north) (Figure 1.2-2). During the late 1950s, the Laboratory, with approval of the US Atomic Energy Commission and upon recommendation of the US Geological Survey, selected TA-54 for underground disposal of Laboratory-derived waste (Rogers 1977, 5707 and 5708). Since that time, TA-54 has functioned as a major storage and disposal facility with some permitted treatment for wastes generated by Laboratory operations. MDA H is one of four MDAs at TA-54 (Figure 1.2-2). The MDA, which consists of nine shafts, opened in 1960 and was used for the disposal of classified, noncontainerized, solid wastes, some of which were residually contaminated with radioactive, hazardous, and high-explosive constituents. No waste was disposed of after August 1986, but the MDA has not yet undergone formal RCRA closure.

1.3 Objectives and Scope

The objectives of the RFI at MDA H were to

- determine if a release of hazardous waste has occurred from the MDA;
- characterize the nature and extent of contaminant releases (both hazardous waste constituents and radionuclides), if any, to the environment, based on the approved Operable Unit 1148 RFI work plan (LANL 1992, 7669) and subsequent modifications (Glatzmaier 1993, 30987) (Appendix G);
- evaluate the potential ecological and human health risks posed by exposure to contaminants under present-day conditions; and
- recommend, if necessary, additional investigations to reduce uncertainties associated with contaminant behavior and to ensure that contaminants do not pose an unacceptable future risk to human and ecological receptors.

This RFI report focuses on the potential present-day risks posed to human and ecological receptors located on top of and along the sides of the mesa. The cumulative risk from all potential sources will be evaluated in watershed reports for lower Pajarito Canyon aggregate, as identified in the approved IWP (LANL 1998, 62060).



F1.2-1/MDA H RFI RPT/022101/RLM

Figure 1.2-1. Location of TA-54 with respect to Laboratory technical areas and surrounding land holdings

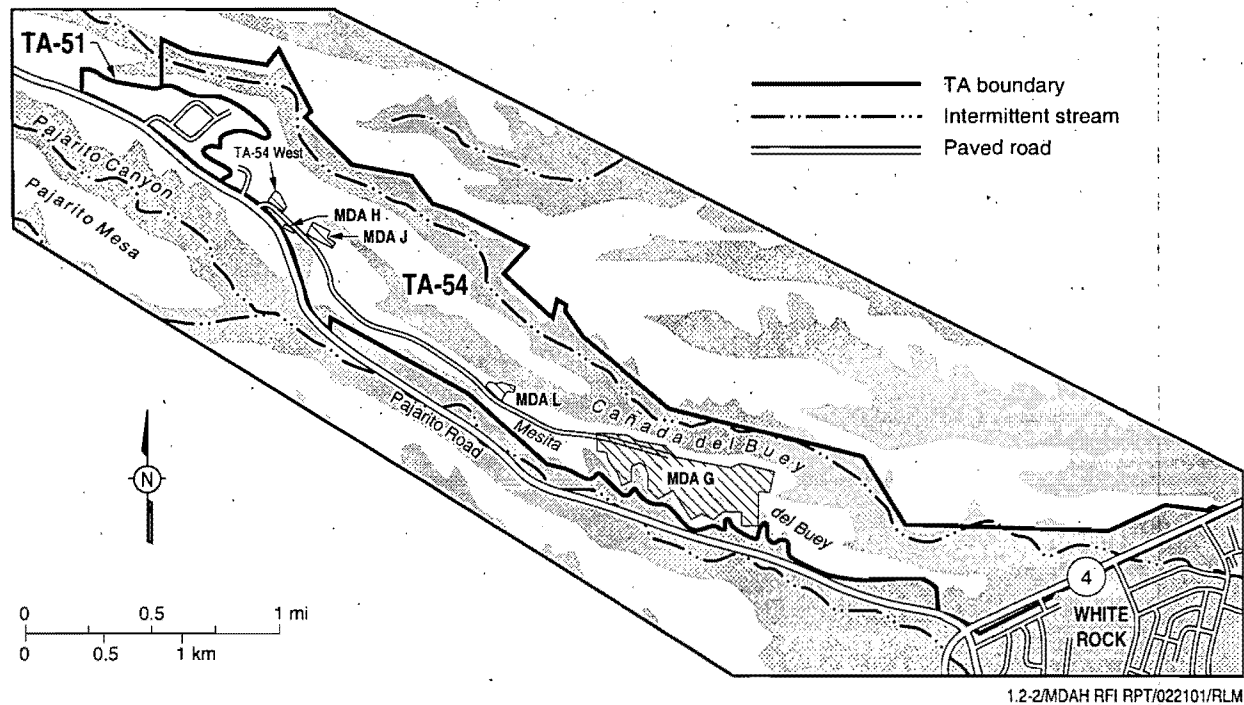


Figure 1.-2. Location of MDAs in TA-54

1.4 Technical Approach

For the technical approach to be successful, nature and extent of contamination at the site and contaminant behavior in the environment must be understood. Nature and extent refers to the types of contaminants released from the PRS and their spatial distribution within and across environmental media. Contaminant behavior refers to the fate and transport of a contaminant in the environmental media. To establish nature and extent, samples of media must be collected and analyzed and the data evaluated.

The RFI of MDA H assembled existing information and undertook additional efforts to define the nature and extent of contamination. Additional efforts included collecting data, revising the site conceptual model based on the new data, and estimating potential risk to human and ecological receptors from present day to 2044. Data gathered during the RFI were then evaluated to assess the potential present-day risk to site workers at MDA H. The assessments consider potential risks posed by releases of radionuclides and hazardous chemicals from the shafts to the surrounding environment. Present-day risks to biota were also assessed. A scoping analysis identified the biotic processes that were potentially most impacted by site operations and contaminant releases. Media-specific contaminant concentrations were subsequently compared with ecological screening levels to determine whether a potential unacceptable ecological risk existed. The approved installation work plan (LANL 1998, 62060) describes the methodologies used during the investigation and analyses.

2.0 MDA H

2.1 Summary of MDA H Activities and Data Review

From 1960 until 1986, MDA H was the Laboratory's primary disposal area for classified, solid-form waste. The MDA consists of nine inactive shafts, which are collectively designated as PRS 54-004. Shafts 1 through 8 are covered with crushed tuff and concrete; shaft 9 is covered solely by a thicker layer of concrete. All nine shafts are being addressed under RCRA corrective action.

RCRA facility investigation (RFI) fieldwork at MDA H was conducted by the Laboratory ER Project from 1994 to 1995 to determine the nature and extent of any contamination in channel sediments and subsurface media (LANL 1992, 7669). Four sediment samples and 33 core samples were collected to characterize the area and determine if releases of contaminants had occurred. All RFI samples were sent to an off-site contract laboratory for analysis.

The RFI focused on identifying chemicals of potential concern (COPCs) and developing a conceptual model for their fate and transport. To identify COPCs, data of sufficient quality were compared with applicable thresholds (i.e., background values for inorganic chemicals, background or fallout values for radionuclides, and estimated quantitation limits for organic chemicals). If sample data were above background or fallout concentrations for inorganic chemicals and radionuclides or related to a release for organic chemicals, the analytes were retained as COPCs and evaluated further.

Review of data from field investigations of MDA H indicate that the data were of sufficient quality and quantity to support the following statements:

- Most inorganic chemicals are not above background in either the sediment or tuff.
- Copper was detected at concentrations above background in the shallow tuff.
- Tritium is present at elevated concentrations in the subsurface tuff.
- Tritium and the pesticide methoxychlor were detected in channel sediments.
- Several organic chemicals were infrequently detected in the subsurface tuff.

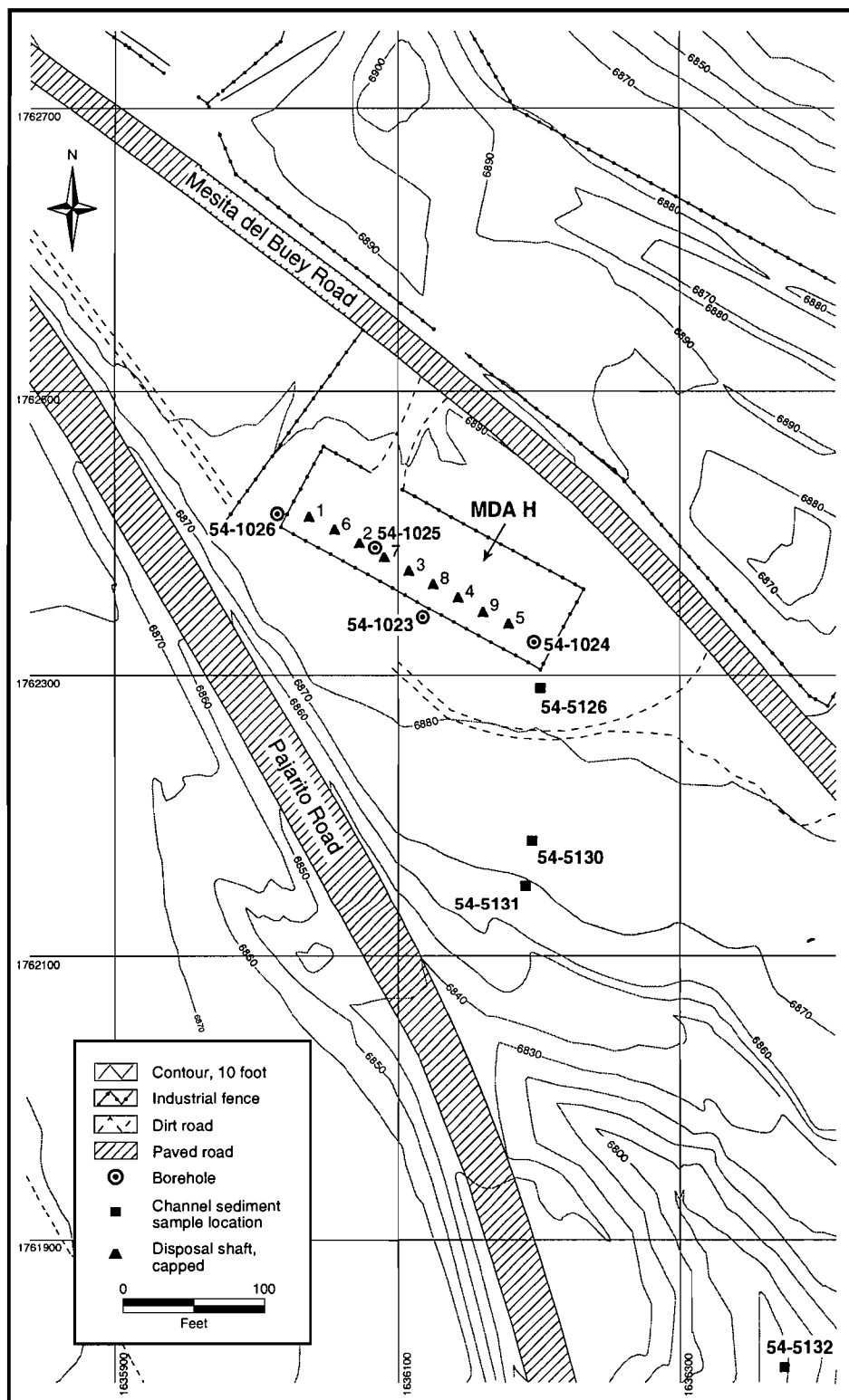
2.2 Description and Operational History

MDA H is designated as PRS 54-004 in Module VIII of the Laboratory's Hazardous Waste Facility Permit. Additional information on site description and the operational history of MDA H is in Appendix B.

2.2.1 Site Description

Physical Description

MDA H is located on Mesita del Buey, a small mesa that lies between Pajarito Canyon and Cañada del Buey (Figure 1.2-2). Three other MDAs are located on the mesa top. MDA H is a 70-ft by 200-ft (0.3-acre) fenced area and consists of nine inactive vertical disposal shafts arranged in a line approximately 15 ft inside its southern fence (Figure 2.2-1). Each shaft is cylindrical with a diameter of 6 ft and a depth of 60 ft. The shafts are filled with solid-form waste to a depth of 6 ft from the ground surface. The wastes in shafts 1 through 8 are covered by a 3-ft layer of concrete placed over a 3-ft layer of crushed tuff. The waste in shaft 9 is covered by 6 ft of concrete. To protect against the possible impacts of mesa-edge instability, all MDA H disposal shafts were placed over 50 ft from the rim of Pajarito Canyon (the nearest canyon).



F2.2-1/MDAH RFI RPT/052301/RLM

Figure 2.2-1. Locations of inactive disposal shafts, RFI boreholes, and volatile organic compound flux and channel sediment sample locations at MDA H

Land Use

MDA H is in an industrial area currently used for Laboratory waste management. The Laboratory does not anticipate the use of TA-54 to change during the planned operational life of MDA G (2044) (LANL 1995, 57224, pp. 11–12). MDA H is a fenced area with restricted access. These security measures effectively eliminate the possibility of inadvertent site intrusion by humans.

Relationship to Other PRSs

To evaluate the potential impact of MDA H and to make sound decisions regarding the need for and nature of effective remedies, it is important to understand, at least qualitatively, the potential impact of nearby PRSs. The most significant PRSs, in terms of contaminant inventory and physical size, near MDA H are MDAs G and L at TA-54 (Figure 1.2-2) and several PRSs at TA-18 (Figure 1.2-1).

MDA G is located near the eastern end of Mesita del Buey approximately 2.3 miles (3.7 km) east of MDA H (Figure 1.2-2). This 100-acre site has been the Laboratory's primary radioactive waste disposal facility since 1959 and is likely to continue operating for the life of the Laboratory. Pits and shafts at MDA G that received waste before 1989 make up 24 PRSs. Investigations to date have revealed a diffuse plume of VOCs (likely associated with residual solvent contamination in radioactive waste) and a plume of tritium-containing water vapor. As an operating nuclear facility, MDA G is subject to intensive personnel safety and environmental protection and surveillance programs, and the VOC and tritium plumes are monitored regularly. Ongoing low-level radioactive waste disposals are authorized by the DOE, and ongoing solid low-level mixed-waste and transuranic mixed-waste management activities are authorized by the DOE and permitted, as necessary, by the NMED under agreement with the EPA. MDA G is within the Lower Pajarito Canyon aggregate of the Pajarito Watershed (LANL 2000, 66802).

MDA L is a 2.5-acre (10,000 m²) site located on Mesita del Buey approximately 0.86 miles (1.4 km) east of MDA H (Figure 1.2-2). This site has been the Laboratory's primary chemical waste disposal and treatment facility since the early 1960s. Disposal of chemical waste ceased in the mid-1980s, and the ER Project is investigating 13 pits and shafts within the Lower Cañada del Buey aggregate of the Mortandad Watershed. Early disposal activities resulted in a subsurface volatile organic vapor plume; since the mid-1980s, the plume has been, and continues to be, extensively monitored.

TA-18, located approximately 1000 ft (300 m) south of MDA H on the other side of Pajarito Road in Pajarito Canyon, was established in 1943 and today continues its long history in nuclear criticality research, nuclear weapons safeguards and security, and treaty verification technology assessment. TA-18 comprises 40 PRSs organized into five groups within the Lower Pajarito Canyon aggregate of the Pajarito Watershed. Within the five PRS groups are septic systems and associated components, an underground storage tank, surface contamination from firing sites, storm sewer outfalls, and buried disposal areas (LANL 1993, 15310).

All of the proximate PRSs identified above and MDA H are located within the same groundwater aggregate. The deep hydrogeologic system (including the regional aquifer), which for the purposes of this plan means the region below MDA H, is being investigated in accordance with the hydrogeologic work plan (LANL 1996, 55430) approved by NMED and the joint ER DP Monitoring Well Installation Program (LANL 1995, 50124).

Environment

Detailed information on the environmental setting of the Pajarito Plateau and TA-54 is provided in Appendix B. This section discusses only site-specific aspects of the environmental setting of MDA H; these aspects are important to assessing the potential for fate and transport of contaminants and include

- a semiarid climate with low precipitation and a high evapotranspiration rate, which limits the amount of moisture percolating into the shafts, subsequently limiting the amount of water available to leach radionuclides or other hazardous waste constituents;
- a very thick, relatively dry unsaturated zone, which greatly restricts or prevents downward migration of contaminants in the liquid phase through the vadose zone to the regional aquifer; and
- a canyon-mesa terrain, which affects atmospheric conditions and ecological habitats.

One of the Laboratory's six meteorological towers is located at MDA G and provides site-specific meteorological data for Mesita del Buey; these data are summarized in Appendix B, Section B-2.

MDA H is located on the south side of Mesita del Buey. The area is relatively flat with a gentle slope toward Pajarito Canyon to the south. Runoff is primarily by sheet flow into a tributary of that canyon. A surface water assessment of MDA H was conducted on December 20, 2000. Based on this assessment, this PRS has a score of 45.6, indicating a moderate erosion potential. The assessment found that there was no debris in the watercourse. Surface water runoff from MDA H terminates to the southeast in Pajarito Canyon. Rill erosion is occurring at one location along the southern fence line, and there is minor run-on to the site from the northwest. There are no structural or operational factors that might affect the site hydrology. The hydrology of the general area is discussed in Appendix B, Section B-4, and the surface water assessment document is attached at the end of that appendix.

The Environmental Restoration (ER) Project has drilled, cored, and sampled four boreholes at MDA H to characterize the potential contaminant release and transport in the subsurface. Borehole logs provide detail on the stratigraphy below the MDA to a depth of approximately 260 ft and are included in Appendix H. Detailed discussions of the stratigraphy and the geology of TA-54 are in Appendix B, Section B-3.

The estimated depth to regional groundwater beneath MDA H is 1040 ft (312 m), which corresponds to an elevation of 5848 ft (1754 m), based on data from the Site-Wide Geologic Model 3-dimensional stratigraphic model (Carey et al. 1999, 66782). Preliminary data indicate that regional well R-22, located immediately east of MDA G on Mesita del Buey, encountered the regional aquifer within the Cerros del Rio basalts of the Puye Formation at a depth of 895 ft (269 m), which correlates to an elevation of approximately 5745 ft (1724 m). No perched zones of saturation were encountered above the regional aquifer. It is anticipated that the 3-dimensional stratigraphic model, Site-Wide Geologic Model, will undergo revision to incorporate data from R-22 by the end of Fiscal Year 2001.

Cultural and Biological Resources

No cultural resources are present at or near MDA H. Section B-6 in Appendix B presents information on the cultural resource survey for this area.

No wetlands or floodplains exist near MDA H. No habitats for threatened and endangered species were located. Further information is contained in "Biological Assessment of Environmental Restoration Program, Operable Unit 1148, TA-54" (Banar 1996, 58192) and in Section B-5, Appendix B. The ecological scoping checklist for TA-54 is included in Appendix F.

2.2.2 Operational History

From May 1960 until August 1986, MDA H functioned as the Laboratory's primary disposal area for classified, noncontainerized, solid-form waste. Between periods of waste disposal, each shaft was covered with a steel plate that was padlocked as a security precaution to prevent unauthorized access to classified materials. Table 2.2-1 presents a summary of the types and quantities of the wastes disposed of at MDA H. The table, which was compiled from information in the MDA H operational logbook and the Operable Unit 1148 data report (IT Corporation 1992, 23247), includes information about the period of use and the date each disposal shaft was capped. Much of the classified waste was nonhazardous; however, various hazardous chemicals, radionuclide-contaminated materials, and materials contaminated by high explosives (HE) were also disposed of at MDA H. These include depleted-uranium scraps and shapes, drummed radioactive waste, fuel elements, a tritium classified unit, plutonium-contaminated shapes, and decontamination and decommissioning scrap. As can be seen in Table 2.2-1, MDA H also received a one-time disposal of a nonsolid-form waste when 40 lb of graphite-contaminated motor oil was placed in shaft 9. Information on the operational history of TA-54 is in Appendix B, Section B-1. A discussion of the inventory, compiled from disposal records for MDA H, follows.

Table 2.2-1
Summary of Wastes Disposed of at MDA H Shafts

	Shaft 1	Shaft 2	Shaft 3	Shaft 4	Shaft 5	Shaft 6	Shaft 7	Shaft 8	Shaft 9	MDA H Total
Period of use	5/3/60 to 9/27/61	10/17/61 to 5/15/63	6/4/63 to 11/9/64	12/23/64 to 8/16/66	10/7/66 to 9/27/67	7/12/67 to 3/6/69	3/21/69 to 9/8/71	10/4/71 to 7/16/79	7/23/80 to 8/29/86	n/a ^a
Date capped	10/11/61	Unknown	12/10/64	9/66	Unknown	3/13/69	9/30/71	12/12/79	1992	n/a
Metal weapons components	42,505	20,914	— ^b	—	—	—	1000	—	—	64,419
Depleted uranium scrap and shapes ^c	463	4063	8459	2675	27,015	3138	4838	—	—	50,651
Photographic film	4660	7665	9500	9330	—	—	—	—	—	31,155
Classified shapes ^c	1875	—	12,119	19,455	13,822	28,790	32,038	34,205	21,570	16,3874
Firing assemblies	1000	—	—	—	—	—	—	2610	—	3610
Graphite components	1000	5179	—	—	—	400	—	—	—	6579
Tungsten carbide scrap	11,500	—	—	—	—	—	—	—	—	11,500
Drummed radioactive waste	728	—	—	—	—	—	—	—	—	728
Plastic parts (assorted)	—	4500	—	—	—	—	—	—	—	4500
Lithium fluoride PBX (HE)	—	—	4408	—	—	—	—	—	—	4408
Metal containment for explosives	—	—	2500	—	—	—	—	—	—	2500
Serial-numbered items	—	—	1500	—	—	—	—	—	—	1500
Fuel elements	—	—	255	1645	2365	2725	—	—	—	6990
Tritium classified unit	—	—	—	35	—	—	—	—	—	35
Lithium shapes	—	—	—	400	—	—	—	60	—	460
Plutonium-contaminated shapes ^c	—	—	—	—	—	—	275	—	—	275

	Shaft 1	Shaft 2	Shaft 3	Shaft 4	Shaft 5	Shaft 6	Shaft 7	Shaft 8	Shaft 9	MDA H Total
Lead coil assemblies	—	—	—	—	—	—	2150	—	—	2150
Electronic data tapes	—	—	—	—	—	—	—	1360	1300	2660
Tracer cans and templates	—	—	—	—	—	—	—	430	—	430
Decontamination and decommissioning scrap	—	—	—	—	—	—	—	20,500	—	20,500
Files and file storage	—	—	—	—	—	—	—	—	925	925
Computer disks	—	—	—	—	—	—	—	—	1487	1487
Motor oil w/graphite	—	—	—	—	—	—	—	—	40	40
Shaft Total	63,731	42,321	38,741	33,540	43,202	35,053	40,301	59,165	25,322	381,376

Note: Weight of material disposed of is in pounds.

^a n/a = not applicable.

^b A dash indicates that wastes of this type were not disposed of in that shaft.

^c The term *shape* refers to various shaped, typically inert, preliminary design mockups of explosive devices.

Inventory of Materials at MDA H

Disposal of waste materials at MDA H was restricted to items or materials that authorized personnel determined to be both classified and either excess or no longer required. This determination was recorded on special forms that accompanied the waste to MDA H. Procedures required that two people observe and sign off on the disposal activities (Myers 2001, 70028)) Disposals were recorded in a logbook that contains descriptions of the items or materials disposed of, an approximate mass (weight), a cross-reference to the detailed waste disposal form (Disposal of Contaminated and/or Classified Property form (252-R), and signatures of the witnesses. All material disposed of at MDA H required either double packaging with an opaque outer material, such as plastic bags or drums, or special security approvals for materials that, because of physical size, precluded the standard packaging. Light-weight wastes were dropped into the shafts, while heavier materials were lowered in by heavy equipment. Based on information in early records, the density of the waste materials varied from as low as 5 lb per cubic foot up to 540 lb per cubic foot.

RCRA-regulated hazardous waste chemicals known to be in the MDA H inventory include several reactive lithium compounds (including lithium fluoride, lithium hydride, and lithium boride) and high explosives (HE). Additional potentially regulated RCRA hazardous wastes are anticipated because they (lead, silver, barium, and cadmium) were used for shielding, solders, parts, and coatings. Other hazardous constituents, such as beryllium, are known to be in the inventory. The radionuclides known to be in the inventory include tritium, uranium-235, and uranium-238. While logbook descriptions include sufficient information to identify, with some degree of certainty, the hazardous wastes and radionuclides in the inventory, the amounts of these materials cannot be absolutely quantified (because of impracticability and national security). Therefore, records, process knowledge of former site operations, and best professional and engineering judgment were applied to estimate the quantity of these materials. The results are summarized in the following paragraphs and in Table 2.2-2. It is important to understand, however, that corrective action decisions must be and can be made in the face of uncertainties in the amount of certain constituents in the inventory.

Lithium Compounds. Lithium hydride reacts with water, either liquid or vapor, to form lithium hydroxide and hydrogen. For lithium hydride solids in the MDA H inventory (such as *shapes*), this reaction is expected to form a hydroxide coating on the exposed surface that inhibits the reaction beneath the

surface. It is assumed that reactive (still hazardous) lithium hydride remains in the inventory. The same situation exists for any lithium hydride that was contained within a vessel in the inventory. Only lithium hydride powders exposed to moisture would be expected to be fully reacted (nonhazardous) now. This assumption is also applied to the lithium fluoride and lithium boride in the inventory assuming that, for modeling purposes, both are as reactive as lithium hydride and would result in an explosion on contact with water or toxic salt.

High Explosives. The largest mass of potential high explosives (HE) is lithium fluoride PBX. Additional review of documentation is being conducted to estimate the actual quantity of material. Based on procedures for handling HE for disposal, the HE-contaminated waste is likely to be contaminated with PBX. It is assumed that all HE-contaminated materials were contaminated with RDX, unless PBX is specified. This assumption is conservative, based on the relative mobility, persistence, and toxicity of RDX compared with other conventional high explosives. The masses indicated in the logbook are masses of the contaminated structures and not masses of HE. Discussions with subject matter experts indicate that residual contamination on the waste structures disposed of at MDA H would be indiscernible or else the items would have (by procedure) been flashed at Laboratory burning grounds before being disposed of at MDA H. Therefore, gross upper-bound values have been estimated and are conservative.

Beryllium. The MDA H logbook indicates that just over 240 lb of beryllium was disposed of. Based on the descriptions, it is assumed that this mass is in the form of solid metal.

Tritium. There are several considerations that are important when *converting* logbook descriptions into a quantity of tritium. First, tritium was used primarily as a gas or vapor in classified applications. Second, tritium is an accountable material and therefore would have been recovered when possible and would only have been disposed of in relatively small (unaccountable) quantities. Third, liquid tritium waste was not disposed of at MDA H but was typically absorbed onto a solid matrix and disposed of MDA G. (Myers 2001, 70029). This information was used to estimate the amount of tritium associated with items disposed of at MDA H; the items had a total mass of 2400 lb.

Plutonium. The majority of the radioactive waste generated at the Laboratory (even classified) was disposed of at MDA G and not MDA H. Plutonium is present only as residual contamination on classified shapes and other items, and the amount of plutonium is assumed to be below the detection limits of instruments used when the waste was placed at MDA H. Established guidelines dictated that materials containing plutonium above a certain level of contamination were sent for recovery of plutonium and not for disposal and therefore are not in the MDA H inventory.

Uranium. Two general descriptions of uranium waste are found in the MDA H logbook. One is of depleted uranium, and the other is of fuel elements or pellets. The documented mass of these categories of waste was converted directly into amounts of uranium-238 and uranium-235 (the longest-lived isotopes) using standard ratios nationally recognized by actinide scientists as representative of uranium-related activities. The documented mass of depleted uranium in MDA H is 21,528 lb. It was assumed that 80% of the mass associated with "shapes, molds, modules, mockups and scrap," with no additional material specification in the logbook, was also depleted uranium. The documented mass of fuel elements or pellets is 17,645 lb.

Table 2.2-2
Estimated Amounts of Constituents in the Inventory at MDA H

Inventory Constituent	Estimated Amount	Assumptions/Comments
Beryllium	238 lb	Solid form
Lithium Lithium hydride Lithium fluoride Lithium boride	526 lb <4400 lb 10 lb	Majority in solid form, not oxidized and therefore still reactive
High explosives PBX RDX	51,958 lb total gross weight of items with residual HE contamination <4400 lb <100 lb	Unless otherwise specified, HE is assumed to be RDX, based on mobility and toxicity. Unless otherwise specified, assume indiscernible surface contamination.
Film (Silver)	42,296 lb total gross weight of film	Component of photographic film, therefore not leachable
Pthalates/Plastics	6545 lb total gross weight	Present in packaging and plastic explosives
Fuel Elements Uranium-235 Uranium-238	< 13.6 Ci < 0.57 Ci	Standard ratios apply for converting depleted uranium and fuel (enriched uranium) masses to isotopic abundances.
Uranium Uranium-234 Uranium-235 Uranium-238	26 Ci 0.6 Ci 35 Ci	Standard ratios apply for converting depleted uranium and fuel (enriched uranium) masses to isotopic abundances.
Tritium	240 Ci	Residual radioactivity in stainless steel canisters of known mass; estimate based on average MDA G high-activity tritium waste concentration (this is a very conservative basis for this estimate)
Plutonium Plutonium-238 Plutonium-239 Plutonium-240 Plutonium-241 Plutonium-242	27 mCi (isotopic) 25 mCi 0.0027 mCi 1.6 mCi 0.054 mCi 0.054 mCi	Assume 100 nCi/g as limit of detection Assume plutonium-52 as isotopic composition, based on most common waste contamination

On a mass basis, the major contributor (about 60%) to the MDA H inventory is metal, of which most is either indicated as or assumed to be depleted uranium, based on process knowledge and interpretation of logbook entries. Reactive materials, such as lithium compounds and HE, represent approximately 1. % and 13%, respectively. Approximately 12% of the mass is recording media (paper documents, film (developed), slides, magnetic computer tapes). Graphite represents about 12% of the mass inventory, and *unreacted fuel* (consisting of various isotopes of uranium) accounts for approximately 5% of the

inventory. Additional materials disposed of include plastics accounting for approximately 1.7% of the inventory.

2.3 Investigation Activities

2.3.1 Previous Field Investigations

Before the RFI, other Laboratory groups conducted several investigations at MDA H. The investigations described in this section were used to support the development of the preliminary site conceptual model of potential contaminant release, transport, and fate.

2.3.1.1 Tritium Measurements

In 1969, subsurface samples were collected as part of a Laboratory-wide effort to determine background for tritium in tuff. A single soil-moisture core sample and several air samples were collected at a depth of 40 ft inside shaft 8; several air samples were also collected at the same depth in shaft 7. Pore water in the core sample had an activity-based tritium concentration of approximately 2.0×10^9 pCi/L, and the air samples had an average concentration of 4.4×10^8 pCi/L (Aeby 1969, 1799). To determine the extent of tritium at MDA H, the investigation was expanded to include sampling and analysis of air and soil in and around the nine disposal shafts. Fourteen soil samples and four air samples were analyzed; the highest concentrations were measured in samples from around shaft 8. Table 2.3-1 lists the tritium analytical results for the 1969 sampling.

In 1973, additional soil and flora samples from MDA H were analyzed for tritium (LANL 1992, 7669). Plants growing in the area were found to have concentrations of tritium three orders of magnitude higher than species in other uncontaminated areas. Surface soils near the shafts had measured concentrations of tritium about two to three times the concentration measured in background samples outside of the area. These data were used to support the conceptual model for fate and transport of tritium at MDA H. Table 2.3-2 lists the analytical results for the 1973 sampling.

Table 2.3-1
1969 Tritium Sampling Results for MDA H

Sample Number	Counts*	Activity (pCi/L)
1 (soil)	4.6×10^6	2.1×10^9
4 (soil)	9.9×10^3	4.5×10^6
8 (air)	9.3×10^5	4.2×10^8
9 (air)	1.0×10^6	4.6×10^8
10 (air)	9.8×10^5	4.5×10^5
11 (air)	3.5×10^5	1.6×10^8
12 (soil)	2.0×10^3	9.1×10^5
13 (soil)	5.1×10^1	2.3×10^4
18 (soil)	1.4×10^2	6.6×10^4
19 (soil)	1.4×10^2	6.5×10^4
20 (soil)	5.3×10^2	2.4×10^5
21 (soil)	2.5×10^2	1.1×10^5
22 (soil)	2.5×10^3	1.1×10^6
23 (soil)	7.3×10^1	3.3×10^4
24 (soil)	2.8×10^2	1.3×10^5
25 (soil)	6.8×10^3	3.1×10^6
26 (soil)	3.8×10^2	1.7×10^5
27 (soil)	1.3×10^2	6.0×10^4

* Counts were taken in 1969 and are in units of disintegrations per minute per milliliter.

Table 2.3-2
1973 Tritium Soil and Flora Sampling Results for MDA H

Samples	Activity (pCi/L)
Soil at fence	7.79×10^4
Soil 20 ft south of fence	7.38×10^4
Soil 75 ft south of fence	3.08×10^4
Soil 150 ft south of fence	3.40×10^3
Background soil	2.40×10^4
Mountain daisy near shaft 8	3.41×10^6
Weed near shaft 8	2.79×10^6
Piñon 60 ft east of southwest corner of fence	6.10×10^3
Cedar 60 ft east of southwest corner of fence	2.18×10^6
Cedar 65 ft west of southeast corner of fence	1.40×10^6
Piñon background	2.40×10^3
Cedar background	2.30×10^3
Background weeds	2.00×10^3
Background mountain daisy	2.10×10^3

2.3.1.2 Volatile Organic Compound Flux Measurements

Five measurements of surface volatile organic compound (VOC) flux were collected in 1994 by the Laboratory Waste Management Program (Trujillo et al. 1998, 58242). The samples were obtained using passive diffusion cartridges placed under cups on the ground surface for a 72-hr period. Analysis of the cartridges was conducted using Environmental Protection Agency (EPA) Method 8240 (LANL 1991, 27915). Details of the investigation are reported in a Quadrel Services report (Quadrel 1994, 63869) and Trujillo et al. (1998, 58242).

2.3.2 Preliminary Conceptual Model

The preliminary site conceptual model, shown in Figure 2.3-1, illustrates the potential sources of contamination at MDA H, potential source release mechanisms, and potential transport pathways that may result in on-site and off-site redistribution of contaminants.

The figure illustrates the following information.

- Mesa-Canyon Topography. The topography has important effects on air, surface water, and subsurface contaminant transport, as well as on potential receptors.
- Geology. The figure illustrates subsurface layers of various volcanic depositions (e.g., units of the Tshirege Member of the Bandelier Tuff, the Otowi Member of the Bandelier Tuff, and the Cerros del Rio basalts). The geology has variable physical and chemical features that dramatically affect subsurface contaminant transport.

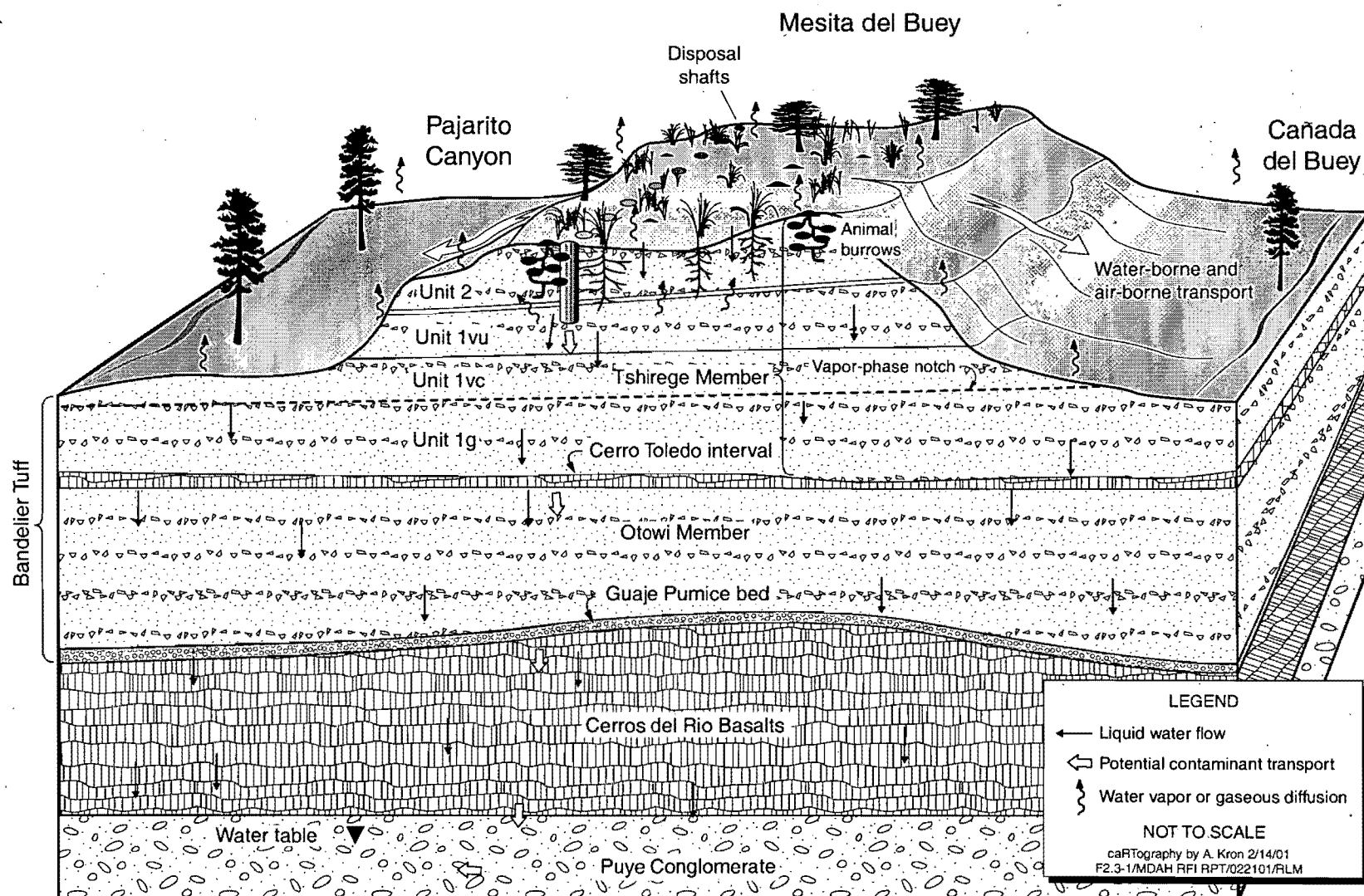


Figure 2.3-1. Site conceptual model for MDA H

- Hydrology. The hydrology affects surface and subsurface transport of contaminants and includes intermittent surface streams in adjacent canyons as well as liquid- and vapor-phase water moving through the subsurface within the rock matrix, within fractures in the rock, along interfaces between layers, and upward from the site because of transpiration.

The solid arrows represent the movement of water as a liquid (straight arrows) and as a vapor (serpentine arrows). Liquid water generally infiltrates down into the mesa, and water vapor generally moves upward, undergoing evapotranspiration along the top and sides of the mesa.

Contamination may exist at residual levels in the surface soils and underlying tuff or be released from the disposed waste. Source release mechanisms for the buried waste are illustrated in the conceptual model with straight and serpentine arrows around the shafts. The straight arrows represent movement of leachate percolating through the shafts. The serpentine arrows suggest releases of contamination into the air, either as gases or as dust particles. The actual source term for resuspended particulates involves processes that may lead to surface contamination, including intrusion into the disposed waste by plants, animals, and erosion.

Contaminants potentially present on the surface of the site or released from the disposed waste may be transported away from the site through a variety of transport pathways. Contaminant transport pathways are identified in Figure 2.3-1 by open arrows; important pathways include

- subsurface transport of leachate through the geologic strata beneath the shafts toward the regional aquifer,
- atmospheric transport of gases and suspended particulates to downwind locations,
- surface water transport of contaminants deposited on the mesa top by plants and animals or exposed by cover erosion or cliff retreat, and
- subsurface migration of vapor-phase tritium contaminants in pore gas.

Potential surface contamination at the site and contaminant releases from the buried waste may result in exposures to on-site human and ecological receptors through a variety of pathways. Present-day exposures to humans are relatively limited because of the restrictions placed on site access and the subsurface disposition of the wastes.

2.3.3 RFI Fieldwork

The ER Project conducted RFI fieldwork at MDA H from 1994 to 1995 and in Spring 2001. The RFI work plan specified sampling surface water, surface sediment, and tuff for inorganic chemicals (TAL metals plus cyanide), organic chemicals (VOCs, SVOCs, pesticides, and PCBs), and radionuclides (LANL 1992, 7669). The objectives of the work plan were to determine if contaminants had been released from MDA H, to define the nature and extent of any contaminant releases, to collect data to support and supplement existing data, and to collect data to be used in a risk assessment. The RFI fieldwork at MDA H included

- drilling four vertical boreholes around the nine disposal shafts,
- collecting and analyzing 33 core samples from the boreholes, and
- collecting and analyzing four sediment samples.

A summary of work plan specifications, fieldwork performed, and the rationales for deviations from the work plan are in Table 2.3-3. Surface water runoff samples were not collected at MDA H but were collected at MDA G. These data were used in a qualitative manner to develop the site conceptual model for all MDAs at TA-54, including MDA H.

Table 2.3-3
Summary of Work Plan Specifications, Fieldwork, and Rationales for Deviations

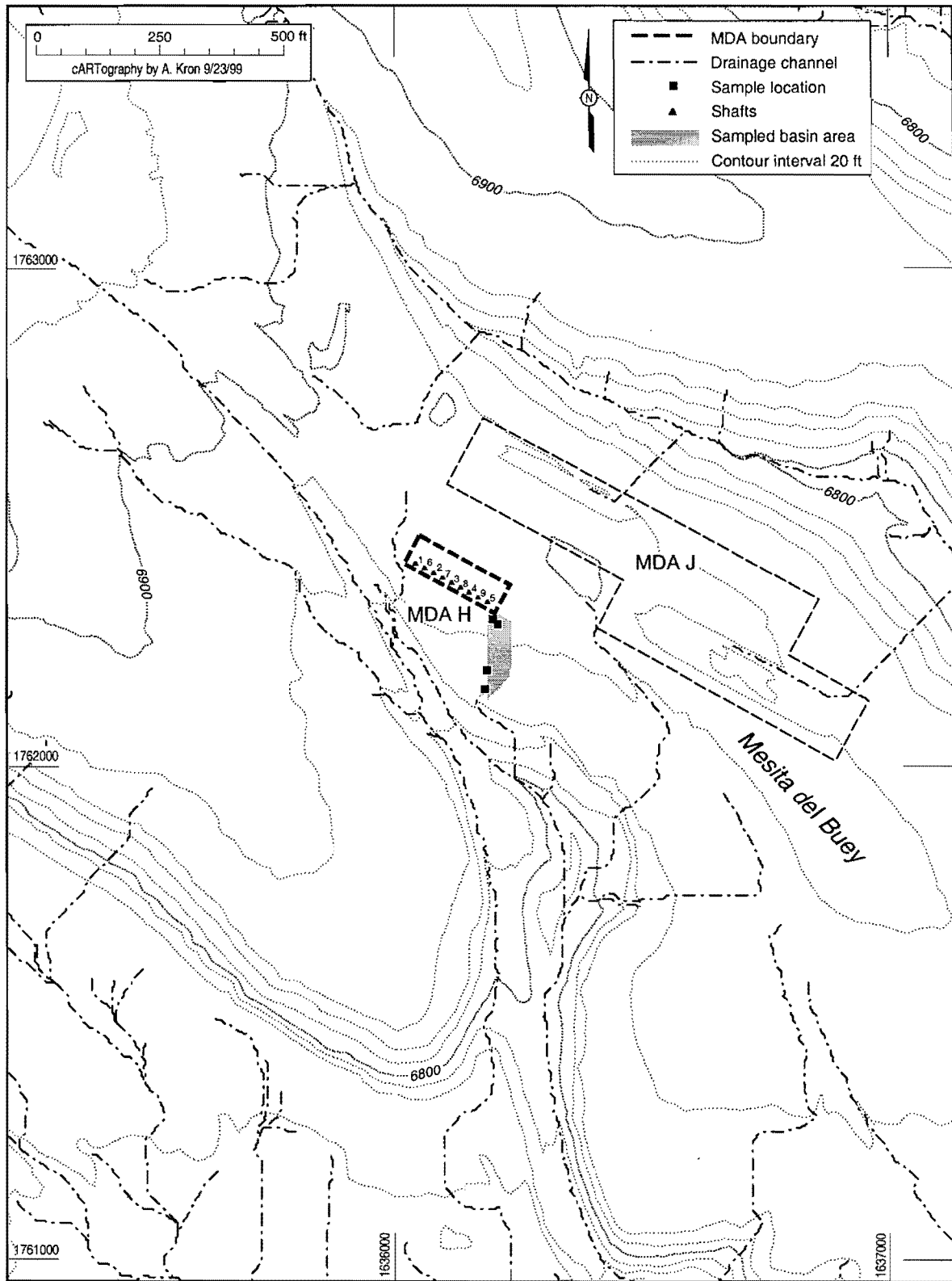
Media	Work Plan Specification		Actual Fieldwork Performed		Rationale for Deviation
	Number Samples Analyzed	Analytes (Method)	Number Samples Analyzed	Analytes (Method)	
Surface water runoff	1	VOCs, SVOCs, inorganic chemicals, pesticides, PCBs, cyanide, radionuclides, tritium	0	n/a*	ESH-18 and ESH-19 data from MDA G were used to support site conceptual model development (Jansen and Taylor 1996, 54959).
Sediment (drainages)	9	VOCs, SVOCs, inorganic chemicals, cyanide, pesticides, PCBs, radionuclides, tritium	8/4	Inorganic chemicals, cyanide, pesticides, PCBs, radionuclides, tritium	Eight samples were collected based on a geomorphic survey. All samples were field screened for alpha, beta, and gamma radiation to bias sample selection. One sample with the highest gross gamma level and three other samples were sent to a contract laboratory for analysis (Glatzmaier 1994, 52015).
Pore gas	24 (4 open boreholes)	VOCs (SUMMA/SW 846)	3	VOCs (EPA TO-14)	In March 2001, pore gas in borehole 54-1023 was screened for VOCs using a Bruel and Kjaer analyzer every 20 ft from 25 ft to 245 ft. Pore-gas samples were then collected at 60 ft and in SUMMA canisters.
	0	Tritium	8	Tritium	In March 2001, pore-gas samples were collected in borehole 54-1023.
Core	24 (4 boreholes)	VOCs, SVOCs, inorganic chemicals, pesticides, PCBs, cyanide, radionuclides	33	Inorganic chemicals, cyanide, PCBs, pesticides, VOCs, SVOCs, radionuclides, tritium	More samples were collected than specified in the work plan.

* n/a = not applicable.

2.3.3.1 Channel Sediments

Runoff from MDA H is concentrated into a single drainage that carries surface runoff into Pajarito Canyon to the south (Figure 2.3-2). The drainage traverses the south side of Mesita del Buey from the southeast corner of the MDA H fence, drops over the cut of an abandoned road near Pajarito Road, eventually crosses the abandoned road, and flows into a tributary of Pajarito Canyon near TA-18. In 1994, eight sites were selected for sediment sampling to determine if contaminants had migrated from MDA H; the most likely depositional areas (e.g., low areas, behind obstructions) for the channel were determined by an on-site geomorphic survey. These sites included areas with coarse sediment deposition on the upper slope and areas with finer sediment deposition on the lower slope. Eight sediment samples (and two duplicate field samples) were collected and field screened for alpha, beta, and gamma radiation to bias

sample selection. The sample with the highest gross gamma activity and three other samples selected at random were submitted to an off-site contract laboratory to be analyzed for inorganic chemicals, cyanides, PCBs, pesticides, tritium, and radionuclides (Environmental Restoration Project 1996, 54462).



F2.3-2MDA H RFI RPT/022101/RLM

Figure 2.3-2. MDA H drainage

2.3.3.2 Core Sampling

From June 23, 1995, to February 12, 1996, four boreholes were drilled as part of the MDA H RFI fieldwork. Detailed borehole logs, including lithologies and well construction diagrams, are presented in Appendix H. The locations of the boreholes and their relation to the shafts are shown on Figure 2.2-1. Pertinent information on each borehole is shown in Table 2.3-4. From continuous core drilled in each borehole, 33 samples were collected (see Appendix D for depth intervals). The samples collected were submitted to an off-site contract laboratory for analysis of TAL metals, cyanide, VOCs, SVOCs, PCBs, pesticides, tritium, and radionuclides.

2.3.4 Data Review

The RFI data set for MDA H includes analytical data from 4 sediment samples from the drainage channel and 33 tuff samples collected from the boreholes; Figure 2.2-1 shows the sample locations. All data used quantitatively to identify COPCs at MDA H were subjected to ER Project quality assurance (QA)/quality control (QC). An overview of the QA/QC findings is included here for each class of chemical and medium sampled, and a detailed review of QA/QC activities is provided in Appendix C.

The data review process for identifying COPCs begins with a comparison of site data with

- naturally occurring background concentrations for inorganic chemicals,
- naturally occurring background or fallout concentrations for radionuclides, and
- analytical EQLs for organic chemicals.

Table 2.3-4
Summary Information of RFI Boreholes at MDA H

Borehole ID	Declination (degrees)	Surface Elevation (ft) ^a	Borehole Length (ft)	Vertical Depth (ft)	Total Depth Elevation (ft)	Total Depth Formation	NAD 83 ^b Northing	NAD 83 Easting	Drilling Dates	Borehole Completion
54-1023	90	6884	259.7	259.7	6624.3	Qct	1,762,333.44	1,636,125.65	6/23/95–2/12/96	Open hole with surface casing
54-1024	90	6885	90	90	6795	Qbt 1v(u)	1,762,323.99	1,636,195.54	6/29–7/5/95	Backfilled
54-1025	90	6887	90	90	6797	Qbt 1v(u)	1,762,390.86	1,636,083.80	7/6/95	Backfilled
54-1026	90	6887	90.5	90.5	6796.5	Qbt 1v(u)	1,762,416.64	1,636,016.79	6/26–29/95	Backfilled

^a Elevations are feet above the mean sea level.

^b NAD 83 indicates North American datum 1983.

Background comparisons and a variety of statistical and graphical methods are used to compare site inorganic and radionuclide data with Laboratory background data. Organic chemical data are evaluated for detection status only. For background comparisons, the first step is to compare the site data with a

background value, which is an estimated value for the background data set (UTL [95, 95] or the 95% upper confidence bound on the 95th quantile). If a site-specific datum exceed its BV, additional evaluation of the datum may be performed by comparing the range of values in the site data set for that chemical to the range of values for that chemical in the background data set. Graphical analyses (e.g., box plots) may be used, or if adequate data are available, statistical tests that evaluate differences in distribution may be utilized. Nonparametric tests commonly used to assess data distributions include the Gehan, quantile, and slippage tests. Together these tests assess complete shifts in distributions, shifts of a subset of the data, and the potential for some of the site data to be greater than the maximum BV. Observed significance levels (p-values) are obtained, these values indicate whether a difference does or does not exist between the data sets. A p-value of less than 0.05 indicates that there is a difference between the distributions (i.e., the site data are different from the background data), while a p-value greater than 0.05 indicates that there is no difference between distributions (i.e., site and background data are similar). Statistical tests and results are discussed in Appendix E.

Graphical analyses of the data sets provide a visual representation of the data and allow a visual comparison among concentration distributions. The observed differences may include an overall shift in concentration or, when centers are nearly equal, a difference between the upper tails of the two distributions. The plots may either be used alone to describe the relationship of the two distributions or may be used in conjunction with the statistical tests described earlier. The graphical analyses used to assess the inorganic and radionuclide data from MDA H were box plots (Appendix E).

Only data that are relevant for identifying COPCs are included in this section; this includes measurements that are above applicable thresholds or whose DLs are greater than an applicable threshold. Tables D-2.0-1, D-2.0-2, D-2.0-3, D-2.0-4, D-2.0-5, and D-2.0-6 in Appendix D include the data for all analytes (detected and undetected).

2.3.4.1 Channel Sediment

Channel sediments at MDA H are derived from the mesa-top materials, the tuff on the sides of the mesa, and colluvium and soils on the mesa slopes (Environmental Restoration Project 1996, 54462). The samples were described in the field summary report as soil samples and in the channel sediment report as silt, sand, and gravel mixtures. Sample concentrations were compared with the Laboratory sediment background data set (Ryti et al. 1998, 59730) (Table 2.3-5), which was derived from sediment samples collected in Indio, Ancho, Los Alamos, Pueblo, and Guaje Canyons. These deposits are described in Ryti et al. (1998, 59730) as young alluvium in or near stream channels. Consequently, the Laboratory background data set for sediments might represent a different matrix than the channel sediment samples collected at MDA H.

Inorganic Chemical Comparison with Background

Except for aluminum, there were no QA/QC issues associated with the inorganic chemical results at MDA H. Results for aluminum are qualified as J (estimated) because recovery in the QC sample was low. Overall, the sediment inorganic chemical data for MDA H are of good quality and suitable for data assessments. Table C-5.1-1 in Appendix C presents detailed results of the QA/QC assessment. Table D-2.0-1 in Appendix D provides the complete data set.

Table 2.3-5
Frequency of Detected Inorganic Chemicals in Channel Sediment Samples

Analyte	Number of Detects	Concentration Range (mg/kg) ^a	Sediment BV (mg/kg) ^b	Frequency of Detects Above BV
Aluminum	4	1140–4800	15400	0/4
Antimony	0	[0.2]	0.83	0/4
Arsenic	0	[0.91–1.7]	3.98	0/4
Barium	3	[32.4]–71	127	0/4
Beryllium	0	[0.2–0.39]	1.31	0/4
Boron	0	[1.6]	No value	0/4
Cadmium	0	[0.26–0.68]	0.4	3/4 DL > BV
Calcium	2	[912]–1590	4420	0/4
Chromium	4	2.4–4.8	10.5	0/4
Cobalt	0	[1.7–4.6]	4.73	0/4
Copper	0	[2.1–4.1]	11.2	0/4
Cyanide	0	[0.2–0.28]	0.82	0/4
Iron	4	3690–5890	13800	0/4
Lead	4	13.1–21.3	19.7	2/4
Magnesium	0	[513–948]	2370	0/4
Manganese	4	116–300	543	0/4
Mercury	0	[0.02]	0.1	0/4
Molybdenum	0	[5.2–5.3]	No value	0/4
Nickel	0	[1.2–2.9]	9.38	0/4
Potassium	0	[195–723]	2690	0/4
Selenium	0	[0.6–0.61]	0.3	4/4 DL > BV
Silver	0	[0.6–0.61]	1.0	0/4
Sodium	0	[28.7–67.5]	1470	0/4
Thallium	0	[0.2]	0.73	0/4
Vanadium	1	[6.7]–11.2	19.7	0/4
Zinc	4	0.2–35.3	60.2	0/4

Note. Four samples were analyzed; all were analyzed for each chemical listed in the table.

^aValues in square brackets indicate nondetects.

^bSediment BVs obtained from Rytí et al. (1998, 59730).

Lead was detected above the Laboratory-wide sediment BV of 19.7 mg/kg in two coarse sediment samples (locations 54-5130 and 54-5131) at concentrations of 21.3 mg/kg and 19.9 mg/kg, respectively. A box plot depicting the distributions of the background and site data sets shows that the two distributions are similar (2 mg/kg to 25.6 mg/kg versus 13.1 mg/kg to 21.3 mg/kg, respectively) (Appendix E, Figure E-3.1-1). Based on the sediment background comparison, lead is not identified as a COPC at MDA H.

Cadmium was not detected in the channel sediments, but detection limits in three of four samples (0.41, 0.5, and 0.68 mg/kg) exceeded the sediment BV of 0.4 mg/kg as well as the range of values in the sediment background data set (0.05 mg/kg to 0.18 mg/kg). Based on this evaluation, cadmium is assumed to be different from background.

Selenium was also not detected in the channel sediments, but detection limits (0.6 to 0.61 mg/kg) exceeded its BV of 0.3 mg/kg. No selenium was detected in the sediment background samples, and the detection limit was 0.1 mg/kg. Based on this evaluation, selenium is assumed to be different from background.

Lead was detected at concentrations above the Laboratory-wide sediment background level but within the range of concentrations in the background data set. Cadmium and selenium, while not detected, had detection limits elevated above Laboratory-wide sediment background levels. All other inorganic chemicals were not different from sediment background concentrations at MDA H. Table E-3.1-1 and Figure E-3.1-1 in Appendix E provide more details on the inorganic statistical tests.

Radionuclide Comparison with Background and Fallout Values

Except for tritium, there were no QA/QC issues associated with the radiochemical results for samples collected at MDA H. Three tritium results were qualified as J (estimated) because the blind QC sample recovery was outside the QC sample acceptance limits. Overall, the sediment radionuclide data for MDA H are of good quality and suitable for data assessments. Table C-5.3-1 in Appendix C presents detailed results of the QA/QC assessment. Table D-2.0-3 in Appendix D provides the complete data set.

Detected concentrations of radionuclides were compared with either the sediment background value or the sediment fallout value (Ryti et al. 1998, 59730), depending on whether the radionuclide is naturally occurring or a fallout radionuclide. Americium-241, cesium-137, cobalt-60, tritium, plutonium-238, plutonium-239, and strontium-90 were compared with sediment fallout values. Isotopes of uranium and thorium, which are naturally occurring radionuclides, were compared with sediment BVs (Table 2.3-6).

The channel sediment report (Environmental Restoration Project 1996, 54462) listed americium-241, polonium-210, and yttrium-90 as COPCs because no background and fallout values for those radionuclides were available at that time. Currently, americium-241 has a sediment fallout value of 0.04 pCi/g, which is greater than the detected concentrations in the channel sediment (Table 2.3-6). Polonium-210 and yttrium-90 both have short half-lives (approximately 138 days and 60 hours, respectively), so they are no longer present in the channel sediment and are, therefore, not evaluated in this RFI report.

The detected activity concentration for tritium in one sample (0.111 pCi/g) exceeded the associated sediment fallout value of 0.093 pCi/g (Figure 2.3-3). The highest detected concentration was also above the maximum concentration in the tritium fallout data set. No other radionuclides were detected above their respective background or fallout values; Table E-3.1-2 in Appendix E presents more details on the radionuclide background comparisons. Tritium is, therefore, retained as a COPC in channel sediments at MDA H.

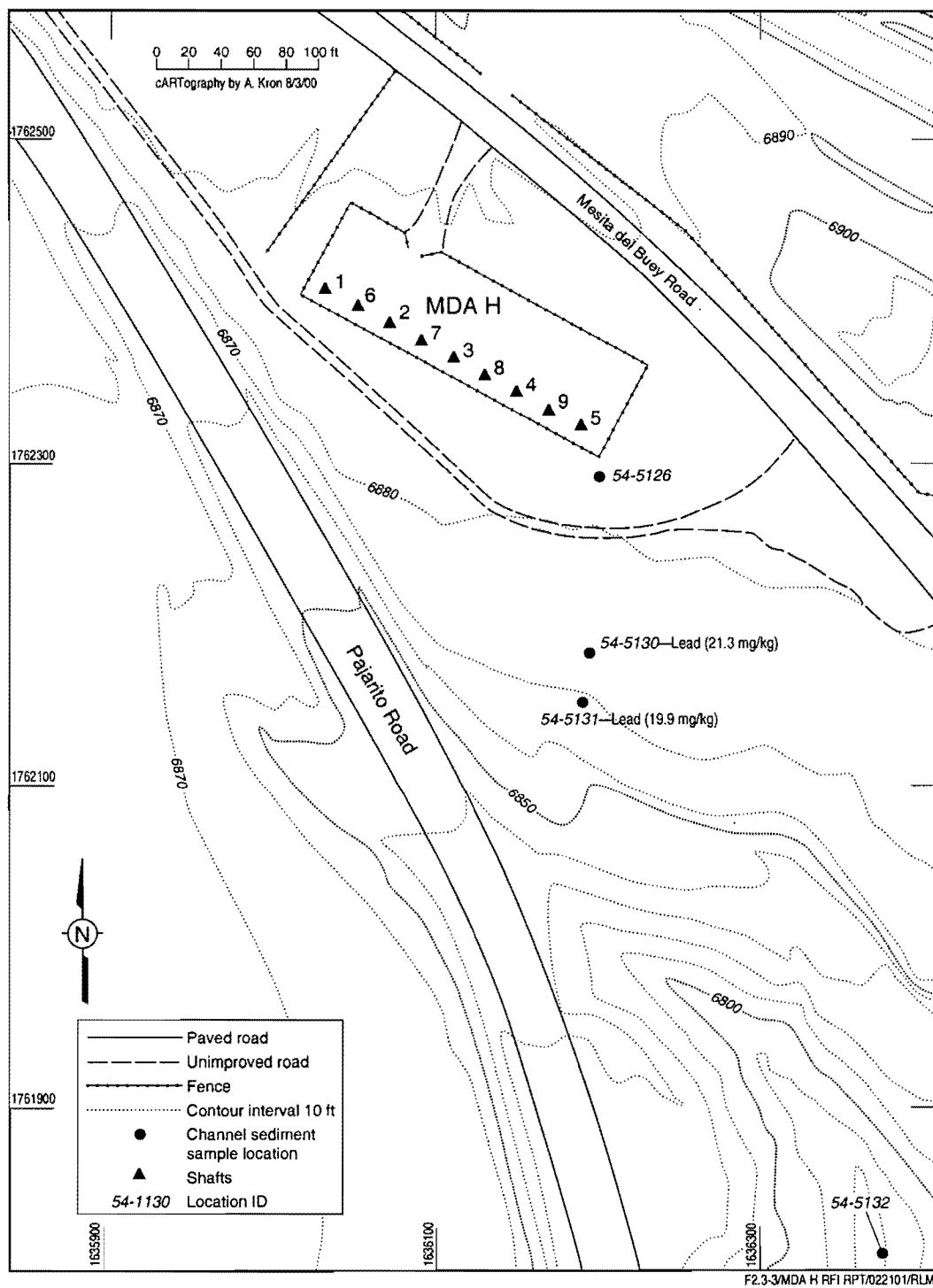


Figure 2.3-3. Detections of tritium (pCi/g) above fallout levels in channel sediment samples at MDA H

Table 2.3-6
Frequency of Detected Radionuclides in Channel Sediment Samples

Analyte	Number of Detects	Concentration Range (pCi/g) ^a	Sediment Background or Fallout Value (pCi/g) ^b	Frequency of Detects or Detects Above Background or Fallout Value
Americium-241	2	[0.003]–0.008	0.04	0/4
Cesium-137	2	[0.08]–0.48	0.9	0/4
Cobalt-60	0	[0.04–0.07]	No value	0/4
Plutonium-238	0	[0.001–0.003]	0.006	0/4
Plutonium-239	1	[0.001]–0.017	0.068	0/4
Radium-226	1	[0.25]–1.2	2.59	0/4
Strontium-90	0	[–0.02–0.14]	1.04	0/4
Technetium-99	0	[0.2]	No value	0/4
Thorium-228	4	0.84–1.22	2.28	0/4
Thorium-230	4	0.76–1.21	2.29	0/4
Thorium-232	4	0.87–1.3	2.33	0/4
Tritium	4	0.004–0.11	0.093	1/4
Uranium-234	4	0.71–1.34	2.59	0/4
Uranium-235	0	[0.05–0.08]	0.2	0/4
Uranium-238	4	0.77–1.36	2.29	0/4

NOTE. Four samples were analyzed; all were analyzed for each chemical listed in the table.

^aValues in square brackets indicate nondetects.

^bSediment background and fallout values obtained from Rytí et al. (1998, 59730).

Evaluation of Organic Chemicals

The four sediment samples were analyzed only for PCBs and pesticides. There were no QA/QC issues associated with the analytical data, and the data are of sufficient quality to identify COPCs. Table C-5.2-1 in Appendix C presents the detailed results of the QA/QC assessment. Table D-2.0-2 in Appendix D provides the complete data set.

Methoxychlor was detected in two samples at concentrations of 0.036 mg/kg (sample AAB3129) and 0.04 mg/kg (sample AAB3131), which are approximately twice the EQL (0.02 mg/kg) (Figure 2.3-4). No other organic chemicals were detected in the sediment samples; Table E-3.1-3 in Appendix E provides more details on the organic chemical analyses. Methoxychlor was retained as a COPC in channel sediments at MDA H.

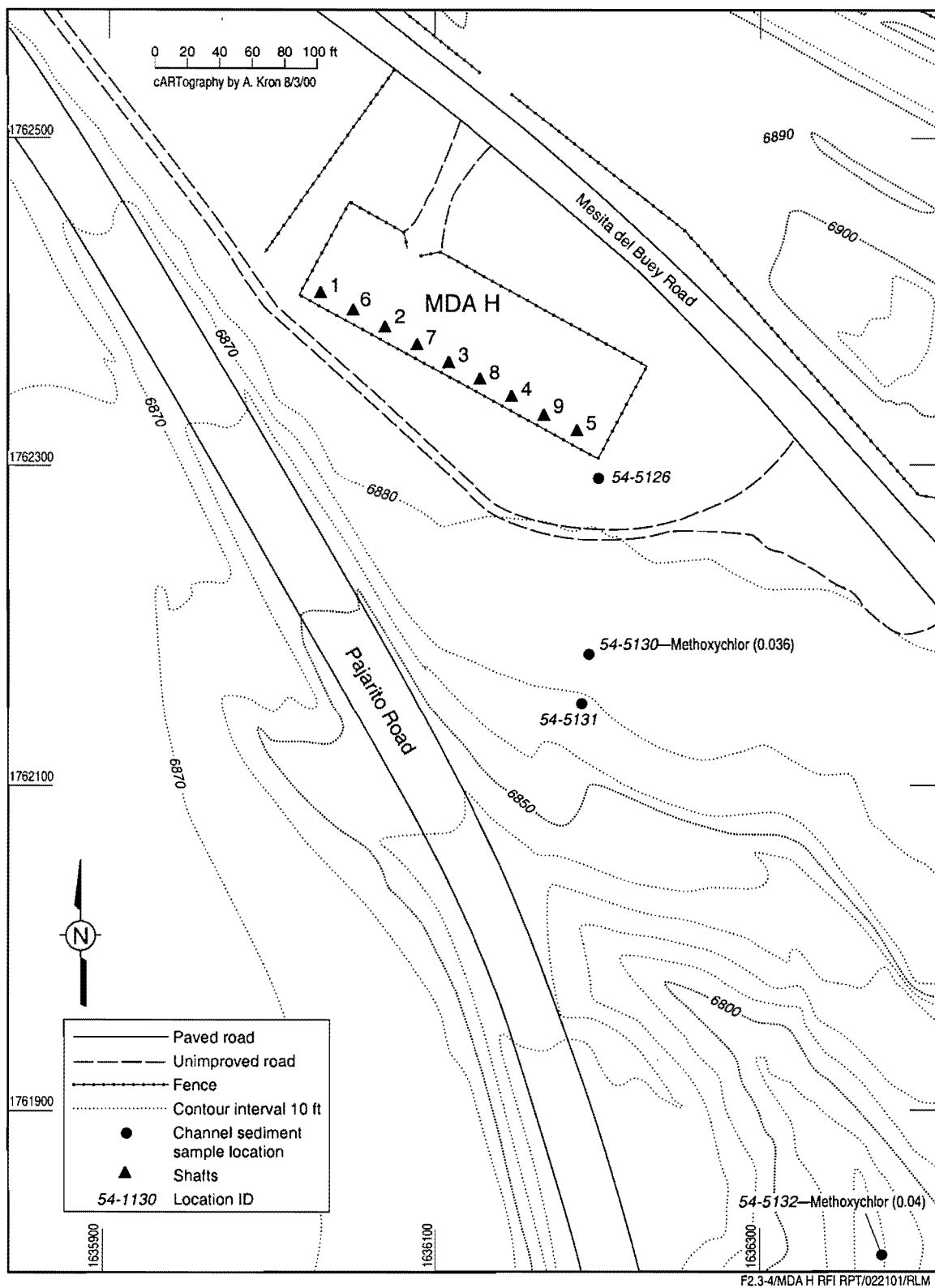


Figure 2.3-4. Detected concentrations (mg/kg) of methoxychlor in channel sediment samples at MDA H

2.3.4.2 Subsurface Tuff Samples from Boreholes

Thirty-three tuff samples were collected from four vertical boreholes. Thirteen were collected from Qbt 2 of the Tshirege Member of Bandelier Tuff, and 20 were collected from the deeper Qbt 1v. A field duplicate was collected for QA/QC purposes only and was not used as an additional data point in the data review process.

Boreholes 54-1024, 54-1025, and 54-1026 were each drilled to a depth of 90 ft. Borehole 54-1023 was drilled to a depth of 259.7 ft, but samples were not collected below 90 ft. Stratigraphic thicknesses obtained from the borehole logs indicate that Qbt 2 is approximately 30 ft thick, Qbt 1v is approximately 110 ft thick, and the Tsankawi Pumice Bed is approximately 1 ft thick beneath MDA H.

Inorganic Chemical Comparison with Background

Some data for antimony, manganese, and selenium are qualified as UJ or J because matrix spike recoveries were below recovery limits. Some lead data are qualified as J+ because matrix spike recoveries were above the recovery limits. Some data for antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, magnesium, mercury, nickel, potassium, selenium, silver, sodium, thallium, and vanadium are qualified J because results were below the estimated DL but above the instrument DL. These data are usable and are potentially biased low or high; however, there is a higher analytical uncertainty than normally associated with inorganic chemical data. Copper and thallium in one sample each are qualified not detected (U) because the results are less than five times the result for these analytes in the preparation blank. Seven cyanide results from one borehole (54-1023) were qualified as R (unusable) because the matrix spike recoveries were less than 30%, making the level of confidence in the results too low. These data were not used in the subsequent assessments of the subsurface inorganic chemical data. Overall, the data are of good quality and suitable for data assessments. Data qualifiers are defined in Appendix A and Table C-5.0-1 in Appendix C. Table C-5.1-1 in Appendix C provides a comprehensive review of data quality.

Analytical results for the samples collected from Qbt 2 were compared with BVs for Qbt 2, 3, and 4, and samples from Qbt 1v were compared with BVs for that unit (Ryti et al. 1998, 59730). Table 2.3-7 provides a summary of the analyses. Analytical results were plotted by depth in each borehole to identify patterns that might be associated with a release and migration through a fractured medium (Appendix E, Figures E-3.2-1 and E-3.2-2. Table D-2.0-4 in Appendix D provides the complete data set.

In all four boreholes, concentrations of copper at the uppermost sampling depth (approximately 9 ft below ground surface) were greater than three times the BV. However, concentrations of copper in all deeper samples were below the Qbt 1v BV. Statistical tests showed that copper concentrations are different from Qbt 2 background concentrations ($p < 0.05$) but are not different from Qbt 1v background concentrations ($p > 0.05$) (Appendix E). Copper is retained as a COPC; and concentrations greater than background are presented in Figure 2.3-5.

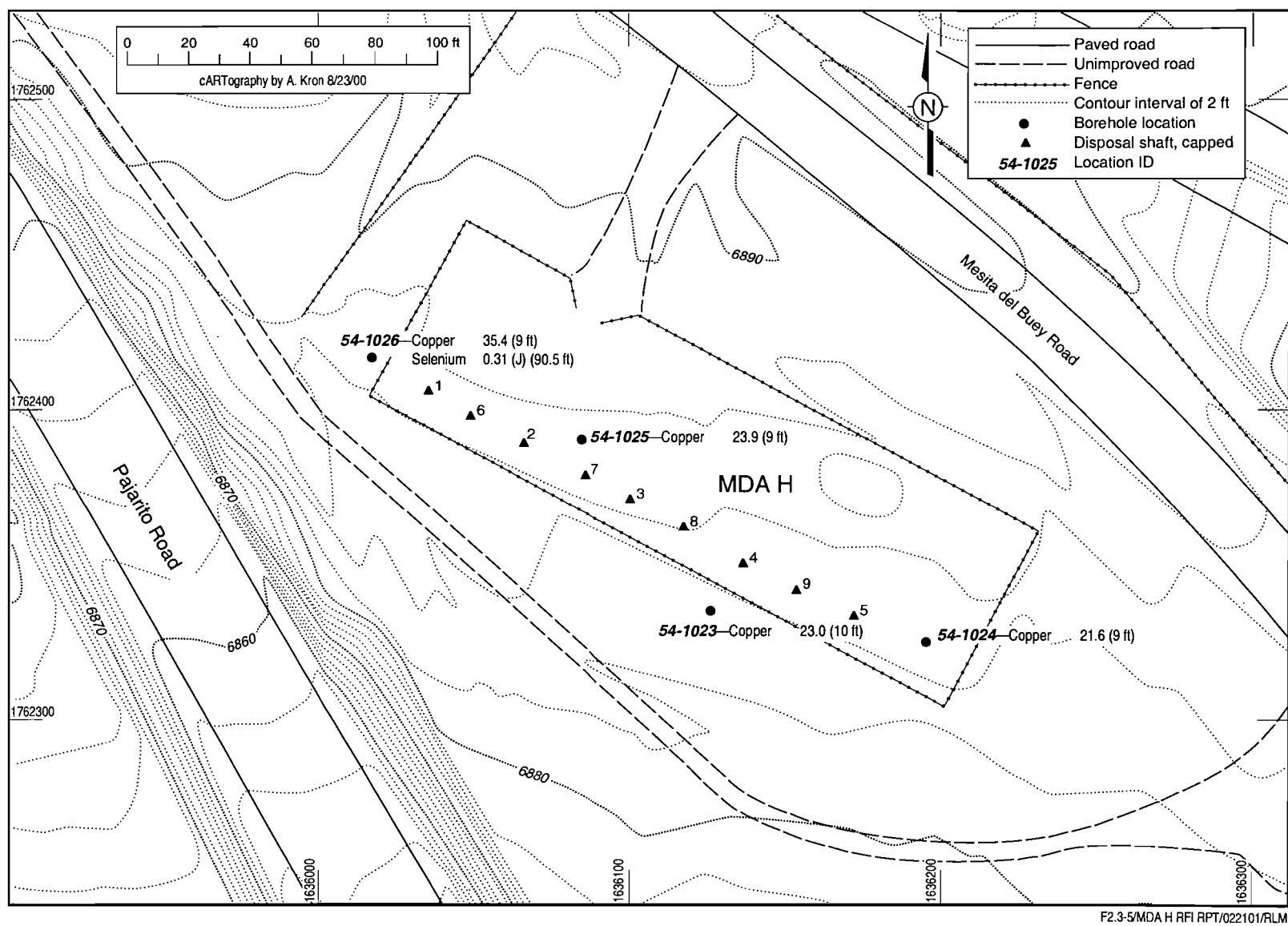


Figure 2.3-5. Detected concentrations of copper and selenium above background values in borehole samples at MDA H

Table 2.3-7
Frequency of Detected Inorganic Chemicals in Tuff Samples

Analyte	Media	Number of Analyses	Number of Detects	Concentration Range (mg/kg) ^a	BV (mg/kg) ^b	Frequency of Detects Above BV
Aluminum	Qbt 2	13	13	187–3140	7340	0/13
	Qbt 1v	20	20	167–2570	8170	0/20
Antimony	Qbt 2	13	2	[0.1]–[4.9]	0.5	1/13 2/13 DLs > BV
	Qbt 1v	20	0	[0.1]–[5.0]	0.5	4/20 DLs > BV
Arsenic	Qbt 2	13	4	[0.2]–2.1	2.79	0/13
	Qbt 1v	20	8	[0.2]–1.8	1.81	0/20
Barium	Qbt 2	13	13	2.8–18	46	0/13
	Qbt 1v	20	20	1.7–10.7	26.5	0/20
Beryllium	Qbt 2	13	9	[0.08]–[0.49]	1.21	0/13
	Qbt 1v	20	16	0.1–[0.5]	1.7	0/20
Cadmium	Qbt 2	13	1	[0.02]–[0.49]	1.73	0/13
	Qbt 1v	20	2	[0.02]–0.52	0.4	1/20 4/20 DLs > BV
Calcium	Qbt 2	13	13	155–776	2200	0/13
	Qbt 1v	20	20	202–754	3700	0/20
Chromium	Qbt 2	13	9	[0.3]–7.0	7.14	0/13
	Qbt 1v	20	12	[0.3]–3.0	2.24	1/20
Cobalt	Qbt 2	13	8	0.14–1.8	3.14	0/13
	Qbt 1v	20	5	0.14–[1.01]	1.78	0/20
Copper	Qbt 2	13	9	[0.5]–35.4	4.66	4/13
	Qbt 1v	20	15	0.37–1.7	3.26	0/20
Cyanide	Qbt 2	11	0	[0.15–1.01]	0.5	2/11 DLs > BV
	Qbt 1v	15	0	[0.15–1.02]	0.5	4/15 DLs > BV
Iron	Qbt 2	13	13	685–4650	14500	0/13
	Qbt 1v	20	20	250–5330	9900	0/20
Lead	Qbt 2	13	13	1.3–16.2	11.2	1/13
	Qbt 1v	20	20	1.02–27.2	18.4	1/20
Magnesium	Qbt 2	13	13	27.8–400	1690	0/13
	Qbt 1v	20	20	27.6–321	780	0/20
Manganese	Qbt 2	13	13	49.6–212	482	0/13
	Qbt 1v	20	20	44.8–238	408	0/20
Mercury	Qbt 2	13	0	[0.02–0.1]	0.1	0/13
	Qbt 1v	20	3	[0.02]–0.07	0.1	0/20
Nickel	Qbt 2	13	8	[0.6]–6.0	6.58	0/13
	Qbt 1v	20	5	[0.6]–1.9	2.0	0/20
Potassium	Qbt 2	13	12	90–871	3500	0/13
	Qbt 1v	20	15	[89.9]–271	6670	0/20

Table 2.3-7 (continued)

Analyte	Media	Number of Analyses	Number of Detects	Concentration Range (mg/kg) ^a	BV (mg/kg) ^b	Frequency of Detects Above BV
Selenium	Qbt 2	13	1	[0.2]–[0.95]	0.3	5/13 DLs > BV
	Qbt 1v	20	1	[0.2]–[0.46]	0.3	1/20 5/20 DLs > BV
Silver	Qbt 2	13	0	[0.1]–[1.3]	1.0	1/13 DL > BV
	Qbt 1v	20	1	[0.1]–0.71	1.0	0/20
Sodium	Qbt 2	13	13	64.9–771	2770	0/13
	Qbt 1v	20	20	78.9–382	6330	0/20
Thallium	Qbt 2	13	1	[0.1]–1.7	1.1	1/13
	Qbt 1v	20	0	[0.1]–[0.5]	1.24	0/20
Vanadium	Qbt 2	13	12	0.94–3.8	17	0/13
	Qbt 1v	20	16	0.7–3.3	4.38	0/20
Zinc	Qbt 2	13	13	8.4–32.5	63.5	0/13
	Qbt 1v	20	20	7.0–45	84.6	0/20

^a Values in square brackets indicate nondetects.

^b Tuff background values obtained from Rytí et al. (1998, 59730).

Chromium and thallium were detected at concentrations above their respective BVs in a single core sample; lead was detected at concentrations above its BVs in one sample from each of the two tuff units. Chromium and lead concentrations were not different from either tuff unit's background concentration (Qbt 2 and/or Qbt 1v) ($p > 0.05$). Thallium was detected once in Qbt 2 core samples at a concentration (1.7 mg/kg) larger than the BV (1.1 mg/kg) but within the range of detected concentrations in Laboratory tuff background (0.05 mg/kg to 1.7 mg/kg). All the thallium DLs at MDA H were below the BV, but four of them were larger than the detection limits observed in the Laboratory background samples. If these four larger DLs are treated as detects, then thallium concentrations at MDA H are not significantly different from background.

Antimony, cadmium, and selenium were detected above their respective BVs in single samples and had DLs above the Qbt 2 and/or Qbt 1v BVs, which are nominal analytical DLs. Silver and cyanide also had DLs above their respective BVs. The DLs reported above BVs occurred in blocks of samples from certain laboratory request numbers, implying that the elevated DLs are associated with a laboratory batch rather than a borehole location.

Cadmium was detected twice in Qbt 1v core samples with one concentration (0.52 mg/kg) above the BV (0.4 mg/kg, a nominal detection limit), and there were four DLs marginally above the BV (0.49 mg/kg to 0.5 mg/kg). There were no Qbt 1v Laboratory background samples analyzed for cadmium. If the MDA H samples are compared to the Laboratory background samples from the upper Qbt units (Qbt 2, Qbt 3, Qbt 4) all MDA H results are below the BV (1.63 mg/kg). If the four MDA H nondetects with elevated DLs are treated as detects (DL-mod), the modified statistical tests indicate that MDA H concentrations are less than those in background (both the quantile and slippage test p -values are greater than 0.99). Therefore, it is concluded that cadmium is not present at concentrations different from tuff background.

Six of 33 samples were analyzed for antimony by ICPES, resulting in high detection limits (approximately 5 mg/kg) that are above the tuff BV (0.5 mg/kg, a nominal detection limit). The remainder of the samples

was analyzed by ICPMS, the method used for the Laboratory background samples. If the ICPEES results are removed as inadequate, all DLs in Qbt 1v are below the BV, and in Qbt 2, only one DL of 0.55 mg/kg and one detected concentration of 0.57 mg/kg remain above the BV. When ICPEES results are excluded for Qbt 2 and the DLs larger than BVs are treated as detects (DL-mod), antimony concentrations are not significantly different from background (quantile test p-value = 0.12, slippage test p-value = 0.14) (Table E-3.2-2). Therefore, antimony in tuff at MDA H is not different from Laboratory tuff background.

Silver was not detected in core samples at MDA H. In Qbt 2, one sample had a DL (1.3 mg/kg) above the BV (1.0 mg/kg) but smaller than the detected concentration (1.9 mg/kg) in Laboratory background for this tuff unit. The detection rate at MDA H is lower than for Laboratory background, and the DLs are within the range of the Laboratory results (detection limits plus detected concentrations). Silver is not considered elevated above background.

Cyanide was not detected in tuff samples at MDA H. The majority of the DLs were below the BV of 0.5 mg/kg (a nominal detection limit), but six DLs (1 mg/kg to 1.02 mg/kg) from one request number were approximately double the BV. Cyanide was not analyzed for in Laboratory background tuff samples, so there are no results for comparison. Therefore, cyanide is assumed to be different from background.

Selenium was detected once in Qbt 2 core samples and once in Qbt 1v core samples at concentrations (0.27 mg/kg and 0.31 mg/kg) approximately equal to the BV (0.3 mg/kg, a nominal detection limit) (Figure 2.3-5). In addition, there were 10 samples with elevated detection limits (nine DLs between 0.42 mg/kg and 0.46 mg/kg and a DL of 0.95 mg/kg). Only 15 Laboratory background tuff samples were analyzed for selenium, and none produced detected concentrations. There are insufficient Laboratory background tuff results for further comparisons, so selenium is assumed to be different from Laboratory background.

Radionuclide Comparison with Background or Fallout Values

Tuff samples were analyzed for gamma-emitting radionuclides and tritium, using gamma spectroscopy and liquid scintillation, respectively. The full-suite analyte list in the ER Project analytical services statement of work (LANL 1995, 49738) includes the decay series of the naturally occurring radionuclides, uranium-235, uranium-238, and thorium-232, as well as fission and activation products and their progeny. The primary radionuclides reliably measured by gamma spectroscopy include activation products (americium-241, cobalt-60, and sodium-22), fission products (cesium-134, cesium-137, europium-152, and ruthenium-106), and uranium-235. Uranium-235 is both naturally occurring and a potential historical contaminant from Laboratory operations. There were no QA/QC issues with the gamma-emitting radionuclide or tritium data that affected usability. Europium-152 results in two samples are qualified as not detected (U) because the results were less than five times the concentration of this analyte in the method blank. Table C-5.3-1 in Appendix C provides a comprehensive review of data quality.

Data indicate that tritium was the only radionuclide detected above its tuff fallout value, which is a nominal minimum detectable activity of 0.3 pCi/mL. Tritium was detected in 22 of 33 samples in the four boreholes and at all depths in boreholes 54-1023 and 54-1025. Tritium was detected at only four depths from approximately 40 ft to 70 ft in borehole 54-1026 and at only two depths from approximately 9 ft to 20 ft in borehole 54-1024. The concentrations ranged between a nondetect at certain depths in borehole 54-1026 and 777,000 pCi/mL in borehole 54-1025. Table 2.3-8 summarizes the radionuclide data for the tuff samples; Table 2.3-9 presents the detected tritium values by sample. Figure 2.3-6 presents the sample locations for the detected tritium concentrations.

Tritium is present as a result of releases from tritium-contaminated waste in one or more of the shafts. Consequently, tritium is retained as a COPC at MDA H. The subsurface radionuclide data are discussed

further in Appendix E; Table D-2.0-6 in Appendix D includes the complete data set. Section 3.1.2 discusses the spatial pattern of tritium concentrations.

Evaluation of Organic Chemicals

Tuff samples were analyzed for PCBs, pesticides, SVOCs, and VOCs. Acetone, benzene, benzoic acid, bis(2-ethylhexyl)phthalate, 2-butanone, butylbenzene (sec-), butylbenzene (n-), di-n-butylphthalate, dimethylphthalate, diethylphthalate, hexachlorobutadiene, methylene chloride, naphthalene, toluene, 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, and trichlorofluoromethane were qualified J (estimated) in one or more samples because the sample results were at concentrations below the analytical laboratory's EQLs. As a result, the concentrations for these organic chemicals have a greater uncertainty associated with the values. Several other organic chemicals (acetone, bis(2-ethylhexyl)phthalate, methylene chloride, and N-nitrosodimethylamine) were qualified as U (undetected) in some samples because of blank contamination. The detected organic chemicals in borehole samples at MDA H are shown on Figure 2.3-7. These QA/QC issues do not affect the data quality or usability of the organic chemical tuff data. Table C-5.2-1 in Appendix C provides a comprehensive review of data quality.

Table 2.3-8
Frequency of Detected Radionuclides in Tuff Samples

Analyte	Media	Number of Analyses	Number of Detects	Concentration Range (pCi/g) ^a	Sediment Background or Fallout Value (pCi/g) ^b	Frequency of Detects or Detects Above Background or Fallout Value
Americium-241	Tuff	33	0	[-0.11–0.37]	0.05 ^c	0/33
Cesium-134	Tuff	17	0	[0.05–0.14]	No value	0/17
Cesium-137	Tuff	33	0	[-0.032–0.1]	0.1 ^c	0/33
Cobalt-60	Tuff	33	0	[-0.03–0.09]	No value	0/33
Europium-152	Tuff	16	0	[-0.07–0.23]	No value	0/16
Ruthenium-106	Tuff	33	0	[-0.44–0.67]	No Value	0/33
Sodium-22	Tuff	33	0	[-0.52–0.08]	No value	0/33
Tritium ^d	Tuff	33	22	[1.3]–777,000	0.3 ^c	22/33
Uranium-235	Qbt 2	6	0	[0.11–0.13]	0.09	0/6
	Qbt 1v	11	0	[0.11–0.13]	0.14	0/11

^aValues in square brackets indicate nondetects.

^bTuff background and fallout values obtained from Ryti et al. (1998, 59730)

^cFallout values are nominal minimum detectable activities.

^dTritium values are in pCi/mL.

Table 2.3-9
Detected Tritium in Tuff Samples

Location ID	Sample ID	Sample Result (pCi/mL)	Media	Depth (ft)
54-1023	0554-95-0282	5890	Qbt 2	9.5–9.7
54-1023	0554-95-0284	37,927	Qbt 2	15.5–17
54-1023	0554-95-0286	44,535	Qbt 2	27–28.5
54-1023	0554-95-0288	34,409	Qbt 1v	37–38.5
54-1023	0554-95-0290	22,450	Qbt 1v	47–48.5
54-1023	0554-95-0292	12,005	Qbt 1v	57–58.5
54-1023	0554-95-0294	6644	Qbt 1v	67–68.5
54-1023	0554-95-0298	988	Qbt 1v	82.5–83.5
54-1024	0554-95-0321	320	Qbt 2	9–9.2
54-1024	0554-95-0323	3660	Qbt 2	18.5–20
54-1025	0554-95-0339	276	Qbt 2	9–9.2
54-1025	0554-95-0341	16,000	Qbt 2	17–18.8
54-1025	0554-95-0343	110,000	Qbt 2	28–29.5
54-1025	0554-95-0345	331,000	Qbt 1v	41–42.5
54-1025	0554-95-0347	777,000	Qbt 1v	51–52.7
54-1025	0554-95-0349	284,000	Qbt 1v	62–62.8
54-1025	0554-95-0351	32,200	Qbt 1v	71–71.8
54-1025	0554-95-0355	253	Qbt 1v	86–90
54-1026	0554-95-0304	429	Qbt 1v	41–41.5
54-1026	0554-95-0306	697	Qbt 1v	46.5–48
54-1026	0554-95-0308	589	Qbt 1v	58–60
54-1026	0554-95-0310	440	Qbt 1v	66.5–68

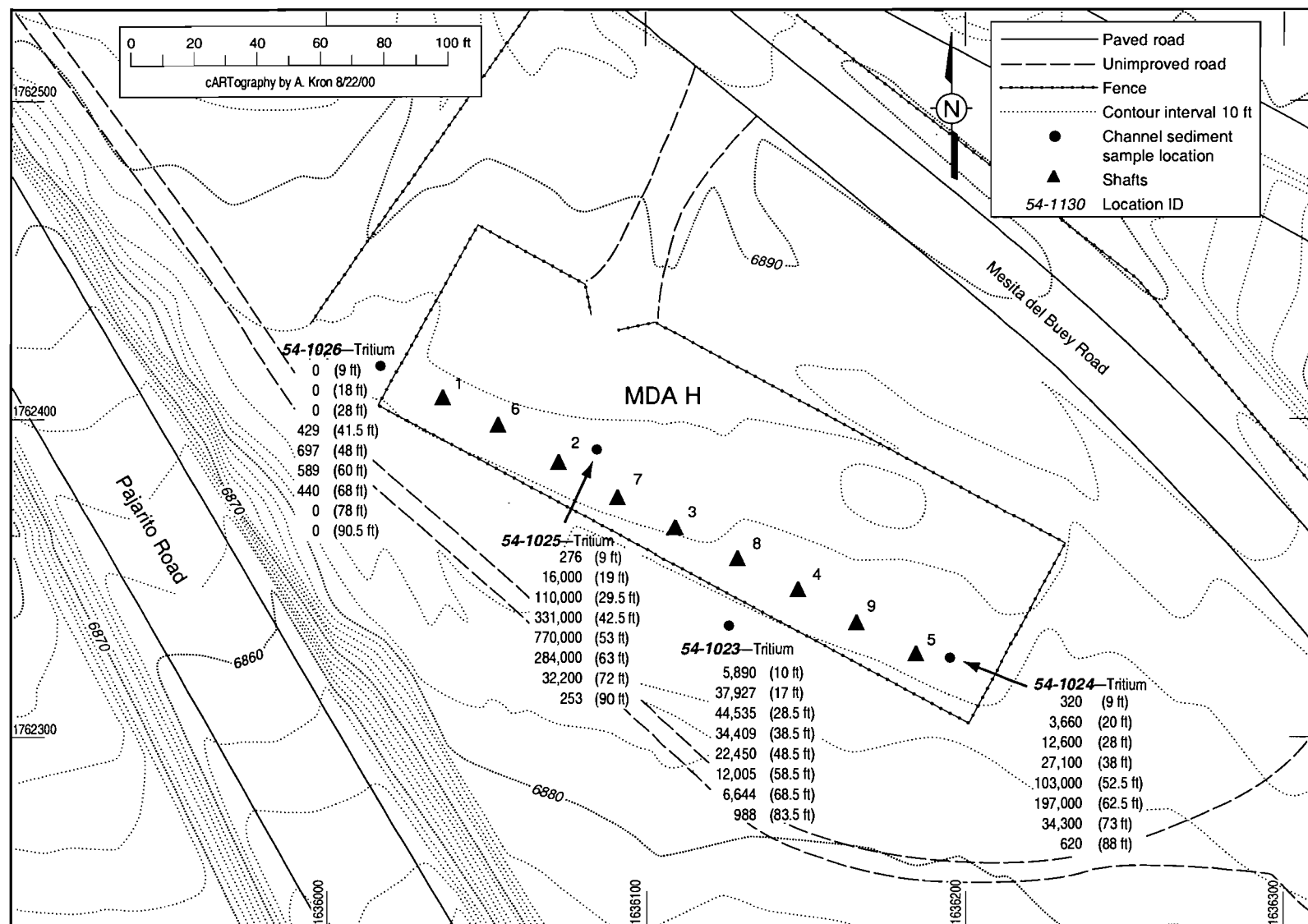


Figure 2.3-6. Detected concentrations (pCi/mL) of tritium in borehole samples at MDA H

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Eighteen organic chemicals were detected in one to six samples, with 14 of the detected organic chemicals reported only at concentrations below the EQLs. Acetone was detected in two samples at concentrations of 0.011 mg/kg and 0.016 mg/kg, which were slightly above the EQL of 0.01 mg/kg for these samples. Endosulfan sulfate was detected at a concentration of 0.000674 mg/kg, which is similar to the EQL of 0.000671 mg/kg. Trichlorofluoromethane was detected in six samples from borehole 54-1024 at concentrations ranging between 0.002 mg/kg and 0.007 mg/kg. The reported concentrations were slightly above the EQL of 0.005 mg/kg in four of the six samples. Bis(2-ethylhexyl)phthalate was detected in five samples at concentrations ranging between 0.038 mg/kg and 3.8 mg/kg. Two of the detected concentrations were above the EQL of 0.34 mg/kg (1.3 mg/kg and 3.8 mg/kg). Table 2.3-10 summarizes organic chemicals detected in the tuff at MDA H. Table D-2.0-5 in Appendix D includes the complete data set. Figure 2.3-7 presents the sample locations for the detected organic chemicals.

Table 2.3-10
Frequency of Detected Organic Chemicals in the Tuff Samples

Suite or Analyte	Number of Analyses	Number of Detects	Concentration Range (mg/kg)*	EQL (mg/kg)	Frequency of Detects
SVOCs					
Benzoic acid	33	1	0.49–[3.5]	0.81-3.5	1/33
Bis(2-ethylhexyl)phthalate	33	5	[0.038]–3.8	0.04-0.34	5/33
Di-n-butylphthalate	33	6	0.043–[0.35]	0.33-0.35	6/33
Diethylphthalate	33	1	0.28–[0.35]	0.33-0.35	1/33
Dimethylphthalate	33	1	0.042–[0.35]	0.33-0.35	1/33
Naphthalene	33	1	0.001–[0.35]	0.005-0.35	1/33
Pesticide/PCB					
Endosulfan sulfate	33	1	[0.000671]–[0.00351]	0.000671-0.00351	1/33
VOCs					
Acetone	33	2	[0.002]–[0.025]	0.002-0.021	2/33
Benzene	33	1	0.003–[0.0052]	0.005-0.0052	1/33
Butanone [2-]	33	2	0.002–[0.021]	0.01-0.021	2/33
Butylbenzene [n-]	33	1	0.0013–[0.0052]	0.005-0.0052	1/33
Butylbenzene [sec-]	33	2	0.0011–[0.0052]	0.005-0.0052	2/33
Hexachlorobutadiene	33	1	0.002–[0.005]	0.005-0.35	1/33
Methylene chloride	33	3	0.002–[0.011]	0.003-0.011	3/33
Toluene	33	3	0.001–[0.0052]	0.005-0.0052	3/33
Trichlorobenzene[1,2,3-]	9	2	0.001–[0.005]	0.005	2/9
Trichlorobenzene[1,2,4-]	33	1	0.001–[0.005]	0.005-0.35	1/33
Trichlorofluoromethane	33	6	0.002–0.007	0.005-0.0052	6/33

*Values in square brackets indicate nondetects.

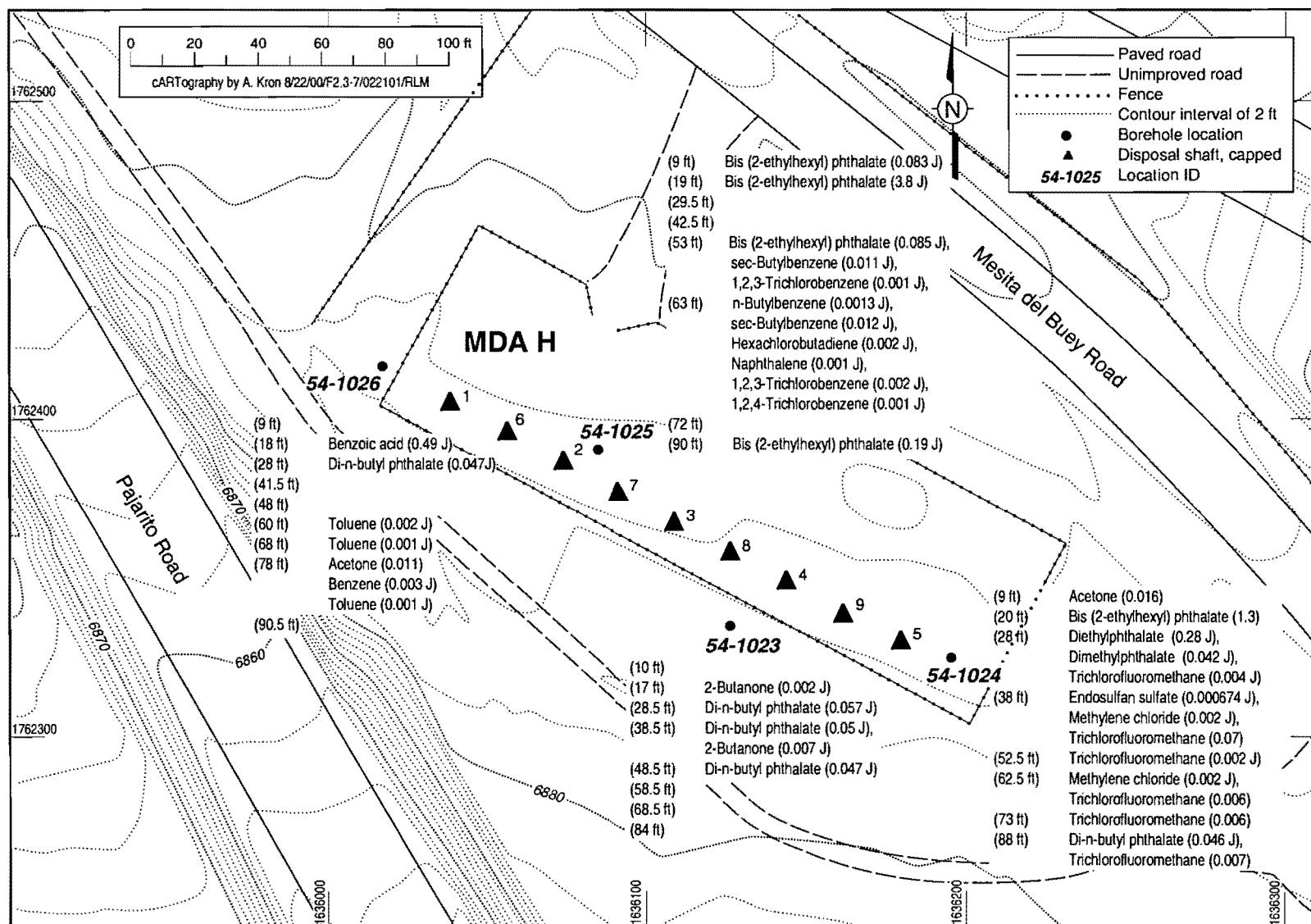


Figure 2.3-7. Detected organic chemicals (mg/kg) in borehole samples at MDA H

The reported concentrations of seven of the organic chemicals (benzoic acid, benzene, naphthalene, n-butylbenzene, hexachlorobutadiene, 1,2,4-trichlorobenzene, and endosulfan sulfate) detected in the tuff were at or below the EQLs; these chemicals were detected in less than 5% of the samples (1 of 33 samples). Because of the low level and infrequent detections, these organic chemicals may be false positives. According to waste disposal records, pesticides, VOCs, and SVOCs were not disposed of at MDA H. EPA guidance (EPA 1989, 8021) indicates that a low frequency of detection (e.g., 5% or less) is a mechanism to eliminate chemicals as COPCs, particularly if the available process knowledge indicates that the chemical(s) were not related to site activity. Despite these factors, benzoic acid, benzene, naphthalene, n-butylbenzene, hexachlorobutadiene, 1,2,4-trichlorobenzene, and endosulfan sulfate are retained as COPCs and carried forward to the screening assessment (Table 2.3-11).

The majority of the remaining organic chemicals also were detected below the EQLs but are present in more than one sample and, in some cases, detected at consecutive depths within a borehole or boreholes. Because of the low-level detects whose concentrations are close to EQL values, there is a high degree of uncertainty related to actual levels present, and there is an increased likelihood of false positives. Although information indicates that they were not disposed of as waste, some of the waste may have been placed in plastic containers, i.e., bags or bottles, before disposal. As a result, the phthalates are retained as COPCs. Trichlorofluoromethane is also retained because it was detected in pore gas, surface flux, and ambient air samples at MDA G. Therefore, the remaining eleven organic chemicals (acetone, 2-butanone, sec-butylbenzene, methylene chloride, toluene, 1,2,3-trichlorobenzene, diethylphthalate, dimethylphthalate, bis(2-ethylhexyl)phthalate, di-n-butylphthalate, and trichlorofluoromethane) are also retained as COPCs at MDA H (Table 2.3-11).

Table 2.3-11
Detected Organic Chemicals in Boreholes at MDA H

Analyte	Location ID	Sample ID	Sample Concentration (mg/kg)	Media	Depth (ft)
Acetone	54-1024	0554-95-0321	0.016	Qbt 2	9–9.2
	54-1026	0554-95-0312	0.011	Qbt 1v	76.5–78
Benzene	54-1026	0554-95-0312	0.003(J)	Qbt 1v	76.5–78
Benzoic acid	54-1026	0554-95-0300	0.49(J)	Qbt 2	16.5–18.1
Bis(2-ethylhexyl)phthalate	54-1024	0554-95-0323	1.3	Qbt 2	18.5–20
	54-1025	0554-95-0339	0.083(J)	Qbt 2	9–9.2
	54-1025	0554-95-0341	3.8	Qbt 2	17–18.8
	54-1025	0554-95-0347	0.085(J)	Qbt 1v	51–52.7
	54-1025	0554-95-0355	0.19(J)	Qbt 1v	86–90
2-Butanone	54-1023	0554-95-0284	0.002(J)	Qbt 2	15.5–17
	54-1023	0554-95-0288	0.007(J)	Qbt 1v	37–38.5
n-Butylbenzene	54-1025	0554-95-0349	0.0013(J)	Qbt 1v	61–62.8
sec-Butylbenzene	54-1025	0554-95-0347	0.011(J)	Qbt 1v	51–52.7
	54-1025	0554-95-0349	0.012(J)	Qbt 1v	61–62.8

Table 2.3-11 (continued)

Analyte	Location ID	Sample ID	Sample Concentration (mg/kg)	Media	Depth (ft)
Diethylphthalate	54-1024	0554-95-0325	0.28(J)	Qbt 2	26–27.8
Dimethylphthalate	54-1024	0554-95-0325	0.042(J)	Qbt 2	26–27.8
Di-n-butylphthalate	54-1023	0554-95-0286	0.057(J)	Qbt 2	27–28.5
	54-1023	0554-95-0288	0.05(J)	Qbt 1v	37–38.5
	54-1023	0554-95-0290	0.051(J)	Qbt 1v	47–48.5
	54-1023	0554-95-0292	0.047(J)	Qbt 1v	57–58.5
	54-1024	0554-95-0337	0.046(J)	Qbt 1v	86–87.8
	54-1026	0554-95-0302	0.047(J)	Qbt 2	26.5–28
Endosulfan sulfate	54-1024	0554-95-0327	0.000674	Qbt 2	36–37.8
Hexachlorobutadiene	54-1025	0554-95-0349	0.002(J)	Qbt 1v	61–62.8
Methylene chloride	54-1024	0554-95-0327	0.002(J)	Qbt 2	36–37.8
	54-1024	0554-95-0331	0.002(J)	Qbt 1v	61–62.5
	54-1024	0554-95-0333	0.002(J)	Qbt 1v	71–72.8
Naphthalene	54-1025	0554-95-0349	0.001(J)	Qbt 1v	61–62.8
Toluene	54-1026	0554-95-0308	0.002(J)	Qbt 1v	58–60
	54-1026	0554-95-0310	0.001(J)	Qbt 1v	66.5–68
	54-1026	0554-95-0312	0.001(J)	Qbt 1v	76.5–78
1,2,3-Trichlorobenzene	54-1025	0554-95-0347	0.001(J)	Qbt 1v	51–52.7
	54-1025	0554-95-0349	0.002(J)	Qbt 1v	61–62.8
1,2,4-Trichlorobenzene	54-1025	0554-95-0349	0.001(J)	Qbt 1v	61–62.8
Trichlorofluoromethane	54-1024	0554-95-0325	0.004(J)	Qbt 2	26–27.8
	54-1024	0554-95-0327	0.007	Qbt 2	36–37.8
	54-1024	0554-95-0329	0.002(J)	Qbt 1v	51–52.5
	54-1024	0554-95-0331	0.006	Qbt 1v	61–62.5
	54-1024	0554-95-0333	0.006	Qbt 1v	71–72.8
	54-1024	0554-95-0337	0.007	Qbt 1v	86–87.8

2.3.5 Summary of COPCs at MDA H

Table 2.3-12 summarizes the results of the data review for channel sediments and tuff at MDA H. For each analyte listed, the table identifies which are retained as COPCs and which are eliminated from further consideration in the RFI, along with the rationale for that decision.

**Table 2.3-12
Data Review Summary**

Analyte	Medium	COPC (y/n?)	Rationale
Inorganic chemicals (except for copper, lead, cadmium, cyanide, and selenium)	Sediment and tuff	No	Inorganic chemical data were either less than the BVs or not different from background data sets.
Copper	Sediment	No	Not detected above sediment BV
	Tuff	Yes	Statistical tests found copper to be different from Qbt 2 background.
Lead	Sediment	No	Detected above the sediment BV in two samples but results are within the range of values in the background data set.
	Tuff	No	Not statistically different from tuff backgrounds
Cadmium	Sediment	Yes	Detection limits above the sediment BV and sediment background data set
	Tuff	No	Not statistically different from tuff backgrounds
Cyanide	Sediment	No	Not detected above the sediment BV
	Tuff	Yes	Detection limits above the tuff BV
Selenium	Sediment	Yes	Detection limits above the sediment BV
	Tuff	Yes	Detection limits above the tuff BVs
Radionuclides (except for tritium)	Sediment and tuff	No	Either not detected or detected below background or fallout value
Tritium	Sediment	Yes	Detected at a concentration above the fallout value in one sample
	Tuff	Yes	Detected in the majority of tuff samples at concentrations greatly exceeding the fallout value
Pesticides (except for methoxychlor and endosulfan sulfate)	Sediment and tuff	No	No other pesticides were detected in sediment or tuff.
Methoxychlor	Sediment	Yes	Detected at low concentrations in two samples
	Tuff	No	Not detected in any tuff samples
Endosulfan sulfate	Tuff	Yes	Detected in one tuff sample below the EQL
	Sediment	No	Not detected in any sediment samples
PCBs	Sediment and tuff	No	No PCBs were detected in sediment or tuff.
SVOCs (except for benzoic acid, bis(2-ethylhexyl)phthalate, diethylphthalate, dimethylphthalate, di-n-butylphthalate, naphthalene)	Tuff	No	Not detected in the tuff samples
	Sediment	No	Not analyzed for in sediment samples
Benzoic acid, bis(2-ethylhexyl)phthalate, diethylphthalate, dimethylphthalate, di-n-butylphthalate, naphthalene	Tuff	Yes	Detected in one to six tuff samples
	Sediment	No	Not analyzed for in sediment samples

Table 2.3-12 (continued)

Analyte	Medium	COPC (y/n?)	Rationale
VOCs (except for acetone, benzene, 2-butanone, n-butylbenzene, sec-butylbenzene, hexachlorobutadiene, methylene chloride, toluene, 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, trichlorofluoromethane)	Tuff	No	Not detected in the tuff samples
	Sediment	No	Not analyzed for in sediment samples
Acetone, benzene, 2-butanone, n-butylbenzene, sec-butylbenzene, hexachlorobutadiene, methylene chloride, toluene, 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, trichlorofluoromethane	Tuff	Yes	Detected in one to six tuff samples
	Sediment	No	Not analyzed for in sediment samples

3.0 REVISED SITE CONCEPTUAL MODEL FOR MDA H

This section evaluates the COPCs to identify trends that may indicate a release from the PRS and the extent of the contamination resulting from the release. Results of the data review are used to reassess and revise, if necessary, the preliminary site conceptual model. The preliminary site conceptual model presented in Section 2 accurately depicts the potential release mechanisms throughout pathways at MDA H. The processes and events related to contaminant fate and transport in environmental media are discussed in Section 3.2. The nature and extent of contamination in sediment (i.e., accessible contamination) is the basis of the assessment of potential present-day risk (Section 4.2), while the characterization of the environmental fate of subsurface contaminants (i.e., currently inaccessible contamination) will be the basis of the future risk assessment associated with the corrective measures study (CMS) for MDA H.

3.1 Nature and Extent of Contamination

Channel sediment and subsurface tuff were sampled for contamination at MDA H. The data review in Section 2 indicated that COPCs include

- methoxychlor and tritium in channel sediment,
- copper and selenium in subsurface tuff,
- several organic chemicals in subsurface tuff, and
- tritium in subsurface tuff.

The source of the low-concentrations of methoxychlor contamination in the channel sediment is not known but is most likely the result of routine application. The source of the elevated copper concentrations at approximately 10 ft bgs is also not known. One possible explanation is natural variability, the result of remobilization by vapor-phase processes during welding/vitrification during

emplacement (Stimac et al. 1996, 59362); similar enrichments of other inorganic chemicals in the Bandelier Tuff have been documented. The source of the low-level organic chemicals is unclear because VOCs and SVOCs were not disposed of as waste at MDA H. The source of tritium in the subsurface is the tritium-contaminated waste. The source for selenium in tuff is also unclear. The data from sediment and subsurface samples are discussed below.

The nature and extent analyses of MDA H RFI data corroborate the preliminary site conceptual model described in Section 2.3.2. Figure 2.3-1 illustrates that the source term and environmental transport components of the known sources of environmental contamination are

- vapor-phase release of tritium and perhaps organic chemicals from subsurface shafts and
- channel sediments contaminated with methoxychlor and tritium.

3.1.1 Surface Media Contamination

Four channel sediment samples were collected from the primary drainage at MDA H. This drainage runs to the southeast away from the site and is more of a depositional area than a well-defined, channeled drainage. No surface release or residual contamination was evident or documented for MDA H, which is consistent with the operational history and scale of activities at the site.

Nature and Extent of Inorganic Chemicals in Channel Sediment

Lead was the only inorganic chemical detected above the sediment BV in the drainage channel but was not different from the range of values in the background data set. Concentrations of lead were elevated above the BV (19.7 mg/kg) by only 0.2 mg/kg to 1.6 mg/kg and decreased to below the BV in the farthest sample down drainage from MDA H. Cadmium and selenium were not detected in any channel sediment samples but had detection limits above their BVs in three of four samples. The other inorganic chemicals in the channel sediment were either less than the BVs or not different from the background data sets.

Nature and Extent of Radionuclides in Channel Sediment

Tritium was detected above the fallout value in the sample nearest the fenced area of MDA H. Concentrations of tritium decreased to below the fallout value in samples collected farther down the drainage.

Nature and Extent of Organic Chemicals in Channel Sediment

Methoxychlor was detected in two of four samples at concentrations of 0.036 mg/kg and 0.04 mg/kg (Figure 2.3-4), approximately twice the EQL of 0.02 mg/kg. The extent of methoxychlor is not clearly defined by the channel sediment data because the farthest sample from the site had a detected concentration of 0.04 mg/kg, which is similar to the upstream concentration of 0.036 mg/kg. Because methoxychlor concentrations do not demonstrate an increase where detected, and methoxychlor is not related to disposal activities at MDA H, further sampling for extent is not warranted. Methoxychlor is further evaluated in the risk assessment, although its presence is likely due to routine application of this pesticide either within TA-54 or elsewhere and not due to past waste disposal practices.

3.1.2 Subsurface Contamination

Nature and Extent of Inorganic Chemicals in Tuff

Copper was present at concentrations above the background value in the uppermost core sample (approximately 9 ft bgs) from each of the four boreholes at MDA H (Appendix E, Figures E-4.2-1 through E-3.2-1). Deeper samples had copper at concentrations less than the tuff BVs, thereby bounding the extent of copper. The presence of copper, which was not attributable to the subsurface disposal units, is likely due to a locally enriched zone in the tuff (Stimac et al. 1996, 59362). Cyanide and selenium were not detected in any of the borehole samples; however, 6 sample results (cyanide) and 10 sample results (selenium) in borehole 54-1024 had detection levels above the tuff BVs. Neither of these inorganic chemicals were detected in the surrounding boreholes, and analytical detection limits were below the respective tuff BVs (0.5 mg/kg for cyanide and 0.3 mg/kg for selenium) in the remaining 20 sample results (cyanide) and 23 sample results (selenium). Therefore, there is no evidence of a release of cyanide or selenium, and further sampling for extent is not warranted.

Nature and Extent of Radionuclides in Tuff

Tritium was present at elevated levels in core samples (Figure 3.1-1). Transport of tritium through the subsurface is expected to be in the form of water vapor; therefore, tritium measured in core samples at MDA H is associated with residual moisture (pore water and water vapor) within the tuff. In each borehole, the tritium concentrations increased with depth to approximately 40 ft to 50 ft and subsequently decreased with depth. In addition, the highest tritium concentrations were reported in borehole 54-1025, which is located between shafts 2 and 7, while the other boreholes located away from the shafts had lower tritium concentrations. Additional subsurface data for tritium will be collected to obtain a clearer picture of its distribution and relationship to the shafts at MDA H.

Nature and Extent of Organic Chemicals in Tuff

Eighteen organic analytes were detected in 1 to 6 of the 33 core samples. Of these, 14 organic chemicals were detected at concentrations below the EQLs. Because the available site knowledge at MDA H indicates that pesticides, VOCs, and SVOCs were not disposed of and because of the infrequent detections (<5% of the samples) and the low-level concentrations (at or below the EQLs) reported, there is a strong likelihood that some of the 18 organic chemicals are not present or related to a release.

The vertical extent of the organic chemical concentrations is defined because, except for bis(2-ethylhexyl)phthalate and trichlorofluoromethane, one or more samples at greater depths than the detected concentrations were reported as not detected. The vertical extent is also defined for bis(2-ethylhexyl)phthalate because, although the deepest sample in borehole 54-1025 reported this chemical at 0.19 mg/kg, it is below the EQL of 0.33 to 0.34 mg/kg. Trichlorofluoromethane was only detected in borehole 54-1025 with concentrations ranging between 0.002 mg/kg and 0.007 mg/kg; it has an EQL of 0.005 mg/kg. The deepest sample from this borehole reported the concentration of 0.007 mg/kg, which is slightly above the EQL. Because of the low-level detection and the small difference from the EQL (0.002 to 0.003 mg/kg), no additional sampling for extent is warranted.

Lateral extent has also been defined by the available sample results, because most of the detected organic chemicals were reported in only one or two of the boreholes. The exception to this is di-n-butylphthalate, which was detected in three boreholes. However, the detected concentrations were below the EQL, so further sampling for extent is not warranted.

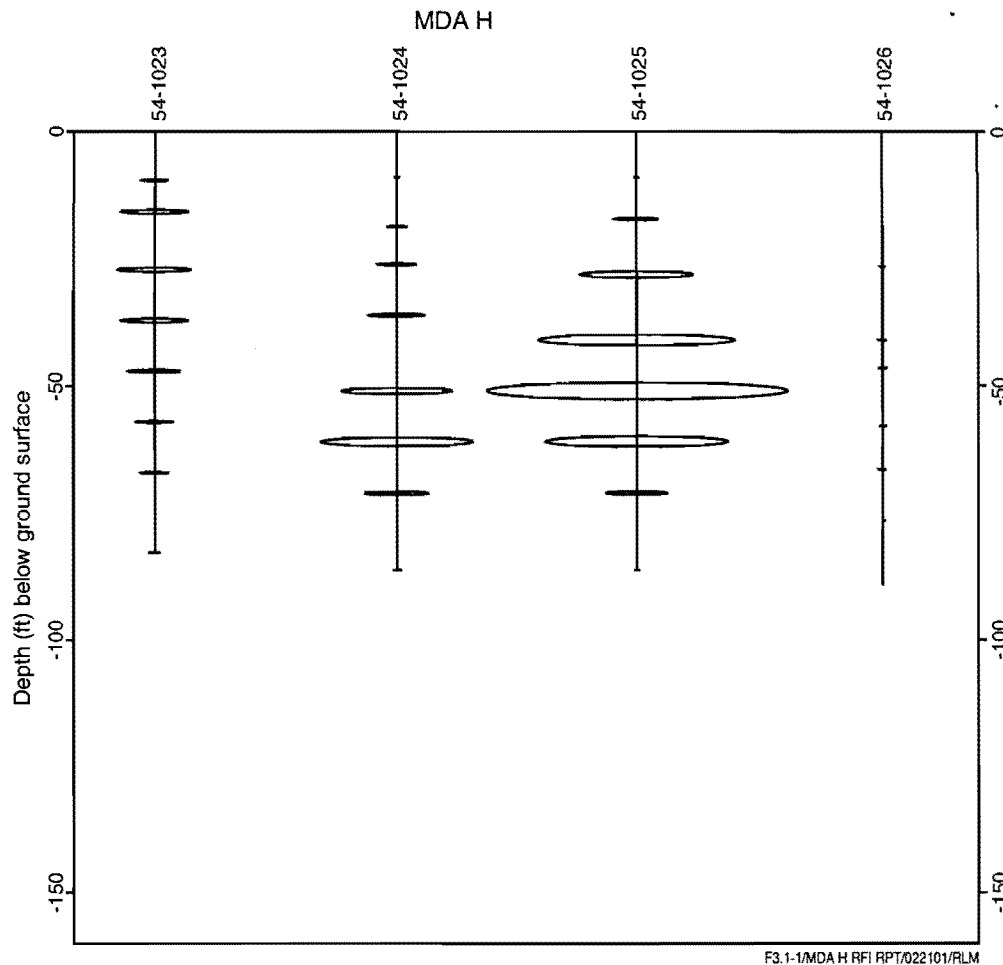


Figure 3.1-1. Tritium concentrations (pCi/mL) in borehole tuff samples at MDA H. Concentrations are proportional to the area enclosed by the oval and plotted at sampled depths (feet below ground surface) within the borehole.

3.2 Environmental Fate

This section evaluates the RFI data for MDA H in the context of the revised site conceptual model; revisions to the model are based on the data analyses in Section 3.1. The revised model will serve as the basis for mathematical fate and transport models and will be used to calculate potential contaminant concentrations and potential migration of contaminants in the future. The RFI data are used to estimate present-day risks associated with contamination in potentially accessible environmental media at MDA H. The results of fate and transport models will be used to estimate future risks to hypothetical human and ecological receptors from processes and events that may make currently inaccessible subsurface contamination accessible. This subsequent analysis will be done as part of the CMS at MDA H.

3.2.1 Contaminant Release Mechanisms

The conceptual model of contaminant release from below-ground sources includes the following processes:

- dissolution of soluble contaminants in water percolating through the disposal shafts,
- excavation of particulate contaminants by animals burrowing into the disposal shafts,
- uptake of bioavailable contaminants by plants rooting into the disposal shafts, and
- diffusion of volatile or vapor-phase contaminants.

Of these processes, only the diffusion of tritium (as water vapor) is indicated by the RFI data for MDA H. Release rates depend upon the rate at which gaseous species are generated and how quickly the contaminants move through the waste matrix, backfill, and rock matrix. The measured surface fluxes at MDA H are expected to represent the maximum rates of release for tritium because the maximum tritium inventory (which produced the maximum diffusion gradient and release rate) occurred when the tritium-containing waste was disposed of. The maximum inventory has been reduced by both diffusion out of the waste and by radioactive decay. The remaining inventory of tritium will be reduced by a factor of two every 12 yr and will continue to diffuse at slower and slower rates.

3.2.2 Contaminant Transport Pathways

Conceptually, the pathways by which contaminants released from MDA H could be transported in environmental media include the following:

- unsaturated transport by pore water through the vadose zone beneath the shafts;
- solute or sediment transport by surface water of surface contamination into Pajarito Canyon;
- biotic uptake and redistribution of contamination;
- diffusion of volatile or vapor-phase contaminants from the ground surface into the ambient air, followed by dispersion in air; and
- atmospheric transport of vapor-phase volatile contaminants and contaminated surface soils to off-site locations.

All of these processes could apply to the tritium being released from MDA H, but dispersion in the atmosphere is the dominant transport pathway.

Because tritium is being released from MDA H as water vapor, it moves readily through various environmental media, including air, water, and plants. Tritiated water vapor will disperse most readily into air, unless there is sufficient water on the surface. If there is a high enough release rate of the tritium vapor and sufficient surface water, the tritium vapor that migrates to the surface may condense into the liquid phase. This condensed vapor could flow into Pajarito Canyon following the natural drainage off the mesa. In addition, tritium in water vapor may enter the food chain through root uptake, inhalation, dermal contact, and ingestion.

Tritium in water vapor will condense into the liquid phase if liquid water is present in sufficient amounts. This process is not physically possible at the generally low ambient moisture contents measured at MDA H but will be discussed here for completeness. If the moisture content in and around the disposal shafts at MDA H were to increase to 20% to 25%, the tritium could be transported vertically downward with water percolating through Mesita del Buey. Tritium may then reach the regional aquifer and be transported to downgradient locations east of Mesita del Buey in 120 yr to 240 yr (10 to 20 half-lives). The thickness of the unsaturated rock between the disposal shafts (i.e., the tritium source) and the regional

water-supply aquifer is 900 ft. Under the existing measured moisture content (5%), water within the unsaturated rock on Mesita del Buey is not expected to recharge into the regional aquifer for thousands of years, if at all. Evidence supporting this statement includes natural tracer studies (Hollis et al. 1997, 63131, Appendix 2b), pore-water chemical analysis (Hollis et al. 1997, 63131, Appendix 2d), moisture-measurement analyses (Hollis et al. 1997, 63131, Appendix 2c), and groundwater flow calculations (Hollis et al. 1997, 63131). The moisture content in the rock beneath MDA H would have to increase by at least 10 times to significantly increase groundwater flow velocities toward the regional aquifer. The current moisture content of the Bandelier Tuff is <5%.

4.0 SITE ASSESSMENTS

4.1 Summary

Human health and ecological screening assessments were conducted for the COPCs identified in Section 2.3.4. These assessments did not indicate an unacceptable present-day risk to either group of receptors. The surface water assessment conducted for MDA H resulted in an erosion matrix score of 45.6, which indicates a moderate potential for erosion from this site (Appendix B). A groundwater assessment was not conducted as part of the RFI because sampling indicates that subsurface contamination from MDA H does not currently impact groundwater. Monitoring of the groundwater downgradient from TA-54 is being and will continue to be conducted to ensure contamination does not impact this medium. An underground storage tank assessment was not performed because it is not applicable to MDA H.

4.2 Screening Assessments

The human health screening assessment for MDA H is presented in Section 4.2.1 and the ecological screening assessment is presented in Section 4.2.2. The human health screening assessment follows the Hazardous Waste Bureau (HWB) Risk-Based Decision Tree (NMED 1998, 57761) and the current EPA Region 6 guidance (EPA 2000, 68410). The ecological screening assessment is based on the methodology described in Rytty et al. (1999, 64783).

4.2.1 Human Health

(a) Scoping

The current land use for this site is industrial, and the most likely exposed individuals are site workers. The site has restricted access (i.e., fenced and locked) and is not operational, so exposure is infrequent. The future land use is anticipated to remain industrial, i.e., under Laboratory control, for the foreseeable future (next 100 yr). If Laboratory control is eliminated, the area may become accessible to recreational as well as residential receptors. Because the residential land use is considered to be the most restrictive, although impractical under current site conditions, the potential present-day risks were evaluated using this scenario.

(b) Screening Evaluation

The COPCs identified in Section 2.3.4 were compared with the Laboratory's screening action levels (SALs) to determine if the chemicals were detected at concentrations of potential concern to human health. The SALs for nonradionuclides used in this evaluation were calculated based on NMED or EPA Region 6 guidance (NMED 2000, 68554; EPA 2000, 68410). The parameters used include the most

current values available, as presented in EPA Region 6 and/or NMED guidance (EPA 2000, 68410; NMED 2000, 68554). The SALs used in this evaluation for radionuclide COPCs were calculated using the RESRAD computer code. All of the SALs reflect a residential exposure scenario where exposure is based on 24 hours per day and 350 days per year. The SALs are used to ensure a conservative evaluation of potential risk, and the data screening assessment follows the guidance provided by EPA Region 6 and NMED (EPA 2000, 68410; NMED 1998, 57761; NMED 2000, 68554). The comparison to SALs is conducted separately for carcinogens, noncarcinogens, and radionuclides. The SALs are equivalent to a 10^{-6} cancer risk for carcinogens, a hazard quotient of 1.0 for noncarcinogens, and a dose of 15 mrem/yr for radionuclides. The maximum concentration of each COPC was compared with the SAL for carcinogens and for radionuclides and the 0.1 SAL for noncarcinogens because more than two noncarcinogenic COPCs have been identified.

Four carcinogenic chemicals [bis(2-ethylhexyl)phthalate, benzene, hexachlorobutadiene, and methylene chloride] were retained as COPCs in the subsurface tuff at MDA H. No carcinogenic chemicals were detected in the surface medium. The comparison of these COPCs to their respective SALs is presented in Table 4.2-1. The COPCs were detected below their SALs, and the total incremental cancer risk was 1×10^{-7} , which is below NMED's target risk level of 10^{-5} . This indicates that exposure to these COPCs does not present an unacceptable risk.

Table 4.2-1
Comparison of Carcinogenic COPCs to SALs

Analyte	Location ID	SAMPLE ID	Depth (ft.)	Maximum Sample Value (mg/kg)	SAL (mg/kg)
Benzene	54-1026	0554-95-0312	76.5–78	0.003(J)	0.64
Bis(2-ethylhexyl)phthalate	54-1025	0554-95-0341	17–18.8	3.8	35
Hexachlorobutadiene	54-1025	0554-95-0349	61–62.8	0.002(J)	6.2
Methylene chloride	54-1024	0554-95-0327	36–37.8	0.002(J)	65

The noncarcinogenic COPC detected in the channel sediment was methoxychlor. Cadmium and selenium were also COPCs in the channel sediment because of elevated detection limits. Copper, endosulfan sulfate, five SVOCs, and eight VOCs were retained as noncarcinogenic COPCs in the tuff samples. Cyanide and selenium were also COPCs in the tuff because of elevated detection limits. The comparison of these COPCs to their respective SALs and 0.1 SALs is presented in Table 4.2-2. All of the COPCs were detected below 0.1 of their SALs indicating that exposure to either one or all of these COPCs does not present an unacceptable risk. The hazard index (obtained by dividing each concentration by the SAL and summing all quotients) for noncarcinogenic COPCs is 0.04, well below the NMED's target level of 1.0.

Tritium was the only radionuclide COPC identified in the channel sediment. The slightly elevated concentrations of 0.11 pCi/g is well below the SAL of 880 pCi/g. This SAL is based on a dose limit of 15 mrem/yr and derived according to LANL (2000, 69693). The concentration of tritium represents a dose of 0.002 mrem/yr.

Table 4.2-2
Comparison of Noncarcinogenic COPCs to SALs

Analyte	Location ID	SAMPLE ID	Depth (ft.)	Maximum Sample Value (mg/kg)	SAL (mg/kg)	0.1 SAL (mg/kg)
Acetone	54-1024	0554-95-0321	9-9.2	0.016(J)	1600	160
Benzoic acid	54-1026	0554-95-0300	16.5-18.1	0.49(J)	100,000	10,000
Butanone[2-]	54-1023	0554-95-0288	37-38.5	0.007(J)	37000	3700
Butylbenzene[n-]	54-1025	0554-95-0349	61-62.8	0.0013(J)	140	14
Butylbenzene[sec-]	54-1025	0554-95-0349	61-62.8	0.0012(J)	110	11
Diethylphthalate	54-1024	0554-95-0325	26-27.8	0.28(J)	49000	4900
Di-n-butylphthalate	54-1023	0554-95-0286	27-28.5	0.057(J)	6100	610
Dimethylphthalate	54-1024	0554-95-0325	26-27.8	0.042(J)	100,000	10,000
Endosulfan sulfate	54-1024	0554-95-0327	36-37.8	0.000674(J)	370 ^a	37
Naphthalene	54-1025	0554-95-0349	61-62.8	0.001(J)	53	5.3
Toluene	54-1026	0554-95-0308	58-60	0.002(J)	180	18
1,2,3-Trichlorobenzene	54-1025	0554-95-0349	61-62.8	0.002(J)	520 ^b	52
1,2,4-Trichlorobenzene	54-1025	0554-95-0349	61-62.8	0.001(J)	520	52
Trichlorofluoromethane	54-1024	0554-95-0327	36-37.8	0.007	12000	1200
Methoxychlor	54-5132	AAB3131	0-0.67	0.04	310	31
Cadmium	54-5132	AAB3131	0-0.67	0.68(U)	70	7.0
Copper	54-1026	0554-95-0318	9-9.2	35.4	2800	280
Cyanide	54-1024	0554-95-0333	71-72.8	1.02(U)	1200 ^c	120
Selenium	54-1023	0554-95-0282	9.5-9.7	0.95(U)	380	38

^aNo SAL is available for endosulfan sulfate, so the SAL for endosulfan is used as a surrogate based on similarity of structure.

^bNo SAL is available for 1,2,3-trichlorobenzene, so the SAL for 1,2,4-trichlorobenzene is used as a surrogate based on similarity of structure.

^cThe SAL used for cyanide is the value for free cyanide.

Tritium was the only radionuclide COPC detected in the tuff samples collected from the boreholes drilled in and around MDA H. Tritium concentrations reported in pCi/mL were converted to pCi/g based on the percent moisture for a given sample. The maximum reported tritium concentration of 777,000 pCi/mL is equivalent to approximately 1543 pCi/g based on a soil moisture of 0.2% for sample 0554-95-0347. This concentration is approximately an order of magnitude greater than the SAL of 260 pCi/g and represents a potential dose of 59 mrem/yr. However, this concentration was reported at approximately 52.5 ft, which is below the depth at which potential exposure may occur for a resident. Residential exposure to subsurface contaminants (as represented by the SAL) exists only within the top 10 ft, which is approximately the depth at which a basement is located. The maximum concentration of tritium at 10 ft was approximately 5890 pCi/mL (sample 0554-95-0282), which is equivalent to approximately 182 pCi/g based on a soil moisture of 3% for this sample. This tritium concentration is less than the SAL of 260 pCi/g and represents a potential dose of approximately 7.0 mrem/yr.

(c) Uncertainty Analysis

The human health screening evaluation is a conservative comparison of the maximum detected concentrations of each COPC at MDA H with the respective SALs whose values are based on a residential exposure scenario. Because MDA H is currently under Laboratory control and is likely to remain so for at least the next 100 years, the most likely exposed individual is a site worker. This individual has a shorter exposure time, exposure frequency, and exposure duration than a resident (assumed to be 8 hr/day, 250 days/year, and 25 years versus 24 hr/day, 350 days/year, and 30 years for resident). As a result, the potential risk for the site worker is overestimated by the screening evaluation. MDA H is located in the southwestern corner of TA-54 and is not adjacent to San Ildefonso Pueblo land. The surface runoff from this MDA flows into Pajarito Canyon. Therefore, exposure of Native American receptors to detected concentrations of tritium and methoxychlor in drainage channel sediments from cultural use of pueblo land is unlikely, and potential risk is overestimated by this assessment.

Because copper, SVOC, VOC, endosulfan sulfate, and tritium contamination is only present in the subsurface tuff and MDA H is no longer in operation and has restricted access, it is unlikely that workers or nonworkers can currently be exposed to these contaminants under current conditions. The screening assessment, which is based on a residential scenario, assumes that exposure can occur because the below-ground portion of the house (0 ft to 10 ft) intrudes into the waste. This conservative assumption could not occur given the present-day conditions and land use and is not representative of current worker exposure. The only contaminants that a site worker or a nonworker could be exposed to are tritium and methoxychlor (in channel sediments), which are both below 0.1 SAL.

Because tritium tends to exist in the vapor phase, it may be diffusing from the surface at MDA H. No ambient air or surface flux measurements of tritium were collected at MDA H but were collected at MDA G. Amounts of tritium disposed of at MDA G are greater than those disposed of at MDA H. In addition, concentrations of tritium at MDA H are less than those detected at MDA G. For example, the maximum tritium concentration at MDA G is approximately 6,826,000 pCi/mL compared to a maximum tritium concentration of 777,000 pCi/mL at MDA H. The tritium plume at MDA G is also several times larger than the plume at MDA H. Therefore, an assessment of the ambient air tritium data at MDA G is an adequate, albeit indirect, way to determine whether a potentially unacceptable risk to site workers could be present at MDA H.

Tritium data collected in 1994 from ambient air station G-2 at MDA G were used in calculating the exposure point concentration (Environmental Surveillance Program 1998, 59904). Air station G-2 is adjacent to the tritium disposal shafts responsible for over 90% of tritium releases at MDA G and consistently has the highest measured tritium concentrations of any air-monitoring station at TA-54. Laboratory group ESH-17 (the Laboratory's air monitoring group), which maintains station G-2 and other ambient air stations in and around the Laboratory, reports the tritium data as the 95% UCL of the mean (Table 4.2-3). The annual average tritium concentration for 1994 at air station G-2, calculated as the average of the 95% UCL values, is 1070 pCi/m³ and was used to assess the ambient air exposure to tritium by site workers.

Table 4.2-3
1994 Ambient Air Tritium Concentrations at Station G-2 at MDA G

Sample Start Date	95% UCL (pCi/m³)	Sample Start Date	95% UCL (pCi/m³)
1/3/94	19.5	7/5/94	4917.1
1/18/94	16.7	7/18/94	3511.6
1/31/94	19.5	8/1/94	2763.5
2/14/94	59.4	8/15/94	1333.8
2/28/94	155.8	9/12/94	1819.2
3/14/94	180.9	9/26/94	983.9
3/28/94	399.5	10/11/94	568.6
4/11/94	577.9	10/24/94	303.7
4/25/94	555.1	11/7/94	56.0
5/9/94	1877.0	11/21/94	82.7
5/23/94	3241.2	12/5/94	57.4

An inhalation rate of 1.3 m³/hr, which assumes an equal mix of light and moderate activity levels for a site worker throughout the workday, was used to assess the risk. This rate is the average of the hourly inhalation rates of 1.0 m³/hr (light activity for adults) and 1.6 m³/hr (moderate activity for adults) obtained from Table 5-23 in EPA's Exposure Factors Handbook (EPA 1997, 66596). An exposure time of 8 hr/day, an exposure frequency of 250 days/yr, and an exposure duration of 25 yr were assumed based on EPA's Standard Default Exposure Factors (EPA 1991, 56140). The internal dose conversion factor (DCF) for tritium was obtained from Federal Guidance Report No. 11 (EPA 1988, 50123). The DCF is used to convert the estimated adult daily intake of radionuclides over an exposure period to an annual committed effective dose equivalent. The calculated annual dose is assessed relative to a target dose of 15 mrem/yr, which is recommended by EPA for dose-based decisions (EPA 1997, 58693) and by DOE for the unconditional release of real property (DOE 2000, 67153).

Based on the exposure point concentration, the exposure parameters, and the equation presented in Appendix F, the annual tritium dose from ambient air to a site worker at MDA G is 0.19 mrem/yr. This annual dose is below the target limit of 15 mrem/yr. Based on the results of this assessment, site worker exposure to ambient air concentrations of tritium at MDA H is expected to be well below the 15 mrem/yr dose limit.

Tritium has a half-life of approximately 12.3 years. The tuff samples used in the screening assessment were collected in 1995, so approximately 20% of the tritium has decayed since that sampling event. As a result, the maximum concentration of tritium in tuff currently is approximately 1274 pCi/g or 49 mrem/yr (at 53 ft in borehole 54-1025), while the highest 10-ft concentration has been reduced to approximately 146 pCi/g or 5.6 mrem/yr. Based on the decay of tritium over time, the above estimates of dose have been overestimated in the assessments of data from MDA H.

(d) Interpretation of Screening Assessment Results for MDA H

The potential present-day risk to site workers from contaminants released to the surface and potentially accessible subsurface media is considered to be acceptable. Concentrations of noncarcinogenic COPCs do not exceed current SALs or 0.1 SALs, which represent a residential exposure. Similarly, carcinogenic

COPCs did not exceed their respective SALs and had a total incremental cancer risk of approximately 1×10^{-7} . Comparison to EPA Region 6 human health medium-specific screening levels for an industrial worker indicates a similar relationship (EPA 2000, 68410). The maximum concentration of methoxychlor is several orders of magnitude below the EPA Region 6 industrial value for an outside worker of 3800 mg/kg. Comparison of the tuff COPCs to EPA Region 6 industrial worker values showed similar results.

The tritium concentrations in sediment are below the SAL and represent a dose of approximately 0.002 mrem/yr. The maximum tritium concentration in tuff exceeds the SAL and the recommended dose limit of 15 mrem/yr. However, this concentration of tritium as well as similarly elevated tritium concentrations are at depths that are inaccessible to current receptors (>10 ft) and do not pose a present-day problem to site workers. The maximum tritium concentration within the potential exposure depth of 10 ft for a resident was found to be less than 15 mrem/yr. In addition, an assessment of ambient air concentrations at MDA G was found not to result in an unacceptable dose to site workers, so by comparison, ambient air concentrations of tritium at MDA H should also not pose a problem to site workers.

Based on the human health assessment of RFI data collected at MDA H, there is no need for immediate action to reduce or eliminate exposure of site workers to contaminants.

4.2.2 Ecological

(a) Scoping

The scoping evaluation includes the problem formulation, which forms the conceptual basis for exposure and identifies the pathways of contaminant exposure to ecological receptors. The ecological scoping checklist for Mesita del Buey and TA-54, which forms the basis for the scoping, is presented in Appendix F. The checklist is for all of TA-54, including MDAs G and L, because the area contains similar habitat and receptors. Information from the checklist is summarized below. The ecological pathways conceptual exposure model for TA-54 is included as part of the checklist (Part C) and identifies the exposure pathways to plant and animal receptors at this site. The primary exposure pathways at TA-54 are dietary and respiratory uptake of contaminated surface and near-surface soil and sediment.

Biotic Associations

The top of Mesita del Buey has been developed as a result of site operations with some intrusion from grasses (e.g., *Bouteloua* spp.) and sage (*Artemisia* spp.). Predominant hillside tree and shrub species include ponderosa pine (*Pinus ponderosa*), piñon (*Pinus edulis*), one-seed juniper (*Juniperus monosperma*), Rocky Mountain juniper (*Juniperus scopulorum*), Gambel oak (*Quercus gambelii*), wavyleaf oak (*Quercus undulata*), mockorange (*Philadelphus microphyllus*), mountain mahogany (*Cercocarpus montanus*), New Mexico hops (*Ptelae trifoliata*), sumac (*Rhus* spp.), and sage. Predominant hillside ground cover includes various grasses (e.g., *Bouteloua* spp.) and some forbs, as well as mosses and lichens in rocky areas. Banar (1996, 58192) presents a detailed account of the species present in and around TA-54. Scoping activities revealed abundant invertebrates, reptiles, mammals, birds, and plant life on the hillsides. The hillside areas of Mesita del Buey have fully intact terrestrial biotic communities and therefore include a full suite of potential terrestrial receptors.

MDA H is managed in a way that limits ecological receptors to invasive plants, small mammals, birds, and invertebrates. The mesa top is fenced off from the surrounding hillsides and is managed intensively to limit access to the area by large ground-dwelling animals (e.g., deer, elk, and mountain lions); some limitations may also apply to foxes, coyotes, raccoons, bobcat, and other medium-size mammals.

Although the mesa top and hillsides differ in community composition and character because of area management, each of the terrestrial functional feeding groups expected on the Pajarito Plateau are likely found in and around MDA H.

Potential habitat for threatened and endangered (T&E) species is found on the mesa top and/or hillsides of Mesita del Buey for a number of species (Banar 1996, 58192, Chapter 6). However, habitats for only two species (peregrine falcon [*Falco peregrinus*] and the spotted bat [*Euderma maculatum*]) are found with high frequency in the area. Neither of these species has been observed to roost or nest in the area. In addition, the peregrine falcon was delisted as a federal threatened and endangered species by the US Fish and Wildlife Service in August 1999.

Suspected Contaminant and Physical Effects on Biotic Media

To evaluate the impacts of potential contamination from subsurface releases at MDA H, efforts were made to distinguish between effects that may be contaminant related and those that are related to natural physical processes or manmade disturbances, i.e., operational activities. On Mesita del Buey, there are no causal signs of contaminant-related effects. Contaminants are known to have reached biotic populations at MDA G from sampling of vegetation (Fresquez et al. 1997, 62346), small mammals (Bennett et al., 1997, 62342), and invertebrates (Haarmann and Fresquez, 1998, 62351). However, there have been no demonstrated population-wide or individual toxicological or ecological effects.

The only obvious ecological effect from TA-54 operations, including MDA H, is from the physical disturbance of the area as a result of operational activities. The area around MDA H shows some signs of erosion because of the removal of vegetation and past disposal activities. Sheet flow and rill erosion from stormwater runoff from the site has occurred and has resulted in the formation of a drainage channel leading into Pajarito Canyon to the southeast of MDA H.

Data Adequacy

The results of the data quality assessment for the samples collected from MDA H are presented in Appendix C. There were no QA/QC issues associated with the sampling and analyses that affected the sufficiency and quality of the data for decision-making purposes at this site. Therefore, the data are considered adequate for this assessment and representative of the contamination present at MDA H.

The nature and extent of contamination at MDA H are summarized in Section 3. Tritium was detected slightly above background and methoxychlor was detected in the channel sediments below MDA H, while cadmium and selenium had elevated detection limits in the sediment data set. These chemicals are included in the screening evaluation even though the data do not indicate a subsurface or surface release from this MDA. The subsurface COPCs were not evaluated by the screening assessment because they were detected at depths greater than 5 ft. Below this depth, there are no complete pathways to ecological receptors.

(b) Screening Evaluation

The results of ecological scoping indicate that eight terrestrial receptors are appropriate for numerical screening against contaminant concentrations at MDA H. These receptors cover 11 trophic categories identified for the Pajarito Plateau (Ryti et al. 1999, 64783) and include

- a generic plant,
- a soil-dwelling invertebrate (represented by the earthworm),

- the American robin (avian insectivore, avian omnivore, and avian herbivore),
- the American kestrel (avian insectivore and carnivore),
- the deer mouse (mammalian omnivore),
- the vagrant shrew (mammalian insectivore),
- the desert cottontail (mammalian herbivore), and
- the gray fox (mammalian carnivore).

In addition to these commonly assessed receptors, the little brown myotis bat is included in this screening evaluation because it is a surrogate for the spotted bat, a T&E species. The spotted bat is an insectivorous mammal, and the little brown myotis bat is a receptor that models the effects of contaminants bioaccumulated from sediments to insects to aerial insectivores. A high fraction of its diet is emergent aquatic insects, as the habitats surrounding water are favorite foraging areas. Although aquatic insects are not present in the vicinity of MDA H, the drainage channel leading from this site does flow into Pajarito Canyon where small wetland areas are present. Contaminants transported from MDA H (specifically tritium and methoxychlor) by way of surface runoff may be deposited in these wetland areas and result in exposure to the bat. Concentrations of tritium and methoxychlor reported in the drainage channel are representative of concentrations that may be present in the wetlands.

The numerical screening evaluation compared media-specific ESLs for each receptor with concentrations of contaminants detected at the site. ESLs are derived based on the approach presented in Ryti et al. (1999, 64783) and the ECORISK database (LANL 1998, 67822). These sources include all relevant information necessary to calculate hazard quotients and hazard indices, including concentration equations, dose equations, bioconcentration factors, transfer factors, and toxicity reference values. Radiological ESLs are derived on a radiation dose basis, while those for nonradiological chemicals are determined on a toxicological dose basis (Ryti et al. 1999, 64783). For wildlife, toxicological studies were used to determine the maximum contaminant exposure at which no adverse effect was observed (Ryti et al. 1999, 64783). This critical exposure level may vary greatly because of population-based variations in individual weight, diet, reproductive status, and phenology. In the case of terrestrial organisms, ESLs were developed to reflect an adverse effect on an average, nongravid, adult individual of a particular species (EPA 1993, 59384, p. 7). ESLs are designed, therefore, to be protective of specific organisms and may only be used to infer a potential for risk to receptors. The ESLs used in the screening evaluation at MDA H were obtained from the ECORISK database (LANL 1998, 67822).

COPCs at MDA H evaluated by the ecological screening assessment process included methoxychlor, tritium, cadmium, and selenium (Section 2.3.4). The maximum detected concentrations of each COPC were used in the comparison because the number of samples collected was insufficient to calculate a representative 95% upper confidence limit of the mean. As previously mentioned, COPCs from depths greater than 5 ft are not included in the screening evaluation because they are not available to ecological receptors.

The minimum ESL for each COPC was compared with the maximum detected concentration or detection limit for that contaminant; the hazard quotient (HQ) was calculated by dividing the concentration/detection limit by the ESL (Table 4.2-4). An HQ equal to or greater than 0.3 was used as a threshold to identify COPECs and determine which chemicals should be evaluated further (Ryti et al. 1999, 64783). Based on this initial comparison, tritium and methoxychlor are eliminated from further evaluation because the maximum HQs are less than 0.3, while cadmium and selenium are identified as COPECs because the

maximum HQs are greater than 0.3. These COPECs are evaluated further by calculating HQs for each COPEC/receptor combination using the maximum detection limit. Table 4.2-5 presents a summary of this evaluation.

The maximum HQ for selenium is above 1.0, and the maximum HQ for cadmium is less than 1.0 (Ryti et al. 1999, 64783). Because of the conservative nature of the ESLs, this indicates little if any potential for adverse impacts to receptor populations. In addition, neither of these inorganic chemicals was detected in the sediment samples at the concentrations used in the screening nor at lower concentrations. The other HQs (Table 4.2-5) are approximately 1.0 or less for selenium and approximately 1/3 or more below the maximum HQ for cadmium, further indicating that these COPECs do not present a potential for adverse impacts to receptor populations. The potential for adverse impact to threatened and endangered species (peregrine falcon and spotted bat) is also unlikely because the maximum HQs for the kestrel (100% meat diet) and the little brown myotis bat, which are surrogates for the T&E species, are 0.001 and 0.06, respectively, for cadmium, and 0.1 and 0.8, respectively, for selenium (Table 4.2-5).

Table 4.2-4
Comparison of Maximum Detected Concentrations or Detection Limits
of COPECs in the Channel Sediment with Final ESLs

Analyte	Maximum Concentration (mg/kg)	Minimum ESL (mg/kg)	Receptor	HQ
Cadmium	0.68(U)	1.0	Plant	0.7
Tritium	0.11 pCi/g	21,000 pCi/g	Plant	0.000005
Methoxychlor	0.04	8.4	Shrew	0.005
Selenium	0.95(U)	0.5	Plant	1.9

Table 4.2-5
HQ Calculations for Terrestrial Receptors at MDA H

Analyte	Plant		Invertebrate		Deer Mouse		Vagrant Shrew		Desert Cottontail		Gray Fox	
	ESL	HQ	ESL	HQ	ESL	HQ	ESL	HQ	ESL	HQ	ESL	HQ
Cadmium	1.0	0.7	10	0.1	8.4	0.1	7.2	0.1	18	0.06	730	.001
Selenium	0.5	1.9	7.7	0.1	1.2	0.4	0.91	1.0	4.1	0.2	34	0.03

Analyte	Robin (insectivore)		Robin (omnivore)		Robin (herbivore)		Kestrel (omnivore)		Kestrel (100% meat diet)		Little Brown Myotis Bat	
	ESL	HQ	ESL	HQ	ESL	HQ	ESL	HQ	ESL	HQ	ESL	HQ
Cadmium	5.9	0.2	6.1	0.2	6.3	0.2	45	0.02	720	.001	10	0.1
Selenium	1.1	0.9	1.4	0.7	2.0	0.5	7.7	0.1	37	0.06	1.2	0.8

Note. Units for ESLs are mg/kg.

(c) Uncertainty Analysis

Toxicity information is available for several receptors for each of the COPCs. The numbers of receptors for each COPC were six for methoxychlor and nine for cadmium, tritium, and selenium. The receptors, for which toxicity information is available, includes several trophic categories for each COPC. The available ESLs are, therefore, considered adequate to determine whether there is a potential for ecological impacts from exposure to the COPCs.

ESLs for vertebrate terrestrial receptors were based on similar species and derived from experimentally determined no-observed adverse effect levels, lowest-observed adverse effect levels, or lethal doses that caused 50% mortality in the population. Receptor-specific data for estimating potential ecological risk are often lacking; therefore, species-specific toxicological effect data from laboratory animals must be extrapolated for wild receptors. Data from laboratory studies are sometimes limited because the studies often evaluate single chemical exposures in isolated and controlled conditions using a single exposure pathway. Additionally, laboratory-controlled toxicological studies are often performed on individuals obtained from artificial and maintained populations. Wild organisms are concomitantly exposed to a variety of stressors and risk-drivers, thereby, increasing the potential from synergistic and antagonistic physiological effects. Wild populations are also considered to be more genetically diverse than laboratory animals, making wild populations, as a whole, potentially less sensitive to chemical exposure. The uncertainties associated with these differences may result in an underestimation or overestimation of potential risk.

The assumptions used in the ESL derivations were conservative and not necessarily representative of actual conditions. The assumptions include maximum chemical bioavailability, maximum receptor ingestion rates, minimum body weight, 100% home-range exposure, and additive effects of multiple COPCs. This tends to result in conservative estimates of the ESLs, which may lead to an overestimation of the potential risk to a receptor.

The chemical form of the COPCs was not determined as part of this RFI. This is largely a matter of limitations of analytical quantitation of individual chemical species. Toxicological data are typically based on the most toxic and bioavailable chemical species, which are not likely found in the environment. Inorganic, organic, or radionuclide chemicals are generally not 100% bioavailable to receptors in the natural environment because of adsorption to matrix surfaces (e.g., soil and sediments) or rapid oxidation or reduction changes that render harmful chemical forms unavailable to biotic processes. Inorganic chemicals and methoxychlor tend to adsorb to soil particles making them less available to receptors. Therefore, the exposure and subsequent toxicity of inorganic chemicals and methoxychlor to receptors is likely overestimated by the screening assessment. Tritium, which tends to exist in the water-vapor phase, is more readily available to receptors. Although the high bioavailability of tritium may result in an underestimation of the exposure and toxicity to receptors, the tritium concentrations were an order of magnitude or more below the ESL.

The screening evaluation was performed using the maximum detected concentration of each COPC at MDA H. Maximum concentrations were used because only a few data points were available for some media, and there were often a large number of nondetects associated with the COPCs. As a result, the exposure of individuals within a population was evaluated using this specific concentration; the concentration was assumed to be constant throughout the exposure area. This results in an overestimation of the potential risk because concentrations of COPCs varied across the site as well as with depth, as illustrated by the sample data (Figures 2.3-3, 2.3-4, 2.3-5, 2.3-6, and 2.3-7).

ESLs are not currently available for methoxychlor for either the plant or the soil-dwelling invertebrate. Because these receptors are in close contact with the soil, they may be susceptible to these chemicals. In

addition, the concentrations of methoxychlor were approximately two orders of magnitude or more below the ESLs, including the ESLs for the shrew and mouse, which are also in close contact with the soil.

The shallowest depth from which borehole samples were collected and analyzed was approximately 10 ft below ground surface. The lack of data between the surface and 10 ft results in some uncertainty with respect to the concentrations of COPCs actually encountered by receptors within the top 5 ft of the site. However, the top 6 ft of the shafts were backfilled with crushed tuff and covered with concrete and soil, so no contaminants are present in the shafts at this depth. As a result, concentrations of contaminants in the top 6 ft or so should be negligible, and the concentrations at 9 ft to 10 ft should be representative of the remaining 3 ft to 4 ft between the crushed tuff layer and the shallowest borehole sample. MDA H does have some plant cover, and there is evidence of burrowing animals (primarily pocket gophers); however, the plants inhabiting the site are invasive grasses and weeds and are not deep rooted, while the gopher burrows are not likely to reach very deep because of the tuff layer, which is difficult to penetrate.

The tritium data from all four boreholes demonstrates an increase in concentrations from approximately 10 ft to approximately 50 ft and a subsequent decrease in concentrations below 50 ft (Figure 2.3-6). Based on this relationship of tritium concentration and depth, it is appropriate to assume that the concentrations of tritium from 0 ft to 10 ft are less than the concentrations from 10 ft to 50 ft. In addition, as mentioned earlier, the top 6 ft of the shafts were backfilled, so no contaminants are present at this depth. Therefore, using the maximum detected concentration of tritium at 10 ft to simulate tritium levels in the 0-ft- to 5-ft-depth interval overestimates the actual concentration of tritium available at shallower depths. Comparison of the tritium level of 5890 pCi/mL in sample 0554-95-0282, which is equivalent to approximately 182 pCi/g based on a soil moisture of 3% for this sample, to the minimum ESL (21,000 pCi/g for the plant) indicates that there is no potential risk to ecological receptors from tritium in the subsurface. Tritium concentrations in the channel sediment were reported to be similar to or less than the fallout value, indicating that there has not been a surface release of tritium at MDA H.

Copper concentrations above background were only detected at a depth of 10 ft, and concentrations at deeper depths were all less than tuff background concentrations. In addition, concentrations in the channel sediment were less than the background value for sediment, indicating that there was not a surface release of copper at MDA H. The single layer of elevated copper may indicate natural variability within the tuff. Other heterogeneities (enrichments) of particular inorganic chemicals have been documented in the Bandelier Tuff and are the result of remobilization by vapor-phase processes during welding/devitrification (Stimac et al. 1996, 59362). Copper is one of the inorganic chemicals that can be affected by these processes. Therefore, elevated copper concentrations detected in the tuff may not be related to a release from the shafts. In addition, concentrations of copper from 0 ft to 10 ft are likely less than those reported at 10 ft because the top 6 ft of the shafts are backfilled as described above.

No vapor-phase or surface flux data for tritium are available. As a result, the exposure of burrowing animals to vapor-phase tritium in burrows cannot be assessed directly. If a burrow intrudes into the tritium plume and does not vent to the surface, the concentration of tritium within the burrow space will eventually equilibrate with the concentration in the surrounding tuff. As shown in the screening evaluation, the maximum detected tritium concentration in tuff (1593 pCi/g) is less than the minimum ESL (21,000 pCi/g for the plant). The maximum tritium concentration is also below the ESLs for the earthworm (100,000 pCi/g) and the shrew (2,700,000 pCi/g), which represent below-ground receptors. Based on this comparison, the concentration of tritium in burrow spaces does not pose the potential for adverse impacts to ecological receptors.

(d) Interpretation of Screening Assessment Results for MDA H

The ecological screening assessment of MDA H indicates that the COPCs identified by the data review (Section 2.3.4) do not pose a potential for adverse ecological impacts to terrestrial receptors. The screening evaluation, which used conservative ESLs for nine representative receptors, showed that HQs were slightly above 1.0 for the plant for selenium but 1.0 or less for all other receptors. The HQs for the other COPECs were less than 1.0 for all receptors, including the surrogates for the T&E species. In addition to the low HQs, cadmium and selenium were not detected in any of the sediment samples. Based on the results of the ecological screening assessment, there is no current potential for adverse impact to ecological receptors at MDA H.

4.3 Surface Water Assessment

The Laboratory's ER Project has developed a procedure to assess sediment transport and erosion concerns at individual PRSs. It provides a basis for prioritizing and scheduling action to control erosion of potentially contaminated soils at specific PRSs. The procedure is a two-part evaluation. Part A is a compilation of existing PRS analytical data, site maps, and knowledge-of-process information. Part B is an assessment of erosion and sediment transport potential at the PRS. Erosion potential is numerically rated from 1 to 100 using a matrix system. PRSs that score greater than 60 have a high erosion potential. MDA H (PRS 54-004) has score of 45.6, indicating a moderate erosion potential. The surface water assessment was conducted on December 20, 2000. The calculated erosion matrix score includes 3.6 for site setting, a runoff score of 35.0, and a run-on score of 7.0. The surface water assessment document is attached to Appendix B. The assessment found that there was no debris in the watercourse. Surface water runoff from MDA H terminates to the southeast in Pajarito Canyon. Rill erosion is occurring at one location along the southern fence line, and there is minor run-on to the site from the northwest portion. There are no structural or operational factors that might affect the site hydrology.

4.4 Groundwater Assessment

A groundwater assessment was not conducted for MDA H because sampling indicates that subsurface contamination from MDA H does not currently impact groundwater. Groundwater is being investigated according to the Laboratory's Hydrogeologic Work Plan (LANL 1996, 55430), and a characterization well (R-22) has been drilled downgradient from TA-54 to determine any impact to the main aquifer groundwater quality.

4.5 Underground Storage Tank

Not applicable

4.6 Other Assessments

No other assessments were conducted.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The objectives of this MDA H RFI were to

- determine if a release of hazardous waste has occurred from the MDA;

- characterize the nature and extent of contaminant releases, if any, to the environment in accordance with the Operable Unit 1148 RFI work plan (LANL 1992, 7669) and subsequent modifications to the work plan (Appendix G);
- evaluate the potential ecological and human health risks posed by exposure to contaminants under present-day conditions, and
- recommend, if necessary, additional investigations to reduce uncertainties associated with contaminant behavior and to ensure that contaminants do not pose an unacceptable future risk to human and ecological resources.

Data analyses in Section 3 showed a release of tritium (in the form of water vapor) from subsurface shafts. Methoxychlor was also detected at very low concentrations in channel sediments in the drainage leading from MDA H. Other COPCs (copper, selenium, and the organic chemicals that were detected in the tuff) do not appear to be related to a release. Data gathered during the RFI identified the nature and partial extent of contamination in surface and subsurface media. Results from human health and ecological impact assessments, based on the preliminary RFI data, show that MDA H poses no unacceptable present-day risk to human health and the environment. The collection of additional data described below will result in a reevaluation of the present-day risk at MDA H in an addendum to this RFI report.

During the review of the draft RFI report for MDA H, New Mexico Environment Department Hazardous Waste Bureau (NMED-HWB) personnel identified data gaps regarding the extent of tritium and VOC contamination in the subsurface and of tritium in air. Therefore, the following activities are recommended to address the remaining data gaps, fully characterize the lateral and vertical extent of contaminant releases, and bolster impact assessments, while addressing preliminary data needs for the CMS.

- Collection of additional subsurface samples to further define the lateral extent of tritium and organic chemical contamination from borehole 54-1023 and from newly drilled boreholes.
- Installation of an air-monitoring station adjacent to MDA H to monitor for tritium in air.
- Collection of a sediment sample near sample location 54-5132 at the interface of the alluvial sediments and bedrock to collect data where all the sediment accumulated over the years.
- Evaluation and incorporation of groundwater data from the unsaturated zone monitoring at MDA G, the regional saturated zone at R-22, and the ongoing TA-54 groundwater investigation.

In addition, NMED-HWB determined that a RCRA corrective measures study (CMS) was needed because "...contaminants at this site may present a threat to human health and the environment over the lifetime of the waste" (Young 2000, 68569). Therefore, the determination to proceed with a CMS is based on a potential for future adverse human health or environmental impacts from the radionuclides in accordance with DOE Orders 435.1, "Radioactive Waste Management," and 5400.5, "Radiation Protection of the Public and the Environment." NMED-HWB agreed that further investigation of the site to fill remaining data gaps could be completed as part of the CMS.

The MDA H CMS will assess the need for and the design features of alternative remedies to reduce potential future adverse impacts from hazardous wastes, if any, and radionuclides buried in the subsurface. During the CMS, remediation alternatives that address potential future unacceptable conditions will be identified and evaluated, such as in-place containment, removal, and no action. After completion of the CMS, one or more of the alternatives will be recommended for implementation.

6.0 REFERENCES

Area H - Classified Waste Disposal Site, LA Notebook 10820

Aeby, J., November 21, 1969. "Permeability of the Tuff to Water Vapor," Los Alamos Scientific Laboratory H-6 memorandum to W. Kennedy, Los Alamos, New Mexico. (Aeby 1969, 1799)

Banar, A., February 1996. "Biological Assessment for Environmental Restoration Program, Operable Unit 1148, TA-54 and TA-51," Los Alamos National Laboratory report LA-UR-93-1054, Los Alamos, New Mexico. (Banar 1996, 58192)

Bennett, K., J. Biggs, and P. Fresquez, January 1997. "Radionuclide Contaminant Analysis of Small Mammals at Area G, TA-54, Los Alamos National Laboratory, 1995," Los Alamos National Laboratory report LA-13242-MS, Los Alamos, New Mexico. (Bennett et al. 1997, 62342)

Carey, B., G. Cole, C. Lewis, F. Tsai, R. Warren, and G. WoldeGabriel, 1999. "Revised Site-Wide Geologic Model for Los Alamos National Laboratory (FY99)," Los Alamos National Laboratory LA-UR-00-2056, Los Alamos, New Mexico. (Carey et al. 1999, 66782)

DOE (Department of Energy), April 2000. "Procedure for the Release of Real Property Containing Residual Radioactive Material," DOE Albuquerque Operations Office document, Albuquerque, New Mexico. (DOE 2000, 67153)

Environmental Restoration Project, February 1996. "RFI Report for Channel Sediment Pathways from MDAs G, H, J, and L, TA-54, (located in former Operable Unit 1148), Field Unit 5," Los Alamos National Laboratory report LA-UR-96-110, Los Alamos, New Mexico. (Environmental Restoration Project 1996, 54462)

Environmental Surveillance Program, September 1998. "Environmental Surveillance at Los Alamos During 1997," Los Alamos National Laboratory report LA-13487-ENV, Los Alamos, New Mexico. (Environmental Surveillance Program 1998, 59904)

EPA (US Environmental Protection Agency), September 1988. "Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion, and Ingestion," Federal Guidance Report No. 11, EPA-520/1-88-020, Washington, DC. (EPA 1988, 50123)

EPA (US Environmental Protection Agency), July 29, 1989. "Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A)," Interim Final, EPA 540/1-89/002, Office of Emergency and Remedial Response, Washington, DC. (EPA 1989, 8021)

EPA (US Environmental Protection Agency), April 10, 1990. Module VIII of RCRA Permit No. NM0890010515, EPA Region VI, issued to Los Alamos National Laboratory, Los Alamos, New Mexico, effective May 23, 1990, EPA Region VI, Hazardous Waste Management Division, Dallas, Texas. (EPA 1990, 1585)

EPA (US Environmental Protection Agency), March 25, 1991. "Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual, Supplemental Guidance "Standard Default Exposure Factors," Interim Final," OSWER Directive 9285.6-03, Office of Emergency and Remedial Response, Toxics Integration Branch, Washington, DC. (EPA 1991, 56140)

EPA (US Environmental Protection Agency), December 1993. "Wildlife Exposure Factors handbook," Volume I, EPA/600/P-93/187a, OSWER Publication PB94-174778, Washington, DC. (EPA 1993, 59384)

EPA (US Environmental Protection Agency), August 1997. "Volume 1 - General Factors, Exposure Factors Handbook," EPA/600/P-95/002Fa (update to EPA/600/8-89/043), Washington, DC. (EPA 1997, 66596)

EPA (US Environmental Protection Agency), August 22, 1997. "Establishment of Cleanup Levels for CERCLA Sites with Radioactive Contamination," OSWER No. 9200.4-18, Washington, DC (EPA 1997 58693)

EPA (US Environmental Protection Agency), September 2000. "Human Health Medium-Specific Screening Levels," EPA Region 6 document, Dallas, Texas. (EPA 2000, 68410)

Fresquez, P., E. Vold, and L. Naranjo, Jr., July 1997. "Radionuclide Concentrations in Soils and Vegetation at Radioactive-Waste Disposal Area G during the 1996 Growing Season," Los Alamos National Laboratory report LA-13332-PR, Los Alamos, New Mexico. (Fresquez et al. 1997, 62346)

Glatzmaier, T., November 12, 1993. "Final Notice of Deficiency (NOD) Response for Operable Unit (OU) 1148," Los Alamos National Laboratory memorandum EM-13:93-A232 to T. Taylor, Los Alamos, New Mexico. (Glatzmaier 1993, 30987)

Glatzmaier, T., June 8, 1994. "Proposed Modification to the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Work Plan for Operable Unit (OU) 1148," Los Alamos National Laboratory memorandum EM/ER:94-A199 to T. Taylor, Los Alamos, New Mexico. (Glatzmaier 1994, 52015)

Haarman, T., and P. Fresquez, July 1998. "Radionuclide Concentrations in Honey Bees from Area G at TA-54 during 1997," Los Alamos National Laboratory report LA-13480-PR, Los Alamos, New Mexico. (Haarman and Fresquez 1998, 62351)

Hollis, D. et al., March 1997. "Performance Assessment and Composite Analysis for Los Alamos National Laboratory Material Disposal Area G," Los Alamos National Laboratory report LA-UR-97-85, Los Alamos, New Mexico. (Hollis et al. 1997, 63131)

IT Corporation 1992. "Operable Unit 1148 Data Report," IT Corporation report, Los Alamos, New Mexico. (IT Corporation 1992, 23247)

Jansen, J. and T. J. Taylor, July 17, 1996. "Modification to Resource Conservation and Recovery Act Facility Investigation (RFI) Work Plan for Operable Unit (OU) 1148, Field Unit 5," Los Alamos National Laboratory memorandum EM/ER:96:234 to Benito Garcia, Los Alamos, New Mexico. (Jansen and Taylor 1996, 54959)

LANL (Los Alamos National Laboratory), May 1991. "Generic Quality Assurance Project Plan for RCRA Facility Investigations for the Los Alamos National Laboratory Environmental Restoration Program," Rev. 0, Los Alamos National Laboratory report, Los Alamos, New Mexico. (LANL 1991, 27915) xxx

LANL (Los Alamos National Laboratory), May 1992. "RFI Work Plan for Operable Unit 1148," Los Alamos National Laboratory report LA-UR-92-855, Los Alamos, New Mexico. (LANL 1992, 7669)

LANL (Los Alamos National Laboratory), May 1993. "RFI Work Plan for Operable Unit 1093," Los Alamos National Laboratory report LA-UR-93-422, Los Alamos, New Mexico. (LANL 1993, 15310)

LANL (Los Alamos National Laboratory) 1995. "Site Development Plan, Annual Update 1995," Los Alamos National Laboratory publication LALP-95-113, Los Alamos, New Mexico. (LANL 1995, 57224)

LANL (Los Alamos National Laboratory), July 1995. "Statement of Work—Analytical Support," Revision 2, RFP No. 9-XS1-Q4257, Los Alamos, New Mexico. (LANL 1995, 49738)

LANL (Los Alamos National Laboratory), December 6, 1996. "Hydrogeologic Workplan" (draft), Revision 1.0, Los Alamos, New Mexico. (LANL 1996, 55430)

LANL 1998, 67822

LANL (Los Alamos National Laboratory), November 1998. "Installation Work Plan for Environmental Restoration Project," Revision 7, Los Alamos National Laboratory report LA-UR-98-4652, Los Alamos, New Mexico. (LANL 1998, 62060)

LANL (Los Alamos National Laboratory), March 2000. "Installation Work Plan for Environmental Restoration Project," Revision 8, Draft (pending approval of administrative authority), Los Alamos National Laboratory report LA-UR-00-1336, Los Alamos, New Mexico. (LANL 2000, 66802)

Myers, B., February 7, 2001. Personal communication between Karen Balo and Brian Myers, Los Alamos, New Mexico. (Myers 2001, 70028)

Myers, B., February 23, 2001. Personal communication between John Warren and Brian Myers, Los Alamos, New Mexico. (Myers 2001, 70029)

NMED (New Mexico Environment Department), 1998. "Risk-Based Decision Tree," in "New Mexico Environment Department Hazardous and Radioactive Materials Bureau RCRA Permits Management Program Document Requirement Guide," Santa Fe, New Mexico. (NMED 1998, 57761)

NMED 2000, 68554

Quadrel Services, September 9, 1994, "EMFLUX Soil-Gas Survey of Technical Area 54 Los Alamos National Laboratory New Mexico," Quadrel report number QS1190 prepared under subcontract 1490L0014, Clarksburg, MD. (Quadrel Services 1994, 63869)

Rogers, M. A., June 1977. "History and Environmental Setting of LASL Near-Surface Land Disposal Facilities for Radioactive Wastes (Areas A, B, C, D, E, F, G, and T)," Los Alamos Scientific Laboratory report LA-6848-MS, Volume I, Los Alamos, New Mexico. (Rogers 1977, 5707)

Rogers, M., June 1977. "History and Environmental Setting of LASL Near-Surface Land Disposal Facilities for Radioactive Wastes (Areas A, B, C, D, E, F, G, and T)," Los Alamos Scientific Laboratory report LA-6848-MS, Volume II, Los Alamos, New Mexico. (Rogers 1977, 5708)

Ryti, R., and P. Longmire, September 22, 1998. "Inorganic and Radionuclide Background Data for Soils, Canyon Sediments, and Bandelier Tuff at Los Alamos National Laboratory," Los Alamos National Laboratory report LA-UR-98-4847, Los Alamos, New Mexico. (Ryti and Longmire 1998, 59730) **xxx**

Ryti, R., E. Kelly, M. Hooten, G. Gonzales, G. McDermott, and L. Soholt, April 1999. "Screening Level Ecological Risk Assessment Methods," Los Alamos National Laboratory report LA-UR-99-1405, Los Alamos, New Mexico. (Ryti et al. 1999, 64783) **xxx**

Stimac, J., D. Hickmott, and R. Abell, A. Larocque, D. Broxton, J. Gardner, S. Chipera, J. Wolff, and E. Gauerke, 1996. "Redistribution of PB and Other Volatile Trace Metals During Eruption, Devitrification, and Vapor-Phase Crystallization of the Bandelier Tuff, New Mexico," *Journal of Volcanology and Geothermal Research*, No. 73, pp. 245–266. (Stimac et al. 1996, 59362)

Trujillo, V., R. Gilkeson, M. Morgenstern, and D. Krier, June 1998. "Measurement of Surface Flux Rates for Volatile Organic Compounds at Technical Area 54," Los Alamos National Laboratory report LA-13329, Los Alamos, New Mexico. (Trujillo et al. 1998, 58242)

Young, J., December 27, 2000. "Status of the RFI Report for MDAs G, H, and L at TA-54 Los Alamos National Laboratory," State of New Mexico Environment Department memorandum to J. Browne and T. Taylor, Santa Fe, New Mexico. (Young 2000, 68569)

Appendix A

Acronyms, Glossary, and Metric Conversion Tables

APPENDIX A ACRONYMS, GLOSSARY, AND METRIC CONVERSION TABLES

A-1.0 ACRONYMS

AA	administrative authority
AEC	US Atomic Energy Commission
AOC	area of concern
B&K	Bruel & Kjaer
bgs	below ground surface
BV	background value
CA	corrective action
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CLP	contract laboratory program
CMS	corrective measures study
COPC	chemical of potential concern
COPEC	chemical of potential ecological concern
CST	Chemical Science and Technology (Laboratory Division)
CSTR	continuously stirred tank reactor
CVAA	cold vapor atomic absorption
D&D	decontamination and decommissioning
DCF	dose conversion factor
DL	detection limit
DOE	US Department of Energy
EDL	estimated detection limit
EPA	US Environmental Protection Agency
EQL	estimated quantitation limit
ER	Environmental restoration
ESL	ecological screening level
ESH	environment, safety, and health
FGR	federal guidance report
FIA	flow injection analysis
FIMAD	Facility for Information Management, Analysis, and Display
FV	fallout value
FWO	Facility and Waste Operations
FY	fiscal year
GAC	granulated activated charcoal
GCMS	gas chromatography/mass spectrometry
GFAA	graphite furnace atomic absorption
GPC	gel permeation chromatography
HE	high explosive

HEAST	health effects assessment summary tables
HI	hazard index
HG	hazard quotient
HSWA	Hazardous and Solid Waste Amendments of 1984
IA	interim action
ICPES	inductively coupled plasma emission spectroscopy
ICPMS	inductively coupled plasma mass spectroscopy
ICR	incremental cancer risk
IRIS	Integrated Risk Information System
IWP	installation work plan
KPA	kinetic phosphorescence analysis
LAAO	Los Alamos Area Office (a branch of the Department of Energy)
Laboratory	Los Alamos National Laboratory
LANL	Los Alamos National Laboratory
LASL	Los Alamos Scientific Laboratory (LANL before January 1, 1981)
LCS	laboratory check sample
LLW	low-level waste
MAP	Mixed activation product
MARS	multivariate adaptive regression splines
MDA	Material disposal area
MFP	mixed fission products
MRAL	mobile radiological analysis laboratory
NCEA	National Center for Environmental Assessment
ND	not detected
NFA	no further action
NIOSH	National Institute of Occupational Safety and Health
NMED	New Mexico Environment Department (New Mexico Environmental Improvement Division before 1991)
NOD	notice of deficiency
NPDES	National pollutant discharge elimination system
OU	operable unit
PA	performance assessment
PAR	photoacoustic radiometry
PCB	polychlorinated biphenyl
PCE	perchloroethane
PEF	particulate emission factor
PRS	potential release site
QA	Quality assurance
QC	Quality control
RALM	radionuclide analysis laboratory method

RAS	radiological alpha spectroscopy
RCRA	Resource Conservation and Recovery Act
RfD	Reference dose
RI	relative influence
RIP	Repository Integration Program
RFI	RCRA facility investigation
RPD	relative percent difference
RRF	relative response factor
RSD	risk-specific dose
RSRL	regional statistical reference level
SAA	same as above
SAL	screening action level
SAR	safety analysis report
SD	solvent desorption
SF	slope factor
SOP	standard operating procedure
SVOC	semivolatile organic compound
SWMU	solid waste management unit
SWO	Solid Waste Operations
T&E	threatened and endangered
TA	technical area
TAL	target analyte list (EPA)
TCA	trichloroethane
TCE	trichloroethylene
TCLP	toxicity characteristic leaching procedure
TD	thermal desorption
TIC	tentatively identified compound
TPU	total propagated uncertainty
TRI	triangular distribution
TRU	transuranic
TSP	total suspended particulates
TWISP	Transuranic Waste Inspection Project
UCL	upper confidence level
UTL	upper tolerance limit
VOC	volatile organic compound
VOST	volatile organic sample train

A-2.0 GLOSSARY

Absorption. The penetration of substances into the bulk of a solid or liquid.

Accuracy. A measure of the closeness of measurements to the true value of the parameter being measured.

Action level. Health- and environmental-based concentrations derived using chemical-specific toxicity information and standardized exposure assumptions. Action levels can be developed on a facility-specific basis or can be taken from standardized lists (61 Federal Register 19446). Contamination found in a particular medium below an appropriate action level would not generally be subject to remediation or further study.

Adsorption. The surface retention of solid, liquid, or gas molecules, atoms, or ions by a solid or a liquid.

Administrative authority (AA). The Director of the New Mexico Environment Department, or his/her designee, or the U.S. Environmental Protection Agency.

Alluvial. Relating to geologic deposits or features formed by running water.

Alluvium. Clay, silt, sand, gravel, or other rock materials transported by water and deposited in fairly recent geologic time as sorted or semisorted sediments in riverbeds, flood plains, lake shores, and fans at the base of mountain slopes.

Alpha radiation. Radiation composed of alpha particles emitted during the radioactive decay of certain nuclides. The least penetrating of the three common types of radiation (alpha, beta, and gamma), alpha radiation can be blocked easily (for example, by a sheet of paper or the outer layer of skin).

Analyte. The element, nuclide, or ion a chemical analysis seeks to identify and/or quantify; the chemical constituent of interest.

Area of concern (AOC). An area at the Laboratory known or suspected to be contaminated with radionuclides but not contaminated by hazardous chemicals or hazardous waste.

Ash-flow tuff. A tuff deposited by a hot, dense volcanic current. Ash-flow tuff can be either welded or nonwelded.

Background value (BV). The upper tolerance limits (UTLs) of background sample results, calculated as the upper 95% confidence limit for the 95th percentile. When a UTL cannot be calculated, either the detection limit or the maximum reported value is used as a BV; BVs are used as simple threshold numbers to identify potentially contaminated site sample results that are greater than background levels in that geological sample medium (or group of media). All inorganic chemicals and radionuclides have BVs.

Baseline risk assessment (also known as risk assessment). A site-specific analysis of the potential adverse effects of hazardous substances that are released from a site in the absence of any control or mitigation actions. A baseline risk assessment consists of four steps: data collection and analysis, exposure assessment, toxicity assessment, and risk characterization.

Best management practice. For facilities that manufacture, use, store, or discharge toxic or hazardous pollutants as defined by the 1977 Clean Water Act, a required program to control the potential spill or release of those materials to surface waters. (The Facts on File Dictionary of Environmental Science, edited by L. Harold Stevenson and Bruce Wyman)

Beta radiation. Radioactive transformation of a nuclide in which the nucleus emits a beta particle (electron or positron). Beta radiation can be blocked by an inch of wood or by a thin sheet of aluminum.

Biomass. The dry weight of living matter, including stored food, present in a species population and expressed in terms of a given area or volume of the habitat.

Chemical of potential concern (COPC). Chemical, detected at a site, that has the potential to adversely affect human and/or ecological receptors due to its concentration, distribution, and mechanism of toxicity. A COPC remains a concern until exposure pathways and receptors are evaluated in a site-specific risk assessment.

Cold vapor atomic absorption (CVAA). An analytical technique used for measuring mercury; it is described in EPA Methods 7470A (Mercury in Liquid Waste) and 7471A (Mercury in Solid or Semisolid Waste). The technique is based on the absorption of radiation at 253.7-nm by mercury vapor. The mercury is reduced to the elemental state and aerated from solution in a closed system. The mercury vapor passes through a cell positioned in the light path of an atomic absorption spectrophotometer. Absorbance (peak height) is measured as a function of mercury concentration.

Corrective measures study (CMS). A study to assess risks (from a release) to human health, the environment, costs, and other factors (such as disposal methods) in a given area. If a RCRA facility investigation indicates further action is required, a CMS is performed to identify and evaluate cleanup alternatives.

Data validation. Systematic process that applies a defined set of performance-based criteria to a body of data; may result in qualification of the data. The data validation process is performed independently of the analytical laboratory that generates the data set and occurs before conclusions are drawn from the data. The process may comprise a standardized data review (routine data validation) and/or a problem-specific data review (focused data validation).

Decommissioning. Permanent removal from service of facilities and their components, after the discontinued use of structures or buildings deemed no longer useful, in accordance with regulatory requirements and environmental policies.

Decontamination. Removal of unwanted material from the surface of or from within another material.

Detection limit. Minimum concentration that can be determined by a single measurement by an instrument; implies a specified statistical confidence that the analytical concentration is greater than zero.

Dose. Quantity of radiation that is absorbed, per unit of mass, by the body or by any portion of the body.

Effluent. Liquid discharged as a waste, such as contaminated water from a factory or the outflow from a sewage works; water discharged from a storm sewer or from land after irrigation.

Ephemeral stream. Said of a stream or spring that flows only during and immediately after periods of rainfall or snowmelt.

Estimated quantitation limit. The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine analytical-laboratory operating conditions. Sample estimated quantitation limits are highly matrix-dependent, and the specified estimated quantitation limits might not always be achievable.

Evapotranspiration. The combined discharge of water from the earth's surface to the atmosphere by evaporation from lakes, streams, and soil surfaces, and by transpiration from plants.

Exposure pathway. Mode by which a receptor may be exposed to contaminants in environmental media (e.g., drinking water, ingesting food, or inhaling dust).

External standard. External standard calibration involves comparison of instrument responses from the sample to the responses from the target compounds in the calibration standards. Sample peak areas (or peak heights) are compared to peak areas (or heights) of the standards.

Fallout radionuclides. Radionuclides that are present at globally elevated levels in the environment as a result of the fallout from atomic weapons tests. The Laboratory background data sets consist of Environmental Surveillance samples taken from marginal and regional locations for the following radionuclides associated with fallout: tritium, cesium-137, americium-241, plutonium-238, plutonium-239/240, and strontium-90. Samples were collected from regional and marginal locations in the vicinity of the Laboratory that are (1) representative of geological media found within Laboratory boundaries and (2) were not impacted by Laboratory operations.

Fault. A fracture, or zone of fractures, in rock along which there has been vertical or horizontal movement; adjacent rock surfaces are displaced.

Field blank (also known as field reagent blank). A blank sample either prepared in the field or carried to the sampling site, exposed to sampling conditions (e.g., bottle caps removed, preservatives added), and returned to a laboratory for analysis in the same manner in which environmental samples are analyzed. Used to identify the presence of contamination potentially added during the sampling and analysis process.

Field duplicate. A second sample collected as near as possible to the original sample.

Gamma radiation. A form of electromagnetic, high-energy radiation emitted from a nucleus. Gamma rays are essentially the same as x-rays and require heavy shielding, such as concrete or steel, to be blocked.

Groundwater. Water in a subsurface saturated zone.

Hazard index (HI). The sum of hazard quotients for multiple contaminants to which a receptor (j) is determined to be exposed, i.e., $HI_j = \sum_i HQ_{ij}$.

Hazard quotient (HQ). The ratio of a calculated exposure (E) to or dose (D) from a given contaminant (i) to a given receptor (j) over a reference value (TRV) for contaminant (i) determined to be protective of receptor (j), i.e., $HQ_{ij} = E_{ij}$ [or D_{ij}] TRV_{ij} .

Holding time. The maximum elapse of time that one can expect to store a sample without unacceptable changes in analyte concentrations. Holding times apply under prescribed conditions and deviations from these conditions may affect the holding time. Extraction holding time refers to the time lapse from sample collection to sample preparation; Analytical holding time refers to the time lapse between sample preparation and analysis.

HSWA module. A portion of the Laboratory's permit to operate under RCRA that contains requirements specific to Los Alamos National Laboratory. It is this portion of the permit that contains the list of solid waste management units that must be cleaned up in accordance with RCRA procedures.

Hydraulic conductivity. The rate at which water moves through a medium in a unit of time under a unit hydraulic gradient through a unit area measured perpendicular to the direction of flow.

Hydraulic gradient. The rate of change of hydraulic head per unit of distance in the direction of groundwater flow.

Hydrogeology. The science that applies geologic methods to the understanding of hydrologic phenomena.

Inductively coupled plasma emission spectroscopy (ICPES). ICPES determines trace elements, including metals, in solutions. The instrument measures characteristic emission spectra by optical spectrometry. Samples are nebulized, and the resulting aerosol is transported to the plasma torch. Element-specific emission spectra are produced by a radio-frequency inductively coupled plasma. The spectra are dispersed by a grating spectrometer, and photosensitive devices are used to monitor the intensities of the emission lines.

Inductively coupled plasma mass spectroscopy (ICPMS). ICPMS is applicable to the determination of sub- $\mu\text{g/l}$ concentrations of a large number of elements in water samples and in waste extracts or digests. When dissolved constituents are required, samples must be filtered and acid preserved before analysis. No digestion is required before analysis for dissolved elements in water samples. The method measures ions produced by a radio-frequency inductively coupled plasma. Analyte species originating in a liquid are nebulized, and the resulting aerosol transported by argon gas into the plasma torch. The ions produced are entrained in the plasma gas and introduced, by means of an interface, into a mass spectrometer. The ions produced in the plasma are sorted according to their mass-to-charge ratios and quantified with a channel electron multiplier.

Instrument detection limit (IDL). The IDL is defined to be three times the average of the standard deviations obtained on three nonconsecutive days from the analysis of a standard solution, with seven consecutive measurements of that solution per day. The standard solution must be prepared at a concentration of three to five times the instrument manufacturer's estimated IDL. This is a measure of instrument sensitivity without any consideration for contributions to signal from reagents.

Internal standards. Compounds added to the sample after sample preparation for qualitative and quantitative instrument analysis—the compounds serve as a standard of retention time and response, which is invariant from run to run with the instruments. (Handbook of Environmental Analysis, by Roy-Keith Smith, 3rd ed.)

Laboratory control sample (LCS). A known matrix that has been spiked with compound(s) representative of the target analytes. The LCS is used to document laboratory performance. The acceptance criteria for LCSs are method specific.

Laboratory qualifier (or laboratory flag). Codes applied to the data by the contract analytical laboratory to indicate, on a gross scale, a verifiable or potential data deficiency. These flags are applied using the Environmental protection Agency (EPA) contract laboratory program (CLP) guidelines.

Leachate. Any liquid, including any suspended components in the liquid, that has percolated through or drained from hazardous waste (40 CFR 260.10).

Matrix spike. An aliquot of sample spiked with a known concentration of target analyte(s). Matrix spike samples are used to measure the ability to recover prescribed analytes from a native sample matrix. The spiking typically occurs before sample preparation and analysis.

Method blank. An analyte-free matrix to which all reagents are added in the same volumes or proportions as those used in the environmental sample processing and which is prepared and analyzed in the same manner as the corresponding environmental samples. The method blank is used to assess the potential for contamination to the sample during preparation and analysis.

Minimum detectable activity. For the *analysis of radionuclides*, the minimum detectable activity is the lowest detectable radioactivity for a given analytical technique. The following equation shall be used to calculate the MDA unless otherwise noted or approved by the Laboratory:

$$\text{MDA} = \frac{4.65(\text{BKG})^{0.5} + 2.71}{2.22 \times \text{EFF} \times V \times T_s \times Y}$$

where

- BKG = the total background counts,
- EFF = the fraction detector efficiency,
- V = the volume or unit weight,
- T_s = the *sample* count duration, and
- Y = the fractional *chemical* recovery obtained from the *tracer* recovery.

Depending on the type of *analysis*, other terms may also be required in the denominator (e.g., gamma abundance).

Model. A mathematical approximation of a physical, biological, or social system.

Nondetect. Sample result that is less than the MDL. The laboratory reports nondetects as undetected at the EQL.

Notice of deficiency (NOD). A notice issued to DOE and the Laboratory by the administrative authority which states that some aspect(s) of a plan, report, or application does not meet their requirements or that requires clarification or correction.

Operable unit (OU). At the Laboratory, one of 24 areas originally established for administering the ER Project. Set up as groups of potential release sites, the OUs were aggregated based on geographic proximity for the purpose of planning and conducting the cleanup effort. As the project matured, it became apparent that 24 were too many to allow efficient communication and to ensure consistency in approach. Therefore, in 1994, the 24 OUs were reduced to six administrative "field units."

Percent recovery (%R). Amount of material detected in a sample (minus any amount already in the sample) divided by the amount added to the sample and expressed as a percentage.

Perched groundwater. Groundwater that lies above the regional water table and is separated from it by an unsaturated zone.

Perennial stream. Said of a stream or reach that flows continuously throughout the year.

Piezometric surface. The level to which water will rise in a well tightly cased into an aquifer (also called potentiometric surface).

Polychlorinated biphenyls (PCBs). Any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contains such substances. PCBs are colorless, odorless compounds that are chemically, electrically, and thermally stable and have proven to be toxic to both humans and animals.

Porosity. The ratio of the volume of interstices in rock or soil to its total volume expressed as a percentage or as a fraction.

Potential release site (PRS). A site suspected of releasing or having the potential to release contaminants into the environment. PRS is a generic term that includes solid waste management units, hazardous waste sites listed in Module 7 of the Laboratory's Hazardous Waste Facility Permit, and sites that have been identified as potentially contaminated by radioactivity.

Precision. A concept used to describe dispersion of measurements with respect to a measure of location or central tendency. Precision may be represented by the inverse of the standard deviation of a set of measurements.

Quality assessment (QA) sample. A sample submitted for analysis, the data from which are used to assess the quality of performance of a sampling or analysis process. May include performance-evaluation samples, field duplicates, field blanks, etc.

Quality control (QC) sample. A sample which, upon analysis, provides information useful for adjusting, controlling, or verifying continuing acceptability of sampling and/or analysis activities that are in progress.

Radioactive decay. (1) The process whereby radioactive materials undergo a change from one nuclide, element, or state to another, releasing radiation in the process. This action ultimately results in a decrease in the number of radioactive nuclei present in the sample. (2) The spontaneous transformation of one nuclide into a different nuclide or into a different isotope of the same nuclide accompanied by

either the emission of particles from the nucleus, nuclear capture or ejection of orbital electrons, or fission.

Radioactive tracer. A radioactive material added to, or induced in, a sample for the purpose of monitoring chemical or physical losses of the target analytes. The tracer is assumed to behave in the same manner as that of the target analytes.

RCRA facility investigation (RFI). The investigation that determines if a release has occurred and the nature and extent of the contamination at a hazardous waste facility. The RFI is generally equivalent to the remedial investigation portion of the Comprehensive Environment Response, Compensation, and Liability Act (CERCLA) process.

Receptor. A person, plant, animal, or geographical location that is exposed to a chemical or physical agent released to the environment by human activities.

Recharge. The process by which water is added to the zone of saturation, either directly from the overlying unsaturated zone or indirectly by way of another material in the saturated zone.

Regional aquifer. Geologic material(s) or unit(s) of regional extent whose saturated portion yields significant quantities of water to wells, contains the regional zone of saturation, and is characterized by the regional water table or potentiometric surface.

Relative percent difference (RPD). The measure used to assess the *precision* between parent *sample* results and their associated duplicate results. The RPD is calculated as follows:

$$|RPD| = \frac{S - R}{\left(\frac{S + R}{2}\right)} 100$$

where: RPD = relative percent difference,
 S = parent *sample* result, and
 R = duplicate *sample* result.

The Los Alamos National Laboratory ER Project criteria for the RPD is less than 20% for aqueous *samples* and less than 35% for soil *samples* when the *sample* concentrations are greater than or equal to five times the *method detection limit (MDL)*. For *samples* with concentrations less than five times the *MDL*, but greater than the *MDL*, the control is $\pm MDL$. No *precision* criterion applies to *samples* with concentrations less than the *MDL*.

Reporting limit. The numerical value that an analytical laboratory (in conjunction with its client) selects to determine if a target analyte is detected. Results below the RL are considered not detected, while results greater than the RL are considered detected. The RLs are not necessarily based on instrument sensitivity. RLs can be established at the instrument detection limit, method detection limit, estimated quantitation limit, and contract-required detection limit.

Resource Conservation and Recovery Act (RCRA). The Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976. (40 CFR 270.2)

Runoff. The portion of the precipitation on a drainage area that is discharged from the area either by sheet flow or adjacent stream channels.

Run-on. Surface water flowing onto an area as a result of runoff occurring higher up the slope.

Sample. A portion of a material (e.g., rock, soil, water, air), which, alone or in combination with other samples, is expected to be representative of the material or area from which it is taken. Samples are

typically sent to a laboratory for analysis or inspection or are analyzed in the field. When referring to samples of environmental media, the term field sample may be used.

Sample matrix. In chemical analysis, that portion of a sample which is exclusive of the analytes of interest. Together, the matrix and analytes of interest form the sample.

Screening action level (SAL). Medium-specific concentration level for a chemical derived using conservative criteria below for which it is generally assumed that there is no potential for unacceptable risk to human health. The derivation of a SAL is based on conservative exposure and land-use assumptions. However, if an applicable regulatory standard exists that is less than the value derived by risk-based computations, it will be used for the SAL.

Sediment. (1) A mass of fragmented inorganic solid that comes from the weathering of rock and is carried or dropped by air, water, gravity, or ice; or a mass that is accumulated by any other natural agent and that forms in layers on the earth's surface such as sand, gravel, silt, mud, fill, or loess. (2) A solid material that is not in solution and either is distributed through the liquid or has settled out of the liquid.

Serial dilution sample. A requirement of EPA Method 6010B (Inductively Coupled Plasma-Atomic Emission Spectrometry). Serial dilutions are made by performing a series of dilutions of an aliquot taken from a stock solution for a target analyte. The first dilution of the original stock solution serves as the stock solution for the second dilution and the second dilution serves as the stock solution for the third dilution and so on. To meet the requirement of EPA Method 6010B, one serial dilution analysis must be performed for each matrix in every sample batch, with a minimum of one serial dilution sample per 20 samples. The serial dilution analysis is accomplished by diluting the sample(s) by a factor of five and comparing the dilution-corrected results to those of the undiluted parent sample(s). The serial dilution results are required to agree within +/-10% of the undiluted parent sample results, where the undiluted results are greater than or equal to the method detection limit.

Site conceptual model. A qualitative or quantitative description of sources of contamination, environmental transport pathways for contamination, and biota that may be impacted by contamination (called receptors) and whose relationships describe qualitatively or quantitatively the release of contamination from the sources, the movement of contamination along the pathways to the exposure points, and the uptake of contaminant by the receptors.

Solid waste management unit (SWMU). Any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released. This definition includes regulated units (i.e., landfills, surface impoundments, waste piles, and land treatment units) but does not include passive leakage or one-time spills from production areas and units in which wastes have not been managed (e.g., product storage areas).

Standard operating procedure (SOP). A document that details the method for an operation, analysis, or action with thoroughly prescribed techniques and steps, and is officially approved as the method for performing certain routine or repetitive tasks.

Stratigraphy. The science dealing with the succession, age, composition, and history of strata.

Surrogate compound or surrogate. An organic compound used in the analyses of organic target analytes that is similar in composition and behavior to target analytes but is not normally found in field samples. Surrogates are added to every blank and spike sample to evaluate the efficiency with which analytes are recovered during extraction and analysis.

Target analyte. An element, chemical, or parameter, the concentration, mass, or magnitude of which is designed to be quantified by use of a particular test method.

Technical area (TA). The Laboratory established technical areas as administrative units for all its operations. There are currently 49 active TAs spread over 43 square miles.

Tentatively identified compound (TIC). Chemical compound detected in a sample that is not a target analyte, IS, or surrogate compound. Up to 30 chromatographic peaks may be subject to mass spectral matching for identification as TICs.

Tracer. A substance, usually a radioactive isotope, added to a sample to determine the efficiency (chemical or physical losses) of the chemical extraction, reaction, or analysis. The tracer is assumed to behave in the same manner as that of the target radionuclides. Recovery guidelines for tracer results are 30% to 110% under the current contract laboratory statement of work and will be 40% to 105% under the new statement of work. Correction of the analytical results for the tracer recovery is performed for each sample. The concentration of the tracer added needs to be sufficient to result in a maximum of 10% uncertainty at the 95% confidence level in the measured recovery.

Tuff. A compacted deposit of volcanic ash and dust that contains rock and mineral fragments accumulated during an eruption.

U.S. Department of Energy (DOE). Federal agency that sponsors energy research and regulates nuclear materials for weapons production.

U.S. Environmental Protection Agency (EPA). Federal agency responsible for enforcing environmental laws. While state regulatory agencies may be authorized to administer some of this responsibility, the EPA retains oversight authority to ensure protection of human health and the environment.

Vadose zone. The unsaturated zone. Portion of the subsurface above the regional water table in which pores are not fully saturated.

Welded tuff. A volcanic deposit hardened by the action of heat, pressures from overlying material, and hot gases.

Metric to English Conversions

Multiply SI (Metric) Unit	by	To Obtain US Customary Unit
kilometers (km)	0.622	miles (mi)
kilometers (km)	3281	feet (ft)
meters (m)	3.281	feet (ft)
meters (m)	39.37	inches (in.)
centimeters (cm)	0.03281	feet (ft)
centimeters (cm)	0.394	inches (in.)
millimeters (mm)	0.0394	inches (in.)
micrometers or microns (μm)	0.0000394	inches (in.)
square kilometers (km^2)	0.3861	square miles (mi^2)
hectares (ha)	2.5	acres
square meters (m^2)	10.764	square feet (ft^2)
cubic meters (m^3)	35.31	cubic feet (ft^3)
kilograms (kg)	2.2046	pounds (lb)
grams (g)	0.0353	ounces (oz)
grams per cubic centimeter (g/cm^3)	62.422	pounds per cubic foot (lb/ft^3)
milligrams per kilogram (mg/kg)	1	parts per million (ppm)
micrograms per gram ($\mu\text{g/g}$)	1	parts per million (ppm)
liters (l)	0.26	gallons (gal.)
milligrams per liter (mg/l)	1	parts per million (ppm)
degrees Celsius ($^{\circ}\text{C}$)	$9/5 + 32$	degrees Fahrenheit ($^{\circ}\text{F}$)

Metric Prefixes

Term	Power of 10	Symbol
mega-	10^6	M
kilo-	10^3	k
deci-	10^{-1}	d
centi-	10^{-2}	c
milli-	10^{-3}	m
micro-	10^{-6}	μ
nano-	10^{-9}	n
pico-	10^{-12}	p

Appendix B

Operational and Environmental Setting

APPENDIX B OPERATIONAL AND ENVIRONMENTAL SETTING

B-1.0 OPERATIONAL HISTORY AND LAND USE

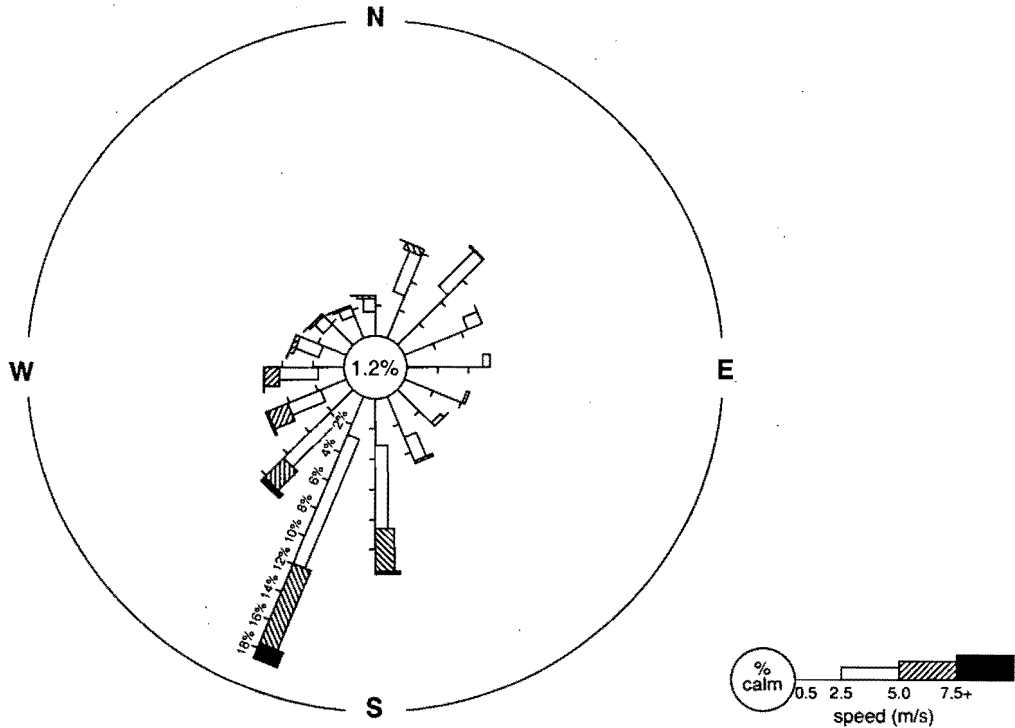
Technical Area (TA) 54 is located in the east-central portion of the Los Alamos National Laboratory (Laboratory) (Figure 1.2-1, Section 1) on Mesita del Buey between Pajarito Canyon (south) and Cañada del Buey (north) (Figure 1.2-2, Section 1). During the late 1950s, the Laboratory, with approval of the US Atomic Energy Commission and upon recommendation of the US Geological Survey, selected TA-54 for disposal of Laboratory-derived waste. Since that time, the site has functioned as a major storage and disposal facility with some permitted treatment of Laboratory-derived wastes since that time. There are four material disposal areas (MDAs) at TA-54 (Figure 1.2-2), which have been used to store and/or dispose of solid, sensitive (classified), hazardous, radioactive, or mixed waste generated at the Laboratory.

MDA G, the first disposal area, accepted its first shipment of radioactive waste in 1957 and is still in operation. The Department of Energy (DOE) authorized MDA G for the disposal of low-level and transuranic (TRU) radioactive waste and certain radioactively contaminated infectious waste, asbestos-contaminated material, and polychlorinated biphenyls (PCBs) and for the temporary placement of TRU waste. New Mexico Environment Department (NMED) issued a permit for the site for the storage of mixed waste. MDA L opened during the late 1950s for the disposal of liquid chemical waste; it is operating as a storage facility permitted by the Resource Conservation and Recovery Act (RCRA). MDA H opened in 1960 and was used for the disposal of classified, noncontainerized, solid wastes, some of which were residually contaminated with radioactive, hazardous, and high-explosive constituents. MDA H is no longer operational but has not undergone formal closure. Finally, MDA J has been used since 1961 for the disposal of administratively controlled solid wastes and for the storage and disposal of special wastes. MDA J will be closed in Fiscal Year 2001 as a solid waste and special waste facility in accordance with New Mexico Solid Waste Management Regulations, 20 NMAC 9.1, Subpart V. A closure plan has been submitted (Plum 1999, 63136). Rogers (1977, 5707 and 5708) and Chapter 2 of the RCRA facility investigation (RFI) work plan (LANL 1992, 7669) describe the TA-54 area and document the uses of the MDAs. The performance assessment and composite analysis report (Hollis et al. 1997, 63131) and the safety analysis report (LANL 1995, 63300) present additional information on MDA G.

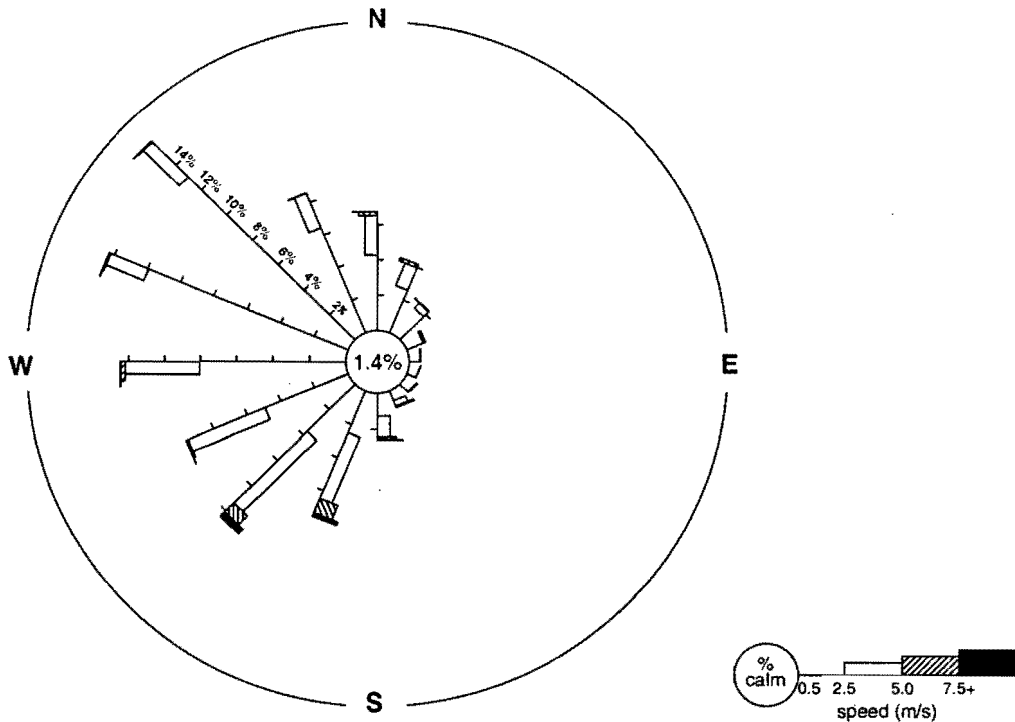
B-2.0 CLIMATE

Mesita del Buey has a semiarid, temperate mountain climate (Bowen 1990, 6899). Average annual precipitation at a weather station at MDA G is approximately 14 in. (35.6 cm); about 40% of this occurs as brief, intense thunderstorms during July and August. Snowfall is greatest from December through March; heavy snowfall is infrequent during other months. Surface water runoff can occur during summer thunderstorms, frontal storms, and snowmelt periods, but the majority of runoff and resultant erosion probably occurs during the summer thunderstorm period. The canyon-mesa topography at TA-54 affects wind speed and direction in a dramatic way, as indicated by measurements taken at meteorological stations on Mesita del Buey and within Cañada del Buey and Pajarito Canyon. Comparisons of average annual wind roses (Figures B-2.0-1 and B-2.0-2) from the mesa-top and canyon meteorological towers reveal the channeling effect of the mesa-canyon topography. Mesa-top winds flow predominately south to southwest during the day. Canyon winds are strongly channeled; they flow predominately up canyon (north-northwest) during the day and down canyon (south-southeast) and across the mesa (east) at night. The strongest winds typically occur in the spring. Summer afternoon temperatures generally range between 70°F and 90°F, and typical winter temperatures range between 30°F and 50°F during the day and 15°F and 25°F at night.

Daytime



Nighttime



FB2.0-1/021401/RM

Figure B-2.0-1. Windroses from Mesita del Buey (1998)

B-3.0 GEOLOGY

Mesita del Buey is relatively flat and narrow, with steep sides draining into Cañada del Buey to the north and Pajarito Canyon to the south. The north-facing slope of the mesa has a gentler gradient than the south-facing slope. The south-facing slope of Mesita del Buey is almost vertical near the rim and becomes more gently sloped toward the canyon floor approximately 100 ft (30 m) below.

B-3.1 Stratigraphy

In the discussions below of Bandelier Tuff, the term *welding* is used to differentiate between tuffs that are uncompacted and porous (nonwelded) and those that are more compacted and dense (welded). In the field, the degree of welding in tuff is quantified by the degree of flattening of pumice fragments (a higher degree of flattening and elongation equals a higher degree of welding). Petrographically, welded tuffs show adhesion (welding) of grains while nonwelded tuffs do not. The term *devitrified* is applied to tuff whose volcanic glass has crystallized.

The Tshirege Member of the Bandelier Tuff is a compound cooling unit that resulted from several successive ash-flow deposits separated by periods of inactivity, which allowed for partial cooling of each unit. Properties related to water flow and contaminant migration (e.g., density, porosity, degree of welding, fracture content, and mineralogy) vary both vertically and laterally as a result of localized emplacement temperature, thickness, gas content, and composition. Figure B-3.1-1 shows the generalized stratigraphy of the area.

Tshirege Member Unit 2 of the Bandelier Tuff

Unit 2 of the Tshirege Member of the Bandelier Tuff is competent, resistant caprock that forms the surface of Mesita del Buey. Its thickness varies from 35 ft (10.7 m) near MDA H to 45 ft to 50 ft (13.7 m to 15.2 m) near MDA L to 39 ft (11.9 m) near MDA G. Where it is exposed, unit 2 forms nearly vertical cliffs on the sides of the mesa. The rock is described as a moderately welded ash-flow tuff composed of crystal-rich, devitrified pumice fragments in a matrix of ash, shards, and phenocrysts (primarily potassium feldspar and quartz).

Unit 2 is extensively fractured as a consequence of contraction during postdepositional cooling. The cooling-joint fractures are visible on mesa edges and on the walls of pits. In general, the fractures dissipate at the bottom of unit 2. On average, fractures in unit 2 are nearly vertical. Mean spacing between fractures ranges between 1.9 ft and 2.6 ft (0.6 m and 0.8 m), and fracture width ranges between less than 0.03 in. and 0.51 in. (1 mm and 13 mm) with a median of 0.12 in. (3 mm). Fractures are typically filled with clays to a depth of about 9.9 ft (3 m); smectites are the dominant clay minerals present. Smectites are known for their tendency to swell when water is present and for their ability to strongly bind certain elements, both of which have implications for transport of radionuclides in fractures. Opal and calcite can occur throughout the fractured length, usually in the presence of tree and plant roots (live and decomposed); the presence of both the minerals and the roots suggests some water at depth in fractures.

At the base of unit 2 is a series of thin, less than 3.9-in.-thick (10-cm-thick), discontinuous, crystal-rich, fine- to coarse-grained surge deposits. Bedding structures are often observed in these deposits. The surge beds mark the base of unit 2.

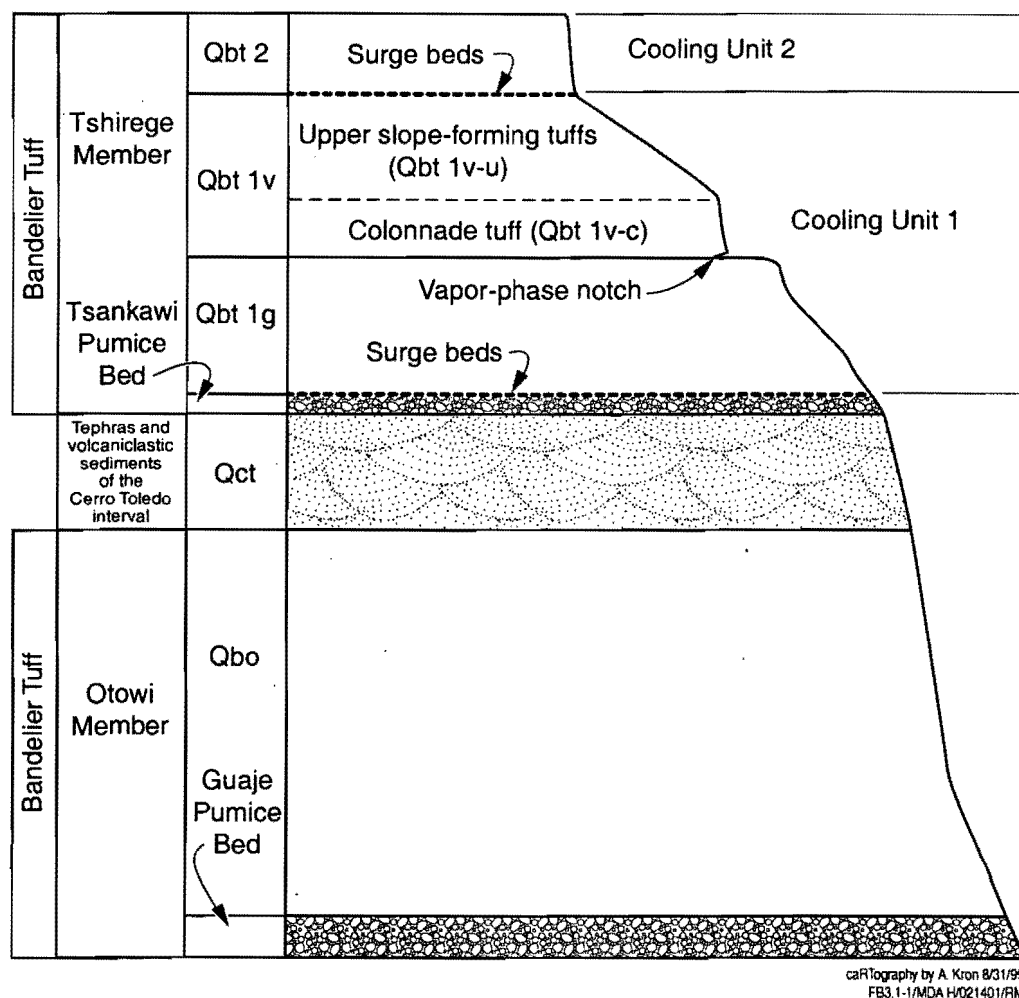


Figure B-3.1-1. Generalized stratigraphy of TA-54

Tshirege Member Unit 1v of the Bandelier Tuff

Tshirege Member unit 1v is a vapor-phase-altered cooling unit underlying unit 2. This unit forms sloping outcrops, which contrast with the near-vertical cliffs of unit 2. Unit 1v is further subdivided into units 1vu and 1vc.

Unit 1vu. The uppermost portion of unit 1v is devitrified and vapor-phase-altered ash-fall and ash-flow tuff and has been designated unit 1vu, where u signifies upper. It is about 90 ft (27.4) thick near MDA H and thins to the east to about 46 ft (14 m) near MDA G. Unit 1vu is unconsolidated at its base and becomes moderately welded nearer the overlying unit 2. Only the more prominent cooling fractures originating in unit 2 continue into the more welded upper section of unit 1vu but die out in the less-consolidated lower section. More typically, fractures in unit 2 do not extend into unit 1vu.

Unit 1vc. Beneath unit 1vu is unit 1vc, where c stands for colonnade, named for the columnar jointing visible in cliffs formed from this unit. Unit 1vc is a poorly welded, devitrified ash-flow tuff at its base and top, becoming more welded in its interior. Unit 1vc is 23 ft to 26 ft (7 m to 8 m) thick in the eastern reaches of Mesita del Buey and 49 ft (15 m) thick in the western reaches.

Tshirege Member Unit 1g of the Bandelier Tuff

The basal contact of unit 1vc is marked by a rapid change (within 0.7 ft [0.2 m] vertical) from devitrified (crystallized) matrix in unit 1vc to vitric (glassy) matrix in the underlying unit 1g. Vitric pumices in unit 1g stand out in relief on weathered outcrops, while devitrified pumices above this interval are weathered out. In outcrop, this devitrification interval forms a prominent erosional recess termed the *vapor-phase notch*. There is no depositional break associated with the vapor-phase notch; the abrupt transition suggests that this feature is the base of the devitrification that occurred in the hot interior of the cooling ash-flow sheet after emplacement.

Unit 1g is a vitric, pumiceous, nonwelded ash-flow tuff underlying the devitrified unit 1vc. It is about 150 ft (45.7 m) thick beneath MDA H and about 49 ft (15 m) thick beneath MDA G. Borehole 54-1023 at MDA H penetrated this unit. Few fractures are observed in the visible outcrops of this unit, and weathered cliff faces have a distinctive Swiss-cheese appearance because of the softness of the tuff. The uppermost 5 ft to 20 ft (1.5 m to 6.1 m) of unit 1g are iron-stained and slightly welded. This portion of unit 1g is resistant to erosion, helping to preserve the vapor-phase notch in outcrop. A distinctive pumice-poor surge deposit forms the base of unit 1g.

Tshirege Member of the Bandelier Tuff, Tsankawi Pumice Bed

The Tsankawi Pumice Bed is the basal air-fall deposit of the Tshirege Member of the Bandelier Tuff. It is a thin bed of gravel-sized vitric pumice. It is about 3 ft (1 m) thick in the vicinity of MDA L and about 2 ft (0.6 m) thick at the eastern terminus.

Cerro Toledo Interval

The Cerro Toledo interval consists of thin beds of tuffaceous sandstones, paleosols, siltstones, ash, and pumice falls; the Cerro Toledo interval separates the Tshirege and Otowi Members of the Bandelier Tuff. The Cerro Toledo interval also includes localized gravel- and cobble-rich fluvial deposits predominantly derived from intermediate composition lavas eroded from the Jemez Mountains west of the Pajarito Plateau. The interval thins to 20 ft (6.1 m) at the eastern portion of MDA G. Borehole 54-1023 at MDA H penetrated this unit.

Otowi Member of the Bandelier Tuff

The Otowi Member tuffs are about 98 ft (30 m) thick in the northwestern portion of Mesita del Buey and become thinner toward MDA G. The tuffs are a massive, nonwelded, pumice-rich, and mostly vitric ash flow. The pumices are fully inflated, supporting tubular structures that have not collapsed as a result of welding. The matrix is an unsorted mix of glass shards, phenocrysts, perlite clasts, and minute, broken pumice fragments.

Otowi Member of the Bandelier Tuff, Guaje Pumice Bed

The Guaje Pumice Bed is the basal air-fall deposit of the Otowi Member of the Bandelier Tuff. The thickness of the unit has been measured as 10 ft (3 m) in the northwestern reaches of Mesita del Buey and as 12 ft (3.7 m) in Pajarito Canyon south of MDA G. It has not been penetrated by drilling at the eastern part of the mesa. The pumice bed is nonwelded but brittle. Pumice tubes are partially filled with silica cement.

Cerros del Rio Basalts

Few data exist to describe the Cerros del Rio basalts directly beneath TA-54. Local borehole cores at MDA L show that the basalts consist of both angular rubble and dense, fractured masses, with zones of moderately to very porous lavas. Based on the borehole data at MDA L, it is inferred that the Cerros del Rio basalts exist beneath Mesita del Buey. The thickness of the basalt beneath TA-54 is extrapolated to be between 262 ft (79.9 m) and 492 ft (150 m).

Puye Formation

The depth to and thickness of the Puye Formation beneath TA-54 has not been determined. However, 1750 ft (533 m) of Puye Formation sedimentary rocks were encountered beneath 82 ft (24 m) of basalt in a water-supply well in Pajarito Canyon about 0.9 mi (1.5 km) west of Mesita del Buey. The lower part of the Puye Formation hosts the regional aquifer beneath Mesita del Buey.

B-3.2 Geochemistry

Certain minerals present in Bandelier Tuff are important in terms of sorption of chemical species from water. Among them are alkali feldspar and a combination of three silica polymorphs (i.e., quartz, cristobalite, and tridymite). These minerals are found throughout the thickness of the Bandelier Tuff, and their absolute abundance throughout the tuff can have a significant effect on the retardation of several constituents in the TA-54 MDA inventories. Less important in terms of transport are organic materials, which can react with certain constituents to form relatively mobile compounds. The organic content of geologic materials on the Pajarito Plateau mesas is typically less than 1 wt %. However, the fractures can contain higher organic concentrations than the tuff matrix.

In addition to the minerals found in the tuff matrix, clay minerals are found in abundance in fractures and interbeds in the Bandelier Tuff. The primary clay minerals are smectites, with lesser amounts of kaolinite. The clay minerals have high sorptive capacity for many TA-54 inventory constituents. Hematite (i.e., iron oxide) coatings are also found but with less frequency than clay coatings. Hematite has a very large surface area for binding certain metals and is therefore also important when considering transport in fractures.

Clay, iron oxide, carbonate minerals, and solid organic matter are known to be present in ancient, buried soils (paleosols) found elsewhere across the Laboratory. In particular, the Cerro Toledo interval, Guaje Pumice Bed, and Puye Formation are known to have buried soils. The occurrence of clay-rich horizons in the subsurface is not known beneath TA-54; however, they may be important (e.g., the Cerro Toledo interval commonly contains paleosol horizons). Vertical water flow may be inhibited and lateral flow enhanced by clay layers; clay has a low permeability. Furthermore, certain inventory constituents would be sorbed onto or complexed with the soil minerals and organic matter present in such zones. Because of these potentially important effects, field and laboratory investigations are underway to identify and characterize clay-rich soil horizons beneath Mesita del Buey.

B-3.3 Seismology

There are three major faults that are considered significant with respect to seismic potential across the Laboratory complex: the Pajarito, the Guaje Mountain, and the Rendija Canyon faults. The locations of these faults with respect to TA-54 are shown in Figure B-3.3-1.

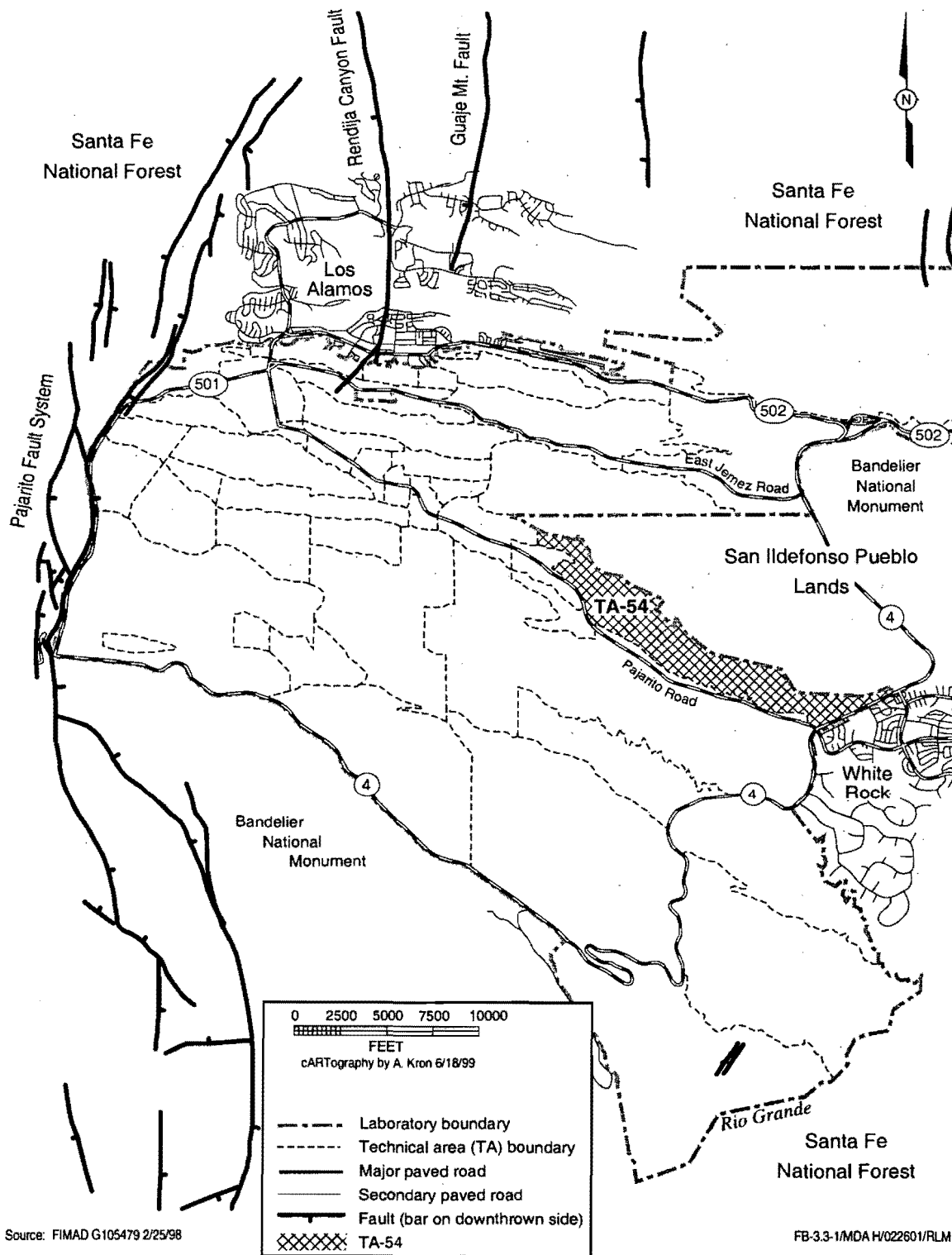


Figure B-3.3-1. Locations of major faults in Laboratory complex

The Pajarito fault is a normal fault, is downthrown to the east, and extends along the western margin of the Laboratory. It defines the active western boundary of the Rio Grande rift and has an average slip rate of 0.003 in./yr (0.07 mm/yr). The Rendija Canyon and Guaje Mountain faults are also normal faults, are downthrown to the west, and are considered secondary faults within the Pajarito fault system. The Rendija Canyon fault is located 3 mi (3 km) east of the Pajarito fault, and the Guaje Mountain fault is located about 1.2 mi (2 km) east of the Rendija Canyon fault. Geologic evidence reveals that the Pajarito fault has ruptured within the past 1.2 million yr, perhaps as recently as 50,000 yr ago. Field investigations show that the Rendija Canyon fault has ruptured within the past 10,000 yr and that the Guaje Mountain fault has ruptured within the past 6000 yr. The recurrence interval of seismic events along the Rendija Canyon and Guaje Mountain faults is estimated to be between 10,000 and 150,000 yr.

A number of small to moderate earthquakes not associated with mapped faults (termed *background* earthquakes) have occurred in north-central New Mexico within the past 100 yr. Since 1973, local seismicity has been monitored by the Los Alamos Seismograph Network. Measured events have not exceeded a magnitude of 4, which is relatively weak compared with earthquakes producing damage to buildings and structures.

Recently, a seismic hazard evaluation was completed to estimate ground motion from possible earthquakes at several sites around the Laboratory. The objective was to determine the design criteria for several nuclear facilities based on potential seismic hazards in accordance with DOE Order 5480.28, "Natural Phenomena Hazards Mitigation." The evaluation led to the following conclusions:

- within 100 yr, a magnitude 6 background earthquake is considered likely, and
- within 10,000 yr, a magnitude 7 Pajarito fault system quake is considered unlikely.

Whether a magnitude 6 or 7 earthquake would result in surface rupture depends on the local geologic conditions, including mesa topography and sequential welded and nonwelded Bandelier Tuff. Peak horizontal accelerations between 0.4 g and 0.6 g were estimated for the sites included in the study. While TA-54 was not included in the study, its geology is similar to two other sites considered (TA-18 and TA-46); results of the study were applied in the safety analysis report for MDA G (LANL 1995, 63300). In the SAR, the maximum design-basis earthquake considered that facility structures must be capable of withstanding was 0.57 g. Such an earthquake was determined not to pose a risk in terms of waste buried below the surface.

B-3.4 Soils

Soils of Mesita del Buey form from the weathering of the Tshirege Member tuffs (phenocrysts and phenocryst fragments, devitrified glass, and minor lithic fragments) and wind-blown sources. Soils on the flanks of the mesa are developed on Tshirege Member tuffs and colluvium with additions from wind-blown and water-transported sources. Native soils have been disturbed by waste management operations over much of the surface of the mesa, but when present, native soils are thickest near the center of the mesa and thinner toward the edges. In general, soils can be considered thin and poorly developed on the mesa surface; they tend to be sandy in texture near the surface and are more clay-like beneath the surface. More highly developed soil profiles exist on the north-facing slopes; they tend to be richer in organic matter. Soil profiles on the south-facing slopes tend to be poorly developed. Soil-forming processes have been identified along fractures in the upper part of the mesa, and the translocation of clay minerals from surface soils into fractures has been described at Mesita del Buey (Reneau and Vaniman 1998, 63135). A discussion of the soils in the Los Alamos area is located in Section 2.5.1.3 of the Environmental Restoration (ER) Project installation work plan (LANL 1995, 49822). The soils on the mesa top at TA-54 were mapped by Nyhan et al. (1978, 5702).

B-4.0 HYDROLOGY

The hydrogeology of the Pajarito Plateau is generally separable in terms of mesas and canyons forming the plateau. Mesas are generally devoid of water, both on the surface and within the rock forming the mesa. Canyons range from wet to relatively dry; the wettest canyons contain continuous streams and contain perennial groundwater in the canyon-bottom alluvium. Dry canyons have only occasional stream flow and may lack alluvial groundwater. Intermediate perched groundwater has been found at certain locations on the plateau at depths ranging between 100 ft and 400 ft (30 m and 122 m). The regional aquifer is found at depths of about 600 ft to 1200 ft (180 m and 360 m).

B-4.1 Hydrogeologic Conceptual Model

The hydrogeologic model (Figure B-4.1-1) shows that relatively small volumes of water move beneath mesa tops under natural conditions; this is because of low rainfall, high evaporation, and efficient water use by vegetation. Atmospheric evaporation may extend deeper into mesas, further inhibiting downward flow.

The amount of mesa-top recharge along the western portion of the Laboratory is uncertain. Higher rainfall, increased vegetative cover, and increased welding and jointing of the tuff might lead to different recharge rates than those observed in better-studied portions of the Laboratory. Mesa-top recharge can be locally significant under disturbed surface conditions. Such change occurs when the soil is compacted, when the vegetation is disturbed, or when more water is artificially added to the hydrologic system by features such as blacktop, lagoons, or effluent disposal. Fractures within mesas do not enhance the movement of dissolved contaminants unless saturated conditions develop. Contaminants in vapor form readily migrate through mesas. Vapors denser than air will sink.

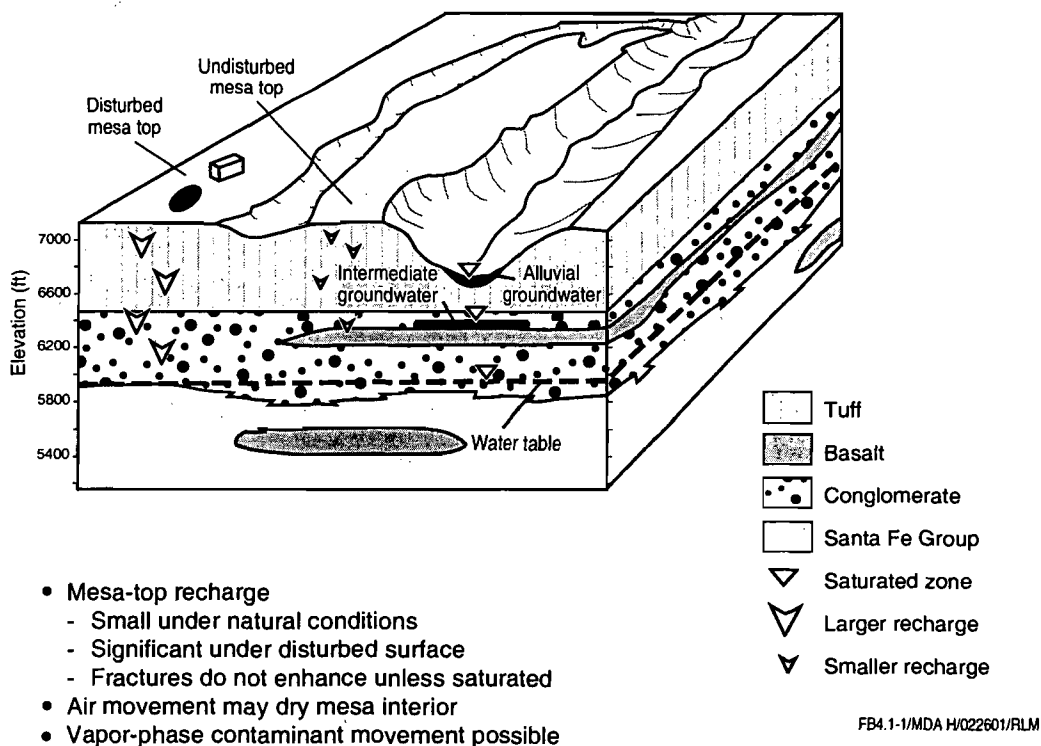


Figure B-4.1-1. Hydrogeologic conceptual model for mesas

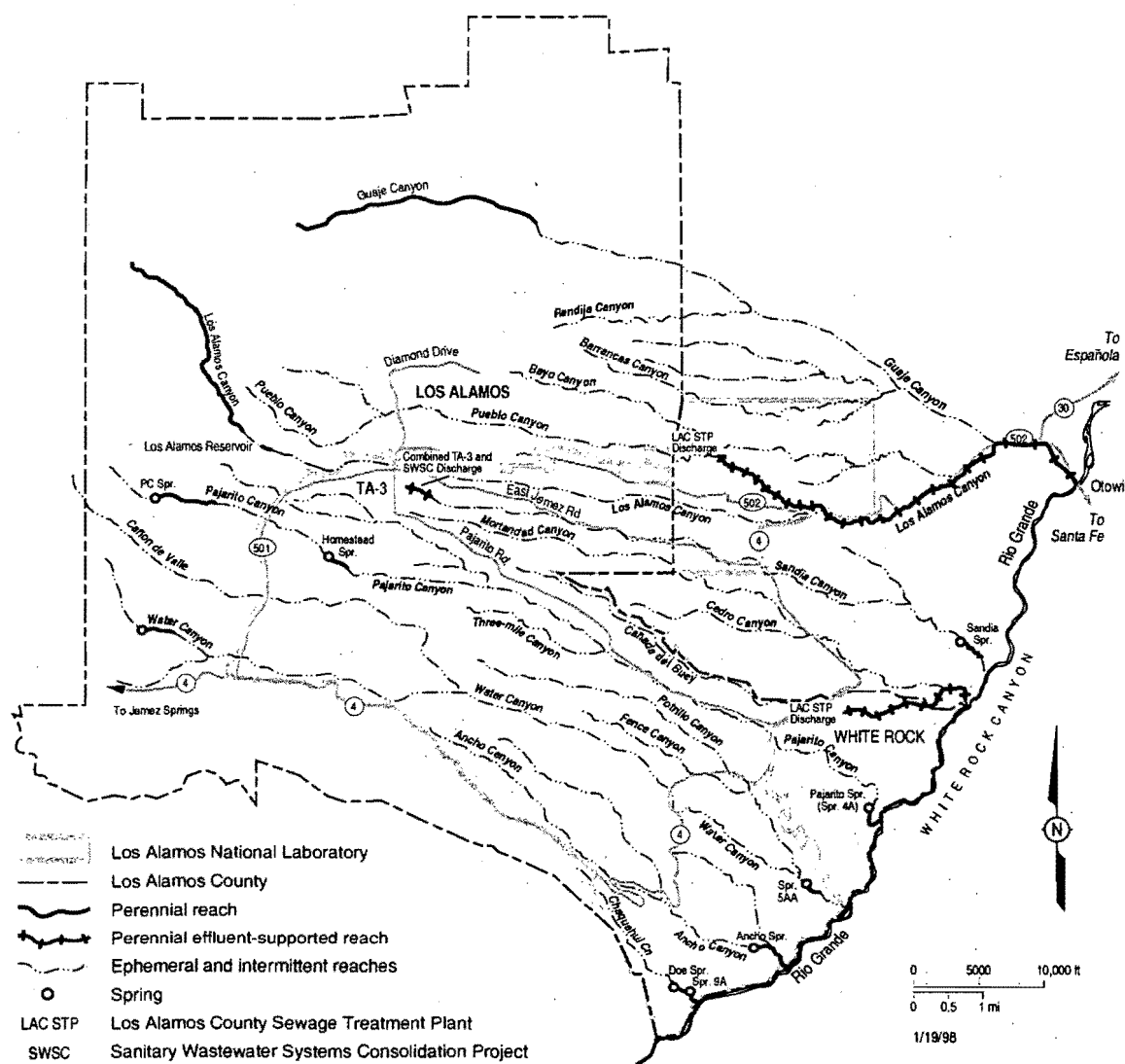
B-4.2 Surface Water

The Rio Grande is the master stream in north-central New Mexico. All surface water drainage and groundwater discharge from Pajarito Plateau ultimately arrive at the Rio Grande. The Rio Grande at Otowi, just east of Los Alamos, has a drainage area of 14,300 mi² (37,180 km²) in southern Colorado and northern New Mexico. The discharge for the period of record (1890–1985) has ranged between a minimum of 6980 ft³ per second (1.7 m³ per second) in 1902 and 24,400 ft³ per second (690.8 m³ per second) in 1920. The river transports about 1 million tons (910,000 metric tons) of suspended sediments past Otowi annually (Graf 1993, 23251). Essentially all Rio Grande flow passes through Cochiti Reservoir (downstream of the Laboratory), which began filling in 1976. The dam is expected to trap at least 90% of the sediments carried by the river (Graf 1993, 23251).

Figure B-4.2-1 shows the locations of the major surface water drainages in the Los Alamos area. Included in Figure B-4.2-1 are the ephemeral, intermittent, and perennial reaches of surface waters; the major wastewater effluent-created reaches; and springs. Naturally perennial surface water reaches are located in Ancho, Pajarito, and Chaquehui Canyons. Within Laboratory boundaries, perennial reaches in the lower portions of Ancho Canyon and Chaquehui Canyon are close enough to the Rio Grande that they extend to the river without being depleted. In Pajarito Canyon, about 1 mi (1.6 km) east of State Road 501, a spring (sometimes called Homestead Spring) feeds a perennial reach a few hundred yards long, followed by an intermittent reach that flows varying distances, depending on climate conditions. Another perennial reach in Pajarito Canyon is located west of the Laboratory boundary below PC Spring; it terminates by infiltration into the alluvium (LANL 1998, 59577). Occasionally, during heavy runoff years, Pajarito Canyon sustains flow, which sometimes extends as far as the Rio Grande (LANL 1998, 59577). Essentially all other reaches of canyons (including Cañada del Buey) within the Laboratory's boundaries are ephemeral; that is, they flow in response to precipitation or snowmelt in the immediate locality. Snowmelt recharges the alluvial groundwater, and discharge from springs supports stream flow for a somewhat longer period.

The canyons of 11 drainage areas, with a total area of 82 mi² (213.2 km²), pass through the Laboratory's eastern boundary. Runoff from heavy thunderstorms and heavy snowmelt reaches the Rio Grande several times a year in some drainages. Los Alamos, Pajarito, and Water Canyons have drainage areas upstream of the east Laboratory boundary that are greater than 10 mi² (26 km²). Pueblo Canyon has 8 mi² (20.8 km²), and the rest have less than 5 mi² (13 km²). Theoretical maximum flood peaks range between 24 ft³ per second (0.68 m³ per second) for a 2-yr frequency and 686 ft³ per second (19.4 m³ per second) for a 50-yr frequency (McLin 1992, 12014). The overall flooding risk to community and Laboratory buildings is low because nearly all the structures are located on the mesa tops, from which runoff drains rapidly into the deep canyons.

There are no streams on Mesita del Buey; water flows only as stormwater and snowmelt runoff on the mesa and in small drainages off the mesa to the north and the south. Stormwater flows at a number of points along the perimeter of TA-54, as identified and characterized in the "Stormwater Pollution Prevention Plan," which is being prepared for the National Pollutant Discharge Elimination System Permit pursuant to the Clean Water Act. Flooding of the facility is, therefore, not a concern. As a result of runoff, surface erosion occurs, primarily as shallow sheet erosion on the relatively flat parts of the mesa and as channel erosion in major drainages from the mesa top. Runoff from summer storms reaches a maximum in less than 2 hr and lasts less than 24 hr. In contrast, runoff from spring snowmelt occurs over a period of several weeks at a low discharge rate. The amount of eroded material transported in runoff waters is generally higher in summer rainfall events than during snowmelt (Hollis et al. 1997, 63131, p. 2-33).



FB-4.2-1/MDA H RFI RPT/022601/RLM

Figure B-4.2-1. Surface water occurrences at Los Alamos (perennial and effluent-supported reaches from Stoker (1993, 56021))

Mesita del Buey is one of the drier mesas found at the Laboratory. Infiltration beneath the mesa appears to be very low, possibly only 0.04 in./yr (1 mm/yr) and occurs during snowmelts or intense summer thunderstorms, which leads to slightly higher moisture contents within the uppermost few meters of the mesa surface. During dry periods, evapotranspiration removes moisture from the surface of the mesa; permeable zones such as fractures and surge beds act as conduits for air and aid in the drying of the mesa (Turin and Rosenberg 1996, 63559). Net infiltration during these alternating infiltration episodes and normal drying conditions is difficult to quantify.

At the Laboratory, surface water runoff and sediment transport are among the potential migration pathways by which contaminants might be transported to off-site receptors. Surface water may also access subsurface contaminants exposed by soil erosion. Soil erosion is dependent on several factors, including soil properties, the amount of vegetative cover, the slope of the contaminated area, exposure, the intensity and frequency of precipitation, and seismic activity.

The Laboratory's ER Project has assessed sediment transport and erosion concerns at over 1000 potential release sites (PRSs). The surface water assessment provides a basis for prioritizing and scheduling actions to control erosion of potentially contaminated soils at specific PRSs. The procedure is a two-part evaluation. Part A is a compilation of existing PRS analytical data, site maps, and knowledge-of-process information. Part B is an assessment of the erosion/sediment transport potential at the PRS. Erosion potential is numerically rated from 1 to 100 using a matrix system. PRSs that score below 40 have a low erosion potential, those that score from 40 to 60 have a medium erosion potential, and those that score above 60 have a high erosion potential. Part A of this assessment is initiated and completed by the Laboratory's ER Project; Part B is completed by the Laboratory's Water Quality and Hydrology Group (ESH-18). A Surface Water Assessment Team, composed of representatives from the ER Project, ESH-18, the Laboratory's Facility Management Group (FSS-7), and the NMED DOE Oversight Bureau, evaluates each completed assessment. If necessary, a best management practice or other action is implemented based on the results of the assessment. PRS 54-004, MDA H, has a score of 45.6, indicating a moderate erosion potential. The calculated erosion matrix score includes 3.6 for site setting, a runoff score of 35.0, and a run-on score of 7.0. The surface water assessment for MDA H is attached at the end of this appendix.

B-4.3 Groundwater

Groundwater in the area of the Laboratory occurs as

- shallow alluvial groundwater in canyons,
- perched zones beneath some canyons and along the Jemez Mountains (within the Bandelier Tuff, the Cerros del Rio basalts, and the upper part of the Puye Formation), and
- the regional aquifer.

B-4.3.1 Alluvial Waters

The hydrologic characteristics of the canyons bordering Mesita del Buey may influence the hydrology beneath the mesa. To the north, Cañada del Buey contains an intermittent stream. The alluvium is thin; it ranges between 4 ft (1.2 m) and 19 ft (5.7 m), but the underlying weathered tuff ranges in thickness between 12 ft (3.7 m) and 39.6 ft (12 m) (LANL 1999, 64617, p. D-11). Nine observation wells and two moisture-access holes have been installed in Cañada del Buey (CDBO-1 through CDBO-4 in 1985 and CDBO-5 through CDBO-9, CDBM-1, and CDBM-2 in 1992) to detect alluvial water (Figure B-4.3-1). Groundwater has been observed and sampled annually in two of the wells (CDBO-6 and CDBO-7) since their installation (Environmental Protection Group 1994, 45363; Environmental Surveillance Program 1999, 64034); the remaining holes are dry (Purtymun 1995, 45344, pp. 113–114). However, the saturation observed in CDBO-6 and CDBO-7 appears not to be present in the alluvium but rather is perched in the underlying tuff; additional discussion of this groundwater is presented in Section B-4.3.2.

Pajarito Canyon, to the south, also contains an intermittent stream, but the larger flow in this canyon maintains perennial groundwater in the alluvium. Semipermanent wetlands have developed in borrow pits that were excavated in lower Pajarito Canyon east of TA-18 and south of Mesita del Buey. The wetlands frequently contain ponded water from local stormwater runoff, Laboratory discharges, or streamflow (LANL 1998, 59577, p. 3-37). The surface of the water in the wetlands probably coincides with the alluvial water table (Environmental Restoration Project 1996, 55120, p. 6). Potentially one of the largest volumes of discharge to Pajarito Canyon may be from occasional purging of nearby municipal water supply well PM-2 (Figure B-4.3-2). Some years this well is only operated during the summer months, which requires several days of pumping 1000 to 1500 gpm (3800 to 5700 L/m) to clean out the well bore. At times, this may be one of the primary sources of surface water in lower Pajarito Canyon (LANL 1998, 59577, p. 3-37).

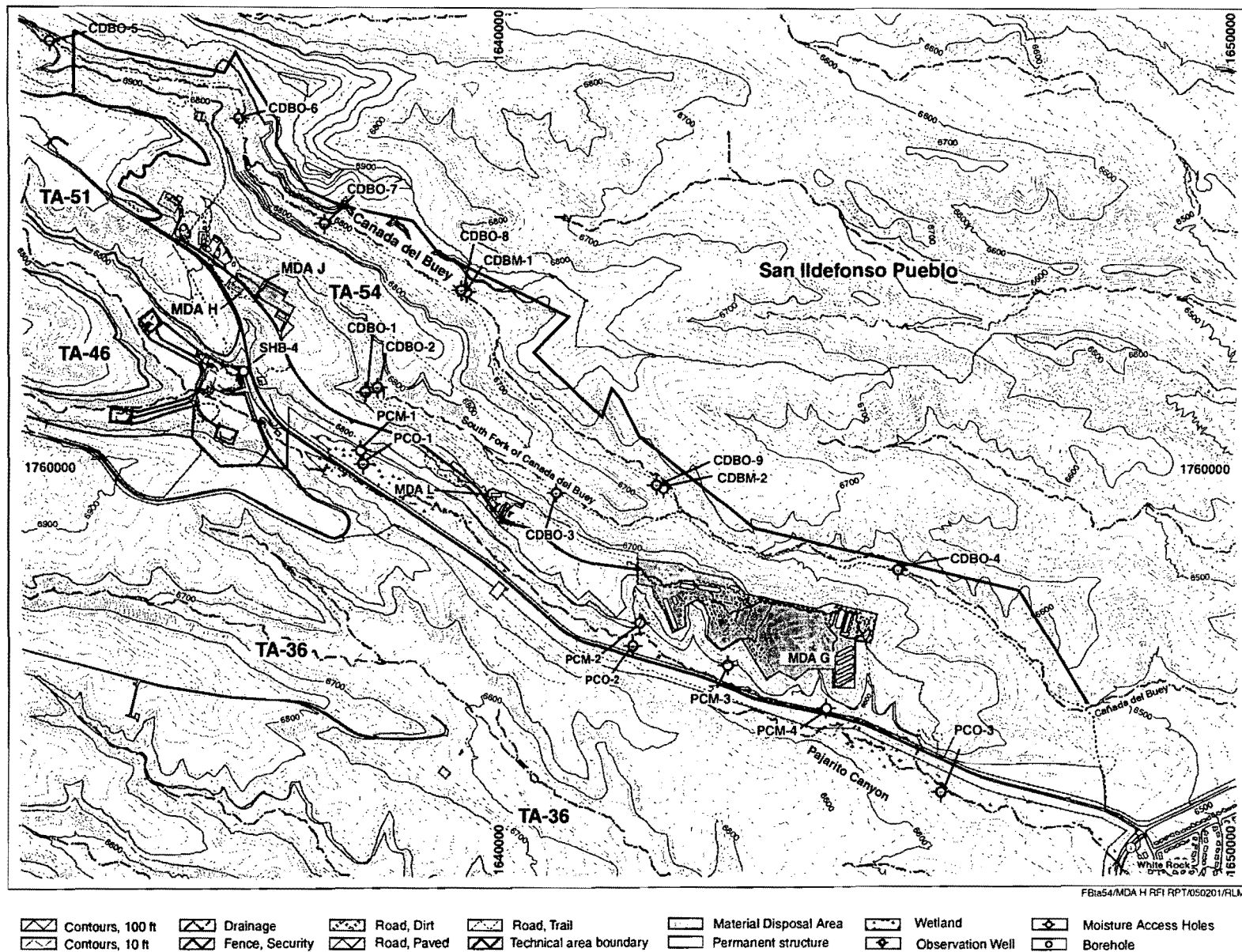


Figure B-4.3-1. Locations of wells and holes for locating alluvial and perched water at TA-54

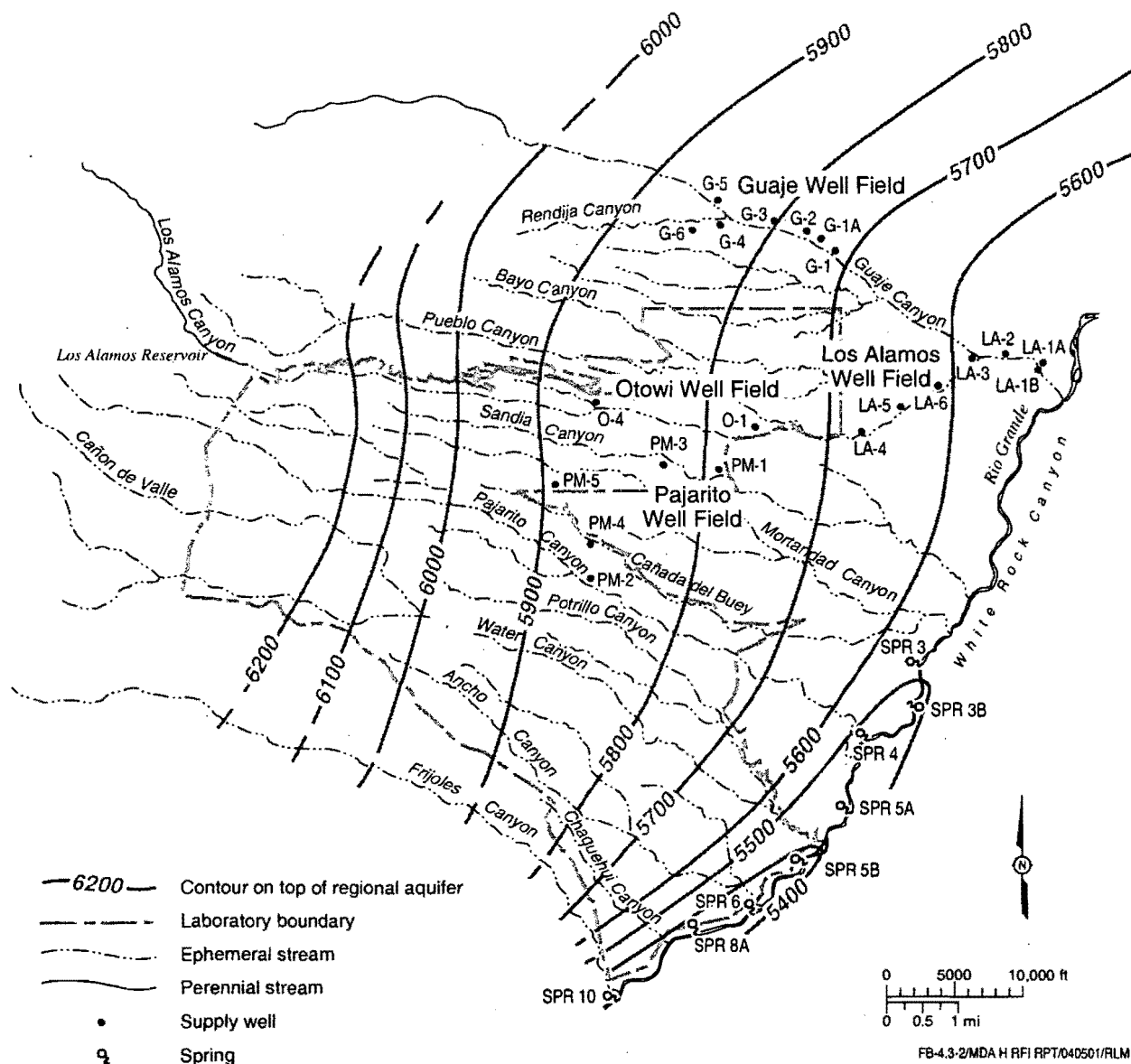


Figure B-4.3-2. Locations of wells and generalized water-level contours on top of the regional aquifer (modified from Purtymun 1984, 6513)

In 1985, three observation wells (PCO-1 through PCO-3) were installed in lower Pajarito Canyon east of TA-18 (Figure B-4.3-1). The three wells were drilled and cased in the canyon near the stream channel to outline the geology and provide a monitoring network of the water in the alluvium perched on the underlying tuff. Alluvial water was identified at depths of 1.3 ft (0.4 m) in PCO-1, 6.3 ft (1.9 m) in PCO-2, and 3.1 ft (0.93 m) in PCO-3 (Devaurs and Purtymun 1985, 7415, p. 12).

In Cañada del Buey, the infiltration rate estimated for the MDA G performance assessment (Hollis et al. 1997, 63131) using in situ moisture contents and hydrologic properties determined from cores is 0.17 in./yr (0.44 cm/yr). Data are not available to estimate infiltration rates in Pajarito Canyon. However, data are available from Mortandad Canyon, which has similar characteristics. Estimates of infiltration rates in that canyon range between 0.8 and 4 in./yr (2 and 10 cm/yr).

Evapotranspiration data for alluvial groundwater in Pajarito Canyon and Cañada del Buey are not available. However, estimates for nearby watersheds are available for comparison. Some studies for Mortandad Canyon indicate approximately 20% of the input to the stream channel is ultimately lost to evapotranspiration (Purtymun 1974, 5476, p. 7). A study of the Los Alamos Canyon system indicated that approximately 75% to 85% of the total input to the watershed is lost to evapotranspiration (Gray 1997, 58208, p. 68).

B-4.3.2 Perched Waters

No perched groundwater has been identified below Mesita del Buey (LANL 1998, 59599). In 1985, four moisture-access holes (PCM-1 through PCM-4) were installed in lower Pajarito Canyon north of the stream channel along the mesa wall to outline the aquifer and to determine whether the aquifer extended beyond the alluvium (Figure B-4.3-1). The moisture-access holes were drilled to depths ranging between 60 ft (18 m) and 100 ft (30 m); all four holes were dry. These holes "document that perched water in Pajarito Canyon, adjacent to Mesita del Buey, is confined to the alluvium in the stream channel and does not extend to the flank of the canyon" (Devaurs and Purtymun 1985, 7415, p. 12).

No perched intermediate zones of saturation have been delineated beneath Pajarito Canyon; however, possible intermediate wet zones have been reported in two boreholes at TA-18. In borehole SHB-4 (Figure B-4.3-1), wet core samples were retrieved from the interval of 125 ft to 145 ft (38 m to 44 m) within the Cerro Toledo interval. RFI borehole 54-1023 at MDA H (Figure 2.2-1) was drilled into the top of the Cerro Toledo interval but did not encounter saturation within or beneath the mesa. In PM-2 (Figure B-4.3-2), a possible wet zone was reported as "a show of water at 335 ft" (102 m), which may indicate a zone of intermediate perched groundwater (Cooper et al. 1965, 8582, p. 56; Davis et al. 1996, 55446). The pilot hole for this well was drilled using cable tools to a depth of 617 ft (185 m). No other mention of water in the unsaturated zone is found in the descriptive log of drill cuttings for this well (Cooper et al. 1965, 8582, pp. 55–61). Electrical resistivity (geophysical) logs of the borehole at PM-2 did not confirm the presence of water at 335 ft (102 m). The middle of the Otowi Member is present in PM-2 at a depth of 335 ft (102 m); this zone has not previously been observed to contain perched groundwater.

In Cañada del Buey, an isolated 0.5-mi-long (0.8-km-long) segment of saturation has been identified in boreholes CDBO-6 and CDBO-7 (Figure B-4.3-1). The saturation may represent a perched groundwater zone present in the colonnade tuff at the base of unit 1v of the Tshirege Member of the Bandelier Tuff (LANL 1999, 64617, p. 115) (Figure B-4.3-1). When the holes were drilled in 1992, a 10-ft-thick (3-m-thick) perched water zone was encountered from 34 ft to 44 ft (10.3 m to 13.4 m) in CDBO-6, and a 1-ft- to 2-ft-thick (0.3-m- to 0.6-m-thick) zone of perched groundwater was encountered in CDBO-7 (the depth of the zone was not stated in the drilling information but was probably between 38 ft and 39 ft [11.6 m and 11.9 m]) (Environmental Protection Group 1995, 50285, p. VII-26; Purtymun 1995, 45344, p. 131; LANL 1999, 64617, p. 115). The depth of the alluvium at these two boreholes is 19 ft (5.7 m); the tops of the 10-ft screened intervals within the boreholes are located approximately 15 ft (CDBO-6) and 10 ft (CDBO-7) below the base of the overlying alluvium and are within the tuff (LANL 1999, 64617, pp. D-9 and D-11). Since 1992, water levels have ranged between 0 ft (dry) and 12 ft (saturated) in CDBO-6 and between 0 ft (dry) and 7 ft (saturated) in CDBO-7 (LANL 1996, 55430, p. 4-16). Water levels have typically been measured three times each year since 1995. Significant seasonal variations are not apparent, and the water levels have typically varied by less than 5 ft (1.5 m) (LANL 1999, 64617, p. 3-117). Laboratory group ESH-18 has previously identified the source of the saturation as purge water from nearby municipal water supply well PM-4 (Figure B-4.3-2) because the alluvium is dry upstream of the purge water entry point. Discharges from PM-4 occurred twice in 1998 but only once in the previous four years. Such limited releases would be insufficient to maintain saturation found at the two alluvial observation wells

(Environmental Surveillance Program 1999, 64034, p. 136). It is unknown whether the observed perched saturated zone extends laterally in a direction perpendicular to the stream channel.

B-4.3.3 Regional Aquifer

The regional aquifer of the Los Alamos area is the only aquifer capable of large-scale municipal water supply (Purtymun 1984, 6513). There have been 21 supply wells and 10 test wells drilled into the regional aquifer on or adjacent to the Pajarito Plateau. The 21 supply wells are in four well fields: Los Alamos (seven wells), Guaje (seven wells), Pajarito (five wells), and Otowi (two wells). These well fields are identified in Figure B-4.3-2. The hydrologic characteristics of the regional aquifer measured at each of the supply wells and at eight of the test wells differ because of the geology of the aquifer and the thickness of the saturated zone penetrated by the well.

The Pajarito Field (the field nearest TA-54) contains the most productive supply wells, as suggested by the characteristics shown in Table B-4.3-1. The average saturated thickness of the regional aquifer penetrated by the Pajarito Field wells is 1810 ft (550 m). The age of water in the regional aquifer ranges between a few thousand and more than 40,000 yr, with the youngest water occurring to the west and the oldest to the east. A portion of the regional aquifer discharges into the Rio Grande east of the Laboratory; the 11-mi (18-km) reach of the Rio Grande in White Rock Canyon receives about 5500 acre-ft (6.8 million m³) annually as discharge from the aquifer.

Table B-4.3-1
Hydrologic Characteristics of Pajarito Field Water Supply Wells

Well Designation	Saturated Thickness, ft (m)	Pumping Rate, gal./min. (L/m)
PM-2	1739 (530)	1401 (5390)
PM-4	1870 (570)	1489 (5728)
PM-5	1910 (582)	2019 (7764)

The surface of the regional aquifer rises westward from the Rio Grande within the Santa Fe Group into the lower part of the Puye Formation beneath the central and western part of the Pajarito Plateau (Figure B-4.3-2). The depths to groundwater below the mesa tops range between about 1200 ft (366 m) along the western margin of the plateau and about 600 ft (183 m) at the eastern margin. The regional aquifer is separated from the alluvial groundwater and intermediate perched zone groundwater by 350 ft to 620 ft (106.7 m to 189 m) of tuff, basalt, and sediments (Environmental Protection Group 1993, 23249). The regional aquifer exhibits artesian conditions in the eastern part along the Rio Grande (Purtymun 1984, 6513). Continuously recorded water-level measurements collected in test wells since the fall of 1992 indicate that, throughout the plateau, the regional aquifer responds to barometric and earth tide effects in the manner typical of confined aquifers.

The hydraulic gradient of the regional aquifer averages about 60 to 80 ft/mi within the Puye Formation but increases to 80 to 100 ft/mi along the eastern edge of the plateau as the groundwater enters the less permeable sediments of the Santa Fe Group. The rate of movement of groundwater in the upper section of the aquifer varies depending on the materials in the aquifer. Aquifer tests indicate that the rate of movement ranges between 20 ft/yr in the Tesuque Formation and 345 ft/yr in the more permeable Puye Formation (Purtymun 1984, 6513). The highest-yielding water supply wells are located within the late Miocene trough described by Purtymun (1984, 6513).

There is considerable uncertainty regarding recharge along the Jemez Mountains. Infiltration of stream flow occurs along the mountain flanks, but the limited drilling to date generally has not indicated the presence of significant recharge. Major recharge of the regional aquifer from the west is inferred because the piezometric surface slopes downward to the east (Figure B-4.3-2). Cushman (1965, 8584) suggested three sources of recharge: infiltration of runoff in canyons, underflow from the Valles Caldera through the Tschicoma Formation, and infiltration on mesas. However, a large quantity of hydrologic, structural, and geochemical data indicate that the caldera may not serve as an appreciable source of recharge to the regional aquifer (Conover et al. 1963, 57044; Griggs 1955, 8795; Goff 1991, 57039). Furthermore, natural recharge through undisturbed Bandelier Tuff on the mesa tops is believed to be insignificant (Purtymun and Kennedy 1971, 4798; Kearl et al. 1986, 15368), and few or no data exist to support an evaluation of canyon runoff as a recharge source.

The total volume of annual recharge near the Pajarito Plateau is apparently less than the quantity of municipal water production (approximately 5000 acre-ft/yr). This is based on an overall decline in regional aquifer water levels across the plateau since pumping began in the 1950s.

B-4.4 Vadose Zone

The region beneath the mesa surface and above the regional aquifer is referred to as the vadose zone. The source of moisture in the vadose zone is precipitation, but much of the precipitation is removed as runoff, evaporation, and transpiration. The subsurface vertical movement of the remaining water (often referred to as recharge) is influenced by properties and conditions of the vadose zone.

Two properties of rock that influence fluid flow are the degree of welding and devitrification, which are both effects of prolonged presence of residual gases and high temperatures when the rock was deposited. Because different units of the Bandelier Tuff were deposited at different temperatures and because individual units were laid out in variable thicknesses over different landscapes, cooling was not uniform. Consequently, welding varies spatially, both between and within separate depositional layers. There are several competing effects that determine moisture content and fluid flux in welded, devitrified tuff. Welded tuffs tend to be more fractured than nonwelded tuffs. While water moves slowly through the unsaturated tuff matrix, it can move relatively rapidly through fractures if nearly saturated conditions exist (Hollis et al. 1997, 63131). Modeling studies indicate that when fractures disappear at contacts between stratigraphic subunits, when fracture fills are encountered, or when coatings are interrupted, moisture is absorbed into the matrix. Thus, fractures may provide conduits for fluid flow but only in discrete, disconnected intervals of the subsurface. Because they are open to the passage of both air and water, fractures can have both wetting and drying effects, depending on the relative abundance of water in the fractures and matrix.

As a rule, the Bandelier Tuff, which forms Mesita del Buey, is very dry and does not readily transmit moisture. Most of the pore spaces in the tuff are small enough to be of capillary size and have a strong tendency to hold water against gravity by surface-tension forces. Moisture content is generally more variable near the top of the mesa than in the central portions as a result of variations in temperature, humidity, and evapotranspiration. Vegetation is very effective at removing moisture near the surface. During the summer rainy season when rainfall is highest, near-surface moisture content is variable because of the effects of higher rates of evaporation and of transpiration by vegetation, which flourishes during this time.

Table B-4.4-1 summarizes measurements and observations on core samples retrieved from boreholes drilled at MDA G. The properties listed in the table are

- lithology, which is a general macroscopic description of the rock;
- fracture spacing, which is the distance measured between fractures (in meters);
- fracture dip, which is the angle of the fracture relative to horizontal (in degrees);
- fracture aperture, which is the width of the fracture (in millimeters);
- mean density, which is the mass of rock per unit volume of rock (in grams per cubic centimeter);
- mean porosity, which is the ratio of the air-filled volume to the total volume of the rock (in percent);
- mean volumetric moisture, which is the ratio of the water volume to the total volume of the rock (in percent);
- saturation, which is the ratio of the pore volume containing water to the total porosity (in percent);
- saturated hydraulic conductivity (K_{sat}), which is the rate at which moisture moves through rock under the influence of gravity when the rock is fully saturated (in centimeters per second); and
- van Genuchten parameters θ_r , α , and n , which are derived parameters used to model moisture movement in rock (van Genuchten 1980, 63542).

These data are obtained from either intact tuff (e.g., fracture spacing), from direct measurements of rock samples from TA-54 (e.g., density), or from experiments performed on rock samples (e.g., K_{sat}). The van Genuchten parameters are derived from characteristic curves, which are relationships required to model unsaturated liquid flow through rock. They include moisture retention curves that describe the energy state or tension of pore water in tuff and the hydraulic conductivity (K) of the rock. The moisture tension curve of a material is the relationship between suction within the matrix and the volumetric water content (i.e., the volume of water contained in a volume of tuff) for a porous material. Hydraulic conductivity is simply the rate at which water can travel through a sample of rock or soil under the influence of gravity. In general, soils and rock have higher hydraulic conductivity when more moisture is present; the maximum occurs when the material is fully saturated with water and is called the saturated hydraulic conductivity. In unsaturated media, both the hydraulic conductivity and the tension are highly nonlinear functions of the water content and are complicated by hysteresis.

Unsaturated hydraulic conductivity curves for five units of the TA-54 subsurface are plotted in Figure 2-13 of the performance assessment report (Hollis et al. 1997, 63131). The graphs were made using samples of rock taken in each of the five main geologic units found within and below TA-54. The data plotted on the graph were obtained in experiments conducted on small samples of rock recovered from borehole cores. Unsaturated hydraulic conductivities are calculated using the van Genuchten parameters (van Genuchten 1980, 63542) and Mualem's model (Mualem 1976, 63543).

Characteristic curves like these are often used as a basis for mathematical models of unsaturated flow. For modeling purposes, the curves must be translated into mathematical equations. One popular curve-fitting function is the van Genuchten formulation. The van Genuchten method (van Genuchten 1980, 63542) requires three variables, α , n , and θ_r , to be evaluated to fit the curve to the measured data. The van Genuchten parameters α and n are derived hydraulic properties for modeling moisture flow in unsaturated materials. In general, materials with relatively high values of α can hold more water with less suction, while materials with a relatively large value of n may undergo large changes in moisture content with small changes in suction. The residual moisture content, θ_r , is defined as moisture that cannot be removed from the rock surface under natural conditions; it is typically an uncertain parameter in van Genuchten. Residual moisture is not well defined in arid regions where moisture may be transported in the vapor phase rather than the liquid phase. The van Genuchten parameters are listed in Table B-4.4-1.

Table B-4.4-1
Hydraulic Characteristics of MDA G Vadose Zone

Property	Tshirege Member Unit 2	Tshirege Member Unit 1vu	Tshirege Member Unit 1vc	Tshirege Member Unit 1g	Tsankawi/Cerro Toledo Interval	Otowi Member	Guaje Pumice	Cerros del Rio Basalts	Puye Formation
Thickness, ft (m)	40 (12.2)	45 (13.7)	25 (7.6)	50 (15.2)	5.9 (1.8)	120 (36.6)	12 (3.7)	>119 (>36.3)	~656 (~200)
Lithology Summary	Massive, crystal-rich, slightly welded, devitrified tuff; vapor-phase altered; pumice swarms; basal surge	Massive, crystal-rich nonwelded tuff; devitrified; pumiceous; crystal-rich lapilli	Massive, crystal-rich nonleaded tuff; pumiceous; pumice swarms; ash fall; crystal-rich lapel	Massive, nonwelded nonindurated tuff; vitric; pumiceous; crystal-rich lapilli	Massive air-fall tuff; large white-pumice lapilli; topical surge bed of crystals and ash	Massive, moderately crystal-rich, nonwelded, vitric tuff; ~30% pumice	Basal, nonwelded pumice lapilli bed; vitric	Dense, fractured, basaltic lava flows, with flow breccias and Puye interbeds	Fanglomerates and conglomerates; fluvialite and debris-flow deposits; interbedded ash and pumice falls, basalt flows
Fracture Spacing	3.3–4.3 ft, 1.0–1.3 m	3.3–4.3 ft, 1.0–1.3 m	No data, few fractures	No data, some fractures	No data, rare fractures	No data, few fractures	No data, rare fractures	~1.0 ft (~0.3 m) from observation	No data, poorly developed in outcrop
Fracture Dip and Aperture	87° median; .12-in. (3-mm) median	84° median; .12-in. (3-mm) median	No data, assumed vertical	No data, assumed vertical	No data, assumed vertical	No data	No data	~0.2 in. (~5 mm) from observation	No data, poorly developed in outcrop
Fracture Fill	72% filled; 9% plated; 19% open	82% filled or plated; 18% open	No data	No data	No data	No data; some caliche observed	No data	None observed	No data
Mean Density (g/cc)	1.37	1.26	1.20	1.14	1.12	1.2	No data	No data, 2.4–3.1 estimated	No data
Mean Porosity (%)	45.7	48.7	49.3	46.2	47.3	43.5	No data	No data	No data
Mean Volume Moisture (%)	2.57	1.89	10.88	8.94	14.00	11.5	No data	No data	No data
Saturation (%)	5.7	3.7	21.3	16.9	30.3	26.4	No data	No data	No data
Mean K_{sat} (cm/sec)	4.37E-7	1.48E-4	1.67E-4	188E-4	8.65E-4	2.49E-4	No data	No data	No data
van Genuchten									
θ_r	0.0	0.0	0.0	0.0	0.8	2.1	No data	No data	No data
α	0.0060	0.0030	0.0033	0.0053	0.0152	0.059	No data	No data	No data
n	1.890	1.932	1.647	1.745	1.506	1.713	No data	No data	No data

The data in Table B-4.4-1 show that the units beneath MDA G have volumetric moisture contents between about 2% and 14% by volume. The curves are very steep at low moisture contents, indicating that for a unit increase in water, there is a very large increase in hydraulic conductivity. The slopes of the conductivity curves generally level out when moisture content reaches about 7% by volume. The relatively flat portion of the curves indicates that hydraulic conductivities remain constant over moisture contents ranging between 10% and 30% by volume. This behavior is a function of the sample's pore-size distribution. At moisture contents greater than about 34% by volume, the conductivity curves again become very steep. Note that these are artificially high moisture contents obtained under experimental conditions. Such high moisture contents would naturally occur in the region of the Laboratory only with a major climatic change or artificial input of water, such as from an outfall.

Taken as a group, the hydraulic conductivity curves and tension curves are very similar among the geologic units, with one exception: the Tsankawi Pumice/Cerro Toledo interval characteristic curves show a much greater spread than the others. This reflects the highly varied size of the pore spaces in the rock as compared with other units because of the varied lithologies characteristic of this interval. In general, the curves indicate that the Tsankawi Pumice/Cerro Toledo interval may conduct water more readily than the other units of the Bandelier Tuff.

B-5.0 ECOLOGICAL RESOURCES

Biological resource field surveys have been conducted in the TA-54 area for compliance with the Federal Endangered Species Act of 1973; the New Mexico Wildlife Conservation Act; the New Mexico Endangered Species Act; Executive Order 11990, "Protection of Wetlands"; Executive Order 11988, "Floodplain Management"; 10 CFR 1022, "Compliance with Floodplain/Wetlands Environmental Review Requirements"; and DOE Order 5400.1, "General Environmental Protection Program."

No wetlands exist in the TA-54 area, but wetlands and floodplains exist in the lower portion of Pajarito Canyon. Possible threatened and endangered species for the area were identified, but no habitats were located. Further information is contained in "Biological Assessment of Environmental Restoration Program, Operable Unit 1148, TA-54" (Banar 1996, 58192).

Local Plant Species

The vegetation on Mesita del Buey is dominated by the piñon-juniper series of the Great Basin conifer woodland. One-seed juniper and piñon pines are the dominant tree species in undisturbed areas. Common shrub species include big sagebrush (*Artemisia tridentata*), wax currant (*Ribes cerceum*), four-wing salt bush (*Atriplex canescens*), currant (*Ribes* sp.), and mountain mahogany (*Cercocarpus betuloides*). Blue grama grass (*Bouteloua gracilis*), cryptogamic soil crust, and prickly pear cactus (*Opuntia* spp.) are the most common low-growing (understory) plants on the mesa top. Other common understory plants include snake weed (*Gutierrezia microcephala* and *Gutierrezia sarothrae*), pinque (*Hymenoxys richardsonii*), wild chrysanthemum (*Bahia dissecta*), leafy golden aster (*Chrysopsis filiosa*), purple horned-toothed moss (*Ceratodon purpureus*), several lichen species, three-awn grass (*Aristida* spp.), bottlebrush squirreltail (*Sitanion hystrix*), bluegrass (*Poa* spp.), false tarragon (*Artemisia dracunculus*), and a species of *Mammalaria* cactus (Hollis et al. 1997, 63131, p. 2-13). A representative list of average rooting depths for native plants is presented in Table B-5.0-1.

Table B-5.0-1
Average Rooting Depths of Piñon and Juniper Woodland Plants

Species	Common Name	Root Depth, ft (m)
<i>Quercus</i> spp.	Oak	10.5 (3.2)
<i>Gutierrezia sarothrae</i>	Snakeweed	9.5 (2.9)
<i>Ribes cereum</i>	Wax currant	9.5 (2.9)
<i>Falugia paradoxa</i>	Apache plume	8.5 (2.6)
<i>Rhus trilobata</i>	Squawbush	7.5 (2.3)
<i>Atriplex canescens</i>	Saltbush	7.2 (2.2)
<i>Chrysothamnus nauseosus</i>	Chamisa	6.9 (2.1)
<i>Artemisia tridentata</i>	Sagebrush	5.9 (1.8)
<i>Juniperus monosperma</i>	One-seed juniper	5.6 (1.7)
<i>Pinus ponderosa</i>	Ponderosa pine	4.9 (1.5)
<i>Bouteloua gracilis</i>	Blue grama	1.9 (0.58)
<i>Cercocarpus montanus</i>	Mountain mahogany	1.6 (0.5)
<i>Helianthus petiolaris</i>	Wild sunflower	1.5 (0.45)
<i>Opuntia polycantha</i>	Cactus	0.9 (0.28)
<i>Yucca angustifolia</i>	Yucca	0.3 (0.1)

In a study of 21 species of plants common at the Laboratory, roots were found to be most abundant in the upper 6.4 ft (2 m) of soil. Biomass of annual and perennial plant roots was greatest in the upper 3.3 ft (1 m), whereas ponderosa pine roots were nearly always found within the top 6.6 ft of the soil surface. Tap roots of chamisa, Apache plume, and oak extended over 6.6 ft (2 m) into the soil, and piñon pine and one-seed juniper roots have been found to extend greater than 20 ft (6 m) through fractures in the tuff (Hollis et al. 1997, 63131, p.2-13).

As a result of waste management operations at TA-54, many of the native understory plants on Mesita del Buey are being replaced by new species. Recently disturbed areas support plants such as goosefoot (*Chenopodium fremontii*), tumbleweed (*Salsola kali*), cutleaf evening primrose (*Oenothera caespitosa*), common sunflower (*Helianthus annuus*), and other colonizing species. As pits are closed, native grass species (e.g., blue grama) are planted on the top; these species provide extensive ground cover and have short roots. The density of this vegetative cover protects against erosion, while the shallow roots maximize transpiration of water.

Local Animal Species

Insects, reptiles, mammals, and birds inhabit the Laboratory region. Harvester ants are the most abundant insect at TA-54, while common reptiles include fence lizards (*Sceloporus undulatus*), Plateau striped whiptails (*Cnemidophorus velox*), gopher snakes (*Pituophis melanoleucus*), and garter snakes (*Thamnophis elegans*). Many mammals inhabit the Pajarito Plateau, including rodents, mule deer, elk, black bear, mountain lion, bobcat, fox, and coyote, all of which pass through the TA-54 vicinity at least occasionally. Pajarito Canyon and Cañada del Buey support a wide variety of bird species. In addition to a range of songbirds, a variety of nesting and migrating raptors have been identified in less-disturbed areas of the canyons (Hollis et al. 1997, 63131, p. 2-13).

Table B-5.0-2 lists some burrowing animals observed at TA-54, along with their maximum reported burrowing depths.

Table B-5.0-2
Maximum Recorded Depth of Burrows of Animals at TA-54

Species or Taxon	Common Name	Burrow Depth, ft (m)
<i>Pogonomyrmex spp.</i>	Harvester ant	9.8 (3.0)
<i>Gopheropus polyphemus</i>	Gopher tortoise	2.5 (0.75)
<i>Terrapene carolina</i>	Box turtle	0.3 (0.1)
<i>Blarina brevicaudata</i>	Short-tailed shrew	1.6 (0.5)
<i>Scalopus aquaticus</i>	Mole	2.0 (0.6)
<i>Microtus ochrogaster</i>	Prairie vole	0.7 (0.2)
<i>Peromyscus gossypinus</i>	Cotton mouse	2.5 (0.75)
<i>Ochrotomys nuttalli</i>	Golden mouse	0.4 (0.13)
<i>Perognathus parvus</i>	Pocket mouse	4.6 (1.4)
<i>Thomomys talpoides</i>	Pocket gopher	3.2 (<1)
<i>Dipodomys ordii</i>	Kangaroo rat	2.3 (0.7)
<i>Cynomys leucurus</i>	Prairie dog	6.0 (1.83)
<i>Peromyscus maniculatus</i>	Deer mouse	3.2 (<1)
<i>Marmota monax</i>	Woodchuck	4.9 (1.5)

B-6.0 CULTURAL RESOURCES

A cultural resource survey was conducted during the summer of 1991 at Operable Unit 1148, as required by the National Historic Preservation Act of 1966. A total of 68 archaeological sites have been located within the boundary of the operable unit. Of this number, 56 are eligible for inclusion on the National Register of Historic Places, and 12 have been declared ineligible. According to the RFI work plan, a report documenting the survey area, methods, results, and monitoring recommendations was to be transmitted to the New Mexico State Historic Preservation officer for concurrence in a determination of no effect (LANL 1992, 7669).

REFERENCES

The following list includes all references cited in this appendix. Parenthetical information following each reference provides the author, publication date, and the ER identification (ID) number. This information also is included in the citations in the text. ER ID numbers are assigned by the Laboratory's ER Project to track records associated with the Project. These numbers can be used to locate copies of the actual documents at the ER Project's Records Processing Facility and, where applicable, with the ER Project reference library titled "Reference Set for Material Disposal Areas, Technical Area 54."

Copies of the reference library are maintained at the NMED Hazardous Waste Bureau; the DOE Los Alamos Area Office; United States Environmental Protection Agency, Region VI; and the ER Project Material Disposal Areas Focus Area. This library is a living collection of documents that was developed to ensure that the administrative authority has all the necessary material to review the decisions and actions

proposed in this document. However, documents previously submitted to the administrative authority are not included.

Abeelee, W., M. Wheeler, and B. Burton, October 1981. "Geohydrology of Bandelier Tuff," Los Alamos National Laboratory report LA-8962-MS, Los Alamos, New Mexico. (Abeelee et al. 1981, 6273)

Banar, A., February 1996. "Biological Assessment for Environmental Restoration Program, Operable Unit 1148, TA-54 and TA-51," Los Alamos National Laboratory report LA-UR-93-1054, Los Alamos, New Mexico. (Banar 1996, 58192)

Bowen, B., May 1990. "Los Alamos Climatology," Los Alamos National Laboratory report LA-11735-MS, Los Alamos, New Mexico. (Bowen 1990, 6899)

Conover, C., C. Theis, and R. Griggs, 1963. "Geology and Hydrology of Valle Grande and Valle Toledo, Sandoval County, New Mexico," Geological Survey Water-Supply Paper 1619-Y, Washington, DC. (Conover et al. 1963, 57044)

Cooper, J. B., W. D. Purtymun, and E. C. John, July 1965. "Records of Water Supply Wells Guaje Canyon 6, Pajarito Mesa 1, and Pajarito Mesa 2, Los Alamos, New Mexico, Basic Data Report," US Geological Survey, Albuquerque, New Mexico. (Cooper et al. 1965, 8582)

Cushman, R., 1965. "An Evaluation of Aquifer and Well Characteristics of Municipal Well Fields in Los Alamos and Guaje Canyons Near Los Alamos, New Mexico," Geological Survey Water-Supply Paper 1809-D, Washington, DC. (Cushman 1965, 8584)

Davis, T. D., S. Haines, and K. T. Hill, July 1996. "Hydrogeologic Evaluation of Los Alamos National Laboratory," NMED-HRMB-96/1, Hazardous and Radioactive Materials Bureau, New Mexico Environment Department, Santa Fe, New Mexico. (Davis et al. 1996, 55446)

Devaurs, M., and W. D. Purtymun, 1985. "Hydrologic Characteristics of the Alluvial Aquifers in Mortandad, Cañada del Buey, and Pajarito Canyons," Los Alamos National Laboratory report LA-UR-85-4002, Los Alamos, New Mexico. (Devaurs and Purtymun 1985, 7415)

Environmental Protection Group, August 1993. "Environmental Surveillance at Los Alamos During 1991," Los Alamos National Laboratory report LA-12572-ENV, Los Alamos, New Mexico. (Environmental Protection Group 1993, 23249)

Environmental Protection Group, July 1994. "Environmental Surveillance at Los Alamos during 1992," Los Alamos National Laboratory report LA-12764-ENV, Los Alamos, New Mexico. (Environmental Protection Group 1994, 45363)

Environmental Protection Group, October 1995. "Environmental Surveillance at Los Alamos during 1993," Los Alamos National Laboratory Report LA-12973-ENV, Los Alamos, New Mexico. (Environmental Protection Group 1995, 50285)

Environmental Restoration Project, June 21, 1996. "Corrective Action Report for TA-18," Revision 1, Los Alamos, New Mexico. (Environmental restoration Project 1996, 55120)

Environmental Surveillance Program, September 1999. "Environmental Surveillance at Los Alamos During 1998," Los Alamos National Laboratory report LA-13633-ENV, Los Alamos, New Mexico. (Environmental Surveillance Program 1999, 64034)

- Goff, F., April 3, 1991. "Isotopic Results on Eight White Rock Canyon Springs," Los Alamos National Laboratory memorandum to A. Stoker, Los Alamos, New Mexico. (Goff 1991, 57039)
- Graf, W., March 1993. "Geomorphology of Plutonium in the Northern Rio Grande," Los Alamos National Laboratory report LA-UR-93-1963, Los Alamos, New Mexico. (Graf 1993, 23251)
- Gray, R., May 1997. "Hydrologic Budget Analysis and Numerical Simulations of Groundwater Flow in Los Alamos Canyon Near Los Alamos, New Mexico," M.S. thesis, Volume 1, University of New Mexico, Albuquerque, New Mexico. (Gray 1997, 58208)
- Griggs, R., 1955, "Geology and Groundwater Resources of the Los Alamos Area, New Mexico," United States Department of the Interior Geological Survey report. (Griggs 1955, 8795)
- Hollis, D. et al., March 1997. "Performance Assessment and Composite Analysis for Los Alamos National Laboratory Material Disposal Area G," Los Alamos National Laboratory report LA-UR-97-85, Los Alamos, New Mexico. (Hollis et al. 1997, 63131)
- Jansen, J., and T. Taylor, April 7, 1995. "Notification of Groundwater Encountered Below Material Disposal Area (MDA) L," Los Alamos National Laboratory memorandum EM/ER:95-132 to B. Driscoll, Los Alamos, New Mexico. (Jansen and Taylor 1995, 45978)
- Kearl, P., J. Dexter, and M. Kautsky, December 1986. "Vadose Zone Characterization of Technical Area 54, Waste Disposal Areas G and L, Los Alamos National Laboratory, New Mexico, Report 4: Preliminary Assessment of the Hydrologic System through Fiscal Year 1986," UNC Technical Services report GJ-54, Grand Junction, Colorado. (Kearl et al. 1986, 15368)
- LANL (Los Alamos National Laboratory), May 1992. "RFI Work Plan for Operable Unit 1148," Los Alamos National Laboratory report LA-UR-92-855, Los Alamos, New Mexico. (LANL 1992, 7669)
- LANL (Los Alamos National Laboratory), February 1995. "Installation Work Plan for Environmental Restoration," Revision 4, Los Alamos National Laboratory report LA-UR-95-740, Los Alamos, New Mexico. (LANL 1995, 49822)
- LANL (Los Alamos National Laboratory), August 30, 1995. "Safety Analysis Report for TA-54 Area G," Los Alamos National Laboratory report CST14G-REPORT-003, Los Alamos, New Mexico. (LANL 1995, 63300)
- LANL (Los Alamos National Laboratory), December 6, 1996. "Hydrogeologic Workplan," Revision 1.0, Los Alamos National Laboratory report, Los Alamos, New Mexico. (LANL 1996, 55430)
- LANL (Los Alamos National Laboratory), May 22, 1998. "Hydrogeologic Workplan Los Alamos National Laboratory," Los Alamos National Laboratory report, Los Alamos, New Mexico. (LANL 1998, 59599)
- LANL (Los Alamos National Laboratory), September 1998. "Work Plan for Pajarito Canyon," Los Alamos National Laboratory report LA-UR-98-2550, Los Alamos, New Mexico. (LANL 1998, 59577)
- LANL (Los Alamos National Laboratory), September 1999. "Work Plan for Sandia Canyon and Cañada del Buey," Los Alamos National Laboratory report LA-UR-99-3610, Los Alamos, New Mexico. (LANL 1999, 64617)
- McLin, S., August 1992. "Determination of 100-Year Floodplain Elevations at Los Alamos National Laboratory," Los Alamos National Laboratory report LA-12195-MS, Los Alamos, New Mexico. (McLin 1992, 12014)

Mualem, Y., June 1976. "A New Model for Predicting the Hydraulic Conductivity of Unsaturated Porous Media," in *Water Resources Research*, Vol. 12, No. 3, pp. 513–522. (Mualem 1976, 63543)

Nyhan, J., L. Hacker, T. Calhoun, and D. Young, June 1978. "Soil Survey of Los Alamos County, New Mexico," Los Alamos Scientific Laboratory report LA-6779-MS, Los Alamos, New Mexico. (Nyhan et al. 1978, 5702)

Plum, H. L., June 2, 1999. "Closure Plan for Los Alamos National laboratory Technical Area-54, Area J Solid Waste Facility," Department of Energy memorandum LAAME:6JP-136 to Butch Tongate, Los Alamos, New Mexico. (Plum 1999, 63136)

Purtymun, W., September 1974. "Dispersion and Movement of Tritium in a Shallow Aquifer in Mortandad Canyon at the Los Alamos Scientific Laboratory," Los Alamos Scientific Laboratory report LA-5716-MS, Los Alamos, New Mexico. (Purtymun 1974, 5476)

Purtymun, W., December 1975. "Geohydrology of the Pajarito Plateau with Reference to Quality of Water, 1949-1972," Los Alamos Scientific Laboratory report, Los Alamos, New Mexico. (Purtymun 1975, 11787)

Purtymun, W., January 1984. "Hydrologic Characteristics of the Main Aquifer in the Los Alamos Area: Development of Ground Water Supplies," Los Alamos National Laboratory report LA-9957-MS, Los Alamos, New Mexico. (Purtymun 1984, 6513)

Purtymun, W., January 1995. "Geologic and Hydrologic Records of Observation Wells, Test Holes, Test Wells, Supply Wells, Springs, and Surface Water Stations in the Los Alamos Area," Los Alamos National Laboratory report LA-12883-MS, Los Alamos, New Mexico. (Purtymun 1995, 45344)

Purtymun, W., and W. Kennedy, May 1971. "Geology and Hydrology of Mesita del Buey," Los Alamos Scientific report LA-UR-4660, Los Alamos, New Mexico. (Purtymun and Kennedy 1971, 4798)

Reneau, S. and D. Vaniman, December 1998. "Fracture Characteristics in a Disposal Pit on Mesita del Buey, Los Alamos National Laboratory," Los Alamos National Laboratory report LA-13539-MS, Los Alamos, New Mexico. (Reneau and Vaniman 1998, 63135)

Rogers, M., June 1977. "History and Environmental Setting of LASL Near-Surface Land Disposal Facilities for Radioactive Wastes (Areas A, B, C, D, E, F, G, and T)," Los Alamos Scientific Laboratory report LA-6848-MS, Vols. I and II, Los Alamos, New Mexico. (Rogers 1977, 5707 and 5708)

Stoker, A., March 31, 1993. "Direct Testimony of Alan K. Stoker on Behalf of Petitioners," before the New Mexico Water Quality Control Commission, Los Alamos, New Mexico. (Stoker 1993, 56021)

Turin, H., and N. Rosenberg, 1996. "A Conceptual Model for Flow in the Vadose Zone Beneath Finger Mesas of the Pajarito Plateau," *New Mexico Geological Society Forty-Seventh Annual Field Conference, September 25–28, 1996*, F. Goff et al., Ed., Los Alamos, New Mexico. (Turin and Rosenberg 1996, 63559)

van Genuchten, M., 1980. "A Closed-form Equation for Predicting the Hydraulic Conductivity of Unsaturated Soils," in *Soil Science Society of America Journal*, Vol. 44, pp. 892–898. (van Genuchten 1980, 63542)

Los Alamos National Laboratory

Environment, Safety & Health Division
ESH-18 Water Quality & Hydrology Group

Surface Water Assessment Erosion Matrix for PRS 54-004

CRITERIA EVALUATED		Erosion/Sediment Transport Potential			Calculated Score
		Low 0.1	Medium 0.5	High 1.0	
Site Setting (43)					
On mesa top	1	Defined based on topographic setting			1.0
Within bench of canyon	4				
Within the canyon floodplain but not watercourse	13				
Within bottom of canyon channel in watercourse	17				
Estimated % ground and canopy cover	13	>75%	25-75%	<25%	1.3
Slope	13	0-10%	10-30%	>30%	1.3
Surface Water Factors-Run-off (46)					
Visible evidence of runoff discharging? (Yes/No)	5	If no, score of 0 for runoff section.			5.0
		If yes, score 5 and proceed with section.			
Where does runoff terminate?	19	Other	Bench Setting	Drainage/Wetland	19.0
Has runoff caused visible erosion? (Yes/No)	22	Sheet	Rill	Gully	11.0
					If no, score as 0. If yes, calculate as appropriate.
Surface Water Factors-Run-on (11)					
Structures adversely affecting run-on (Yes/No)	7*	If yes, score as 7. If no, score as 0.			0.0
Current operations adversely impacting (Yes/No)	4	If yes, score as 4. If no, score as 0.			0.0
Natural drainages onto site (Yes/No)	7*	If yes, score as 7. If no, score as 0.			7.0
<i>*Select either structures or natural drainages.</i>					
MAX. POSSIBLE EROSION MATRIX SCORE:	100	Total Score			45.6

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SURFACE WATER
SITE ASSESSMENT

Part B: page 2 of 4

SITE INFORMATION

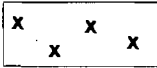
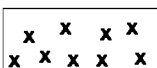
1a) PRS Number 1b) Structure Number 1c) FMU Number
2. Date/Time (M/D/Y H:M am/pm)

SITE SETTING (check all that apply)

3. ☒ On mesa top (a). ☐ In the canyon floor, but not in an established channel (c)
☐ Within a bench of a canyon (b). ☐ Within established channel in the canyon floor (d).

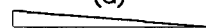
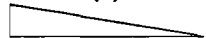
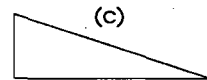
Explanation: Located near TA-54 West off of Pajarito Road. Mesa top setting with dirt/gravel access road on the south and west end. The PRS is surrounded by a security fence. MDA H.

4. Estimated ground and/or canopy cover at site: (deciduous leaves, pine needles, rocks, vegetation, trees,

(Illustration) (a)  (b)  (c) 
Estimated % of ground/canopy cov ☐ 0% to 25% ☐ 25% to 75% ☒ 75% to 100%

Explanation: Good vegetative cover with mixed grasses.

5. Steepest slope at the area impacted:

(a)  (b)  (c) 
☒ Less than 10% ☐ 10% to 30% ☐ 30% and greater

Explanation: Area generally flat with a gentle slope towards the south.

RUNOFF FACTORS

Y / N

- ☒ ☐ 6. Is there visible evidence of runoff discharging from site? If yes, answer a) - c) below:
☐ ☒ 6a) Is runoff channelized? If yes, describe ☐ Man-made channel. ☐ Natural channel.

Explanation: Runoff evidence exists south of the fenced area. A drainage swale/ditch exists between the fenced area and the access road.

RUNOFF FACTORS, CONT'D

6b) Where does evidence of runoff terminate?

☒ **Drainage or wetland (name)** Pajarito Canyon☐ **Within bench of canyon setting (name)**☐ **Other (i.e., retention pond, meadow, mesa top)****Explanation:** Sheet flow runoff flows to drainage swale/ditch which discharges to the mesa edge and into Pajarito Canyon.**Y / N**☒ ☐ 6c) Has runoff caused visible erosion at the site? If yes, explain below: ☐ Sheet ☒ Rill ☐ Gully**Explanation:** Rill erosion is occurring at one location along the southern fence line. The erosional feature intersects with the drainage swale/ditch.**RUN-ON FACTORS****Please rate the potential for storm water to run on to this site: (Check EITHER #7 or #9)**☐ ☒ 7. Are structures (i.e., buildings, roof drains, parking lots, storm drains) creating run-on to the site?**Explanation:** No structural impact.☐ ☒ 8. Are current operations (i.e., fire hydrants, NPDES outfalls) adversely impacting run-on to the site?**Explanation:** No operational impact.☒ ☐ 9. Are natural drainage patterns directing stormwater onto site?**Explanation:** Minor run-on to PRS from the northwestern portion of the site.**ASSESSMENT FINDING:**☒ ☐ 10. Based on the above criteria and the assessment of this site, does soil erosion potential exist? (REFER TO EROSION POTENTIAL MATRIX.)

Veenis, Steve

11. Signature of Water Quality/Hydrology RepresentativeSN

Initials of independent reviewer.

Check here when information is entered in database: ☒

This page is for ESH-18 notes, recommendations, and photos.

- Y / N
12. a) ☐ ☒ Is there visible trash/debris on the site?
- b) ☐ ☒ Is there visible trash/debris in a watercourse?

Description of existing BMPs:

- ☐ ☐ Are BMPs being properly maintained? If no, describe in "Other Internal Notes."
- ☐ ☐ Are BMPs effectively keeping sediment in place and reducing erosion potential?

OTHER INTERNAL NOTES:

Run-on diversion and sediment retention BMPs could help stabilize the site until permanent measures are implemented.

Appendix C

Results of Quality Assurance/Quality Control Activities

APPENDIX C RESULTS OF QUALITY ASSURANCE/QUALITY CONTROL ACTIVITIES

C-1.0 SUMMARY OF QUALITY ASSURANCE/QUALITY CONTROL ACTIVITIES

This appendix consists of an assessment of the quality of analytical results obtained in Resource Conservation and Recovery Act facility investigation (RFI) activities at Material Disposal Area (MDA) H. The data include results for sediment and borehole samples. Borehole samples were analyzed for radionuclides (by gamma spectroscopy), americium-241, tritium, inorganic chemicals (target analyte list [TAL] metals and cyanide), semivolatile organic compounds (SVOCs), volatile organic compounds (VOCs), pesticides, and polychlorinated biphenyls (PCBs). Sediment samples were analyzed for radionuclides (by gamma spectroscopy), americium-241, isotopic plutonium, isotopic thorium, isotopic uranium, strontium-90, tritium, inorganic chemicals (TAL metals and cyanide), pesticides, and PCBs. A summary of the analytical suites and method descriptions is included in Sections C-2.0, C-3.0, and C-4.0.

Quality assurance (QA), quality control (QC), and data validation procedures were implemented in accordance with the requirements of "Quality Assurance Project Plan Requirements for Sampling and Analysis" (LANL 1996, 54609) and the Los Alamos National Laboratory (the Laboratory) Environmental Restoration (ER) Project analytical services statement of work (SOW) for contract laboratories (LANL 1995, 49738). Results of the QA/QC activities were used to estimate accuracy, bias, and precision of the analytical measurements. QC samples, including method blanks, matrix spike samples, matrix spike duplicates, QC blind samples, and laboratory control samples (LCSs), were used to assess accuracy and bias. Internal standards, external standards, surrogates, carriers, and tracers were also used to assess accuracy. Duplicate samples were used to determine precision. The type and frequency of QC analyses are described in the ER Project analytical services SOW (LANL 1995, 49738). Other QC factors, such as sample preservation and holding times, were also assessed. The requirements for sample preservation and holding times are given in the standard operating procedure (SOP) ER-SOP-1.02, Rev. 0, "Sample Containers and Preservation."

Past Data Validation

Before April 1995, Laboratory Group CST-3 (Chemical Science and Technology) performed data validation for the ER Project; data collected, analyzed, and validated from this period of time were qualified according to the CST-3 system. A numeric code was assigned to document the review of the raw data results generated by the analytical laboratory. Depending on the review level, not all QA/QC criteria were examined. The general meaning of the CST-3 numeric codes are in Table C-1.0-1; specific meanings for the codes are in Section C-5.

Table C-1.0-1
CST-3 Review Codes

Review Level Numeric	Description
0	Invoked when personnel resources for data validation were low, workload volume was high, or expedited turnaround was requested
1	Less stringent review of data
2	More stringent review than level 1 but less stringent review than level 3
3	Most stringent review of data

Data validation results, including request numbers, sample identification numbers, and their associated qualifiers, are located in Section C-5.

Current Baseline Data Validation

Starting in April 1995, the Laboratory's ER Project baseline validation procedure (similar to a CST-3 Level 3 data review) was implemented; sample results after April 1995 were qualified using this procedure (ER-SOP 15.17, Rev. 0, "Baseline Analytical Data Validation"). The ER Project data validation process incorporates Laboratory-specific reason codes for qualifying data and adheres to the Environmental Protection Agency's (EPA) "Contract Laboratory Program National Functional Guidelines for Inorganic Data Review" (EPA 1994, 48639) and "Contract Laboratory Program National Functional Guidelines for Organic Data Review" (EPA 1994, 48640). Data packages received from the analytical laboratory were reviewed with respect to the national functional guidelines and Laboratory quality procedures for data validation. Data validation results, including request numbers, sample identification numbers, and their associated qualifiers, are located in Section C-5.

C-2.0 INORGANIC CHEMICALS

C-2.1 Inorganic Chemical Methods

Samples were analyzed for TAL metals and cyanide. Methods for the data set are shown in Table C-2.1-1. Mercury was analyzed by EPA Method 7471A, cold vapor atomic absorption (CVAA), and cyanide was analyzed by either EPA Method 9012 colorimetric analysis (ACOLR) or EPA Method 6010B, inductively coupled plasma emission spectroscopy (ICPES). The other TAL metals were analyzed by EPA Method 6010B, ICPES; EPA Method 6020, inductively coupled plasma mass spectroscopy (ICPMS); or EPA Method 7000 series, graphite furnace atomic absorption (GFAA). The qualifiers for inorganic analytes are provided in Section C-5.1.

Table C-2.1-1
Analytical Methods for Inorganic Chemical Analysis

Analytical Method	Analytical Description	Analytical Suite
EPA Method 6010B	ICPES	Aluminum, antimony, arsenic, barium, beryllium, calcium, cadmium, cobalt, chromium, copper, cyanide, iron, lead, magnesium, manganese, nickel, potassium, selenium, sodium, silver, thallium, vanadium, zinc
EPA Method 7060A	GFAA	Arsenic
EPA Method 9012	ACOLR	Cyanide
EPA Method 7721	GFAA	Lead
EPA Method 7741A	GFAA	Selenium
EPA Method 7841	GFAA	Thallium
EPA Method 6020	ICPMS	Antimony, lead, thallium
EPA Method 7471A	CVAA	Mercury

C-2.2 Inorganic Chemical QA/QC Samples

The LCSs, method blanks, matrix spike samples, laboratory duplicate samples, interference check samples, and serial dilution samples were analyzed to assess accuracy, bias, and precision. Each of these QA/QC sample types is defined in the ER Project analytical services SOW (LANL 1995, 49738) and described briefly below.

LCSs. This sample type serves as a monitor of the overall performance of each step, including sample digestion, during sample analysis. The analytical results for the samples were qualified if the LCS indicated an unacceptable bias in the measurement.

Method Blanks. This sample type is used as a measurement of bias and potential cross contamination. The blank results for inorganic chemical analyses were within acceptable limits for all the analyses.

Matrix Spike Samples. This sample type is designed to provide information about the effect of each sample matrix on the sample preparation procedures and analytical techniques.

Laboratory Duplicate Samples. This sample type assesses precision of inorganic chemical analyses.

Interference Check Samples. This sample type checks to make sure the instrument interelement correction factors are correct. The interference check solution is prepared to contain known concentrations of interfering elements that will provide an adequate test of the correction factors.

Serial Dilution Sample. This sample type is required for each matrix in a sample delivery group, with a minimum of one serial dilution sample per 20 samples. The samples are diluted by a factor of five, and the dilution-corrected results are compared to those of the undiluted parent sample.

Acceptance limits for each QA/QC sample are shown in Table C-2.2-1.

Table C-2.2-1
Inorganic QC Checks and Acceptance Limits

QC Check	Acceptance Limits
Initial and continuing calibration verifications	90 to 110% recovery
For ICPEs—interference check sample	80 to 120% recovery
LCS	Water: 80 to 120% recovery Soil: LCS vendor supplied
Method blank sample	Each analyte must be less than the IDL ^a
Duplicate sample	Water: RPD ^b <20% Soil: RPD <35%
Matrix spike sample	75 to 125% recovery
Serial dilution sample	90 to 110% recovery where undiluted results are greater than or equal to the method detection limit

^a IDL = instrument detection limit.

^b RPD = relative percent difference.

C-3.0 ORGANIC CHEMICALS

Samples were analyzed for VOCs, SVOCs, pesticides, and PCBs. All QC procedures were followed as required in the ER Project analytical services SOW (LANL 1995, 49738). Pore-gas samples were also collected in SUMMA canisters for the analysis of VOCs using EPA Method TO-14. Table C-3.0-1 lists the organic analytical methods used for this report.

Acceptance criteria for the QA/QC samples for each organic chemical analytical suite are shown in Tables C-3.0-2 through C-3.0-4.

Table C-3.0-1
Analytical Methods for Organic Analyses

Analytical Method ^a	Analytical Description	Target Compound List
EPA Method 8270 (3540)	SVOCs	ER Project analytical services SOW ^b
EPA Method 8260 (5030)	VOCs	ER Project analytical services SOW ^b
EPA Method 8080 or 8081 (3540)	Organochlorine pesticides	ER Project analytical services SOW ^b
EPA Method 8080 or 8082 (3540)	PCBs	ER Project analytical services SOW ^b

^a Sample preparation methods are listed in parentheses.

^b LANL 1995, 49738

Table C-3.0-2
VOC QC Checks and Acceptance Limits

QC Check	Acceptance Limits	
Initial calibration	RRF ^a ≥0.05, percent RSD ^b ≤30%	
Continuing calibration	RRF ≥0.05, percent difference = ±25%	
Method blank	All analytes must be less than the IDL ^c .	
Internal standard	The retention time of the internal standards should be ±30 seconds from the retention time of the associated 12-hr calibration standard. The chromatograph peak area of the internal standard in the sample must be 50% to 200% of the peak area exhibited on the last continuing calibration.	
Surrogate spikes	Soil percent recovery	Water percent recovery
Dibromofluoromethane	80–20%	86–118%
Bromofluorobenzene	74–121%	86–115%
Toluene-d8	81–117%	88–110%
Matrix spike/matrix spike duplicate	Each spike analyte should fall within the upper and lower QC limits and below the QC RPD. QC limits for each VOC vary. See SW-846 Method 8260 for a list of these limits.	

^a RRF = relative retention factor.

^b RSD = relative standard deviation.

^c IDL = instrument detection limit.

Table C-3.0-3
SVOC QC Checks and Acceptance Limits

QC Check	Acceptance Limits														
Initial calibration	RRF ≥ 0.05 , percent RSD $\leq 30\%$														
Continuing calibration	RRF ≥ 0.05 , percent difference = $\pm 25\%$														
Method blank	All analytes must be less than the IDL.														
Internal standards	The retention time of the internal standards should be ± 30 seconds from the retention time of the associated 12-hr calibration standard. The chromatograph peak area of the internal standard in the sample must be 50% to 200% of the peak area exhibited on the last continuing calibration.														
Surrogate spikes	<table> <tr> <th>Soil percent recovery</th><th>Water percent recovery</th></tr> <tr> <td>Nitrobenzene</td><td>35–114%</td></tr> <tr> <td>2-Fluorobiphenol</td><td>43–116%</td></tr> <tr> <td>p-Terphenol</td><td>33–141%</td></tr> <tr> <td>Phenol-d5</td><td>10–94%</td></tr> <tr> <td>2-Fluorophenol</td><td>21–100%</td></tr> <tr> <td>2,4,6-Tribromophenol</td><td>10–123%</td></tr> </table>	Soil percent recovery	Water percent recovery	Nitrobenzene	35–114%	2-Fluorobiphenol	43–116%	p-Terphenol	33–141%	Phenol-d5	10–94%	2-Fluorophenol	21–100%	2,4,6-Tribromophenol	10–123%
Soil percent recovery	Water percent recovery														
Nitrobenzene	35–114%														
2-Fluorobiphenol	43–116%														
p-Terphenol	33–141%														
Phenol-d5	10–94%														
2-Fluorophenol	21–100%														
2,4,6-Tribromophenol	10–123%														
Matrix spike/matrix spike duplicate	Each spike analyte should fall within the upper and lower QC limits and below the QC RPD. QC limits for each SVOC vary. See SW-846 Method 8270 for a list of these limits.														

Table C-3.0-4
Pesticide/PCB QC Checks and Acceptance Limits

QC Check	Acceptance Limits
Initial calibration	Percent RSD ≤20%, resolution between two adjacent peaks ≥90%
Calibration verification	RPD ≤20%, resolution between two adjacent peaks ≥90%
Method blank	All analytes must be less than the IDL.
Surrogate spikes	Soil and water percent recovery
Tetrachloro-m-xylene	50–150%
Decachlorobiphenyl	50–150%
Matrix spike/matrix spike duplicate	Each spike analyte should fall within the upper and lower QC limits and below the QC RPD. QC limits for each SVOC vary. See SW-846 Methods 8080, 8081, and 8082 for a list of these limits.

C-4.0 RADIOCHEMICALS

C-4.1 Radiochemical Analyses

MDA H samples were analyzed for radionuclides by the methods listed in Table C-4.1-1. Radionuclides with reported values less than the minimum detectable activity were qualified as undetected (U). Each radionuclide result was also compared with the corresponding 1-sigma total propagated uncertainty (TPU). If the result was not greater than three times the TPU, it was qualified as undetected (U).

Table C-4.1-1
Analytical Methods for Radiochemical Analyses

Analytical Method	Radionuclide(s)
Gamma spectroscopy	Gamma-emitting radionuclides: americium-241, cobalt-60, cesium-134, cesium-137, europium-152, sodium-22, ruthenium-105, uranium-235
Radiochemical separation alpha spectroscopy	Americium-241, isotopic plutonium, isotopic thorium, and isotopic uranium
Liquid scintillation counting	Tritium
Radiochemical separation/air proportional beta analysis	Strontium-90

The results for the gamma spectroscopy analyses were reviewed with respect to their uncertainty values and parent decay series. Based on Laboratory ER guidelines, the eight gamma-emitting radionuclides listed in Table C-4.1-1 are routinely evaluated as part of an RFI data set. These radionuclides are potential Laboratory contaminants, have half-lives greater than one year, and are reliably measured by gamma spectroscopy.

C-4.2 Discussion of Radiochemical QA/QC Samples

CST Division used QC blind samples, matrix spike samples, LCSs, method blanks, duplicates, carriers, and tracers to assess precision, bias, and accuracy of radiochemical analyses performed at off-site fixed laboratories. The acceptance criteria for radionuclide QC samples are shown in Table C-4.2-1.

Table C-4.2-1
Radionuclide QC Checks and Acceptance Limits

QC Check	Acceptance Limits and Qualifiers
QC blind sample	75% to 125% recovery
Method blank	All analytes must be less than the IDL (LANL 1995, 49738)
LCS	Soil: 75% to 125% recovery (LANL 1995, 49738)
Matrix spike sample	75 to 125% recovery (LANL 1995, 49738)
Tracer/carrier recovery	<30% for alpha spectroscopy, <40% for strontium-90, or greater than 110% for either analytical measurement

C-5.0 DATA VALIDATION

If QC samples for each of the analytical suites are outside of the acceptance limits, the data associated with the samples are assigned qualifiers to indicate potential data quality issues. The tables presented in this section summarize the data qualifiers applied to each analyte for a given sample and the rationale for the assigned qualifier. The data qualifiers are defined in Table C-5.0-1.

Table C-5.0-1
Explanation of Data Qualifiers Used in the Data Validation Procedure

Qualifier	Explanation
U	The analyte was analyzed for but not detected. Reported value is the sample-specific estimated quantitation limit or detection limit.
J	The reported value should be regarded as estimated.
J+	The reported value should be regarded as estimated and biased high.
J-	The reported value should be regarded as estimated and biased low.
UJ	The analyte was analyzed for but not detected. Reported value is an estimate of the sample-specific quantitation limit or detection limit.
UJ+	The analyte was analyzed for but not detected. Reported value is an estimate of the sample-specific quantitation limit or reporting limit with a high bias.
UJ-	The analyte was analyzed for but not detected. Reported value is an estimate of the sample-specific quantitation limit or reporting limit with a low bias.
R	The sample results were rejected because of serious deficiencies in the ability to analyze the sample and meet QC criteria; presence or absence cannot be verified.

C-5.1 Inorganic Data Review

CST Division (Section C-1.0, Past Data Validation) assigned a numeric review level code to raw data results generated by the analytical laboratory. Depending on the review level, not all criteria were examined. The CST numeric review levels are defined as follows:

- Level 0: Review samples to make sure they are all present; data are not validated at this review level.
- Level 1: Review LCS and QC blind sample; sometimes holding times are addressed.
- Level 2: Review LCS, QC blind sample, matrix spike sample, and holding times.
- Level 3: Review method blank, calibration data, LCS, matrix spike sample, QC blind sample, and holding times.

For data packages where CST-3 did not perform a Level 3 review, not all QA/QC data are available for review. These data packages were all reviewed but are not complete for QA/QC data.

According to the national functional guidelines for data review (EPA 1994, 48639), data from LCSs, matrix spike samples, and QC samples that have recoveries between 30% and 74% can be qualified as estimated and biased low (UJ- or J-). If the recoveries are below 30%, the data are rejected (R).

Table C-5.1-1 presents the inorganic data quality evaluation for the data set presented in Appendix D.

Table C-5.1-1
Inorganic Data Quality Evaluation

Request Number	Sample ID	Location ID	Analyte	Explanation
557	0554-95-0282	54-1023	Manganese	The result for this analyte should be regarded as estimated and biased low (J-) because the matrix spike recovery for this analyte was low.
557	0554-95-0282	54-1023	Barium Calcium Cobalt Magnesium Nickel Potassium Sodium Thallium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
587	0554-95-0284 0554-95-0286 0554-95-0288 0554-95-0292 0554-95-0294 0554-95-0298	54-1023 54-1023 54-1023 54-1023 54-1023 54-1023	Antimony	The reporting limits for this analyte should be regarded as estimated (JJ) because the matrix spike recovery for this analyte was low.
587	0554-95-0284	54-1023	Barium Beryllium Chromium Magnesium Potassium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
587	0554-95-0286	54-1023	Barium Beryllium Cadmium Cobalt Copper Magnesium Nickel Potassium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
587	0554-95-0288	54-1023	Barium Beryllium Chromium Magnesium Potassium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
587	0554-95-0290	54-1023	Barium Beryllium Magnesium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
587	0554-95-0292	54-1023	Barium Beryllium Calcium Chromium Magnesium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.

Table C-5.1-1 (continued)

Request Number	Sample ID	Location ID	Analyte	Explanation
587	0554-95-0294	54-1023	Barium Beryllium Calcium Copper Magnesium Potassium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
587	0554-95-0298	54-1023	Arsenic Barium Beryllium Chromium Copper Magnesium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
587	0554-95-0284 0554-95-0286 0554-95-0288 0554-95-0290 0554-95-0292 0554-95-0294 0554-95-0298	54-1023 54-1023 54-1023 54-1023 54-1023 54-1023 54-1023	Manganese	The results for this analyte should be regarded as estimated and biased low (J-) because the matrix spike recovery for this analyte was low.
587	0554-95-0284 0554-95-0286 0554-95-0288 0554-95-0290 0554-95-0292 0554-95-0294 0554-95-0298	54-1023 54-1023 54-1023 54-1023 54-1023 54-1023 54-1023	Cyanide	The results for this analyte should be regarded as unusable (R) because the matrix spike recovery for this analyte was low (<10%).
619	0554-95-0300 0554-95-0302 0554-95-0304 0554-95-0306 0554-95-0308 0554-95-0310 0554-95-0312 0554-95-0316 0554-95-0318 0554-95-0321	54-1026 54-1026 54-1026 54-1026 54-1026 54-1026 54-1026 54-1026 54-1026 54-1024	Antimony	The reporting limits for this analyte should be regarded as estimated (UJ) because the matrix spike recovery for this analyte was low.
619	0554-95-0304	54-1026	Thallium	The result for this analyte should be regarded as not detected (U) because the result is less than five times the result for this analyte in the preparation blank.
619	0554-95-0300	54-1026	Barium Calcium Magnesium Potassium Selenium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
619	0554-95-0302	54-1026	Barium Beryllium Calcium Magnesium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.

Table C-5.1-1 (continued)

Request Number	Sample ID	Location ID	Analyte	Explanation
619	0554-95-0304	54-1026	Arsenic Barium Beryllium Copper Magnesium Potassium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
619	0554-95-0306	54-1026	Barium Beryllium Chromium Copper Magnesium Potassium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
619	0554-95-0308	54-1026	Barium Beryllium Calcium Magnesium Potassium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
619	0554-95-0310	54-1026	Barium Beryllium Calcium Copper Magnesium Potassium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
619	0554-95-0312	54-1026	Barium Beryllium Calcium Copper Magnesium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
619	0554-95-0316	54-1026	Barium Beryllium Cadmium Calcium Chromium Copper Magnesium Selenium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
619	0554-95-0318	54-1026	Barium Beryllium Calcium Cobalt Magnesium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
619	0554-95-0321	54-1024	Barium Beryllium Calcium Cobalt Magnesium Nickel Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.

Table C-5.1-1 (continued)

Request Number	Sample ID	Location ID	Analyte	Explanation
619	0554-95-0300 0554-95-0302 0554-95-0304 0554-95-0306 0554-95-0308 0554-95-0310 0554-95-0312 0554-95-0316 0554-95-0318 0554-95-0321	54-1026 54-1026 54-1026 54-1026 54-1026 54-1026 54-1026 54-1026 54-1026 54-1024	Manganese	The results for this analyte should be regarded as estimated and biased low (J-) because the matrix spike recovery for this analyte was low.
644	0554-95-0323	54-1024	Arsenic Barium Beryllium Calcium Chromium Cobalt Copper Magnesium Nickel Potassium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
650	0554-95-0327	54-1024	Copper	The result for this analyte should be regarded as not detected (U) because the result is less than five times the result for this analyte in the preparation blank.
650	0554-95-0325	54-1024	Barium Copper Magnesium Potassium Sodium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
650	0554-95-0327	54-1024	Barium Calcium Magnesium Potassium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
650	0554-95-0329	54-1024	Barium Calcium Copper Magnesium Potassium Silver Sodium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
650	0554-95-0331	54-1024	Barium Copper Magnesium Potassium Sodium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
650	0554-95-0333	54-1024	Barium Copper Magnesium Potassium Sodium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
650	0554-95-0337	54-1024	Selenium	The reporting limits for this analyte should be regarded as estimated (UJ) because the matrix spike recovery for this analyte was low.

Table C-5.1-1 (continued)

Request Number	Sample ID	Location ID	Analyte	Explanation
650	0554-95-0325 0554-95-0327 0554-95-0329 0554-95-0331 0554-95-0333	54-1024 54-1024 54-1024 54-1024 54-1024	Lead	The results for this analyte should be regarded as estimated and biased high (J+) because the matrix spike recovery for this analyte was high.
650	0554-95-0325 0554-95-0327 0554-95-0329 0554-95-0331 0554-95-0333	54-1024 54-1024 54-1024 54-1024 54-1024	Manganese	The results for this analyte should be regarded as estimated and biased low (J-) because the matrix spike recovery for this analyte was low.
659	0554-95-0339	54-1025	Antimony Barium Beryllium Calcium Cobalt Magnesium Nickel Potassium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
659	0554-95-0341	54-1025	Arsenic Barium Beryllium Calcium Chromium Cobalt Copper Magnesium Nickel Potassium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
659	0554-95-0343	54-1025	Antimony Arsenic Barium Beryllium Calcium Chromium Cobalt Copper Magnesium Nickel Potassium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
659	0554-95-0345	54-1025	Arsenic Barium Beryllium Calcium Chromium Cobalt Copper Magnesium Nickel Potassium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.

Table C-5.1-1 (continued)

Request Number	Sample ID	Location ID	Analyte	Explanation
659	0554-95-0347	54-1025	Arsenic Barium Beryllium Calcium Chromium Cobalt Copper Magnesium Nickel Potassium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
659	0554-95-0349	54-1025	Arsenic Barium Beryllium Calcium Cobalt Copper Magnesium Mercury Nickel Potassium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
659	0554-95-0351	54-1025	Arsenic Barium Beryllium Calcium Chromium Cobalt Copper Magnesium Mercury Nickel Potassium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
659	0554-95-0355	54-1025	Arsenic Barium Beryllium Calcium Chromium Cobalt Copper Magnesium Mercury Nickel Potassium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.
659	0554-95-0356	54-1025	Arsenic Barium Beryllium Calcium Chromium Cobalt Copper Magnesium Mercury Nickel Potassium Sodium Vanadium	The results for these analytes should be regarded as estimated (J) because the results for these analytes were below the estimated detection limit but above the IDL.

Table C-5.1-1 (continued)

Request Number	Sample ID	Location ID	Analyte	Explanation
18645	AAB3142 AAB3129 AAB3175 AAB3131	54-5126 54-5130 54-5131 54-5132	Aluminum	The results for aluminum should be regarded as estimated (J for detected results and UJ for not detected results) because the recovery for this analyte in the QC sample was low.

C-5.2 Organic Data Review

CST Division (Section C-1.0, Past Data Validation) assigned a numeric review level code to raw data results generated by the analytical laboratory. Depending on the review level, not all criteria were examined. Unless a Level 3 review was performed, not all QA/QC data are available in the data packages. The numeric review levels are defined as follows:

- Level 0: Review samples to make sure they are all present; data are not validated at this review level.
- Level 1: Review surrogates, QC blind sample, and internal standards.
- Level 2: Review blank, surrogates, QC blind sample, and internal standards.
- Level 3: Review blank, surrogates, QC blind sample, internal standards, and tentatively identified compounds.

Table C-5.2-1 presents the organic data quality evaluation for the data set presented in Appendix D.

Table C-5.2-1
Organic Data Quality Evaluation

Request Number	Sample ID	Location ID	Analytical Suite	Analyte	Explanation
586	0554-95-0286 0554-95-0288 0554-95-0290 0554-95-0292	54-1023 54-1023 54-1023 54-1023	SVOCs	Di-n-butylphthalate	The results for this analyte should be regarded as estimated (J) because the results were less than the practical quantitation limit but above the method detection limit.
586	0554-95-0284 0554-95-0286 0554-95-0288 0554-95-0290 0554-95-0292 0554-95-0294 0554-95-0298	54-1023 54-1023 54-1023 54-1023 54-1023 54-1023 54-1023	SVOCs	Bis(2-ethylhexyl)phthalate	The results for this analyte should be regarded as not detected (U) because the results were less than 10 times the concentration of this analyte in the method blank. The results are therefore indistinguishable from laboratory contamination.
586	0554-95-0284 0554-95-0288	54-1023 54-1023	VOCs	Butanone[2-]	The results for this analyte should be regarded as estimated (J) because the results were less than the practical quantitation limit but above the method detection limit.
586	0554-95-0284 0554-95-0286 0554-95-0288 0554-95-0290 0554-95-0294	54-1023 54-1023 54-1023 54-1023 54-1023	VOCs	Acetone	The results for this analyte should be regarded as not detected (U) because the results were less than 10 times the concentration of this analyte in the method blank. The results are therefore indistinguishable from laboratory contamination.
618	0554-95-0300	54-1026	SVOCs	Benzoic acid	The result for this analyte should be regarded as estimated (J) because the result was less than the practical quantitation limit but above the method detection limit.

Table C-5.2-1 (continued)

Request Number	Sample ID	Location ID	Analytical Suite	Analyte	Explanation
618	0554-95-0302	54-1026	SVOCs	Di-n-butylphthalate	The result for this analyte should be regarded as estimated (J) because the result was less than the practical quantitation limit but above the method detection limit.
618	0554-95-0300 0554-95-0302 0554-95-0304 0554-95-0306 0554-95-0308 0554-95-0310 0554-95-0312 0554-95-0316 0554-95-0318 0554-95-0321	54-1026 54-1026 54-1026 54-1026 54-1026 54-1026 54-1026 54-1026 54-1026 54-1024	SVOCs	Bis(2-ethylhexyl)phthalate	The results for this analyte should be regarded as not detected (U) because the results were less than 10 times the concentration of this analyte in the method blank. The results are therefore indistinguishable from laboratory contamination.
618	0554-95-0308	54-1026	VOCs	Toluene	The result for this analyte should be regarded as estimated (J) because the result was less than the practical quantitation limit but above the method detection limit.
618	0554-95-0310	54-1026	VOCs	Acetone Toluene	The results for these analytes should be regarded as estimated (J) because the results were less than the practical quantitation limit but above the method detection limit.
618	0554-95-0312	54-1026	VOCs	Benzene Toluene	The results for these analytes should be regarded as estimated (J) because the results were less than the practical quantitation limit but above the method detection limit.
618	0554-95-0300 0554-95-0302 0554-95-0304 0554-95-0318	54-1026 54-1026 54-1026 54-1026	VOCs	Acetone	The results for this analyte should be regarded as not detected (U) because the results were less than 10 times the concentration of this analyte in the method blank. The results are therefore indistinguishable from laboratory contamination.
643	0554-95-0323	54-1024	VOCs	Methylene chloride	The result for this analyte should be regarded as not detected (U) because the result was less than 10 times the concentration of this analyte in the method blank. The result is therefore indistinguishable from laboratory contamination.
649	0554-95-0325	54-1024	SVOCs	Diethyl phthalate Dimethyl phthalate	The results for these analytes should be regarded as estimated (J) because the results were less than the practical quantitation limit but above the method detection limit.
649	0554-95-0337	54-1024	SVOCs	Di-n-butylphthalate	The result for this analyte should be regarded as estimated (J) because the result was less than the practical quantitation limit but above the method detection limit.
649	0554-95-0325 0554-95-0333 0554-95-0327 0554-95-0329 0554-95-0331 0554-95-0337	54-1024 54-1024 54-1024 54-1024 54-1024 54-1024	SVOCs	Bis(2-ethylhexyl)phthalate	The results for this analyte should be regarded as not detected (U) because the results were less than 10 times the concentration of this analyte in the method blank. The results are therefore indistinguishable from laboratory contamination.
649	0554-95-0333	54-1024	SVOCs	Nitrosodimethylamine[N-]	The result for this analyte should be regarded as not detected (U) because the result was less than five times the concentration of this analyte in the method blank. The result is therefore indistinguishable from laboratory contamination.

Table C-5.2-1 (continued)

Request Number	Sample ID	Location ID	Analytical Suite	Analyte	Explanation
649	0554-95-0325 0554-95-0329	54-1024 54-1024	VOCs	Trichlorofluoromethane	The results for this analyte should be regarded as estimated (J) because the results were less than the practical quantitation limit but above the method detection limit.
649	0554-95-0327 0554-95-0331 0554-95-0333	54-1024 54-1024 54-1024	VOCs	Methylene chloride	The results for this analyte should be regarded as estimated (J) because the results were less than the practical quantitation limit but above the method detection limit.
649	0554-95-0325 0554-95-0327 0554-95-0329 0554-95-0331 0554-95-0333 0554-95-0337	54-1024 54-1024 54-1024 54-1024 54-1024 54-1024	VOCs	Acetone	The results for this analyte should be regarded as not detected (U) because the results were less than 10 times the concentration of this analyte in the method blank. The results are therefore indistinguishable from laboratory contamination.
658	0554-95-0339 0554-95-0347 0554-95-0355 0554-95-0356	54-1025 54-1025 54-1025 54-1025	SVOCs	Bis(2-ethylhexyl)phthalate	The results for this analyte should be regarded as estimated (J) because the results were less than the practical quantitation limit but above the method detection limit.
658	0554-95-0347	54-1025	VOCs	Butylbenzene[sec-] Trichlorobenzene[1,2,3-]	The results for these analytes should be regarded as estimated (J) because the results were less than the practical quantitation limit but above the method detection limit.
658	0554-95-0349	54-1025	VOCs	Butylbenzene[n-] Butylbenzene[sec-] Hexachlorobutadiene Naphthalene Trichlorobenzene[1,2,3-] Trichlorobenzene[1,2,4-]	The results for these analytes should be regarded as estimated (J) because the results were less than the practical quantitation limit but above the method detection limit.
658	0554-95-0341 0554-95-0343 0554-95-0345 0554-95-0347 0554-95-0349 0554-95-0351 0554-95-0355 0554-95-0356 0554-95-0339	54-1025 54-1025 54-1025 54-1025 54-1025 54-1025 54-1025 54-1025 54-1025	VOCs	Methylene chloride	The results for this analyte should be regarded as not detected (U) because the results were less than 10 times the concentration of this analyte in the method blank. The results are therefore indistinguishable from laboratory contamination.
658	0554-95-0339 0554-95-0356 0554-95-0343 0554-95-0345 0554-95-0347 0554-95-0349 0554-95-0351 0554-95-0355	54-1025 54-1025 54-1025 54-1025 54-1025 54-1025 54-1025 54-1025	VOCs	Acetone	The results for this analyte should be regarded as not detected (U) because the results were less than 10 times the concentration of this analyte in the method blank. The results are therefore indistinguishable from laboratory contamination.

C-5.3 Radionuclide Data Review

Radionuclides qualified as undetected (U) because the result was less than the minimum detectable activity or because the result was less than three times the 1-sigma TPU are summarized in Table C-5.3-1. This table presents the radionuclide data quality evaluation for the data set presented in Appendix D.

Table C-5.3-1
Radionuclide Data Quality Evaluation

Request Number	Sample ID	Location ID	Method Code	Analyte	Explanation
558	0554-95-0282	54-1023	Gamma spectroscopy	Americium-241 Cesium-137 Cobalt-60 Ruthenium-106 Sodium-22	The results for these analytes should be regarded as not detected (U) because the results were below the minimum detectable concentration.
588	0554-95-0284 0554-95-0286 0554-95-0288 0554-95-0290 0554-95-0292 0554-95-0294 0554-95-0298 0554-95-0300	54-1023 54-1023 54-1023 54-1023 54-1023 54-1023 54-1023 54-1026	Gamma spectroscopy	Americium-241 Cesium-134 Cesium-137 Cobalt-60 Ruthenium-106 Sodium-22 Uranium-235	The results for these analytes should be regarded as not detected (U) because the results were below the minimum detectable concentration.
620	0554-95-0302 0554-95-0304 0554-95-0306 0554-95-0308 0554-95-0310 0554-95-0312 0554-95-0316 0554-95-0318 0554-95-0321	54-1026 54-1026 54-1026 54-1026 54-1026 54-1026 54-1026 54-1026 54-1024	Gamma spectroscopy	Americium-241 Cesium-134 Cesium-137 Cobalt-60 Ruthenium-106 Sodium-22 Uranium-235	The results for these analytes should be regarded as not detected (U) because the results were below the minimum detectable concentration.
645	0554-95-0323	54-1024	Gamma spectroscopy	Americium-241 Cesium-137 Cobalt-60 Ruthenium-106 Sodium-22	The results for these analytes should be regarded as not detected (U) because the results were below the minimum detectable concentration.
651	0554-95-0325 0554-95-0327 0554-95-0329 0554-95-0331 0554-95-0333 0554-95-0337	54-1024 54-1024 54-1024 54-1024 54-1024 54-1024	Gamma spectroscopy	Americium-241 Cesium-137 Cobalt-60 Europium-152 Ruthenium-106 Sodium-22	The results for these analytes should be regarded as not detected (U) because the results were below the minimum detectable concentration.
660	0554-95-0339	54-1025	Gamma spectroscopy	Americium-241 Cesium-137 Cobalt-60 Ruthenium-106	The results for these analytes should be regarded as not detected (U) because the results were below the minimum detectable concentration.
660	0554-95-0341	54-1025	Gamma spectroscopy	Americium-241 Cesium-137 Cobalt-60 Ruthenium-106 Sodium-22	The results for these analytes should be regarded as not detected (U) because the results were below the minimum detectable concentration.
660	0554-95-0345	54-1025	Gamma spectroscopy	Americium-241 Cesium-137 Sodium-22	The results for these analytes should be regarded as not detected (U) because the results were below the minimum detectable concentration.
660	0554-95-0347	54-1025	Gamma spectroscopy	Americium-241 Cesium-137 Cobalt-60 Europium-152 Sodium-22	The results for these analytes should be regarded as not detected (U) because the results were below the minimum detectable concentration.
660	0554-95-0349 0554-95-0351	54-1025 54-1025	Gamma spectroscopy	Americium-241 Cesium-137 Cobalt-60 Ruthenium-106 Sodium-22	The results for these analytes should be regarded as not detected (U) because the results were below the minimum detectable concentration.

Table C-5.3-1 (continued)

Request Number	Sample ID	Location ID	Method Code	Analyte	Explanation
660	0554-95-0355	54-1025	Gamma spectroscopy	Americium-241 Cesium-137 Sodium-22 Cesium-137 Ruthenium-106 Sodium-22	The results for these analytes should be regarded as not detected (U) because the results were below the minimum detectable concentration.
660	0554-95-0343	54-1025	Gamma spectroscopy	Cesium-137 Cobalt-60 Ruthenium-106 Sodium-22	The results for these analytes should be regarded as not detected (U) because the results were below the minimum detectable concentration.
660	0554-95-0351 0554-95-0355	54-1025	Gamma spectroscopy	Europium-152	The results for this analyte should be regarded as not detected (U) because the results were less than five times the concentration of this analyte in the method blank. The results are therefore indistinguishable from laboratory contamination.
19010	AAB3143 AAB3160 AAB3150 AAB3139 AAB3122 AAB3120 AAB3123 AAB3126 AAB3173 AAB3133 AAB3202 AAB3147 AAB3183	54-5015 54-5016 54-5017 54-5018 54-5027 54-5029 54-5031 54-5034 54-5053 54-5055 54-5055 54-5058 54-5060	Tritium	Tritium	The results for this analyte should be regarded as estimated (J) because the recovery for this analyte in the QC blind sample was high.

C-6.0 REFERENCES

The following list includes all references cited in this appendix. Parenthetical information following each reference provides the author, publication date, and the ER record identification (ID) number. This information also is included in the citations in the text. ER ID numbers are assigned by the Laboratory's ER Project to track records associated with the Project. These numbers can be used to locate copies of the actual documents at the ER Project's Records Processing Facility and, where applicable, with the ER Project reference library titled "Reference Set for Material Disposal Areas, Technical Area 54."

Copies of the reference library are maintained at the new Mexico Environment Department Hazardous Waste Bureau; the Department of Energy Los Alamos Area Office; United States EPA, Region 6; and the ER Project Material Disposal Areas Focus Area. This library is a living collection of documents that was developed to ensure that the administrative authority has all the necessary material to review the decisions and actions proposed in this document. However, documents previously submitted to the administrative authority are not included.

EPA (US Environmental Protection Agency), February 1994. "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review," EPA-540/R-94-013, Office of Solid Waste and Emergency Response, Washington, DC. (EPA 1994, 48639)

EPA (US Environmental Protection Agency), February 1994. "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review," EPA-540/R-94-012, Office of Solid Waste and Emergency Response, Washington, DC. (EPA 1994, 48640)

LANL (Los Alamos National Laboratory), July 1995. "Statement of Work—Analytical Support," Revision 2, RFP No. 9-XS1-Q4257, Los Alamos, New Mexico. (LANL 1995, 49738)

LANL (Los Alamos National Laboratory), March 1996. "Quality Assurance Project Plan Requirements for Sampling and Analysis," Los Alamos National Laboratory Report LA-UR-96-441, Los Alamos, New Mexico. (LANL 1996, 54609)

Appendix D

Analytical Suites and Results

APPENDIX D ANALYTICAL SUITES AND RESULTS

D-1.0 TARGET ANALYTES AND DETECTION LIMITS

Routine analytical services, through the Los Alamos National Laboratory (the Laboratory) Sample Management Office, were used for this Resource Conservation and Recovery Act facility investigation (RFI). Applicable information was taken from the statement of work (LANL 1995, 49738), the document that analytical laboratories must follow, and updated to agree with the Environmental Restoration (ER) Project Quality Assurance Project Plan (LANL 1996, 55574, Chapter 4). All routine analyses were performed; no deviations were requested or noted in the analytical data packages.

Inorganic Analyses

Table D-1.0-1 lists the target analytes and estimated detection limits (EDLs) for inorganic chemical analyses. Inductively coupled plasma emission spectroscopy (ICPES) is generally used for sample analysis; however, if the EDL is exceeded or false positives are known to be a problem, the analytical laboratory must use graphite furnace atomic absorption (GFAA) techniques (e.g., Method 7841 for thallium and Method 7421 for lead) or inductively coupled plasma mass spectroscopy (ICPMS) (e.g., SW 846, Method 6020).

Radiochemical Analyses

Table D-1.0-2 lists target analytes, soil and water estimated quantitation limits (EQLs), and techniques for radiochemical analyses. The methods utilized by the analytical laboratory for the analyses must be submitted to the Laboratory for approval. Table D-1.0-3 lists the isotopes called out in Table D-1.0-2.

Organic Analyses

Table D-1.0-4 lists target analytes and EQLs for volatile organic compound (VOC) analyses. Environmental Protection Agency (EPA) methods for analysis of the VOC suite are Method SW 8260 (11/90 or more recent) or the Contract Laboratory Program (CLP) method for VOCs (OLM02.0 or more recent, using capillary column). These methods are based on purge and trap sample extraction/concentration followed by gas chromatography/mass spectrometry analysis. If the ER Project requests tentatively identified compounds (TICs), they should be identified and quantitated according to the CLP method for VOCs (OLM02.0 or more recent).

Table D-1.0-5 lists target analytes and EQLs for semivolatile organic compound (SVOC) analyses. EPA methods are Method SW 8270 (11/90 or more recent) or the CLP method for SVOCs (OLM02.0 or more recent). These methods are based on solvent extraction, concentration, and gas chromatography/mass spectrometry detection and quantitation. If the ER Project requests TICs, they should be identified and quantitated according to the CLP method for SVOCs (OLM02.0 or more recent).

Table D-1.0-6 lists target analytes and EQLs for pesticide and Aroclor analyses. EPA methods are Method SW 8081, dual column option (11/92 or more recent), or the CLP method for pesticides/Aroclors (OLM01.8 or more recent). These methods are based on solvent extraction, concentration, and gas chromatography/electron capture detection and quantitation. Use Table D-1.0-7 to adjust the EQLs to the appropriate sample matrix.

Table D-1.0-1
Target Analytes and EDLs for Inorganic Chemical Analyses

Analyte	Water EDL ($\mu\text{g/L}$) ^a	Soil EDL (mg/kg) ^b
<i>ICPES</i>		
Aluminum	200	40
Antimony	60	12
Barium	200	40
Beryllium	5.0	1.0
Cadmium	5.0	1.0
Calcium	5000	1000
Chromium	10	2.0
Cobalt	5.00	10
Copper	25	5.0
Iron	100	20
Lead	3.0	0.6
Magnesium	5000	1000
Manganese	15	3.0
Nickel	40	8.0
Potassium	5000	1000
Silver	10	2.0
Sodium	5000	1000
Vanadium	50	10
Zinc	20	4.0
<i>GFAA, ICPMS</i>		
Arsenic	10	2.0
Lead	1.0	0.2
Selenium	5.0	1.0
Thallium	10	2.0
<i>Cold vapor atomic absorption</i>		
Mercury	0.2	0.1
<i>SW 9010, 9010A, 9012, EPA 335.2</i>		
Total cyanide	10	0.05

^a EDLs for water samples are based on CLP contract-required detection limits (LANL 1995, 49738).

^b Soil EDLs for ICPES, GFAA, and ICPMS analytes are based upon a 0.2-g sample taken to a final volume of 200 mL. Soil EDLs for cold vapor atomic absorption are based upon a 0.2-g sample taken to a final volume of 100 mL. Soil EDLs for CLP ILM03.0 Method 335.2 (cyanide) are based upon a 5-g sample taken to a final volume of 250 mL. The laboratory may vary weights and final volumes for metals and cyanide analyses; however, any allowable variance must still meet the EDL.

Table D-1.0-2
Target Analytes, EQLs, and Required Techniques for Radiochemical Analyses

Analyte	Soil EQL (pCi/g)	Water EQL (pCi/L)	Technique ^a
Gross alpha/beta	10.0	3.0	Gas proportional
Gross alpha/beta	10.0	— ^b	Liquid scintillation
Strontium-90 ^c	2.0	5.0	Gas proportional
Americium-241	0.1	0.1	Alpha spectroscopy
Plutonium-238, -239	0.1	0.1	Alpha spectroscopy
Thorium-228, -230, -232	0.1	0.1	Alpha spectroscopy
Thorium-230, -232	0.1	0.1	ICPMS flow injection analysis (commonly requested nonroutine analysis)
Uranium-234, -235, -238	0.1	0.1	Alpha spectroscopy
Uranium-234, -235, -238	0.1	0.1	ICPMS flow injection analysis (commonly requested nonroutine analysis)
Tritium	300 pCi/L	300	Liquid scintillation
Multiple isotopes (Table D-1.0-3)	Americium-241: 1.0 Cesium-137: 1.0	Americium-241: 20 Cesium-137: 20	Gamma spectroscopy
Gross gamma	2.0	100	Sodium iodide (thallium-doped detector) or high-purity germanium detection
Total uranium	0.5 µg/g	1 µg/L	Kinetic phosphorescence analysis (commonly requested nonroutine analysis)
Total uranium	0.5 µg/g	1 µg/L	ICPMS (commonly requested nonroutine analysis)
Radium-226	1.0	1.0	Assorted
Radium-228	0.5	0.5	Assorted
Thorium-234	1.0	20	Assorted
Lead-210	2.0	5.0	Assorted

^a The Laboratory methods for these analytes are contained in LA-10300-M, "Health and Environmental Chemistry: Analytical Techniques, Data Management, and Quality Assurance" (LANL 1993, 31793, 31794, 31795, and 31796).

^b This EQL has not been established.

^c It may be presumed that strontium-89 is not present.

Table D-1.0-3
Listing of Isotopes for Table D-1.0-2

Nuclide Name	Nuclide Name	Nuclide Name	Nuclide Name
Actinium-228	Cobalt-60	Mercury-203	Selenium-75
Americium-241	Cesium-134	Neptunium-237	Sodium-22
Annihilation radiation	Cesium-137	Potassium-40	Strontium-85
Barium-140	Europium-152	Protactinium-233	Thorium-227
Bismuth-211	Iodine-129	Protactinium-231	Thorium-234
Bismuth-212	Lanthanum-140	Protactinium-234m	Thallium-208
Bismuth-214	Lead-210	Radium-223	Tin-113
Cadmium-109	Lead-211	Radium-224	Uranium-235
Cerium-139	Lead-212	Radium-226	Yttrium-88
Cerium-144	Lead-214	Radon-219	Zinc-65
Cobalt-57	Manganese-54	Ruthenium-106	

Table D-1.0-4
Target Analytes and EQLs for VOC Analyses

VOC	Water EQL ($\mu\text{g/l}$)	Soil/Solids EQL ($\mu\text{g/kg}$)	VOC	Water EQL ($\mu\text{g/l}$)	Soil/Solids EQL ($\mu\text{g/kg}$)
Chloromethane	10	10	1,3-Dichloropropane	5.0	5.0
Vinyl chloride	10	10	Chlorodibromomethane	5.0	5.0
Bromomethane	10	10	4-Methyl-2-Pentanone	20	20
Chloroethane	10	10	Toluene	5.0	5.0
Acetone	20	20	2-Hexanone	20	20
Dichlorodifluoromethane	10	10	1,2-Dibromoethane	5.0	5.0
Iodomethane	5.0	5.0	Tetrachloroethene	5.0	5.0
Trichlorotrifluoroethane	5.0	5.0	Chlorobenzene	5.0	5.0
Trichlorofluoromethane	5.0	5.0	1,1,1,2-Tetrachloroethane	5.0	5.0
Methylene chloride	5.0	5.0	Ethylbenzene	5.0	5.0
1,1-Dichloroethene	5.0	5.0	o,m,p-Xylene (mixed)	5.0	5.0
Carbon disulfide	5.0	5.0	Styrene	5.0	5.0
1,1-Dichloroethane	5.0	5.0	Bromoform	5.0	5.0
1,2-Dichloroethene (total)	10	10	1,1,2,2-Tetrachloroethane	5.0	5.0
Bromochloromethane	5.0	5.0	1,2,3-Trichloropropane	5.0	5.0
Chloroform	5.0	5.0	Isopropylbenzene	5.0	5.0
1,2-Dichloroethane	5.0	5.0	Bromobenzene	5.0	5.0
1,1-Dichloropropene	5.0	5.0	n-Propylbenzene	5.0	5.0
2-Butanone	20	20	2-Chlorotoluene	5.0	5.0
2,2-Dichloropropane	5.0	5.0	4-Chlorotoluene	5.0	5.0
1,1,1-Trichloroethane	5.0	5.0	1,3,5-Trimethylbenzene	5.0	5.0
Carbon tetrachloride	5.0	5.0	tert-Butylbenzene	5.0	5.0
Benzene	5.0	5.0	1,2,4-Trimethylbenzene	5.0	5.0
1,2-Dichloropropane	5.0	5.0	sec-Butylbenzene	5.0	5.0
Trichloroethene	5.0	5.0	1,3-Dichlorobenzene	5.0	5.0
Dibromomethane	5.0	5.0	1,4-Dichlorobenzene	5.0	5.0
Bromodichloromethane	5.0	5.0	p-Isopropyltoluene	5.0	5.0
trans-1,3-Dichloropropene	5.0	5.0	1,2-Dichlorobenzene	5.0	5.0
cis-1,3-Dichloropropene	5.0	5.0	n-Butylbenzene	5.0	5.0
1,1,2-Trichloroethane	5.0	5.0	1,2-Dibromo-3-Chloropropane	10	10

Table D-1.0-5
Target Analytes and EQLs for SVOCs

SVOC	Water EQL ($\mu\text{g/L}$)	Soil/Solids EQL ($\mu\text{g/kg}$)*	SVOC	Water EQL ($\mu\text{g/L}$)	Soil/Solids EQL ($\mu\text{g/kg}$)*
Acenaphthene	10	330	4,6-Dinitro-2-methylphenol	50	1600
Acenaphthylene	10	330	2,4-Dinitrotoluene	10	330
Aniline	20	660	2,6-Dinitrotoluene	10	330
Anthracene	10	330	Di-n-octyl phthalate	10	330
Azobenzene	20	660	Bis(2-ethylhexyl)phthalate	10	330
Benzo(a)anthracene	10	330	Fluoranthene	10	330
Benzoic acid	50	3300	Fluorene	10	330
Benzo(b)fluoranthene	10	330	Hexachlorobenzene	10	330
Benzo(k)fluoranthene	10	330	Hexachlorobutadiene	10	330
Benzo(g, h, i)perylene	10	330	Hexachlorocyclopentadiene	10	330
Benzo(a)pyrene	10	330	Hexachloroethane	10	330
Benzyl alcohol	20	1300	Indeno(1,2,3-cd)pyrene	10	330
Bis(2-chloroethoxy)methane	10	330	Isophorone	10	330
Bis(2-chloroethyl)ether	10	330	2-Methylnaphthalene	10	330
4-Bromophenyl phenylether	10	330	2-Methylphenol	10	330
Butylbenzylphthalate	10	330	4-Methylphenol	10	330
4-Chloroaniline	20	1300	Naphthalene	10	330
4-Chloro-3-methylphenol	20	660	2-Nitroaniline	50	1600
2-Chloronaphthalene	10	330	3-Nitroaniline	50	1600
2-Chlorophenol	10	330	4-Nitroaniline	20	660
4-Chlorophenyl phenylether	10	330	Nitrobenzene	10	330
Chrysene	10	330	2-Nitrophenol	10	330
Dibenz(a,h)anthracene	10	330	4-Nitrophenol	50	1600
Dibenzofuran	10	330	N-Nitrosodimethylamine	10	330
1,2-Dichlorobenzene	10	330	N-Nitrosodiphenylamine	10	330
1,3-Dichlorobenzene	10	330	N-Nitroso-di-n-propylamine	10	330
1,4-Dichlorobenzene	10	330	2,2'-oxybis(1-Chloropropane)	10	330
3,3'-Dichlorobenzidine	20	660	Pentachlorophenol	50	1600
2,4-Dichlorophenol	10	330	Phenanthrene	10	330
Diethyl phthalate	10	330	Phenol	10	330
Dimethyl phthalate	10	330	Pyrene	10	330
2,4-Dimethylphenol	10	330	1,2,4-Trichlorobenzene	10	330
2,4-Dinitrophenol	50	1600	2,4,5-Trichlorophenol	50	1600
Di-n-butylphthalate	10	330	2,4,6-Trichlorophenol	10	330

* Soil EQLs are based on no gel permeation chromatography (GPC) being performed. The laboratories' GPC equipment will determine what the EQL is, based on the volume of extract the GPC equipment uses. However, if possible, in order to provide the lowest possible quantitation limits, the laboratories should concentrate the GPC extract to a volume that makes the EQL for a sample that underwent GPC cleanup no more than twice the listed EQL.

Table D-1.0-6
Target Analytes and EQLs
for Organochlorine Pesticide/Aroclor Analyses

Pesticides and Aroclors	EQL (µg/L)	Pesticides and Aroclors	EQL (µg/L)
Aldrin	0.05	Endrin	0.1
α-BHC	0.05	Endrin ketone	0.1
β-BHC	0.05	Endrin aldehyde	0.1
δ-BHC	0.05	Heptachlor	0.05
γ-BHC (lindane)	0.05	Heptachlor epoxide	0.05
α-Chlordane	0.05	Methoxychlor	0.5
γ-Chlordane	0.05	Toxaphene	5.0
4,4'-DDD	0.1	Aroclor-1016	1.0
4,4'-DDE	0.1	Aroclor-1221	2.0
4,4'-DDT	0.1	Aroclor-1232	1.0
Dieldrin	0.1	Aroclor-1242	1.0
Endosulfan I	0.05	Aroclor-1248	1.0
Endosulfan II	0.1	Aroclor-1254	1.0
Endosulfan sulfate	0.1	Aroclor-1260	1.0

Table D-1.0-7
Determination of EQLs for Various Matrices

Matrix	Factor
Groundwater	1
Low-concentration soil by sonication*	33
High-concentration soil and sludges by sonication*	1000
Nonwater miscible waste	10,000

* This factor is based on no GPC cleanup. The factor will vary for soil samples that undergo GPC, based on the GPC equipment used (volume of extract put through GPC). The laboratories should adjust the final volume of the GPC extract to keep this factor no greater than 66, if possible.

D-2.0 RFI ANALYTICAL RESULTS

This section presents the analytical data for the material disposal areas (MDAs) included in this RFI report. The analytical data available in the Facility for Information Management, Analysis, and Display (FIMAD) were manually verified by FIMAD centralized data management personnel against hard copy data packages from the analytical laboratories. During entry of focused validation qualifiers, the data steward reviewed entries against analytical report hard copies and ER Project baseline validation reports. Any inconsistencies found were corrected locally, summarized, and submitted to centralized data management personnel for correction in FIMAD.

Tables D-2.0-1 through D-2.0-6 present an abridged version of analytical results for inorganic and organic chemicals and radionuclides. A detailed version of the data set is being submitted in electronic format to New Mexico Environment Department (NMED) Hazardous Waste Bureau, the Department of Energy (DOE), and the ER Project Records Processing Facility. Copies of the reports that include electronic

versions of the data set can be recognized by the notation "Data disks included with this copy," which is clearly displayed on the covers.

The data set is presented in spreadsheets using Microsoft Excel Version 97. One disk, entitled Material Disposal Area H at Technical Area 54, was required to accommodate the data set. Names of files are as follows.

SUBSURFACE DATA, INORGANIC.xls
 SUBSURFACE DATA, ORGANIC.xls
 SUBSURFACE DATA, RADIONUCLIDE.xls
 CHANNEL SEDIMENT DATA, INORGANIC.xls
 CHANNEL SEDIMENT DATA, ORGANIC.xls
 CHANNEL SEDIMENT DATA, RADIONUCLIDE.xls

Table D-2.0-1
Inorganic Chemical Analytical Data in Sediments at MDA H

Location	Sample ID	Depth (in.)	Media	Analyte	Result (mg/kg)	Qualifier
54-5126	AAB3142	0-6	Soil	Cyanide, total	0.2	U
54-5126	AAB3142	0-6	Soil	Mercury	0.02	U
54-5126	AAB3142	0-6	Soil	Arsenic	1.7	U
54-5126	AAB3142	0-6	Soil	Selenium	0.61	U
54-5126	AAB3142	0-6	Soil	Aluminum	4800	J
54-5126	AAB3142	0-6	Soil	Barium	71	None
54-5126	AAB3142	0-6	Soil	Beryllium	0.39	U
54-5126	AAB3142	0-6	Soil	Boron	1.6	U
54-5126	AAB3142	0-6	Soil	Cadmium	0.5	U
54-5126	AAB3142	0-6	Soil	Calcium	912	U
54-5126	AAB3142	0-6	Soil	Chromium, total	4.8	None
54-5126	AAB3142	0-6	Soil	Cobalt	4.6	U
54-5126	AAB3142	0-6	Soil	Copper	4.1	U
54-5126	AAB3142	0-6	Soil	Iron	5890	None
54-5126	AAB3142	0-6	Soil	Magnesium	948	U
54-5126	AAB3142	0-6	Soil	Manganese	300	None
54-5126	AAB3142	0-6	Soil	Molybdenum	5.3	U
54-5126	AAB3142	0-6	Soil	Nickel	2.9	U
54-5126	AAB3142	0-6	Soil	Potassium	723	U
54-5126	AAB3142	0-6	Soil	Silver	0.61	U
54-5126	AAB3142	0-6	Soil	Sodium	38.9	U
54-5126	AAB3142	0-6	Soil	Vanadium	11.2	None
54-5126	AAB3142	0-6	Soil	Zinc	35.3	None
54-5126	AAB3142	0-6	Soil	Antimony	0.2	U
54-5126	AAB3142	0-6	Soil	Lead	15.3	None
54-5126	AAB3142	0-6	Soil	Thallium	0.2	U
54-5130	AAB3129	0-6	Soil	Cyanide, total	0.2	U
54-5130	AAB3129	0-6	Soil	Mercury	0.02	U
54-5130	AAB3129	0-6	Soil	Arsenic	1.0	U

Table D-2.0-1 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Result (mg/kg)	Qualifier
54-5130	AAB3129	0-6	Soil	Selenium	0.6	U
54-5130	AAB3129	0-6	Soil	Aluminum	2770	J
54-5130	AAB3129	0-6	Soil	Barium	51.3	None
54-5130	AAB3129	0-6	Soil	Beryllium	0.29	U
54-5130	AAB3129	0-6	Soil	Boron	1.6	U
54-5130	AAB3129	0-6	Soil	Cadmium	0.41	U
54-5130	AAB3129	0-6	Soil	Calcium	976	U
54-5130	AAB3129	0-6	Soil	Chromium, total	2.4	None
54-5130	AAB3129	0-6	Soil	Cobalt	3.1	U
54-5130	AAB3129	0-6	Soil	Copper	2.2	U
54-5130	AAB3129	0-6	Soil	Iron	3870	None
54-5130	AAB3129	0-6	Soil	Magnesium	616	U
54-5130	AAB3129	0-6	Soil	Manganese	229	None
54-5130	AAB3129	0-6	Soil	Molybdenum	5.2	U
54-5130	AAB3129	0-6	Soil	Nickel	2.1	U
54-5130	AAB3129	0-6	Soil	Potassium	382	U
54-5130	AAB3129	0-6	Soil	Silver	0.6	U
54-5130	AAB3129	0-6	Soil	Sodium	31	U
54-5130	AAB3129	0-6	Soil	Vanadium	6.7	U
54-5130	AAB3129	0-6	Soil	Zinc	13.5	None
54-5130	AAB3129	0-6	Soil	Antimony	0.2	U
54-5130	AAB3129	0-6	Soil	Lead	21.3	None
54-5130	AAB3129	0-6	Soil	Thallium	0.2	U
54-5131	AAB3175	0-6	Soil	Cyanide, total	0.2	U
54-5131	AAB3175	0-6	Soil	Mercury	0.02	U
54-5131	AAB3175	0-6	Soil	Arsenic	1.1	U
54-5131	AAB3175	0-6	Soil	Selenium	0.6	U
54-5131	AAB3175	0-6	Soil	Aluminum	2580	J
54-5131	AAB3175	0-6	Soil	Barium	45.2	None
54-5131	AAB3175	0-6	Soil	Beryllium	0.21	U
54-5131	AAB3175	0-6	Soil	Boron	1.6	U
54-5131	AAB3175	0-6	Soil	Cadmium	0.26	U
54-5131	AAB3175	0-6	Soil	Calcium	1430	None
54-5131	AAB3175	0-6	Soil	Chromium, total	2.8	None
54-5131	AAB3175	0-6	Soil	Cobalt	2.9	U
54-5131	AAB3175	0-6	Soil	Copper	2.3	U
54-5131	AAB3175	0-6	Soil	Iron	3690	None
54-5131	AAB3175	0-6	Soil	Magnesium	692	U
54-5131	AAB3175	0-6	Soil	Manganese	184	None
54-5131	AAB3175	0-6	Soil	Molybdenum	5.2	U
54-5131	AAB3175	0-6	Soil	Nickel	2.1	U
54-5131	AAB3175	0-6	Soil	Potassium	252	U
54-5131	AAB3175	0-6	Soil	Silver	0.6	U
54-5131	AAB3175	0-6	Soil	Sodium	28.7	U
54-5131	AAB3175	0-6	Soil	Vanadium	7.1	U

Table D-2.0-1 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Result (mg/kg)	Qualifier
54-5131	AAB3175	0-6	Soil	Zinc	0.2	None
54-5131	AAB3175	0-6	Soil	Antimony	0.2	U
54-5131	AAB3175	0-6	Soil	Lead	19.9	None
54-5131	AAB3175	0-6	Soil	Thallium	0.2	U
54-5132	AAB3131	0-8	Soil	Cyanide, total	0.28	U
54-5132	AAB3131	0-8	Soil	Mercury	0.02	U
54-5132	AAB3131	0-8	Soil	Arsenic	0.91	U
54-5132	AAB3131	0-8	Soil	Selenium	0.6	U
54-5132	AAB3131	0-8	Soil	Aluminum	1140	J
54-5132	AAB3131	0-8	Soil	Barium	32.4	U
54-5132	AAB3131	0-8	Soil	Beryllium	0.2	U
54-5132	AAB3131	0-8	Soil	Boron	1.6	U
54-5132	AAB3131	0-8	Soil	Cadmium	0.68	U
54-5132	AAB3131	0-8	Soil	Calcium	1590	None
54-5132	AAB3131	0-8	Soil	Chromium, total	2.9	None
54-5132	AAB3131	0-8	Soil	Cobalt	1.7	U
54-5132	AAB3131	0-8	Soil	Copper	2.1	U
54-5132	AAB3131	0-8	Soil	Iron	3930	None
54-5132	AAB3131	0-8	Soil	Magnesium	513	U
54-5132	AAB3131	0-8	Soil	Manganese	116	None
54-5132	AAB3131	0-8	Soil	Molybdenum	5.2	U
54-5132	AAB3131	0-8	Soil	Nickel	1.2	U
54-5132	AAB3131	0-8	Soil	Potassium	195	U
54-5132	AAB3131	0-8	Soil	Silver	0.6	U
54-5132	AAB3131	0-8	Soil	Sodium	67.5	U
54-5132	AAB3131	0-8	Soil	Vanadium	7.0	U
54-5132	AAB3131	0-8	Soil	Zinc	21.3	None
54-5132	AAB3131	0-8	Soil	Antimony	0.2	U
54-5132	AAB3131	0-8	Soil	Lead	13.1	None
54-5132	AAB3131	0-8	Soil	Thallium	0.2	U

Table D-2.0-2
Organic Chemical Analytical Data in Sediments at MDA H

Location	Sample ID	Depth (in.)	Media	Analyte	Result (mg/kg)	Qualifier
54-5126	AAB3142	0-6	Soil	Aldrin	0.00172	U
54-5126	AAB3142	0-6	Soil	Aroclor-1016	0.0334	U
54-5126	AAB3142	0-6	Soil	Aroclor-1221	0.0678	U
54-5126	AAB3142	0-6	Soil	Aroclor-1232	0.0334	U
54-5126	AAB3142	0-6	Soil	Aroclor-1242	0.0334	U
54-5126	AAB3142	0-6	Soil	Aroclor-1248	0.0334	U
54-5126	AAB3142	0-6	Soil	Aroclor-1254	0.0334	U
54-5126	AAB3142	0-6	Soil	Aroclor-1260	0.0334	U
54-5126	AAB3142	0-6	Soil	BHC[alpha-]	0.00172	U
54-5126	AAB3142	0-6	Soil	BHC[beta-]	0.00172	U
54-5126	AAB3142	0-6	Soil	BHC[delta-]	0.00172	U
54-5126	AAB3142	0-6	Soil	BHC[gamma-]	0.00172	U
54-5126	AAB3142	0-6	Soil	Chlordane[alpha-]	0.00172	U
54-5126	AAB3142	0-6	Soil	Chlordane[gamma-]	0.00172	U
54-5126	AAB3142	0-6	Soil	DDD[4,4'-]	0.00334	U
54-5126	AAB3142	0-6	Soil	DDE[4,4'-]	0.00334	U
54-5126	AAB3142	0-6	Soil	DDT[4,4'-]	0.00334	U
54-5126	AAB3142	0-6	Soil	Dieldrin	0.00334	U
54-5126	AAB3142	0-6	Soil	Endosulfan I	0.00172	U
54-5126	AAB3142	0-6	Soil	Endosulfan II	0.00334	U
54-5126	AAB3142	0-6	Soil	Endosulfan sulfate	0.00334	U
54-5126	AAB3142	0-6	Soil	Endrin	0.00334	U
54-5126	AAB3142	0-6	Soil	Endrin aldehyde	0.00334	U
54-5126	AAB3142	0-6	Soil	Endrin ketone	0.00334	U
54-5126	AAB3142	0-6	Soil	Heptachlor	0.00172	U
54-5126	AAB3142	0-6	Soil	Heptachlor epoxide	0.00172	U
54-5126	AAB3142	0-6	Soil	Methoxychlor[4,4'-]	0.0172	U
54-5126	AAB3142	0-6	Soil	Toxaphene (technical grade)	0.172	U
54-5130	AAB3129	0-6	Soil	Aldrin	0.00171	U
54-5130	AAB3129	0-6	Soil	Aroclor-1016	0.0332	U
54-5130	AAB3129	0-6	Soil	Aroclor-1221	0.0674	U
54-5130	AAB3129	0-6	Soil	Aroclor-1232	0.0332	U
54-5130	AAB3129	0-6	Soil	Aroclor-1242	0.0332	U
54-5130	AAB3129	0-6	Soil	Aroclor-1248	0.0332	U
54-5130	AAB3129	0-6	Soil	Aroclor-1254	0.0332	U
54-5130	AAB3129	0-6	Soil	Aroclor-1260	0.0332	U
54-5130	AAB3129	0-6	Soil	BHC[alpha-]	0.00171	U
54-5130	AAB3129	0-6	Soil	BHC[beta-]	0.00171	U
54-5130	AAB3129	0-6	Soil	BHC[delta-]	0.00171	U
54-5130	AAB3129	0-6	Soil	BHC[gamma-]	0.00171	U
54-5130	AAB3129	0-6	Soil	Chlordane[alpha-]	0.00171	U
54-5130	AAB3129	0-6	Soil	Chlordane[gamma-]	0.00171	U
54-5130	AAB3129	0-6	Soil	DDD[4,4'-]	0.00332	U

Table D-2.0-2 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Result (mg/kg)	Qualifier
54-5130	AAB3129	0-6	Soil	DDE[4,4'-]	0.00332	U
54-5130	AAB3129	0-6	Soil	DDT[4,4'-]	0.00332	U
54-5130	AAB3129	0-6	Soil	Dieldrin	0.00332	U
54-5130	AAB3129	0-6	Soil	Endosulfan I	0.00171	U
54-5130	AAB3129	0-6	Soil	Endosulfan II	0.00332	U
54-5130	AAB3129	0-6	Soil	Endosulfan sulfate	0.00332	U
54-5130	AAB3129	0-6	Soil	Endrin	0.00332	U
54-5130	AAB3129	0-6	Soil	Endrin aldehyde	0.00332	U
54-5130	AAB3129	0-6	Soil	Endrin ketone	0.00332	U
54-5130	AAB3129	0-6	Soil	Heptachlor	0.00171	U
54-5130	AAB3129	0-6	Soil	Heptachlor epoxide	0.00171	U
54-5130	AAB3129	0-6	Soil	Methoxychlor[4,4'-]	0.0359	None
54-5130	AAB3129	0-6	Soil	Toxaphene (technical grade)	0.171	U
54-5131	AAB3175	0-6	Soil	Aldrin	0.00171	U
54-5131	AAB3175	0-6	Soil	Aroclor-1016	0.0331	U
54-5131	AAB3175	0-6	Soil	Aroclor-1221	0.0673	U
54-5131	AAB3175	0-6	Soil	Aroclor-1232	0.0331	U
54-5131	AAB3175	0-6	Soil	Aroclor-1242	0.0331	U
54-5131	AAB3175	0-6	Soil	Aroclor-1248	0.0331	U
54-5131	AAB3175	0-6	Soil	Aroclor-1254	0.0331	U
54-5131	AAB3175	0-6	Soil	Aroclor-1260	0.0331	U
54-5131	AAB3175	0-6	Soil	BHC[alpha-]	0.00171	U
54-5131	AAB3175	0-6	Soil	BHC[beta-]	0.00171	U
54-5131	AAB3175	0-6	Soil	BHC[delta-]	0.00171	U
54-5131	AAB3175	0-6	Soil	BHC[gamma-]	0.00171	U
54-5131	AAB3175	0-6	Soil	Chlordane[alpha-]	0.00171	U
54-5131	AAB3175	0-6	Soil	Chlordane[gamma-]	0.00171	U
54-5131	AAB3175	0-6	Soil	DDD[4,4'-]	0.00331	U
54-5131	AAB3175	0-6	Soil	DDE[4,4'-]	0.00331	U
54-5131	AAB3175	0-6	Soil	DDT[4,4'-]	0.00331	U
54-5131	AAB3175	0-6	Soil	Dieldrin	0.00331	U
54-5131	AAB3175	0-6	Soil	Endosulfan I	0.00171	U
54-5131	AAB3175	0-6	Soil	Endosulfan II	0.00331	U
54-5131	AAB3175	0-6	Soil	Endosulfan sulfate	0.00331	U
54-5131	AAB3175	0-6	Soil	Endrin	0.00331	U
54-5131	AAB3175	0-6	Soil	Endrin aldehyde	0.00331	U
54-5131	AAB3175	0-6	Soil	Endrin ketone	0.00331	U
54-5131	AAB3175	0-6	Soil	Heptachlor	0.00171	U
54-5131	AAB3175	0-6	Soil	Heptachlor epoxide	0.00171	U
54-5131	AAB3175	0-6	Soil	Methoxychlor[4,4'-]	0.0171	U
54-5131	AAB3175	0-6	Soil	Toxaphene (technical grade)	0.171	U
54-5132	AAB3131	0-8	Soil	Aldrin	0.00172	U
54-5132	AAB3131	0-8	Soil	Aroclor-1016	0.0333	U

Table D-2.0-2 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Result (mg/kg)	Qualifier
54-5132	AAB3131	0-8	Soil	Aroclor-1221	0.0676	U
54-5132	AAB3131	0-8	Soil	Aroclor-1232	0.0333	U
54-5132	AAB3131	0-8	Soil	Aroclor-1242	0.0333	U
54-5132	AAB3131	0-8	Soil	Aroclor-1248	0.0333	U
54-5132	AAB3131	0-8	Soil	Aroclor-1254	0.0333	U
54-5132	AAB3131	0-8	Soil	Aroclor-1260	0.0333	U
54-5132	AAB3131	0-8	Soil	BHC[alpha-]	0.00172	U
54-5132	AAB3131	0-8	Soil	BHC[beta-]	0.00172	U
54-5132	AAB3131	0-8	Soil	BHC[delta-]	0.00172	U
54-5132	AAB3131	0-8	Soil	BHC[gamma-]	0.00172	U
54-5132	AAB3131	0-8	Soil	Chlordane[alpha-]	0.00172	U
54-5132	AAB3131	0-8	Soil	Chlordane[gamma-]	0.00172	U
54-5132	AAB3131	0-8	Soil	DDD[4,4'-]	0.00333	U
54-5132	AAB3131	0-8	Soil	DDE[4,4'-]	0.00333	U
54-5132	AAB3131	0-8	Soil	DDT[4,4'-]	0.00333	U
54-5132	AAB3131	0-8	Soil	Dieldrin	0.00333	U
54-5132	AAB3131	0-8	Soil	Endosulfan I	0.00172	U
54-5132	AAB3131	0-8	Soil	Endosulfan II	0.00333	U
54-5132	AAB3131	0-8	Soil	Endosulfan sulfate	0.00333	U
54-5132	AAB3131	0-8	Soil	Endrin	0.00333	U
54-5132	AAB3131	0-8	Soil	Endrin aldehyde	0.00333	U
54-5132	AAB3131	0-8	Soil	Endrin ketone	0.00333	U
54-5132	AAB3131	0-8	Soil	Heptachlor	0.00172	U
54-5132	AAB3131	0-8	Soil	Heptachlor epoxide	0.00172	U
54-5132	AAB3131	0-8	Soil	Methoxychlor[4,4'-]	0.0397	None
54-5132	AAB3131	0-8	Soil	Toxaphene (technical grade)	0.172	U

Table D-2.0-3
Radionuclide Analytical Data in Sediments at MDA H

Location	Sample ID	Depth (in.)	Media	Analyte	Results (pCi/g)	Qualifier
54-5126	AAB3142	0-6	Soil	Americium-241	0.008	None
54-5130	AAB3129	0-6	Soil	Americium-241	0.003	U
54-5131	AAB3175	0-6	Soil	Americium-241	0.005	None
54-5132	AAB3131	0-8	Soil	Americium-241	0.004	U
54-5126	AAB3142	0-6	Soil	Cesium-137	0.3	None
54-5130	AAB3129	0-6	Soil	Cesium-137	0.48	None
54-5131	AAB3175	0-6	Soil	Cesium-137	0.11	U
54-5132	AAB3131	0-8	Soil	Cesium-137	0.08	U
54-5126	AAB3142	0-6	Soil	Cobalt-60	0.05	U
54-5130	AAB3129	0-6	Soil	Cobalt-60	0.05	U
54-5131	AAB3175	0-6	Soil	Cobalt-60	0.04	U
54-5132	AAB3131	0-8	Soil	Cobalt-60	0.07	U
54-5126	AAB3142	0-6	Soil	Plutonium-238	0.003	U
54-5130	AAB3129	0-6	Soil	Plutonium-238	0.001	U
54-5131	AAB3175	0-6	Soil	Plutonium-238	0.001	U
54-5132	AAB3131	0-8	Soil	Plutonium-238	0.002	U
54-5126	AAB3142	0-6	Soil	Plutonium-239	0.017	None
54-5130	AAB3129	0-6	Soil	Plutonium-239	0.003	U
54-5131	AAB3175	0-6	Soil	Plutonium-239	0.002	U
54-5132	AAB3131	0-8	Soil	Plutonium-239	0.001	U
54-5126	AAB3142	0-6	Soil	Strontium-90	0.14	U
54-5130	AAB3129	0-6	Soil	Strontium-90	0	U
54-5131	AAB3175	0-6	Soil	Strontium-90	0.01	U
54-5132	AAB3131	0-8	Soil	Strontium-90	-0.02	U
54-5126	AAB3142	0-6	Soil	Thorium-228	1.22	None
54-5130	AAB3129	0-6	Soil	Thorium-228	1.09	None
54-5131	AAB3175	0-6	Soil	Thorium-228	1.02	None
54-5132	AAB3131	0-8	Soil	Thorium-228	0.84	None
54-5126	AAB3142	0-6	Soil	Thorium-230	1.21	None
54-5130	AAB3129	0-6	Soil	Thorium-230	0.99	None
54-5131	AAB3175	0-6	Soil	Thorium-230	0.86	None
54-5132	AAB3131	0-8	Soil	Thorium-230	0.76	None
54-5126	AAB3142	0-6	Soil	Thorium-232	1.3	None
54-5130	AAB3129	0-6	Soil	Thorium-232	1.14	None
54-5131	AAB3175	0-6	Soil	Thorium-232	1.07	None
54-5132	AAB3131	0-8	Soil	Thorium-232	0.87	None
54-5126	AAB3142	0-6	Soil	Uranium-234	1.34	None
54-5130	AAB3129	0-6	Soil	Uranium-234	0.81	None
54-5131	AAB3175	0-6	Soil	Uranium-234	0.95	None
54-5132	AAB3131	0-8	Soil	Uranium-234	0.71	None
54-5126	AAB3142	0-6	Soil	Uranium-235	0.07	U
54-5130	AAB3129	0-6	Soil	Uranium-235	0.08	U
54-5131	AAB3175	0-6	Soil	Uranium-235	0.05	U

Table D-2.0-3 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (pCi/g)	Qualifier
54-5132	AAB3131	0-8	Soil	Uranium-235	0.05	U
54-5126	AAB3142	0-6	Soil	Uranium-238	1.36	None
54-5130	AAB3129	0-6	Soil	Uranium-238	0.97	None
54-5131	AAB3175	0-6	Soil	Uranium-238	1.08	None
54-5132	AAB3131	0-8	Soil	Uranium-238	0.77	None
54-5130	AAB3129	0-6	Soil	Tritium	0.00608	None
54-5131	AAB3175	0-6	Soil	Tritium	0.01236	J
54-5126	AAB3142	0-6	Soil	Tritium	0.111	J
54-5132	AAB3131	0-8	Soil	Tritium	0.0041	J
54-5130	AAB3129	0-6	Soil	Radium-226	0.41	U
54-5131	AAB3175	0-6	Soil	Radium-226	0.25	U
54-5126	AAB3142	0-6	Soil	Radium-226	0.29	U
54-5132	AAB3131	0-8	Soil	Radium-226	1.23	None
54-5130	AAB3129	0-6	Soil	Technetium-99	0.2	U
54-5131	AAB3175	0-6	Soil	Technetium-99	0.2	U
54-5126	AAB3142	0-6	Soil	Technetium-99	0.2	U
54-5132	AAB3131	0-8	Soil	Technetium-99	0.2	U

Table D-2.0-4
Inorganic Chemical Analytical Data in Tuff at MDA H

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0282	114–116.4	Qbt 2	Aluminum	2070	None
54-1023	0554-95-0284	186–204	Qbt 2	Aluminum	756	None
54-1023	0554-95-0286	324–342	Qbt 2	Aluminum	3140	None
54-1023	0554-95-0288	444–462	Qbt 1v	Aluminum	1840	None
54-1023	0554-95-0290	564–582	Qbt 1v	Aluminum	176	None
54-1023	0554-95-0292	684–702	Qbt 1v	Aluminum	167	None
54-1023	0554-95-0294	804–822	Qbt 1v	Aluminum	177	None
54-1023	0554-95-0298	990–1005.6	Qbt 1v	Aluminum	209	None
54-1024	0554-95-0321	108–110.4	Qbt 2	Aluminum	1370	None
54-1024	0554-95-0323	222–240	Qbt 2	Aluminum	1590	None
54-1024	0554-95-0325	312–333.6	Qbt 2	Aluminum	295	None
54-1024	0554-95-0327	432–453.6	Qbt 2	Aluminum	656	None
54-1024	0554-95-0329	612–630	Qbt 1v	Aluminum	280	None
54-1024	0554-95-0331	732–750	Qbt 1v	Aluminum	353	None
54-1024	0554-95-0333	852–873.6	Qbt 1v	Aluminum	260	None
54-1024	0554-95-0337	1032–1053.6	Qbt 1v	Aluminum	410	None
54-1025	0554-95-0339	108–110.4	Qbt 2	Aluminum	1610	None
54-1025	0554-95-0341	204–225.6	Qbt 2	Aluminum	363	None
54-1025	0554-95-0343	336–354	Qbt 2	Aluminum	187	None
54-1025	0554-95-0345	492–510	Qbt 1v	Aluminum	208	None
54-1025	0554-95-0347	612–632.4	Qbt 1v	Aluminum	198	None
54-1025	0554-95-0349	732–753.6	Qbt 1v	Aluminum	180	None
54-1025	0554-95-0351	852–861.6	Qbt 1v	Aluminum	242	None
54-1025	0554-95-0355	1032–1080	Qbt 1v	Aluminum	280	None
54-1025*	0554-95-0356	1032–1080	Qbt 1v	Aluminum	233	None
54-1026	0554-95-0300	198–217.2	Qbt 2	Aluminum	260	None
54-1026	0554-95-0302	318–336	Qbt 2	Aluminum	286	None
54-1026	0554-95-0304	492–498	Qbt 1v	Aluminum	2570	None
54-1026	0554-95-0306	558–576	Qbt 1v	Aluminum	303	None
54-1026	0554-95-0308	696–720	Qbt 1v	Aluminum	229	None
54-1026	0554-95-0310	798–816	Qbt 1v	Aluminum	570	None
54-1026	0554-95-0312	918–936	Qbt 1v	Aluminum	208	None
54-1026	0554-95-0316	1068–1086	Qbt 1v	Aluminum	238	None
54-1026	0554-95-0318	108–110.4	Qbt 2	Aluminum	1630	None
54-1023	0554-95-0282	114–116.4	Qbt 2	Antimony	0.55	U
54-1023	0554-95-0284	186–204	Qbt 2	Antimony	0.1	UJ
54-1023	0554-95-0286	324–342	Qbt 2	Antimony	0.1	UJ
54-1023	0554-95-0288	444–462	Qbt 1v	Antimony	0.1	UJ
54-1023	0554-95-0290	564–582	Qbt 1v	Antimony	0.1	UJ
54-1023	0554-95-0292	684–702	Qbt 1v	Antimony	0.1	UJ

* Field duplicate.

Table D-2.0-4 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0294	804-822	Qbt 1v	Antimony	0.1	UJ
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Antimony	0.1	UJ
54-1024	0554-95-0321	108-110.4	Qbt 2	Antimony	0.1	UJ
54-1024	0554-95-0323	222-240	Qbt 2	Antimony	0.39	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Antimony	4.93	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Antimony	4.91	U
54-1024	0554-95-0329	612-630	Qbt 1v	Antimony	5.03	U
54-1024	0554-95-0331	732-750	Qbt 1v	Antimony	5.01	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Antimony	4.9	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Antimony	5.04	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Antimony	0.57	J
54-1025	0554-95-0341	204-225.6	Qbt 2	Antimony	0.39	U
54-1025	0554-95-0343	336-354	Qbt 2	Antimony	0.39	J
54-1025	0554-95-0345	492-510	Qbt 1v	Antimony	0.38	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Antimony	0.38	U
54-1025	0554-95-0349	732-753.6	Qbt 1v	Antimony	0.38	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Antimony	0.42	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Antimony	0.41	U
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Antimony	0.39	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Antimony	0.1	UJ
54-1026	0554-95-0302	318-336	Qbt 2	Antimony	0.1	UJ
54-1026	0554-95-0304	492-498	Qbt 1v	Antimony	0.1	UJ
54-1026	0554-95-0306	558-576	Qbt 1v	Antimony	0.1	UJ
54-1026	0554-95-0308	696-720	Qbt 1v	Antimony	0.1	UJ
54-1026	0554-95-0310	798-816	Qbt 1v	Antimony	0.1	UJ
54-1026	0554-95-0312	918-936	Qbt 1v	Antimony	0.1	UJ
54-1026	0554-95-0316	1068-1086	Qbt 1v	Antimony	0.1	UJ
54-1026	0554-95-0318	108-110.4	Qbt 2	Antimony	0.11	UJ
54-1023	0554-95-0282	114-116.4	Qbt 2	Arsenic	0.93	U
54-1023	0554-95-0284	186-204	Qbt 2	Arsenic	0.31	U
54-1023	0554-95-0286	324-342	Qbt 2	Arsenic	0.31	U
54-1023	0554-95-0288	444-462	Qbt 1v	Arsenic	0.3	U
54-1023	0554-95-0290	564-582	Qbt 1v	Arsenic	0.3	U
54-1023	0554-95-0292	684-702	Qbt 1v	Arsenic	0.3	U
54-1023	0554-95-0294	804-822	Qbt 1v	Arsenic	0.3	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Arsenic	0.33	J
54-1024	0554-95-0321	108-110.4	Qbt 2	Arsenic	0.3	U
54-1024	0554-95-0323	222-240	Qbt 2	Arsenic	1	J
54-1024	0554-95-0325	312-333.6	Qbt 2	Arsenic	0.198	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Arsenic	0.202	U
54-1024	0554-95-0329	612-630	Qbt 1v	Arsenic	0.199	U
54-1024	0554-95-0331	732-750	Qbt 1v	Arsenic	0.192	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Arsenic	0.203	U

* Field duplicate.

Table D-2.0-4 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Arsenic	0.309	None
54-1025	0554-95-0339	108-110.4	Qbt 2	Arsenic	2.1	None
54-1025	0554-95-0341	204-225.6	Qbt 2	Arsenic	1.1	J
54-1025	0554-95-0343	336-354	Qbt 2	Arsenic	1.2	J
54-1025	0554-95-0345	492-510	Qbt 1v	Arsenic	1.0	J
54-1025	0554-95-0347	612-632.4	Qbt 1v	Arsenic	1.3	J
54-1025	0554-95-0349	732-753.6	Qbt 1v	Arsenic	1.1	J
54-1025	0554-95-0351	852-861.6	Qbt 1v	Arsenic	1.8	J
54-1025	0554-95-0355	1032-1080	Qbt 1v	Arsenic	1.3	J
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Arsenic	1.3	J
54-1026	0554-95-0300	198-217.2	Qbt 2	Arsenic	0.31	U
54-1026	0554-95-0302	318-336	Qbt 2	Arsenic	0.3	U
54-1026	0554-95-0304	492-498	Qbt 1v	Arsenic	0.41	J
54-1026	0554-95-0306	558-576	Qbt 1v	Arsenic	0.3	U
54-1026	0554-95-0308	696-720	Qbt 1v	Arsenic	0.3	U
54-1026	0554-95-0310	798-816	Qbt 1v	Arsenic	0.3	U
54-1026	0554-95-0312	918-936	Qbt 1v	Arsenic	0.3	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Arsenic	0.31	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Arsenic	0.32	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Barium	11	J
54-1023	0554-95-0284	186-204	Qbt 2	Barium	5.2	J
54-1023	0554-95-0286	324-342	Qbt 2	Barium	8.6	J
54-1023	0554-95-0288	444-462	Qbt 1v	Barium	4.9	J
54-1023	0554-95-0290	564-582	Qbt 1v	Barium	2.4	J
54-1023	0554-95-0292	684-702	Qbt 1v	Barium	1.7	J
54-1023	0554-95-0294	804-822	Qbt 1v	Barium	4.4	J
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Barium	7.0	J
54-1024	0554-95-0321	108-110.4	Qbt 2	Barium	8.2	J
54-1024	0554-95-0323	222-240	Qbt 2	Barium	12	J
54-1024	0554-95-0325	312-333.6	Qbt 2	Barium	3.55	J
54-1024	0554-95-0327	432-453.6	Qbt 2	Barium	5.83	J
54-1024	0554-95-0329	612-630	Qbt 1v	Barium	3.19	J
54-1024	0554-95-0331	732-750	Qbt 1v	Barium	3.21	J
54-1024	0554-95-0333	852-873.6	Qbt 1v	Barium	3.68	J
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Barium	4.32	None
54-1025	0554-95-0339	108-110.4	Qbt 2	Barium	18	J
54-1025	0554-95-0341	204-225.6	Qbt 2	Barium	6.4	J
54-1025	0554-95-0343	336-354	Qbt 2	Barium	2.8	J
54-1025	0554-95-0345	492-510	Qbt 1v	Barium	2.8	J
54-1025	0554-95-0347	612-632.4	Qbt 1v	Barium	4.4	J
54-1025	0554-95-0349	732-753.6	Qbt 1v	Barium	3.0	J
54-1025	0554-95-0351	852-861.6	Qbt 1v	Barium	4.6	J
54-1025	0554-95-0355	1032-1080	Qbt 1v	Barium	7.5	J

* Field duplicate.

Table D-2.0-4 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Barium	6.9	J
54-1026	0554-95-0300	198-217.2	Qbt 2	Barium	3.0	J
54-1026	0554-95-0302	318-336	Qbt 2	Barium	3.0	J
54-1026	0554-95-0304	492-498	Qbt 1v	Barium	10.7	J
54-1026	0554-95-0306	558-576	Qbt 1v	Barium	6.9	J
54-1026	0554-95-0308	696-720	Qbt 1v	Barium	3.2	J
54-1026	0554-95-0310	798-816	Qbt 1v	Barium	5.6	J
54-1026	0554-95-0312	918-936	Qbt 1v	Barium	4.8	J
54-1026	0554-95-0316	1068-1086	Qbt 1v	Barium	6.8	J
54-1026	0554-95-0318	108-110.4	Qbt 2	Barium	7.4	J
54-1023	0554-95-0282	114-116.4	Qbt 2	Beryllium	0.08	U
54-1023	0554-95-0284	186-204	Qbt 2	Beryllium	0.21	J
54-1023	0554-95-0286	324-342	Qbt 2	Beryllium	0.34	J
54-1023	0554-95-0288	444-462	Qbt 1v	Beryllium	0.49	J
54-1023	0554-95-0290	564-582	Qbt 1v	Beryllium	0.14	J
54-1023	0554-95-0292	684-702	Qbt 1v	Beryllium	0.1	J
54-1023	0554-95-0294	804-822	Qbt 1v	Beryllium	0.17	J
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Beryllium	0.26	J
54-1024	0554-95-0321	108-110.4	Qbt 2	Beryllium	0.2	J
54-1024	0554-95-0323	222-240	Qbt 2	Beryllium	0.44	J
54-1024	0554-95-0325	312-333.6	Qbt 2	Beryllium	0.493	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Beryllium	0.491	U
54-1024	0554-95-0329	612-630	Qbt 1v	Beryllium	0.503	U
54-1024	0554-95-0331	732-750	Qbt 1v	Beryllium	0.501	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Beryllium	0.49	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Beryllium	0.504	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Beryllium	0.34	J
54-1025	0554-95-0341	204-225.6	Qbt 2	Beryllium	0.29	J
54-1025	0554-95-0343	336-354	Qbt 2	Beryllium	0.13	J
54-1025	0554-95-0345	492-510	Qbt 1v	Beryllium	0.11	J
54-1025	0554-95-0347	612-632.4	Qbt 1v	Beryllium	0.14	J
54-1025	0554-95-0349	732-753.6	Qbt 1v	Beryllium	0.14	J
54-1025	0554-95-0351	852-861.6	Qbt 1v	Beryllium	0.22	J
54-1025	0554-95-0355	1032-1080	Qbt 1v	Beryllium	0.25	J
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Beryllium	0.24	J
54-1026	0554-95-0300	198-217.2	Qbt 2	Beryllium	0.1	U
54-1026	0554-95-0302	318-336	Qbt 2	Beryllium	0.13	J
54-1026	0554-95-0304	492-498	Qbt 1v	Beryllium	0.29	J
54-1026	0554-95-0306	558-576	Qbt 1v	Beryllium	0.21	J
54-1026	0554-95-0308	696-720	Qbt 1v	Beryllium	0.18	J
54-1026	0554-95-0310	798-816	Qbt 1v	Beryllium	0.22	J
54-1026	0554-95-0312	918-936	Qbt 1v	Beryllium	0.19	J
54-1026	0554-95-0316	1068-1086	Qbt 1v	Beryllium	0.15	J

* Field duplicate.

Table D-2.0-4 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0318	108–110.4	Qbt 2	Beryllium	0.22	J
54-1023	0554-95-0282	114–116.4	Qbt 2	Cadmium	0.06	U
54-1023	0554-95-0284	186–204	Qbt 2	Cadmium	0.2	U
54-1023	0554-95-0286	324–342	Qbt 2	Cadmium	0.25	J
54-1023	0554-95-0288	444–462	Qbt 1v	Cadmium	0.2	U
54-1023	0554-95-0290	564–582	Qbt 1v	Cadmium	0.2	U
54-1023	0554-95-0292	684–702	Qbt 1v	Cadmium	0.2	U
54-1023	0554-95-0294	804–822	Qbt 1v	Cadmium	0.2	U
54-1023	0554-95-0298	990–1005.6	Qbt 1v	Cadmium	0.52	None
54-1024	0554-95-0321	108–110.4	Qbt 2	Cadmium	0.2	U
54-1024	0554-95-0323	222–240	Qbt 2	Cadmium	0.02	U
54-1024	0554-95-0325	312–333.6	Qbt 2	Cadmium	0.493	U
54-1024	0554-95-0327	432–453.6	Qbt 2	Cadmium	0.491	U
54-1024	0554-95-0329	612–630	Qbt 1v	Cadmium	0.503	U
54-1024	0554-95-0331	732–750	Qbt 1v	Cadmium	0.501	U
54-1024	0554-95-0333	852–873.6	Qbt 1v	Cadmium	0.49	U
54-1024	0554-95-0337	1032–1053.6	Qbt 1v	Cadmium	0.504	U
54-1025	0554-95-0339	108–110.4	Qbt 2	Cadmium	0.02	U
54-1025	0554-95-0341	204–225.6	Qbt 2	Cadmium	0.02	U
54-1025	0554-95-0343	336–354	Qbt 2	Cadmium	0.02	U
54-1025	0554-95-0345	492–510	Qbt 1v	Cadmium	0.02	U
54-1025	0554-95-0347	612–632.4	Qbt 1v	Cadmium	0.02	U
54-1025	0554-95-0349	732–753.6	Qbt 1v	Cadmium	0.02	U
54-1025	0554-95-0351	852–861.6	Qbt 1v	Cadmium	0.02	U
54-1025	0554-95-0355	1032–1080	Qbt 1v	Cadmium	0.02	U
54-1025*	0554-95-0356	1032–1080	Qbt 1v	Cadmium	0.02	U
54-1026	0554-95-0300	198–217.2	Qbt 2	Cadmium	0.21	U
54-1026	0554-95-0302	318–336	Qbt 2	Cadmium	0.2	U
54-1026	0554-95-0304	492–498	Qbt 1v	Cadmium	0.2	U
54-1026	0554-95-0306	558–576	Qbt 1v	Cadmium	0.2	U
54-1026	0554-95-0308	696–720	Qbt 1v	Cadmium	0.2	U
54-1026	0554-95-0310	798–816	Qbt 1v	Cadmium	0.2	U
54-1026	0554-95-0312	918–936	Qbt 1v	Cadmium	0.2	U
54-1026	0554-95-0316	1068–1086	Qbt 1v	Cadmium	0.25	J
54-1026	0554-95-0318	108–110.4	Qbt 2	Cadmium	0.22	U
54-1023	0554-95-0282	114–116.4	Qbt 2	Calcium	621	J
54-1023	0554-95-0284	186–204	Qbt 2	Calcium	584	None
54-1023	0554-95-0286	324–342	Qbt 2	Calcium	659	None
54-1023	0554-95-0288	444–462	Qbt 1v	Calcium	582	None
54-1023	0554-95-0290	564–582	Qbt 1v	Calcium	525	None
54-1023	0554-95-0292	684–702	Qbt 1v	Calcium	460	J
54-1023	0554-95-0294	804–822	Qbt 1v	Calcium	461	J
54-1023	0554-95-0298	990–1005.6	Qbt 1v	Calcium	754	None

* Field duplicate.

Table D-2.0-4 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0321	108-110.4	Qbt 2	Calcium	337	J
54-1024	0554-95-0323	222-240	Qbt 2	Calcium	709	J
54-1024	0554-95-0325	312-333.6	Qbt 2	Calcium	550	None
54-1024	0554-95-0327	432-453.6	Qbt 2	Calcium	432	J
54-1024	0554-95-0329	612-630	Qbt 1v	Calcium	443	J
54-1024	0554-95-0331	732-750	Qbt 1v	Calcium	628	None
54-1024	0554-95-0333	852-873.6	Qbt 1v	Calcium	562	None
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Calcium	692	None
54-1025	0554-95-0339	108-110.4	Qbt 2	Calcium	776	J
54-1025	0554-95-0341	204-225.6	Qbt 2	Calcium	155	J
54-1025	0554-95-0343	336-354	Qbt 2	Calcium	205	J
54-1025	0554-95-0345	492-510	Qbt 1v	Calcium	202	J
54-1025	0554-95-0347	612-632.4	Qbt 1v	Calcium	313	J
54-1025	0554-95-0349	732-753.6	Qbt 1v	Calcium	414	J
54-1025	0554-95-0351	852-861.6	Qbt 1v	Calcium	606	J
54-1025	0554-95-0355	1032-1080	Qbt 1v	Calcium	569	J
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Calcium	540	J
54-1026	0554-95-0300	198-217.2	Qbt 2	Calcium	458	J
54-1026	0554-95-0302	318-336	Qbt 2	Calcium	378	J
54-1026	0554-95-0304	492-498	Qbt 1v	Calcium	578	None
54-1026	0554-95-0306	558-576	Qbt 1v	Calcium	513	None
54-1026	0554-95-0308	696-720	Qbt 1v	Calcium	385	J
54-1026	0554-95-0310	798-816	Qbt 1v	Calcium	378	J
54-1026	0554-95-0312	918-936	Qbt 1v	Calcium	360	J
54-1026	0554-95-0316	1068-1086	Qbt 1v	Calcium	506	J
54-1026	0554-95-0318	108-110.4	Qbt 2	Calcium	470	J
54-1023	0554-95-0282	114-116.4	Qbt 2	Chromium, total	4.9	None
54-1023	0554-95-0284	186-204	Qbt 2	Chromium, total	0.93	J
54-1023	0554-95-0286	324-342	Qbt 2	Chromium, total	1.9	None
54-1023	0554-95-0288	444-462	Qbt 1v	Chromium, total	0.85	J
54-1023	0554-95-0290	564-582	Qbt 1v	Chromium, total	0.3	U
54-1023	0554-95-0292	684-702	Qbt 1v	Chromium, total	0.41	J
54-1023	0554-95-0294	804-822	Qbt 1v	Chromium, total	0.3	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Chromium, total	0.7	J
54-1024	0554-95-0321	108-110.4	Qbt 2	Chromium, total	5.3	None
54-1024	0554-95-0323	222-240	Qbt 2	Chromium, total	1.3	J
54-1024	0554-95-0325	312-333.6	Qbt 2	Chromium, total	0.987	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Chromium, total	0.983	U
54-1024	0554-95-0329	612-630	Qbt 1v	Chromium, total	1.01	U
54-1024	0554-95-0331	732-750	Qbt 1v	Chromium, total	1.02	None
54-1024	0554-95-0333	852-873.6	Qbt 1v	Chromium, total	0.98	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Chromium, total	1.01	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Chromium, total	4.5	None

* Field duplicate.

Table D-2.0-4 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0341	204–225.6	Qbt 2	Chromium, total	0.57	J
54-1025	0554-95-0343	336–354	Qbt 2	Chromium, total	0.84	J
54-1025	0554-95-0345	492–510	Qbt 1v	Chromium, total	0.58	J
54-1025	0554-95-0347	612–632.4	Qbt 1v	Chromium, total	0.48	J
54-1025	0554-95-0349	732–753.6	Qbt 1v	Chromium, total	3.0	None
54-1025	0554-95-0351	852–861.6	Qbt 1v	Chromium, total	1.1	J
54-1025	0554-95-0355	1032–1080	Qbt 1v	Chromium, total	1.1	J
54-1025*	0554-95-0356	1032–1080	Qbt 1v	Chromium, total	1.0	J
54-1026	0554-95-0300	198–217.2	Qbt 2	Chromium, total	0.31	U
54-1026	0554-95-0302	318–336	Qbt 2	Chromium, total	0.3	U
54-1026	0554-95-0304	492–498	Qbt 1v	Chromium, total	1.4	None
54-1026	0554-95-0306	558–576	Qbt 1v	Chromium, total	0.32	J
54-1026	0554-95-0308	696–720	Qbt 1v	Chromium, total	0.3	U
54-1026	0554-95-0310	798–816	Qbt 1v	Chromium, total	0.3	U
54-1026	0554-95-0312	918–936	Qbt 1v	Chromium, total	0.3	U
54-1026	0554-95-0316	1068–1086	Qbt 1v	Chromium, total	0.46	J
54-1026	0554-95-0318	108–110.4	Qbt 2	Chromium, total	7.0	None
54-1023	0554-95-0282	114–116.4	Qbt 2	Cobalt	0.63	J
54-1023	0554-95-0284	186–204	Qbt 2	Cobalt	0.41	U
54-1023	0554-95-0286	324–342	Qbt 2	Cobalt	0.58	J
54-1023	0554-95-0288	444–462	Qbt 1v	Cobalt	0.41	U
54-1023	0554-95-0290	564–582	Qbt 1v	Cobalt	0.4	U
54-1023	0554-95-0292	684–702	Qbt 1v	Cobalt	0.4	U
54-1023	0554-95-0294	804–822	Qbt 1v	Cobalt	0.4	U
54-1023	0554-95-0298	990–1005.6	Qbt 1v	Cobalt	0.41	U
54-1024	0554-95-0321	108–110.4	Qbt 2	Cobalt	1.0	J
54-1024	0554-95-0323	222–240	Qbt 2	Cobalt	0.41	J
54-1024	0554-95-0325	312–333.6	Qbt 2	Cobalt	0.987	U
54-1024	0554-95-0327	432–453.6	Qbt 2	Cobalt	0.983	U
54-1024	0554-95-0329	612–630	Qbt 1v	Cobalt	1.01	U
54-1024	0554-95-0331	732–750	Qbt 1v	Cobalt	1.0	U
54-1024	0554-95-0333	852–873.6	Qbt 1v	Cobalt	0.98	U
54-1024	0554-95-0337	1032–1053.6	Qbt 1v	Cobalt	1.01	U
54-1025	0554-95-0339	108–110.4	Qbt 2	Cobalt	1.8	J
54-1025	0554-95-0341	204–225.6	Qbt 2	Cobalt	0.21	J
54-1025	0554-95-0343	336–354	Qbt 2	Cobalt	0.14	J
54-1025	0554-95-0345	492–510	Qbt 1v	Cobalt	0.14	J
54-1025	0554-95-0347	612–632.4	Qbt 1v	Cobalt	0.26	J
54-1025	0554-95-0349	732–753.6	Qbt 1v	Cobalt	0.26	J
54-1025	0554-95-0351	852–861.6	Qbt 1v	Cobalt	0.33	J
54-1025	0554-95-0355	1032–1080	Qbt 1v	Cobalt	0.43	J
54-1025*	0554-95-0356	1032–1080	Qbt 1v	Cobalt	0.37	J
54-1026	0554-95-0300	198–217.2	Qbt 2	Cobalt	0.41	U

* Field duplicate.

Table D-2.0-4 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0302	318-336	Qbt 2	Cobalt	0.4	U
54-1026	0554-95-0304	492-498	Qbt 1v	Cobalt	0.41	U
54-1026	0554-95-0306	558-576	Qbt 1v	Cobalt	0.4	U
54-1026	0554-95-0308	696-720	Qbt 1v	Cobalt	0.4	U
54-1026	0554-95-0310	798-816	Qbt 1v	Cobalt	0.4	U
54-1026	0554-95-0312	918-936	Qbt 1v	Cobalt	0.4	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Cobalt	0.41	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Cobalt	1.2	J
54-1023	0554-95-0282	114-116.4	Qbt 2	Copper	23	None
54-1023	0554-95-0284	186-204	Qbt 2	Copper	0.51	U
54-1023	0554-95-0286	324-342	Qbt 2	Copper	0.94	J
54-1023	0554-95-0288	444-462	Qbt 1v	Copper	0.51	U
54-1023	0554-95-0290	564-582	Qbt 1v	Copper	0.5	U
54-1023	0554-95-0292	684-702	Qbt 1v	Copper	0.5	U
54-1023	0554-95-0294	804-822	Qbt 1v	Copper	0.61	J
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Copper	1.2	J
54-1024	0554-95-0321	108-110.4	Qbt 2	Copper	21.6	None
54-1024	0554-95-0323	222-240	Qbt 2	Copper	1.1	J
54-1024	0554-95-0325	312-333.6	Qbt 2	Copper	0.927	J
54-1024	0554-95-0327	432-453.6	Qbt 2	Copper	1.35	U
54-1024	0554-95-0329	612-630	Qbt 1v	Copper	1.07	J
54-1024	0554-95-0331	732-750	Qbt 1v	Copper	1.07	J
54-1024	0554-95-0333	852-873.6	Qbt 1v	Copper	1.08	J
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Copper	1.33	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Copper	23.9	None
54-1025	0554-95-0341	204-225.6	Qbt 2	Copper	1.1	J
54-1025	0554-95-0343	336-354	Qbt 2	Copper	0.82	J
54-1025	0554-95-0345	492-510	Qbt 1v	Copper	0.37	J
54-1025	0554-95-0347	612-632.4	Qbt 1v	Copper	0.55	J
54-1025	0554-95-0349	732-753.6	Qbt 1v	Copper	0.6	J
54-1025	0554-95-0351	852-861.6	Qbt 1v	Copper	1.0	J
54-1025	0554-95-0355	1032-1080	Qbt 1v	Copper	1.7	J
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Copper	1.6	J
54-1026	0554-95-0300	198-217.2	Qbt 2	Copper	0.51	U
54-1026	0554-95-0302	318-336	Qbt 2	Copper	0.5	U
54-1026	0554-95-0304	492-498	Qbt 1v	Copper	0.78	J
54-1026	0554-95-0306	558-576	Qbt 1v	Copper	0.98	J
54-1026	0554-95-0308	696-720	Qbt 1v	Copper	0.5	U
54-1026	0554-95-0310	798-816	Qbt 1v	Copper	0.7	J
54-1026	0554-95-0312	918-936	Qbt 1v	Copper	0.53	J
54-1026	0554-95-0316	1068-1086	Qbt 1v	Copper	0.58	J
54-1026	0554-95-0318	108-110.4	Qbt 2	Copper	35.4	None
54-1023	0554-95-0284	186-204	Qbt 2	Cyanide, total	0.15	R

* Field duplicate.

Table D-2.0-4 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0286	324-342	Qbt 2	Cyanide, total	0.15	R
54-1023	0554-95-0288	444-462	Qbt 1v	Cyanide, total	0.15	R
54-1023	0554-95-0290	564-582	Qbt 1v	Cyanide, total	0.15	R
54-1023	0554-95-0292	684-702	Qbt 1v	Cyanide, total	0.15	R
54-1023	0554-95-0294	804-822	Qbt 1v	Cyanide, total	0.15	R
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Cyanide, total	0.15	R
54-1024	0554-95-0321	108-110.4	Qbt 2	Cyanide, total	0.15	U
54-1024	0554-95-0323	222-240	Qbt 2	Cyanide, total	0.39	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Cyanide, total	1.0	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Cyanide, total	1.01	U
54-1024	0554-95-0329	612-630	Qbt 1v	Cyanide, total	1.01	U
54-1024	0554-95-0331	732-750	Qbt 1v	Cyanide, total	1.01	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Cyanide, total	1.02	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Cyanide, total	1.01	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Cyanide, total	0.39	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Cyanide, total	0.39	U
54-1025	0554-95-0343	336-354	Qbt 2	Cyanide, total	0.38	U
54-1025	0554-95-0345	492-510	Qbt 1v	Cyanide, total	0.38	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Cyanide, total	0.38	U
54-1025	0554-95-0349	732-753.6	Qbt 1v	Cyanide, total	0.38	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Cyanide, total	0.41	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Cyanide, total	0.4	U
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Cyanide, total	0.38	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Cyanide, total	0.15	U
54-1026	0554-95-0302	318-336	Qbt 2	Cyanide, total	0.15	U
54-1026	0554-95-0304	492-498	Qbt 1v	Cyanide, total	0.15	U
54-1026	0554-95-0306	558-576	Qbt 1v	Cyanide, total	0.15	U
54-1026	0554-95-0308	696-720	Qbt 1v	Cyanide, total	0.15	U
54-1026	0554-95-0310	798-816	Qbt 1v	Cyanide, total	0.15	U
54-1026	0554-95-0312	918-936	Qbt 1v	Cyanide, total	0.15	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Cyanide, total	0.15	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Cyanide, total	0.16	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Iron	3700	None
54-1023	0554-95-0284	186-204	Qbt 2	Iron	1570	None
54-1023	0554-95-0286	324-342	Qbt 2	Iron	3590	None
54-1023	0554-95-0288	444-462	Qbt 1v	Iron	2160	None
54-1023	0554-95-0290	564-582	Qbt 1v	Iron	1240	None
54-1023	0554-95-0292	684-702	Qbt 1v	Iron	1350	None
54-1023	0554-95-0294	804-822	Qbt 1v	Iron	1360	None
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Iron	5250	None
54-1024	0554-95-0321	108-110.4	Qbt 2	Iron	2710	None
54-1024	0554-95-0323	222-240	Qbt 2	Iron	2110	None
54-1024	0554-95-0325	312-333.6	Qbt 2	Iron	1070	None

* Field duplicate.

Table D-2.0-4 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0327	432-453.6	Qbt 2	Iron	1560	None
54-1024	0554-95-0329	612-630	Qbt 1v	Iron	1400	None
54-1024	0554-95-0331	732-750	Qbt 1v	Iron	1500	None
54-1024	0554-95-0333	852-873.6	Qbt 1v	Iron	798	None
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Iron	250	None
54-1025	0554-95-0339	108-110.4	Qbt 2	Iron	4650	None
54-1025	0554-95-0341	204-225.6	Qbt 2	Iron	845	None
54-1025	0554-95-0343	336-354	Qbt 2	Iron	920	None
54-1025	0554-95-0345	492-510	Qbt 1v	Iron	952	None
54-1025	0554-95-0347	612-632.4	Qbt 1v	Iron	1240	None
54-1025	0554-95-0349	732-753.6	Qbt 1v	Iron	1460	None
54-1025	0554-95-0351	852-861.6	Qbt 1v	Iron	2310	None
54-1025	0554-95-0355	1032-1080	Qbt 1v	Iron	5330	None
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Iron	4740	None
54-1026	0554-95-0300	198-217.2	Qbt 2	Iron	1280	None
54-1026	0554-95-0302	318-336	Qbt 2	Iron	685	None
54-1026	0554-95-0304	492-498	Qbt 1v	Iron	2510	None
54-1026	0554-95-0306	558-576	Qbt 1v	Iron	1440	None
54-1026	0554-95-0308	696-720	Qbt 1v	Iron	1200	None
54-1026	0554-95-0310	798-816	Qbt 1v	Iron	1750	None
54-1026	0554-95-0312	918-936	Qbt 1v	Iron	1960	None
54-1026	0554-95-0316	1068-1086	Qbt 1v	Iron	3740	None
54-1026	0554-95-0318	108-110.4	Qbt 2	Iron	2930	None
54-1023	0554-95-0282	114-116.4	Qbt 2	Lead	3.8	None
54-1023	0554-95-0284	186-204	Qbt 2	Lead	2.4	None
54-1023	0554-95-0286	324-342	Qbt 2	Lead	4.6	None
54-1023	0554-95-0288	444-462	Qbt 1v	Lead	2.9	None
54-1023	0554-95-0290	564-582	Qbt 1v	Lead	1.4	None
54-1023	0554-95-0292	684-702	Qbt 1v	Lead	1.5	None
54-1023	0554-95-0294	804-822	Qbt 1v	Lead	1.7	None
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Lead	2.9	None
54-1024	0554-95-0321	108-110.4	Qbt 2	Lead	3.1	None
54-1024	0554-95-0323	222-240	Qbt 2	Lead	2.3	None
54-1024	0554-95-0325	312-333.6	Qbt 2	Lead	1.47	J+
54-1024	0554-95-0327	432-453.6	Qbt 2	Lead	1.96	J+
54-1024	0554-95-0329	612-630	Qbt 1v	Lead	1.27	J+
54-1024	0554-95-0331	732-750	Qbt 1v	Lead	1.58	J+
54-1024	0554-95-0333	852-873.6	Qbt 1v	Lead	1.02	J+
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Lead	1.69	None
54-1025	0554-95-0339	108-110.4	Qbt 2	Lead	4.6	None
54-1025	0554-95-0341	204-225.6	Qbt 2	Lead	5.9	None
54-1025	0554-95-0343	336-354	Qbt 2	Lead	1.4	None
54-1025	0554-95-0345	492-510	Qbt 1v	Lead	1.5	None

* Field duplicate.

Table D-2.0-4 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0347	612-632.4	Qbt 1v	Lead	3.0	None
54-1025	0554-95-0349	732-753.6	Qbt 1v	Lead	1.6	None
54-1025	0554-95-0351	852-861.6	Qbt 1v	Lead	1.8	None
54-1025	0554-95-0355	1032-1080	Qbt 1v	Lead	3.0	None
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Lead	2.7	None
54-1026	0554-95-0300	198-217.2	Qbt 2	Lead	1.3	None
54-1026	0554-95-0302	318-336	Qbt 2	Lead	1.9	None
54-1026	0554-95-0304	492-498	Qbt 1v	Lead	5.0	None
54-1026	0554-95-0306	558-576	Qbt 1v	Lead	27.2	None
54-1026	0554-95-0308	696-720	Qbt 1v	Lead	3.3	None
54-1026	0554-95-0310	798-816	Qbt 1v	Lead	2.4	None
54-1026	0554-95-0312	918-936	Qbt 1v	Lead	1.2	None
54-1026	0554-95-0316	1068-1086	Qbt 1v	Lead	2.3	None
54-1026	0554-95-0318	108-110.4	Qbt 2	Lead	16.2	None
54-1023	0554-95-0282	114-116.4	Qbt 2	Magnesium	209	J
54-1023	0554-95-0284	186-204	Qbt 2	Magnesium	118	J
54-1023	0554-95-0286	324-342	Qbt 2	Magnesium	400	J
54-1023	0554-95-0288	444-462	Qbt 1v	Magnesium	199	J
54-1023	0554-95-0290	564-582	Qbt 1v	Magnesium	49.8	J
54-1023	0554-95-0292	684-702	Qbt 1v	Magnesium	38.2	J
54-1023	0554-95-0294	804-822	Qbt 1v	Magnesium	45	J
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Magnesium	80.3	J
54-1024	0554-95-0321	108-110.4	Qbt 2	Magnesium	97.6	J
54-1024	0554-95-0323	222-240	Qbt 2	Magnesium	250	J
54-1024	0554-95-0325	312-333.6	Qbt 2	Magnesium	36.4	J
54-1024	0554-95-0327	432-453.6	Qbt 2	Magnesium	81	J
54-1024	0554-95-0329	612-630	Qbt 1v	Magnesium	52.5	J
54-1024	0554-95-0331	732-750	Qbt 1v	Magnesium	39.5	J
54-1024	0554-95-0333	852-873.6	Qbt 1v	Magnesium	32.2	J
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Magnesium	46.3	None
54-1025	0554-95-0339	108-110.4	Qbt 2	Magnesium	237	J
54-1025	0554-95-0341	204-225.6	Qbt 2	Magnesium	56.1	J
54-1025	0554-95-0343	336-354	Qbt 2	Magnesium	27.8	J
54-1025	0554-95-0345	492-510	Qbt 1v	Magnesium	53	J
54-1025	0554-95-0347	612-632.4	Qbt 1v	Magnesium	65.3	J
54-1025	0554-95-0349	732-753.6	Qbt 1v	Magnesium	26.7	J
54-1025	0554-95-0351	852-861.6	Qbt 1v	Magnesium	59.4	J
54-1025	0554-95-0355	1032-1080	Qbt 1v	Magnesium	72.4	J
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Magnesium	66.5	J
54-1026	0554-95-0300	198-217.2	Qbt 2	Magnesium	41.4	J
54-1026	0554-95-0302	318-336	Qbt 2	Magnesium	31.7	J
54-1026	0554-95-0304	492-498	Qbt 1v	Magnesium	321	J
54-1026	0554-95-0306	558-576	Qbt 1v	Magnesium	148	J

* Field duplicate.

Table D-2.0-4 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0308	696-720	Qbt 1v	Magnesium	42.2	J
54-1026	0554-95-0310	798-816	Qbt 1v	Magnesium	101	J
54-1026	0554-95-0312	918-936	Qbt 1v	Magnesium	61.1	J
54-1026	0554-95-0316	1068-1086	Qbt 1v	Magnesium	65.5	J
54-1026	0554-95-0318	108-110.4	Qbt 2	Magnesium	157	J
54-1023	0554-95-0282	114-116.4	Qbt 2	Manganese	138	J-
54-1023	0554-95-0284	186-204	Qbt 2	Manganese	121	J-
54-1023	0554-95-0286	324-342	Qbt 2	Manganese	212	J-
54-1023	0554-95-0288	444-462	Qbt 1v	Manganese	125	J-
54-1023	0554-95-0290	564-582	Qbt 1v	Manganese	99	J-
54-1023	0554-95-0292	684-702	Qbt 1v	Manganese	89.6	J-
54-1023	0554-95-0294	804-822	Qbt 1v	Manganese	113	J-
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Manganese	238	J-
54-1024	0554-95-0321	108-110.4	Qbt 2	Manganese	100	J-
54-1024	0554-95-0323	222-240	Qbt 2	Manganese	89.4	None
54-1024	0554-95-0325	312-333.6	Qbt 2	Manganese	79.9	J-
54-1024	0554-95-0327	432-453.6	Qbt 2	Manganese	93.9	J-
54-1024	0554-95-0329	612-630	Qbt 1v	Manganese	75.8	J-
54-1024	0554-95-0331	732-750	Qbt 1v	Manganese	80.9	J-
54-1024	0554-95-0333	852-873.6	Qbt 1v	Manganese	67.1	J-
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Manganese	44.8	None
54-1025	0554-95-0339	108-110.4	Qbt 2	Manganese	177	None
54-1025	0554-95-0341	204-225.6	Qbt 2	Manganese	75.4	None
54-1025	0554-95-0343	336-354	Qbt 2	Manganese	53.5	None
54-1025	0554-95-0345	492-510	Qbt 1v	Manganese	53.3	None
54-1025	0554-95-0347	612-632.4	Qbt 1v	Manganese	76.4	None
54-1025	0554-95-0349	732-753.6	Qbt 1v	Manganese	75	None
54-1025	0554-95-0351	852-861.6	Qbt 1v	Manganese	119	None
54-1025	0554-95-0355	1032-1080	Qbt 1v	Manganese	196	None
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Manganese	178	None
54-1026	0554-95-0300	198-217.2	Qbt 2	Manganese	69.2	J-
54-1026	0554-95-0302	318-336	Qbt 2	Manganese	49.6	J-
54-1026	0554-95-0304	492-498	Qbt 1v	Manganese	96.5	J-
54-1026	0554-95-0306	558-576	Qbt 1v	Manganese	155	J-
54-1026	0554-95-0308	696-720	Qbt 1v	Manganese	96.3	J-
54-1026	0554-95-0310	798-816	Qbt 1v	Manganese	130	J-
54-1026	0554-95-0312	918-936	Qbt 1v	Manganese	122	J-
54-1026	0554-95-0316	1068-1086	Qbt 1v	Manganese	156	J-
54-1026	0554-95-0318	108-110.4	Qbt 2	Manganese	128	J-
54-1023	0554-95-0282	114-116.4	Qbt 2	Mercury	0.1	U
54-1023	0554-95-0284	186-204	Qbt 2	Mercury	0.02	U
54-1023	0554-95-0286	324-342	Qbt 2	Mercury	0.02	U
54-1023	0554-95-0288	444-462	Qbt 1v	Mercury	0.02	U

* Field duplicate.

Table D-2.0-4 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0290	564-582	Qbt 1v	Mercury	0.02	U
54-1023	0554-95-0292	684-702	Qbt 1v	Mercury	0.02	U
54-1023	0554-95-0294	804-822	Qbt 1v	Mercury	0.02	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Mercury	0.02	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Mercury	0.02	U
54-1024	0554-95-0323	222-240	Qbt 2	Mercury	0.05	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Mercury	0.049	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Mercury	0.049	U
54-1024	0554-95-0329	612-630	Qbt 1v	Mercury	0.048	U
54-1024	0554-95-0331	732-750	Qbt 1v	Mercury	0.049	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Mercury	0.048	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Mercury	0.05	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Mercury	0.05	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Mercury	0.05	U
54-1025	0554-95-0343	336-354	Qbt 2	Mercury	0.05	U
54-1025	0554-95-0345	492-510	Qbt 1v	Mercury	0.05	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Mercury	0.05	U
54-1025	0554-95-0349	732-753.6	Qbt 1v	Mercury	0.06	J
54-1025	0554-95-0351	852-861.6	Qbt 1v	Mercury	0.06	J
54-1025	0554-95-0355	1032-1080	Qbt 1v	Mercury	0.07	J
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Mercury	0.07	J
54-1026	0554-95-0300	198-217.2	Qbt 2	Mercury	0.02	U
54-1026	0554-95-0302	318-336	Qbt 2	Mercury	0.02	U
54-1026	0554-95-0304	492-498	Qbt 1v	Mercury	0.02	U
54-1026	0554-95-0306	558-576	Qbt 1v	Mercury	0.02	U
54-1026	0554-95-0308	696-720	Qbt 1v	Mercury	0.02	U
54-1026	0554-95-0310	798-816	Qbt 1v	Mercury	0.02	U
54-1026	0554-95-0312	918-936	Qbt 1v	Mercury	0.02	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Mercury	0.02	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Mercury	0.02	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Nickel	4.2	J
54-1023	0554-95-0284	186-204	Qbt 2	Nickel	0.61	U
54-1023	0554-95-0286	324-342	Qbt 2	Nickel	1.2	J
54-1023	0554-95-0288	444-462	Qbt 1v	Nickel	0.61	U
54-1023	0554-95-0290	564-582	Qbt 1v	Nickel	0.6	U
54-1023	0554-95-0292	684-702	Qbt 1v	Nickel	0.6	U
54-1023	0554-95-0294	804-822	Qbt 1v	Nickel	0.61	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Nickel	0.62	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Nickel	3.5	J
54-1024	0554-95-0323	222-240	Qbt 2	Nickel	1.6	J
54-1024	0554-95-0325	312-333.6	Qbt 2	Nickel	1.48	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Nickel	1.47	U
54-1024	0554-95-0329	612-630	Qbt 1v	Nickel	1.51	U

* Field duplicate.

Table D-2.0-4 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0331	732-750	Qbt 1v	Nickel	1.5	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Nickel	1.47	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Nickel	1.51	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Nickel	5.8	J
54-1025	0554-95-0341	204-225.6	Qbt 2	Nickel	1.4	J
54-1025	0554-95-0343	336-354	Qbt 2	Nickel	0.96	J
54-1025	0554-95-0345	492-510	Qbt 1v	Nickel	0.64	J
54-1025	0554-95-0347	612-632.4	Qbt 1v	Nickel	0.62	J
54-1025	0554-95-0349	732-753.6	Qbt 1v	Nickel	1.9	J
54-1025	0554-95-0351	852-861.6	Qbt 1v	Nickel	1.0	J
54-1025	0554-95-0355	1032-1080	Qbt 1v	Nickel	1.1	J
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Nickel	0.98	J
54-1026	0554-95-0300	198-217.2	Qbt 2	Nickel	0.62	U
54-1026	0554-95-0302	318-336	Qbt 2	Nickel	0.6	U
54-1026	0554-95-0304	492-498	Qbt 1v	Nickel	0.61	U
54-1026	0554-95-0306	558-576	Qbt 1v	Nickel	0.6	U
54-1026	0554-95-0308	696-720	Qbt 1v	Nickel	0.6	U
54-1026	0554-95-0310	798-816	Qbt 1v	Nickel	0.6	U
54-1026	0554-95-0312	918-936	Qbt 1v	Nickel	0.6	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Nickel	0.61	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Nickel	6.0	None
54-1023	0554-95-0282	114-116.4	Qbt 2	Potassium	848	J
54-1023	0554-95-0284	186-204	Qbt 2	Potassium	130	J
54-1023	0554-95-0286	324-342	Qbt 2	Potassium	445	J
54-1023	0554-95-0288	444-462	Qbt 1v	Potassium	190	J
54-1023	0554-95-0290	564-582	Qbt 1v	Potassium	90.1	U
54-1023	0554-95-0292	684-702	Qbt 1v	Potassium	89.9	U
54-1023	0554-95-0294	804-822	Qbt 1v	Potassium	132	J
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Potassium	92.1	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Potassium	692	None
54-1024	0554-95-0323	222-240	Qbt 2	Potassium	223	J
54-1024	0554-95-0325	312-333.6	Qbt 2	Potassium	158	J
54-1024	0554-95-0327	432-453.6	Qbt 2	Potassium	124	J
54-1024	0554-95-0329	612-630	Qbt 1v	Potassium	169	J
54-1024	0554-95-0331	732-750	Qbt 1v	Potassium	211	J
54-1024	0554-95-0333	852-873.6	Qbt 1v	Potassium	153	J
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Potassium	233	None
54-1025	0554-95-0339	108-110.4	Qbt 2	Potassium	533	J
54-1025	0554-95-0341	204-225.6	Qbt 2	Potassium	106	J
54-1025	0554-95-0343	336-354	Qbt 2	Potassium	92.1	J
54-1025	0554-95-0345	492-510	Qbt 1v	Potassium	132	J
54-1025	0554-95-0347	612-632.4	Qbt 1v	Potassium	98.4	J
54-1025	0554-95-0349	732-753.6	Qbt 1v	Potassium	107	J

* Field duplicate.

Table D-2.0-4 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0351	852-861.6	Qbt 1v	Potassium	169	J
54-1025	0554-95-0355	1032-1080	Qbt 1v	Potassium	172	J
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Potassium	151	J
54-1026	0554-95-0300	198-217.2	Qbt 2	Potassium	146	J
54-1026	0554-95-0302	318-336	Qbt 2	Potassium	90	U
54-1026	0554-95-0304	492-498	Qbt 1v	Potassium	271	J
54-1026	0554-95-0306	558-576	Qbt 1v	Potassium	111	J
54-1026	0554-95-0308	696-720	Qbt 1v	Potassium	108	J
54-1026	0554-95-0310	798-816	Qbt 1v	Potassium	135	J
54-1026	0554-95-0312	918-936	Qbt 1v	Potassium	90.2	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Potassium	91.5	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Potassium	871	None
54-1023	0554-95-0282	114-116.4	Qbt 2	Selenium	0.95	U
54-1023	0554-95-0284	186-204	Qbt 2	Selenium	0.2	U
54-1023	0554-95-0286	324-342	Qbt 2	Selenium	0.2	U
54-1023	0554-95-0288	444-462	Qbt 1v	Selenium	0.2	U
54-1023	0554-95-0290	564-582	Qbt 1v	Selenium	0.2	U
54-1023	0554-95-0292	684-702	Qbt 1v	Selenium	0.2	U
54-1023	0554-95-0294	804-822	Qbt 1v	Selenium	0.2	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Selenium	0.21	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Selenium	0.2	U
54-1024	0554-95-0323	222-240	Qbt 2	Selenium	0.44	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Selenium	0.247	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Selenium	0.252	U
54-1024	0554-95-0329	612-630	Qbt 1v	Selenium	0.249	U
54-1024	0554-95-0331	732-750	Qbt 1v	Selenium	0.24	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Selenium	0.253	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Selenium	0.249	UJ
54-1025	0554-95-0339	108-110.4	Qbt 2	Selenium	0.44	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Selenium	0.43	U
54-1025	0554-95-0343	336-354	Qbt 2	Selenium	0.43	U
54-1025	0554-95-0345	492-510	Qbt 1v	Selenium	0.42	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Selenium	0.42	U
54-1025	0554-95-0349	732-753.6	Qbt 1v	Selenium	0.42	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Selenium	0.46	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Selenium	0.45	U
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Selenium	0.43	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Selenium	0.27	J
54-1026	0554-95-0302	318-336	Qbt 2	Selenium	0.2	U
54-1026	0554-95-0304	492-498	Qbt 1v	Selenium	0.2	U
54-1026	0554-95-0306	558-576	Qbt 1v	Selenium	0.2	U
54-1026	0554-95-0308	696-720	Qbt 1v	Selenium	0.22	U
54-1026	0554-95-0310	798-816	Qbt 1v	Selenium	0.2	U

* Field duplicate.

Table D-2.0-4 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0312	918-936	Qbt 1v	Selenium	0.2	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Selenium	0.31	J
54-1026	0554-95-0318	108-110.4	Qbt 2	Selenium	0.22	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Silver	1.3	U
54-1023	0554-95-0284	186-204	Qbt 2	Silver	0.41	U
54-1023	0554-95-0286	324-342	Qbt 2	Silver	0.41	U
54-1023	0554-95-0288	444-462	Qbt 1v	Silver	0.41	U
54-1023	0554-95-0290	564-582	Qbt 1v	Silver	0.4	U
54-1023	0554-95-0292	684-702	Qbt 1v	Silver	0.4	U
54-1023	0554-95-0294	804-822	Qbt 1v	Silver	0.4	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Silver	0.41	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Silver	0.4	U
54-1024	0554-95-0323	222-240	Qbt 2	Silver	0.1	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Silver	0.493	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Silver	0.491	U
54-1024	0554-95-0329	612-630	Qbt 1v	Silver	0.712	J
54-1024	0554-95-0331	732-750	Qbt 1v	Silver	0.501	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Silver	0.49	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Silver	0.504	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Silver	0.1	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Silver	0.1	U
54-1025	0554-95-0343	336-354	Qbt 2	Silver	0.1	U
54-1025	0554-95-0345	492-510	Qbt 1v	Silver	0.1	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Silver	0.1	U
54-1025	0554-95-0349	732-753.6	Qbt 1v	Silver	0.1	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Silver	0.11	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Silver	0.11	U
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Silver	0.1	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Silver	0.41	U
54-1026	0554-95-0302	318-336	Qbt 2	Silver	0.4	U
54-1026	0554-95-0304	492-498	Qbt 1v	Silver	0.41	U
54-1026	0554-95-0306	558-576	Qbt 1v	Silver	0.4	U
54-1026	0554-95-0308	696-720	Qbt 1v	Silver	0.4	U
54-1026	0554-95-0310	798-816	Qbt 1v	Silver	0.4	U
54-1026	0554-95-0312	918-936	Qbt 1v	Silver	0.4	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Silver	0.41	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Silver	0.43	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Sodium	724	J
54-1023	0554-95-0284	186-204	Qbt 2	Sodium	272	J
54-1023	0554-95-0286	324-342	Qbt 2	Sodium	324	J
54-1023	0554-95-0288	444-462	Qbt 1v	Sodium	176	J
54-1023	0554-95-0290	564-582	Qbt 1v	Sodium	113	J
54-1023	0554-95-0292	684-702	Qbt 1v	Sodium	125	J

* Field duplicate.

Table D-2.0-4 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0294	804–822	Qbt 1v	Sodium	130	J
54-1023	0554-95-0298	990–1005.6	Qbt 1v	Sodium	140	J
54-1024	0554-95-0321	108–110.4	Qbt 2	Sodium	661	None
54-1024	0554-95-0323	222–240	Qbt 2	Sodium	89.7	J
54-1024	0554-95-0325	312–333.6	Qbt 2	Sodium	313	J
54-1024	0554-95-0327	432–453.6	Qbt 2	Sodium	265	J
54-1024	0554-95-0329	612–630	Qbt 1v	Sodium	328	J
54-1024	0554-95-0331	732–750	Qbt 1v	Sodium	382	J
54-1024	0554-95-0333	852–873.6	Qbt 1v	Sodium	301	J
54-1024	0554-95-0337	1032–1053.6	Qbt 1v	Sodium	291	None
54-1025	0554-95-0339	108–110.4	Qbt 2	Sodium	377	J
54-1025	0554-95-0341	204–225.6	Qbt 2	Sodium	64.9	J
54-1025	0554-95-0343	336–354	Qbt 2	Sodium	73.5	J
54-1025	0554-95-0345	492–510	Qbt 1v	Sodium	97.5	J
54-1025	0554-95-0347	612–632.4	Qbt 1v	Sodium	78.9	J
54-1025	0554-95-0349	732–753.6	Qbt 1v	Sodium	89	J
54-1025	0554-95-0351	852–861.6	Qbt 1v	Sodium	132	J
54-1025	0554-95-0355	1032–1080	Qbt 1v	Sodium	125	J
54-1025*	0554-95-0356	1032–1080	Qbt 1v	Sodium	119	J
54-1026	0554-95-0300	198–217.2	Qbt 2	Sodium	146	J
54-1026	0554-95-0302	318–336	Qbt 2	Sodium	120	J
54-1026	0554-95-0304	492–498	Qbt 1v	Sodium	192	J
54-1026	0554-95-0306	558–576	Qbt 1v	Sodium	151	J
54-1026	0554-95-0308	696–720	Qbt 1v	Sodium	126	J
54-1026	0554-95-0310	798–816	Qbt 1v	Sodium	130	J
54-1026	0554-95-0312	918–936	Qbt 1v	Sodium	145	J
54-1026	0554-95-0316	1068–1086	Qbt 1v	Sodium	170	J
54-1026	0554-95-0318	108–110.4	Qbt 2	Sodium	776	None
54-1023	0554-95-0282	114–116.4	Qbt 2	Thallium	1.7	J
54-1023	0554-95-0284	186–204	Qbt 2	Thallium	0.1	U
54-1023	0554-95-0286	324–342	Qbt 2	Thallium	0.1	U
54-1023	0554-95-0288	444–462	Qbt 1v	Thallium	0.1	U
54-1023	0554-95-0290	564–582	Qbt 1v	Thallium	0.1	U
54-1023	0554-95-0292	684–702	Qbt 1v	Thallium	0.1	U
54-1023	0554-95-0294	804–822	Qbt 1v	Thallium	0.1	U
54-1023	0554-95-0298	990–1005.6	Qbt 1v	Thallium	0.1	U
54-1024	0554-95-0321	108–110.4	Qbt 2	Thallium	0.1	U
54-1024	0554-95-0323	222–240	Qbt 2	Thallium	0.48	U
54-1024	0554-95-0325	312–333.6	Qbt 2	Thallium	0.247	U
54-1024	0554-95-0327	432–453.6	Qbt 2	Thallium	0.252	U
54-1024	0554-95-0329	612–630	Qbt 1v	Thallium	0.249	U
54-1024	0554-95-0331	732–750	Qbt 1v	Thallium	0.24	U
54-1024	0554-95-0333	852–873.6	Qbt 1v	Thallium	0.253	U

* Field duplicate.

Table D-2.0-4 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Thallium	0.249	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Thallium	0.48	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Thallium	0.48	U
54-1025	0554-95-0343	336-354	Qbt 2	Thallium	0.47	U
54-1025	0554-95-0345	492-510	Qbt 1v	Thallium	0.46	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Thallium	0.46	U
54-1025	0554-95-0349	732-753.6	Qbt 1v	Thallium	0.46	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Thallium	0.5	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Thallium	0.49	U
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Thallium	0.47	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Thallium	0.1	U
54-1026	0554-95-0302	318-336	Qbt 2	Thallium	0.1	U
54-1026	0554-95-0304	492-498	Qbt 1v	Thallium	0.19	U
54-1026	0554-95-0306	558-576	Qbt 1v	Thallium	0.1	U
54-1026	0554-95-0308	696-720	Qbt 1v	Thallium	0.1	U
54-1026	0554-95-0310	798-816	Qbt 1v	Thallium	0.1	U
54-1026	0554-95-0312	918-936	Qbt 1v	Thallium	0.1	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Thallium	0.1	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Thallium	0.11	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Vanadium	2.4	J
54-1023	0554-95-0284	186-204	Qbt 2	Vanadium	1.8	J
54-1023	0554-95-0286	324-342	Qbt 2	Vanadium	3.8	J
54-1023	0554-95-0288	444-462	Qbt 1v	Vanadium	2.0	J
54-1023	0554-95-0290	564-582	Qbt 1v	Vanadium	0.82	J
54-1023	0554-95-0292	684-702	Qbt 1v	Vanadium	0.7	J
54-1023	0554-95-0294	804-822	Qbt 1v	Vanadium	1.0	J
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Vanadium	2.2	J
54-1024	0554-95-0321	108-110.4	Qbt 2	Vanadium	1.4	J
54-1024	0554-95-0323	222-240	Qbt 2	Vanadium	2.2	J
54-1024	0554-95-0325	312-333.6	Qbt 2	Vanadium	0.987	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Vanadium	1.18	J
54-1024	0554-95-0329	612-630	Qbt 1v	Vanadium	1.01	U
54-1024	0554-95-0331	732-750	Qbt 1v	Vanadium	1.0	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Vanadium	0.98	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Vanadium	1.01	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Vanadium	2.8	J
54-1025	0554-95-0341	204-225.6	Qbt 2	Vanadium	1.4	J
54-1025	0554-95-0343	336-354	Qbt 2	Vanadium	1.2	J
54-1025	0554-95-0345	492-510	Qbt 1v	Vanadium	1.3	J
54-1025	0554-95-0347	612-632.4	Qbt 1v	Vanadium	1.9	J
54-1025	0554-95-0349	732-753.6	Qbt 1v	Vanadium	1.2	J
54-1025	0554-95-0351	852-861.6	Qbt 1v	Vanadium	1.9	J
54-1025	0554-95-0355	1032-1080	Qbt 1v	Vanadium	1.7	J

* Field duplicate.

Table D-2.0-4 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Vanadium	1.5	J
54-1026	0554-95-0300	198-217.2	Qbt 2	Vanadium	0.94	J
54-1026	0554-95-0302	318-336	Qbt 2	Vanadium	1.0	J
54-1026	0554-95-0304	492-498	Qbt 1v	Vanadium	3.3	J
54-1026	0554-95-0306	558-576	Qbt 1v	Vanadium	2.2	J
54-1026	0554-95-0308	696-720	Qbt 1v	Vanadium	0.94	J
54-1026	0554-95-0310	798-816	Qbt 1v	Vanadium	1.9	J
54-1026	0554-95-0312	918-936	Qbt 1v	Vanadium	0.91	J
54-1026	0554-95-0316	1068-1086	Qbt 1v	Vanadium	1.4	J
54-1026	0554-95-0318	108-110.4	Qbt 2	Vanadium	1.2	J
54-1023	0554-95-0282	114-116.4	Qbt 2	Zinc	27.5	None
54-1023	0554-95-0284	186-204	Qbt 2	Zinc	21.2	None
54-1023	0554-95-0286	324-342	Qbt 2	Zinc	31.1	None
54-1023	0554-95-0288	444-462	Qbt 1v	Zinc	27	None
54-1023	0554-95-0290	564-582	Qbt 1v	Zinc	18.2	None
54-1023	0554-95-0292	684-702	Qbt 1v	Zinc	15.4	None
54-1023	0554-95-0294	804-822	Qbt 1v	Zinc	16.2	None
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Zinc	42.6	None
54-1024	0554-95-0321	108-110.4	Qbt 2	Zinc	19.7	None
54-1024	0554-95-0323	222-240	Qbt 2	Zinc	13.1	None
54-1024	0554-95-0325	312-333.6	Qbt 2	Zinc	8.39	None
54-1024	0554-95-0327	432-453.6	Qbt 2	Zinc	12.5	None
54-1024	0554-95-0329	612-630	Qbt 1v	Zinc	11.3	None
54-1024	0554-95-0331	732-750	Qbt 1v	Zinc	9.99	None
54-1024	0554-95-0333	852-873.6	Qbt 1v	Zinc	8.16	None
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Zinc	6.98	None
54-1025	0554-95-0339	108-110.4	Qbt 2	Zinc	31	None
54-1025	0554-95-0341	204-225.6	Qbt 2	Zinc	14.8	None
54-1025	0554-95-0343	336-354	Qbt 2	Zinc	11.7	None
54-1025	0554-95-0345	492-510	Qbt 1v	Zinc	33.9	None
54-1025	0554-95-0347	612-632.4	Qbt 1v	Zinc	35.5	None
54-1025	0554-95-0349	732-753.6	Qbt 1v	Zinc	14.1	None
54-1025	0554-95-0351	852-861.6	Qbt 1v	Zinc	28.8	None
54-1025	0554-95-0355	1032-1080	Qbt 1v	Zinc	45	None
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Zinc	41.9	None
54-1026	0554-95-0300	198-217.2	Qbt 2	Zinc	15.5	None
54-1026	0554-95-0302	318-336	Qbt 2	Zinc	15	None
54-1026	0554-95-0304	492-498	Qbt 1v	Zinc	23.7	None
54-1026	0554-95-0306	558-576	Qbt 1v	Zinc	28.4	None
54-1026	0554-95-0308	696-720	Qbt 1v	Zinc	14.2	None
54-1026	0554-95-0310	798-816	Qbt 1v	Zinc	17.5	None
54-1026	0554-95-0312	918-936	Qbt 1v	Zinc	19.5	None
54-1026	0554-95-0316	1068-1086	Qbt 1v	Zinc	38.2	None
54-1026	0554-95-0318	108-110.4	Qbt 2	Zinc	32.5	None

* Field duplicate.

Table D-2.0-5
Organic Chemical Analytical Data in Tuff at MDA H

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0282	114-116.4	Qbt 2	Acenaphthene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Acenaphthylene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Acetone	0.02	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Aldrin	0.00174	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Aniline	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Anthracene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Aroclor-1016	0.0338	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Aroclor-1221	0.0687	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Aroclor-1232	0.0338	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Aroclor-1242	0.0338	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Aroclor-1248	0.0338	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Aroclor-1254	0.0338	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Aroclor-1260	0.0338	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Azobenzene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Benzene	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Benzo(a)anthracene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Benzo(a)pyrene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Benzo(b)fluoranthene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Benzo(g,h,i)perylene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Benzo(k)fluoranthene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Benzoic acid	1.6	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Benzyl alcohol	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	BHC[alpha-]	0.00174	U
54-1023	0554-95-0282	114-116.4	Qbt 2	BHC[beta-]	0.00174	U
54-1023	0554-95-0282	114-116.4	Qbt 2	BHC[delta-]	0.00174	U
54-1023	0554-95-0282	114-116.4	Qbt 2	BHC[gamma-]	0.00174	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Bis(2-chloroethoxy)methane	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Bis(2-chloroethyl)ether	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Bis(2-ethylhexyl)phthalate	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Bromobenzene	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Bromochloromethane	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Bromodichloromethane	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Bromoform	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Bromomethane	0.01	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Bromophenyl-phenylether[4-]	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Butanone[2-]	0.02	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Butylbenzene[n-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Butylbenzene[sec-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Butylbenzene[tert-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Butylbenzylphthalate	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Carbon disulfide	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Carbon tetrachloride	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Chlordane[alpha-]	0.00174	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0282	114-116.4	Qbt 2	Chlordane[gamma-]	0.00174	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Chloro-3-methylphenol[4-]	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Chloroaniline[4-]	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Chlorobenzene	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Chlorodibromomethane	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Chloroethane	0.01	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Chloroform	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Chloromethane	0.01	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Chloronaphthalene[2-]	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Chlorophenol[2-]	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Chlorophenyl-phenyl[4-] ether	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Chlorotoluene[2-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Chlorotoluene[4-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Chrysene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	DDD[4,4'-]	0.00338	U
54-1023	0554-95-0282	114-116.4	Qbt 2	DDE[4,4'-]	0.00338	U
54-1023	0554-95-0282	114-116.4	Qbt 2	DDT[4,4'-]	0.00338	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Di-n-butylphthalate	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Di-n-octylphthalate	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dibenz(a,h)anthracene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dibenzofuran	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dibromo-3-chloropropane[1,2-]	0.01	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dibromoethane[1,2-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dibromomethane	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dichlorobenzene[1,2-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dichlorobenzene[1,3-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dichlorobenzene[1,4-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dichlorobenzidine[3,3'-]	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dichlorodifluoromethane	0.01	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dichloroethane[1,1-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dichloroethane[1,2-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dichloroethene[1,1-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dichloroethene[cis-1,2-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dichloroethene[trans-1,2-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dichlorophenol[2,4-]	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dichloropropane[1,2-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dichloropropane[1,3-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dichloropropane[2,2-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dichloropropene[1,1-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dichloropropene[cis-1,3-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dichloropropene[trans-1,3-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dieldrin	0.00338	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Diethylphthalate	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dimethyl phthalate	0.34	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0282	114-116.4	Qbt 2	Dimethylphenol[2,4-]	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dinitro-2-methylphenol[4,6-]	0.82	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dinitrophenol[2,4-]	0.82	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dinitrotoluene[2,4-]	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Dinitrotoluene[2,6-]	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Endosulfan I	0.00174	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Endosulfan II	0.00338	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Endosulfan sulfate	0.00338	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Endrin	0.00338	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Endrin aldehyde	0.00338	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Endrin ketone	0.00338	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Ethylbenzene	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Fluoranthene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Fluorene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Heptachlor	0.00174	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Heptachlor epoxide	0.00174	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Hexachlorobenzene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Hexachlorobutadiene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Hexachlorocyclopentadiene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Hexachloroethane	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Hexanone[2-]	0.02	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Indeno(1,2,3-cd)pyrene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Iodomethane	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Isophorone	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Isopropylbenzene	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Isopropyltoluene[4-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Methoxychlor[4,4'-]	0.0174	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Methyl-2-pentanone[4-]	0.02	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Methylene chloride	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Methylnaphthalene[2-]	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Methylphenol[2-]	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Methylphenol[4-]	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Naphthalene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Nitroaniline[2-]	0.82	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Nitroaniline[3-]	0.82	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Nitroaniline[4-]	0.68	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Nitrobenzene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Nitrophenol[2-]	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Nitrophenol[4-]	0.82	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Nitroso-di-n-propylamine[N-]	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Nitrosodimethylamine[N-]	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Nitrosodiphenylamine[N-]	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Oxybis(1-chloropropane)[2,2'-]	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Pentachlorophenol	0.82	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0282	114-116.4	Qbt 2	Phenanthrene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Phenol	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Propylbenzene[1-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Pyrene	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Styrene	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Tetrachloroethane[1,1,2,2-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Tetrachloroethene	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Toluene	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Toxaphene (technical grade)	0.174	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Trichlorobenzene[1,2,4-]	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Trichloroethane[1,1,1-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Trichloroethane[1,1,2-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Trichloroethene	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Trichlorofluoromethane	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Trichlorophenol[2,4,5-]	0.82	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Trichlorophenol[2,4,6-]	0.34	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Trichloropropane[1,2,3-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Trichlorotrifluoroethane	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Trimethylbenzene[1,2,4-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Trimethylbenzene[1,3,5-]	0.005	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Vinyl chloride	0.01	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Xylene (total)	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Acenaphthene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Acenaphthylene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Acetone	0.004	U
54-1023	0554-95-0284	186-204	Qbt 2	Aldrin	0.0017	U
54-1023	0554-95-0284	186-204	Qbt 2	Aniline	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Anthracene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Aroclor-1016	0.033	U
54-1023	0554-95-0284	186-204	Qbt 2	Aroclor-1221	0.068	U
54-1023	0554-95-0284	186-204	Qbt 2	Aroclor-1232	0.033	U
54-1023	0554-95-0284	186-204	Qbt 2	Aroclor-1242	0.033	U
54-1023	0554-95-0284	186-204	Qbt 2	Aroclor-1248	0.033	U
54-1023	0554-95-0284	186-204	Qbt 2	Aroclor-1254	0.033	U
54-1023	0554-95-0284	186-204	Qbt 2	Aroclor-1260	0.033	U
54-1023	0554-95-0284	186-204	Qbt 2	Azobenzene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Benzene	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Benzo(a)anthracene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Benzo(a)pyrene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Benzo(b)fluoranthene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Benzo(g,h,i)perylene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Benzo(k)fluoranthene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Benzoic acid	0.85	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0284	186-204	Qbt 2	Benzyl alcohol	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	BHC[alpha-]	0.0017	U
54-1023	0554-95-0284	186-204	Qbt 2	BHC[beta-]	0.0017	U
54-1023	0554-95-0284	186-204	Qbt 2	BHC[delta-]	0.0017	U
54-1023	0554-95-0284	186-204	Qbt 2	BHC[gamma-]	0.0017	U
54-1023	0554-95-0284	186-204	Qbt 2	Bis(2-chloroethoxy)methane	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Bis(2-chloroethyl)ether	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Bis(2-ethylhexyl)phthalate	0.059	U
54-1023	0554-95-0284	186-204	Qbt 2	Bromobenzene	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Bromodichloromethane	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Bromoform	0.01	U
54-1023	0554-95-0284	186-204	Qbt 2	Bromomethane	0.01	U
54-1023	0554-95-0284	186-204	Qbt 2	Bromophenyl-phenylether[4-]	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Butanone[2-]	0.002	J
54-1023	0554-95-0284	186-204	Qbt 2	Butylbenzene[n-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Butylbenzene[sec-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Butylbenzene[tert-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Butylbenzylphthalate	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Carbon disulfide	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Carbon tetrachloride	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Chlordane[alpha-]	0.0017	U
54-1023	0554-95-0284	186-204	Qbt 2	Chlordane[gamma-]	0.0017	U
54-1023	0554-95-0284	186-204	Qbt 2	Chloro-3-methylphenol[4-]	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Chloroaniline[4-]	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Chlorobenzene	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Chlorodibromomethane	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Chloroethane	0.01	U
54-1023	0554-95-0284	186-204	Qbt 2	Chloroform	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Chloromethane	0.01	U
54-1023	0554-95-0284	186-204	Qbt 2	Chloronaphthalene[2-]	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Chlorophenol[2-]	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Chlorophenyl-phenyl[4-] ether	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Chlorotoluene[2-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Chlorotoluene[4-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Chrysene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	DDD[4,4'-]	0.0033	U
54-1023	0554-95-0284	186-204	Qbt 2	DDE[4,4'-]	0.0033	U
54-1023	0554-95-0284	186-204	Qbt 2	DDT[4,4'-]	0.0033	U
54-1023	0554-95-0284	186-204	Qbt 2	Di-n-butylphthalate	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Di-n-octylphthalate	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Dibenz(a,h)anthracene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Dibenzofuran	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Dibromo-3-chloropropane[1,2-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Dibromoethane[1,2-]	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0284	186-204	Qbt 2	Dibromomethane	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Dichlorobenzene[1,2-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Dichlorobenzene[1,3-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Dichlorobenzene[1,4-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Dichlorobenzidine[3,3'-]	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Dichlorodifluoromethane	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Dichloroethane[1,1-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Dichloroethane[1,2-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Dichloroethene[1,1-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Dichloroethene[cis-1,2-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Dichloroethene[trans-1,2-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Dichlorophenol[2,4-]	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Dichloropropane[1,2-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Dichloropropane[1,3-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Dichloropropane[2,2-]	0.01	U
54-1023	0554-95-0284	186-204	Qbt 2	Dichloropropene[1,1-]	0.01	U
54-1023	0554-95-0284	186-204	Qbt 2	Dichloropropene[cis-1,3-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Dichloropropene[trans-1,3-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Dieldrin	0.0033	U
54-1023	0554-95-0284	186-204	Qbt 2	Diethylphthalate	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Dimethyl phthalate	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Dimethylphenol[2,4-]	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Dinitro-2-methylphenol[4,6-]	0.85	U
54-1023	0554-95-0284	186-204	Qbt 2	Dinitrophenol[2,4-]	0.85	U
54-1023	0554-95-0284	186-204	Qbt 2	Dinitrotoluene[2,4-]	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Dinitrotoluene[2,6-]	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Endosulfan I	0.0017	U
54-1023	0554-95-0284	186-204	Qbt 2	Endosulfan II	0.0033	U
54-1023	0554-95-0284	186-204	Qbt 2	Endosulfan sulfate	0.0033	U
54-1023	0554-95-0284	186-204	Qbt 2	Endrin	0.0033	U
54-1023	0554-95-0284	186-204	Qbt 2	Endrin aldehyde	0.0033	U
54-1023	0554-95-0284	186-204	Qbt 2	Endrin ketone	0.0033	U
54-1023	0554-95-0284	186-204	Qbt 2	Ethylbenzene	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Fluoranthene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Fluorene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Heptachlor	0.0017	U
54-1023	0554-95-0284	186-204	Qbt 2	Heptachlor epoxide	0.0017	U
54-1023	0554-95-0284	186-204	Qbt 2	Hexachlorobenzene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Hexachlorobutadiene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Hexachlorocyclopentadiene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Hexachloroethane	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Hexanone[2-]	0.01	U
54-1023	0554-95-0284	186-204	Qbt 2	Indeno(1,2,3-cd)pyrene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Iodomethane	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0284	186-204	Qbt 2	Isophorone	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Isopropylbenzene	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Isopropyltoluene[4-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Methoxychlor[4,4'-]	0.017	U
54-1023	0554-95-0284	186-204	Qbt 2	Methyl-2-pentanone[4-]	0.01	U
54-1023	0554-95-0284	186-204	Qbt 2	Methylene chloride	0.01	U
54-1023	0554-95-0284	186-204	Qbt 2	Methylnaphthalene[2-]	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Methylphenol[2-]	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Methylphenol[4-]	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Naphthalene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Nitroaniline[2-]	0.85	U
54-1023	0554-95-0284	186-204	Qbt 2	Nitroaniline[3-]	0.85	U
54-1023	0554-95-0284	186-204	Qbt 2	Nitroaniline[4-]	0.85	U
54-1023	0554-95-0284	186-204	Qbt 2	Nitrobenzene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Nitrophenol[2-]	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Nitrophenol[4-]	0.85	U
54-1023	0554-95-0284	186-204	Qbt 2	Nitroso-di-n-propylamine[N-]	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Nitrosodimethylamine[N-]	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Nitrosodiphenylamine[N-]	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Oxybis(1-chloropropane)[2,2'-]	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Pentachlorophenol	0.85	U
54-1023	0554-95-0284	186-204	Qbt 2	Phenanthrene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Phenol	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Propylbenzene[1-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Pyrene	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Styrene	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Tetrachloroethane[1,1,2,2-]	0.01	U
54-1023	0554-95-0284	186-204	Qbt 2	Tetrachloroethene	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Toluene	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Toxaphene (technical grade)	0.17	U
54-1023	0554-95-0284	186-204	Qbt 2	Trichlorobenzene[1,2,4-]	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Trichloroethane[1,1,1-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Trichloroethane[1,1,2-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Trichloroethene	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Trichlorofluoromethane	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Trichlorophenol[2,4,5-]	0.85	U
54-1023	0554-95-0284	186-204	Qbt 2	Trichlorophenol[2,4,6-]	0.34	U
54-1023	0554-95-0284	186-204	Qbt 2	Trichloropropane[1,2,3-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Trichlorotrifluoroethane	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Trimethylbenzene[1,2,4-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Trimethylbenzene[1,3,5-]	0.005	U
54-1023	0554-95-0284	186-204	Qbt 2	Vinyl chloride	0.01	U
54-1023	0554-95-0284	186-204	Qbt 2	Xylene (total)	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0284	186-204	Qbt 2	Xylene[1,2-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Acenaphthene	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Acenaphthylene	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Acetone	0.007	U
54-1023	0554-95-0286	324-342	Qbt 2	Aldrin	0.0016	U
54-1023	0554-95-0286	324-342	Qbt 2	Aniline	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Anthracene	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Aroclor-1016	0.032	U
54-1023	0554-95-0286	324-342	Qbt 2	Aroclor-1221	0.065	U
54-1023	0554-95-0286	324-342	Qbt 2	Aroclor-1232	0.032	U
54-1023	0554-95-0286	324-342	Qbt 2	Aroclor-1242	0.032	U
54-1023	0554-95-0286	324-342	Qbt 2	Aroclor-1248	0.032	U
54-1023	0554-95-0286	324-342	Qbt 2	Aroclor-1254	0.032	U
54-1023	0554-95-0286	324-342	Qbt 2	Aroclor-1260	0.032	U
54-1023	0554-95-0286	324-342	Qbt 2	Azobenzene	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Benzene	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Benzo(a)anthracene	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Benzo(a)pyrene	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Benzo(b)fluoranthene	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Benzo(g,h,i)perylene	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Benzo(k)fluoranthene	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Benzoic acid	0.83	U
54-1023	0554-95-0286	324-342	Qbt 2	Benzyl alcohol	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	BHC[alpha-]	0.0016	U
54-1023	0554-95-0286	324-342	Qbt 2	BHC[beta-]	0.0016	U
54-1023	0554-95-0286	324-342	Qbt 2	BHC[delta-]	0.0016	U
54-1023	0554-95-0286	324-342	Qbt 2	BHC[gamma-]	0.0016	U
54-1023	0554-95-0286	324-342	Qbt 2	Bis(2-chloroethoxy)methane	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Bis(2-chloroethyl)ether	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Bis(2-ethylhexyl)phthalate	0.047	U
54-1023	0554-95-0286	324-342	Qbt 2	Bromobenzene	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Bromodichloromethane	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Bromoform	0.01	U
54-1023	0554-95-0286	324-342	Qbt 2	Bromomethane	0.01	U
54-1023	0554-95-0286	324-342	Qbt 2	Bromophenyl-phenylether[4-]	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Butanone[2-]	0.01	U
54-1023	0554-95-0286	324-342	Qbt 2	Butylbenzene[n-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Butylbenzene[sec-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Butylbenzene[tert-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Butylbenzylphthalate	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Carbon disulfide	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Carbon tetrachloride	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Chlordane[alpha-]	0.0016	U
54-1023	0554-95-0286	324-342	Qbt 2	Chlordane[gamma-]	0.0016	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0286	324-342	Qbt 2	Chloro-3-methylphenol[4-]	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Chloroaniline[4-]	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Chlorobenzene	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Chlorodibromomethane	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Chloroethane	0.01	U
54-1023	0554-95-0286	324-342	Qbt 2	Chloroform	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Chloromethane	0.01	U
54-1023	0554-95-0286	324-342	Qbt 2	Chloronaphthalene[2-]	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Chlorophenol[2-]	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Chlorophenyl-phenyl[4-] ether	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Chlorotoluene[2-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Chlorotoluene[4-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Chrysene	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	DDD[4,4'-]	0.0032	U
54-1023	0554-95-0286	324-342	Qbt 2	DDE[4,4'-]	0.0032	U
54-1023	0554-95-0286	324-342	Qbt 2	DDT[4,4'-]	0.0032	U
54-1023	0554-95-0286	324-342	Qbt 2	Di-n-butylphthalate	0.057	J
54-1023	0554-95-0286	324-342	Qbt 2	Di-n-octylphthalate	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Dibenz(a,h)anthracene	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Dibenzofuran	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Dibromo-3-chloropropane[1,2-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Dibromoethane[1,2-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Dibromomethane	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Dichlorobenzene[1,2-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Dichlorobenzene[1,3-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Dichlorobenzene[1,4-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Dichlorobenzidine[3,3'-]	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Dichlorodifluoromethane	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Dichloroethane[1,1-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Dichloroethane[1,2-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Dichloroethene[1,1-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Dichloroethene[cis-1,2-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Dichloroethene[trans-1,2-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Dichlorophenol[2,4-]	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Dichloropropane[1,2-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Dichloropropane[1,3-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Dichloropropane[2,2-]	0.01	U
54-1023	0554-95-0286	324-342	Qbt 2	Dichloropropene[1,1-]	0.01	U
54-1023	0554-95-0286	324-342	Qbt 2	Dichloropropene[cis-1,3-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Dichloropropene[trans-1,3-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Dieldrin	0.0032	U
54-1023	0554-95-0286	324-342	Qbt 2	Diethylphthalate	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Dimethyl phthalate	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Dimethylphenol[2,4-]	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0286	324-342	Qbt 2	Dinitro-2-methylphenol[4,6-]	0.83	U
54-1023	0554-95-0286	324-342	Qbt 2	Dinitrophenol[2,4-]	0.83	U
54-1023	0554-95-0286	324-342	Qbt 2	Dinitrotoluene[2,4-]	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Dinitrotoluene[2,6-]	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Endosulfan I	0.0016	U
54-1023	0554-95-0286	324-342	Qbt 2	Endosulfan II	0.0032	U
54-1023	0554-95-0286	324-342	Qbt 2	Endosulfan sulfate	0.0032	U
54-1023	0554-95-0286	324-342	Qbt 2	Endrin	0.0032	U
54-1023	0554-95-0286	324-342	Qbt 2	Endrin aldehyde	0.0032	U
54-1023	0554-95-0286	324-342	Qbt 2	Endrin ketone	0.0032	U
54-1023	0554-95-0286	324-342	Qbt 2	Ethylbenzene	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Fluoranthene	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Fluorene	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Heptachlor	0.0016	U
54-1023	0554-95-0286	324-342	Qbt 2	Heptachlor epoxide	0.0016	U
54-1023	0554-95-0286	324-342	Qbt 2	Hexachlorobenzene	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Hexachlorobutadiene	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Hexachlorocyclopentadiene	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Hexachloroethane	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Hexanone[2-]	0.01	U
54-1023	0554-95-0286	324-342	Qbt 2	Indeno(1,2,3-cd)pyrene	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Iodomethane	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Isophorone	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Isopropylbenzene	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Isopropyltoluene[4-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Methoxychlor[4,4'-]	0.016	U
54-1023	0554-95-0286	324-342	Qbt 2	Methyl-2-pentanone[4-]	0.01	U
54-1023	0554-95-0286	324-342	Qbt 2	Methylene chloride	0.01	U
54-1023	0554-95-0286	324-342	Qbt 2	Methylnaphthalene[2-]	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Methylphenol[2-]	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Methylphenol[4-]	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Naphthalene	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Nitroaniline[2-]	0.83	U
54-1023	0554-95-0286	324-342	Qbt 2	Nitroaniline[3-]	0.83	U
54-1023	0554-95-0286	324-342	Qbt 2	Nitroaniline[4-]	0.83	U
54-1023	0554-95-0286	324-342	Qbt 2	Nitrobenzene	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Nitrophenol[2-]	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Nitrophenol[4-]	0.83	U
54-1023	0554-95-0286	324-342	Qbt 2	Nitroso-di-n-propylamine[N-]	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Nitrosodimethylamine[N-]	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Nitrosodiphenylamine[N-]	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Oxybis(1-chloropropane)[2,2'-]	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Pentachlorophenol	0.83	U
54-1023	0554-95-0286	324-342	Qbt 2	Phenanthrene	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0286	324-342	Qbt 2	Phenol	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Propylbenzene[1-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Pyrene	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Styrene	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Tetrachloroethane[1,1,2,2-]	0.01	U
54-1023	0554-95-0286	324-342	Qbt 2	Tetrachloroethene	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Toluene	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Toxaphene (technical grade)	0.16	U
54-1023	0554-95-0286	324-342	Qbt 2	Trichlorobenzene[1,2,4-]	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Trichloroethane[1,1,1-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Trichloroethane[1,1,2-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Trichloroethene	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Trichlorofluoromethane	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Trichlorophenol[2,4,5-]	0.83	U
54-1023	0554-95-0286	324-342	Qbt 2	Trichlorophenol[2,4,6-]	0.33	U
54-1023	0554-95-0286	324-342	Qbt 2	Trichloropropane[1,2,3-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Trichlorotrifluoroethane	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Trimethylbenzene[1,2,4-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Trimethylbenzene[1,3,5-]	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Vinyl chloride	0.01	U
54-1023	0554-95-0286	324-342	Qbt 2	Xylene (total)	0.005	U
54-1023	0554-95-0286	324-342	Qbt 2	Xylene[1,2-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Acenaphthene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Acenaphthylene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Acetone	0.006	U
54-1023	0554-95-0288	444-462	Qbt 1v	Aldrin	0.0017	U
54-1023	0554-95-0288	444-462	Qbt 1v	Aniline	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Anthracene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Aroclor-1016	0.033	U
54-1023	0554-95-0288	444-462	Qbt 1v	Aroclor-1221	0.067	U
54-1023	0554-95-0288	444-462	Qbt 1v	Aroclor-1232	0.033	U
54-1023	0554-95-0288	444-462	Qbt 1v	Aroclor-1242	0.033	U
54-1023	0554-95-0288	444-462	Qbt 1v	Aroclor-1248	0.033	U
54-1023	0554-95-0288	444-462	Qbt 1v	Aroclor-1254	0.033	U
54-1023	0554-95-0288	444-462	Qbt 1v	Aroclor-1260	0.033	U
54-1023	0554-95-0288	444-462	Qbt 1v	Azobenzene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Benzene	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Benzo(a)anthracene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Benzo(a)pyrene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Benzo(b)fluoranthene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Benzo(g,h,i)perylene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Benzo(k)fluoranthene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Benzoic acid	0.82	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0288	444-462	Qbt 1v	Benzyl alcohol	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	BHC[alpha-]	0.0017	U
54-1023	0554-95-0288	444-462	Qbt 1v	BHC[beta-]	0.0017	U
54-1023	0554-95-0288	444-462	Qbt 1v	BHC[delta-]	0.0017	U
54-1023	0554-95-0288	444-462	Qbt 1v	BHC[gamma-]	0.0017	U
54-1023	0554-95-0288	444-462	Qbt 1v	Bis(2-chloroethoxy)methane	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Bis(2-chloroethyl)ether	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.13	U
54-1023	0554-95-0288	444-462	Qbt 1v	Bromobenzene	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Bromodichloromethane	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Bromoform	0.01	U
54-1023	0554-95-0288	444-462	Qbt 1v	Bromomethane	0.01	U
54-1023	0554-95-0288	444-462	Qbt 1v	Bromophenyl-phenylether[4-]	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Butanone[2-]	0.007	J
54-1023	0554-95-0288	444-462	Qbt 1v	Butylbenzene[n-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Butylbenzene[sec-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Butylbenzene[tert-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Butylbenzylphthalate	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Carbon disulfide	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Carbon tetrachloride	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Chlordane[alpha-]	0.0017	U
54-1023	0554-95-0288	444-462	Qbt 1v	Chlordane[gamma-]	0.0017	U
54-1023	0554-95-0288	444-462	Qbt 1v	Chloro-3-methylphenol[4-]	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Chloroaniline[4-]	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Chlorobenzene	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Chlorodibromomethane	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Chloroethane	0.01	U
54-1023	0554-95-0288	444-462	Qbt 1v	Chloroform	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Chloromethane	0.01	U
54-1023	0554-95-0288	444-462	Qbt 1v	Chloronaphthalene[2-]	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Chlorophenol[2-]	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Chlorotoluene[2-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Chlorotoluene[4-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Chrysene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	DDD[4,4'-]	0.0033	U
54-1023	0554-95-0288	444-462	Qbt 1v	DDE[4,4'-]	0.0033	U
54-1023	0554-95-0288	444-462	Qbt 1v	DDT[4,4'-]	0.0033	U
54-1023	0554-95-0288	444-462	Qbt 1v	Di-n-butylphthalate	0.05	J
54-1023	0554-95-0288	444-462	Qbt 1v	Di-n-octylphthalate	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dibenz(a,h)anthracene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dibenzofuran	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dibromoethane[1,2-]	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0288	444-462	Qbt 1v	Dibromomethane	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dichlorobenzene[1,2-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dichlorobenzene[1,3-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dichlorobenzene[1,4-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dichlorobenzidine[3,3'-]	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dichlorodifluoromethane	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dichloroethane[1,1-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dichloroethane[1,2-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dichloroethene[1,1-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dichloroethene[cis-1,2-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dichloroethene[trans-1,2-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dichlorophenol[2,4-]	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dichloropropane[1,2-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dichloropropane[1,3-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dichloropropane[2,2-]	0.01	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dichloropropene[1,1-]	0.01	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dichloropropene[cis-1,3-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dichloropropene[trans-1,3-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dieldrin	0.0033	U
54-1023	0554-95-0288	444-462	Qbt 1v	Diethylphthalate	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dimethyl phthalate	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dimethylphenol[2,4-]	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dinitro-2-methylphenol[4,6-]	0.82	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dinitrophenol[2,4-]	0.82	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dinitrotoluene[2,4-]	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Dinitrotoluene[2,6-]	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Endosulfan I	0.0017	U
54-1023	0554-95-0288	444-462	Qbt 1v	Endosulfan II	0.0033	U
54-1023	0554-95-0288	444-462	Qbt 1v	Endosulfan sulfate	0.0033	U
54-1023	0554-95-0288	444-462	Qbt 1v	Endrin	0.0033	U
54-1023	0554-95-0288	444-462	Qbt 1v	Endrin aldehyde	0.0033	U
54-1023	0554-95-0288	444-462	Qbt 1v	Endrin ketone	0.0033	U
54-1023	0554-95-0288	444-462	Qbt 1v	Ethylbenzene	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Fluoranthene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Fluorene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Heptachlor	0.0017	U
54-1023	0554-95-0288	444-462	Qbt 1v	Heptachlor epoxide	0.0017	U
54-1023	0554-95-0288	444-462	Qbt 1v	Hexachlorobenzene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Hexachlorobutadiene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Hexachlorocyclopentadiene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Hexachloroethane	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Hexanone[2-]	0.01	U
54-1023	0554-95-0288	444-462	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Iodomethane	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0288	444-462	Qbt 1v	Isophorone	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Isopropylbenzene	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Isopropyltoluene[4-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Methoxychlor[4,4'-]	0.017	U
54-1023	0554-95-0288	444-462	Qbt 1v	Methyl-2-pentanone[4-]	0.01	U
54-1023	0554-95-0288	444-462	Qbt 1v	Methylene chloride	0.01	U
54-1023	0554-95-0288	444-462	Qbt 1v	Methylnaphthalene[2-]	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Methylphenol[2-]	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Methylphenol[4-]	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Naphthalene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Nitroaniline[2-]	0.82	U
54-1023	0554-95-0288	444-462	Qbt 1v	Nitroaniline[3-]	0.82	U
54-1023	0554-95-0288	444-462	Qbt 1v	Nitroaniline[4-]	0.82	U
54-1023	0554-95-0288	444-462	Qbt 1v	Nitrobenzene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Nitrophenol[2-]	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Nitrophenol[4-]	0.82	U
54-1023	0554-95-0288	444-462	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Nitrosodimethylamine[N-]	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Nitrosodiphenylamine[N-]	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Pentachlorophenol	0.82	U
54-1023	0554-95-0288	444-462	Qbt 1v	Phenanthrene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Phenol	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Propylbenzene[1-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Pyrene	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Styrene	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.01	U
54-1023	0554-95-0288	444-462	Qbt 1v	Tetrachloroethene	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Toluene	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Toxaphene (technical grade)	0.17	U
54-1023	0554-95-0288	444-462	Qbt 1v	Trichlorobenzene[1,2,4-]	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Trichloroethane[1,1,1-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Trichloroethane[1,1,2-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Trichloroethene	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Trichlorofluoromethane	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Trichlorophenol[2,4,5-]	0.82	U
54-1023	0554-95-0288	444-462	Qbt 1v	Trichlorophenol[2,4,6-]	0.33	U
54-1023	0554-95-0288	444-462	Qbt 1v	Trichloropropane[1,2,3-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Trichlorotrifluoroethane	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Trimethylbenzene[1,2,4-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Trimethylbenzene[1,3,5-]	0.005	U
54-1023	0554-95-0288	444-462	Qbt 1v	Vinyl chloride	0.01	U
54-1023	0554-95-0288	444-462	Qbt 1v	Xylene (total)	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0288	444-462	Qbt 1v	Xylene[1,2-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Acenaphthene	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Acenaphthylene	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Acetone	0.002	U
54-1023	0554-95-0290	564-582	Qbt 1v	Aldrin	0.0017	U
54-1023	0554-95-0290	564-582	Qbt 1v	Aniline	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Anthracene	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Aroclor-1016	0.033	U
54-1023	0554-95-0290	564-582	Qbt 1v	Aroclor-1221	0.068	U
54-1023	0554-95-0290	564-582	Qbt 1v	Aroclor-1232	0.033	U
54-1023	0554-95-0290	564-582	Qbt 1v	Aroclor-1242	0.033	U
54-1023	0554-95-0290	564-582	Qbt 1v	Aroclor-1248	0.033	U
54-1023	0554-95-0290	564-582	Qbt 1v	Aroclor-1254	0.033	U
54-1023	0554-95-0290	564-582	Qbt 1v	Aroclor-1260	0.033	U
54-1023	0554-95-0290	564-582	Qbt 1v	Azobenzene	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Benzene	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Benzo(a)anthracene	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Benzo(a)pyrene	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Benzo(b)fluoranthene	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Benzo(g,h,i)perylene	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Benzo(k)fluoranthene	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Benzoic acid	0.83	U
54-1023	0554-95-0290	564-582	Qbt 1v	Benzyl alcohol	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	BHC[alpha-]	0.0017	U
54-1023	0554-95-0290	564-582	Qbt 1v	BHC[beta-]	0.0017	U
54-1023	0554-95-0290	564-582	Qbt 1v	BHC[delta-]	0.0017	U
54-1023	0554-95-0290	564-582	Qbt 1v	BHC[gamma-]	0.0017	U
54-1023	0554-95-0290	564-582	Qbt 1v	Bis(2-chloroethoxy)methane	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Bis(2-chloroethyl)ether	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.084	U
54-1023	0554-95-0290	564-582	Qbt 1v	Bromobenzene	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Bromodichloromethane	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Bromoform	0.01	U
54-1023	0554-95-0290	564-582	Qbt 1v	Bromomethane	0.01	U
54-1023	0554-95-0290	564-582	Qbt 1v	Bromophenyl-phenylether[4-]	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Butanone[2-]	0.01	U
54-1023	0554-95-0290	564-582	Qbt 1v	Butylbenzene[n-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Butylbenzene[sec-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Butylbenzene[tert-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Butylbenzylphthalate	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Carbon disulfide	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Carbon tetrachloride	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Chlordane[alpha-]	0.0017	U
54-1023	0554-95-0290	564-582	Qbt 1v	Chlordane[gamma-]	0.0017	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0290	564-582	Qbt 1v	Chloro-3-methylphenol[4-]	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Chloroaniline[4-]	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Chlorobenzene	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Chlorodibromomethane	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Chloroethane	0.01	U
54-1023	0554-95-0290	564-582	Qbt 1v	Chloroform	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Chloromethane	0.01	U
54-1023	0554-95-0290	564-582	Qbt 1v	Chloronaphthalene[2-]	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Chlorophenol[2-]	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Chlorotoluene[2-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Chlorotoluene[4-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Chrysene	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	DDD[4,4'-]	0.0033	U
54-1023	0554-95-0290	564-582	Qbt 1v	DDE[4,4'-]	0.0033	U
54-1023	0554-95-0290	564-582	Qbt 1v	DDT[4,4'-]	0.0033	U
54-1023	0554-95-0290	564-582	Qbt 1v	Di-n-butylphthalate	0.051	J
54-1023	0554-95-0290	564-582	Qbt 1v	Di-n-octylphthalate	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dibenz(a,h)anthracene	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dibenzofuran	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dibromoethane[1,2-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dibromomethane	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dichlorobenzene[1,2-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dichlorobenzene[1,3-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dichlorobenzene[1,4-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dichlorobenzidine[3,3'-]	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dichlorodifluoromethane	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dichloroethane[1,1-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dichloroethane[1,2-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dichloroethene[1,1-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dichloroethene[cis-1,2-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dichloroethene[trans-1,2-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dichlorophenol[2,4-]	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dichloropropane[1,2-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dichloropropane[1,3-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dichloropropane[2,2-]	0.01	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dichloropropene[1,1-]	0.01	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dichloropropene[cis-1,3-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dichloropropene[trans-1,3-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dieldrin	0.0033	U
54-1023	0554-95-0290	564-582	Qbt 1v	Diethylphthalate	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dimethyl phthalate	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dimethylphenol[2,4-]	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0290	564-582	Qbt 1v	Dinitro-2-methylphenol[4,6-]	0.83	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dinitrophenol[2,4-]	0.83	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dinitrotoluene[2,4-]	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Dinitrotoluene[2,6-]	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Endosulfan I	0.0017	U
54-1023	0554-95-0290	564-582	Qbt 1v	Endosulfan II	0.0033	U
54-1023	0554-95-0290	564-582	Qbt 1v	Endosulfan sulfate	0.0033	U
54-1023	0554-95-0290	564-582	Qbt 1v	Endrin	0.0033	U
54-1023	0554-95-0290	564-582	Qbt 1v	Endrin aldehyde	0.0033	U
54-1023	0554-95-0290	564-582	Qbt 1v	Endrin ketone	0.0033	U
54-1023	0554-95-0290	564-582	Qbt 1v	Ethylbenzene	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Fluoranthene	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Fluorene	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Heptachlor	0.0017	U
54-1023	0554-95-0290	564-582	Qbt 1v	Heptachlor epoxide	0.0017	U
54-1023	0554-95-0290	564-582	Qbt 1v	Hexachlorobenzene	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Hexachlorobutadiene	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Hexachlorocyclopentadiene	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Hexachloroethane	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Hexanone[2-]	0.01	U
54-1023	0554-95-0290	564-582	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Iodomethane	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Isophorone	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Isopropylbenzene	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Isopropyltoluene[4-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Methoxychlor[4,4'-]	0.017	U
54-1023	0554-95-0290	564-582	Qbt 1v	Methyl-2-pentanone[4-]	0.01	U
54-1023	0554-95-0290	564-582	Qbt 1v	Methylene chloride	0.01	U
54-1023	0554-95-0290	564-582	Qbt 1v	Methylnaphthalene[2-]	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Methylphenol[2-]	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Methylphenol[4-]	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Naphthalene	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Nitroaniline[2-]	0.83	U
54-1023	0554-95-0290	564-582	Qbt 1v	Nitroaniline[3-]	0.83	U
54-1023	0554-95-0290	564-582	Qbt 1v	Nitroaniline[4-]	0.83	U
54-1023	0554-95-0290	564-582	Qbt 1v	Nitrobenzene	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Nitrophenol[2-]	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Nitrophenol[4-]	0.83	U
54-1023	0554-95-0290	564-582	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Nitrosodimethylamine[N-]	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Nitrosodiphenylamine[N-]	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Pentachlorophenol	0.83	U
54-1023	0554-95-0290	564-582	Qbt 1v	Phenanthrene	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0290	564-582	Qbt 1v	Phenol	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Propylbenzene[1-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Pyrene	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Styrene	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.01	U
54-1023	0554-95-0290	564-582	Qbt 1v	Tetrachloroethene	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Toluene	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Toxaphene (technical grade)	0.17	U
54-1023	0554-95-0290	564-582	Qbt 1v	Trichlorobenzene[1,2,4-]	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Trichloroethane[1,1,1-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Trichloroethane[1,1,2-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Trichloroethene	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Trichlorofluoromethane	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Trichlorophenol[2,4,5-]	0.83	U
54-1023	0554-95-0290	564-582	Qbt 1v	Trichlorophenol[2,4,6-]	0.33	U
54-1023	0554-95-0290	564-582	Qbt 1v	Trichloropropane[1,2,3-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Trichlorotrifluoroethane	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Trimethylbenzene[1,2,4-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Trimethylbenzene[1,3,5-]	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Vinyl chloride	0.01	U
54-1023	0554-95-0290	564-582	Qbt 1v	Xylene (total)	0.005	U
54-1023	0554-95-0290	564-582	Qbt 1v	Xylene[1,2-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Acenaphthene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Acenaphthylene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Acetone	0.01	U
54-1023	0554-95-0292	684-702	Qbt 1v	Aldrin	0.0017	U
54-1023	0554-95-0292	684-702	Qbt 1v	Aniline	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Anthracene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Aroclor-1016	0.033	U
54-1023	0554-95-0292	684-702	Qbt 1v	Aroclor-1221	0.066	U
54-1023	0554-95-0292	684-702	Qbt 1v	Aroclor-1232	0.033	U
54-1023	0554-95-0292	684-702	Qbt 1v	Aroclor-1242	0.033	U
54-1023	0554-95-0292	684-702	Qbt 1v	Aroclor-1248	0.033	U
54-1023	0554-95-0292	684-702	Qbt 1v	Aroclor-1254	0.033	U
54-1023	0554-95-0292	684-702	Qbt 1v	Aroclor-1260	0.033	U
54-1023	0554-95-0292	684-702	Qbt 1v	Azobenzene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Benzene	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Benzo(a)anthracene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Benzo(a)pyrene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Benzo(b)fluoranthene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Benzo(g,h,i)perylene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Benzo(k)fluoranthene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Benzoic acid	0.83	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0292	684-702	Qbt 1v	Benzyl alcohol	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	BHC[alpha-]	0.0017	U
54-1023	0554-95-0292	684-702	Qbt 1v	BHC[beta-]	0.0017	U
54-1023	0554-95-0292	684-702	Qbt 1v	BHC[delta-]	0.0017	U
54-1023	0554-95-0292	684-702	Qbt 1v	BHC[gamma-]	0.0017	U
54-1023	0554-95-0292	684-702	Qbt 1v	Bis(2-chloroethoxy)methane	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Bis(2-chloroethyl)ether	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.087	U
54-1023	0554-95-0292	684-702	Qbt 1v	Bromobenzene	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Bromodichloromethane	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Bromoform	0.01	U
54-1023	0554-95-0292	684-702	Qbt 1v	Bromomethane	0.01	U
54-1023	0554-95-0292	684-702	Qbt 1v	Bromophenyl-phenylether[4-]	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Butanone[2-]	0.01	U
54-1023	0554-95-0292	684-702	Qbt 1v	Butylbenzene[n-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Butylbenzene[sec-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Butylbenzene[tert-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Butylbenzylphthalate	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Carbon disulfide	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Carbon tetrachloride	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Chlordane[alpha-]	0.0017	U
54-1023	0554-95-0292	684-702	Qbt 1v	Chlordane[gamma-]	0.0017	U
54-1023	0554-95-0292	684-702	Qbt 1v	Chloro-3-methylphenol[4-]	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Chloroaniline[4-]	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Chlorobenzene	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Chlorodibromomethane	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Chloroethane	0.01	U
54-1023	0554-95-0292	684-702	Qbt 1v	Chloroform	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Chloromethane	0.01	U
54-1023	0554-95-0292	684-702	Qbt 1v	Chloronaphthalene[2-]	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Chlorophenol[2-]	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Chlorotoluene[2-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Chlorotoluene[4-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Chrysene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	DDD[4,4'-]	0.0033	U
54-1023	0554-95-0292	684-702	Qbt 1v	DDE[4,4'-]	0.0033	U
54-1023	0554-95-0292	684-702	Qbt 1v	DDT[4,4'-]	0.0033	U
54-1023	0554-95-0292	684-702	Qbt 1v	Di-n-butylphthalate	0.043	J
54-1023	0554-95-0292	684-702	Qbt 1v	Di-n-octylphthalate	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dibenz(a,h)anthracene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dibenzofuran	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dibromoethane[1,2-]	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0292	684-702	Qbt 1v	Dibromomethane	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dichlorobenzene[1,2-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dichlorobenzene[1,3-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dichlorobenzene[1,4-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dichlorobenzidine[3,3'-]	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dichlorodifluoromethane	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dichloroethane[1,1-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dichloroethane[1,2-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dichloroethene[1,1-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dichloroethene[cis-1,2-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dichloroethene[trans-1,2-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dichlorophenol[2,4-]	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dichloropropane[1,2-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dichloropropane[1,3-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dichloropropane[2,2-]	0.01	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dichloropropene[1,1-]	0.01	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dichloropropene[cis-1,3-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dichloropropene[trans-1,3-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dieldrin	0.0033	U
54-1023	0554-95-0292	684-702	Qbt 1v	Diethylphthalate	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dimethyl phthalate	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dimethylphenol[2,4-]	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dinitro-2-methylphenol[4,6-]	0.83	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dinitrophenol[2,4-]	0.83	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dinitrotoluene[2,4-]	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Dinitrotoluene[2,6-]	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Endosulfan I	0.0017	U
54-1023	0554-95-0292	684-702	Qbt 1v	Endosulfan II	0.0033	U
54-1023	0554-95-0292	684-702	Qbt 1v	Endosulfan sulfate	0.0033	U
54-1023	0554-95-0292	684-702	Qbt 1v	Endrin	0.0033	U
54-1023	0554-95-0292	684-702	Qbt 1v	Endrin aldehyde	0.0033	U
54-1023	0554-95-0292	684-702	Qbt 1v	Endrin ketone	0.0033	U
54-1023	0554-95-0292	684-702	Qbt 1v	Ethylbenzene	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Fluoranthene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Fluorene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Heptachlor	0.0017	U
54-1023	0554-95-0292	684-702	Qbt 1v	Heptachlor epoxide	0.0017	U
54-1023	0554-95-0292	684-702	Qbt 1v	Hexachlorobenzene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Hexachlorobutadiene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Hexachlorocyclopentadiene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Hexachloroethane	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Hexanone[2-]	0.01	U
54-1023	0554-95-0292	684-702	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Iodomethane	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0292	684-702	Qbt 1v	Isophorone	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Isopropylbenzene	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Isopropyltoluene[4-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Methoxychlor[4,4'-]	0.017	U
54-1023	0554-95-0292	684-702	Qbt 1v	Methyl-2-pentanone[4-]	0.01	U
54-1023	0554-95-0292	684-702	Qbt 1v	Methylene chloride	0.01	U
54-1023	0554-95-0292	684-702	Qbt 1v	Methylnaphthalene[2-]	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Methylphenol[2-]	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Methylphenol[4-]	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Naphthalene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Nitroaniline[2-]	0.83	U
54-1023	0554-95-0292	684-702	Qbt 1v	Nitroaniline[3-]	0.83	U
54-1023	0554-95-0292	684-702	Qbt 1v	Nitroaniline[4-]	0.83	U
54-1023	0554-95-0292	684-702	Qbt 1v	Nitrobenzene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Nitrophenol[2-]	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Nitrophenol[4-]	0.83	U
54-1023	0554-95-0292	684-702	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Nitrosodimethylamine[N-]	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Nitrosodiphenylamine[N-]	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Pentachlorophenol	0.83	U
54-1023	0554-95-0292	684-702	Qbt 1v	Phenanthrene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Phenol	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Propylbenzene[1-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Pyrene	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Styrene	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.01	U
54-1023	0554-95-0292	684-702	Qbt 1v	Tetrachloroethene	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Toluene	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Toxaphene (technical grade)	0.17	U
54-1023	0554-95-0292	684-702	Qbt 1v	Trichlorobenzene[1,2,4-]	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Trichloroethane[1,1,1-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Trichloroethane[1,1,2-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Trichloroethene	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Trichlorofluoromethane	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Trichlorophenol[2,4,5-]	0.83	U
54-1023	0554-95-0292	684-702	Qbt 1v	Trichlorophenol[2,4,6-]	0.33	U
54-1023	0554-95-0292	684-702	Qbt 1v	Trichloropropane[1,2,3-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Trichlorotrifluoroethane	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Trimethylbenzene[1,2,4-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Trimethylbenzene[1,3,5-]	0.005	U
54-1023	0554-95-0292	684-702	Qbt 1v	Vinyl chloride	0.01	U
54-1023	0554-95-0292	684-702	Qbt 1v	Xylene (total)	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0292	684-702	Qbt 1v	Xylene[1,2-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Acenaphthene	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Acenaphthylene	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Acetone	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Aldrin	0.0017	U
54-1023	0554-95-0294	804-822	Qbt 1v	Aniline	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Anthracene	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Aroclor-1016	0.034	U
54-1023	0554-95-0294	804-822	Qbt 1v	Aroclor-1221	0.068	U
54-1023	0554-95-0294	804-822	Qbt 1v	Aroclor-1232	0.034	U
54-1023	0554-95-0294	804-822	Qbt 1v	Aroclor-1242	0.034	U
54-1023	0554-95-0294	804-822	Qbt 1v	Aroclor-1248	0.034	U
54-1023	0554-95-0294	804-822	Qbt 1v	Aroclor-1254	0.034	U
54-1023	0554-95-0294	804-822	Qbt 1v	Aroclor-1260	0.034	U
54-1023	0554-95-0294	804-822	Qbt 1v	Azobenzene	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Benzene	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Benzo(a)anthracene	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Benzo(a)pyrene	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Benzo(b)fluoranthene	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Benzo(g,h,i)perylene	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Benzo(k)fluoranthene	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Benzoic acid	0.82	U
54-1023	0554-95-0294	804-822	Qbt 1v	Benzyl alcohol	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	BHC[alpha-]	0.0017	U
54-1023	0554-95-0294	804-822	Qbt 1v	BHC[beta-]	0.0017	U
54-1023	0554-95-0294	804-822	Qbt 1v	BHC[delta-]	0.0017	U
54-1023	0554-95-0294	804-822	Qbt 1v	BHC[gamma-]	0.0017	U
54-1023	0554-95-0294	804-822	Qbt 1v	Bis(2-chloroethoxy)methane	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Bis(2-chloroethyl)ether	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.066	U
54-1023	0554-95-0294	804-822	Qbt 1v	Bromobenzene	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Bromodichloromethane	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Bromoform	0.01	U
54-1023	0554-95-0294	804-822	Qbt 1v	Bromomethane	0.01	U
54-1023	0554-95-0294	804-822	Qbt 1v	Bromophenyl-phenylether[4-]	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Butanone[2-]	0.01	U
54-1023	0554-95-0294	804-822	Qbt 1v	Butylbenzene[n-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Butylbenzene[sec-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Butylbenzene[tert-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Butylbenzylphthalate	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Carbon disulfide	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Carbon tetrachloride	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Chlordane[alpha-]	0.0017	U
54-1023	0554-95-0294	804-822	Qbt 1v	Chlordane[gamma-]	0.0017	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0294	804-822	Qbt 1v	Chloro-3-methylphenol[4-]	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Chloroaniline[4-]	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Chlorobenzene	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Chlorodibromomethane	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Chloroethane	0.01	U
54-1023	0554-95-0294	804-822	Qbt 1v	Chloroform	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Chloromethane	0.01	U
54-1023	0554-95-0294	804-822	Qbt 1v	Chloronaphthalene[2-]	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Chlorophenol[2-]	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Chlorotoluene[2-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Chlorotoluene[4-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Chrysene	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	DDD[4,4'-]	0.0034	U
54-1023	0554-95-0294	804-822	Qbt 1v	DDE[4,4'-]	0.0034	U
54-1023	0554-95-0294	804-822	Qbt 1v	DDT[4,4'-]	0.0034	U
54-1023	0554-95-0294	804-822	Qbt 1v	Di-n-butylphthalate	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Di-n-octylphthalate	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dibenz(a,h)anthracene	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dibenzofuran	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dibromoethane[1,2-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dibromomethane	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dichlorobenzene[1,2-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dichlorobenzene[1,3-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dichlorobenzene[1,4-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dichlorobenzidine[3,3'-]	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dichlorodifluoromethane	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dichloroethane[1,1-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dichloroethane[1,2-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dichloroethene[1,1-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dichloroethene[cis-1,2-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dichloroethene[trans-1,2-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dichlorophenol[2,4-]	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dichloropropane[1,2-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dichloropropane[1,3-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dichloropropane[2,2-]	0.01	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dichloropropene[1,1-]	0.01	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dichloropropene[cis-1,3-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dichloropropene[trans-1,3-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dieldrin	0.0034	U
54-1023	0554-95-0294	804-822	Qbt 1v	Diethylphthalate	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dimethyl phthalate	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dimethylphenol[2,4-]	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0294	804-822	Qbt 1v	Dinitro-2-methylphenol[4,6-]	0.82	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dinitrophenol[2,4-]	0.82	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dinitrotoluene[2,4-]	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Dinitrotoluene[2,6-]	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Endosulfan I	0.0017	U
54-1023	0554-95-0294	804-822	Qbt 1v	Endosulfan II	0.0034	U
54-1023	0554-95-0294	804-822	Qbt 1v	Endosulfan sulfate	0.0034	U
54-1023	0554-95-0294	804-822	Qbt 1v	Endrin	0.0034	U
54-1023	0554-95-0294	804-822	Qbt 1v	Endrin aldehyde	0.0034	U
54-1023	0554-95-0294	804-822	Qbt 1v	Endrin ketone	0.0034	U
54-1023	0554-95-0294	804-822	Qbt 1v	Ethylbenzene	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Fluoranthene	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Fluorene	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Heptachlor	0.0017	U
54-1023	0554-95-0294	804-822	Qbt 1v	Heptachlor epoxide	0.0017	U
54-1023	0554-95-0294	804-822	Qbt 1v	Hexachlorobenzene	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Hexachlorobutadiene	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Hexachlorocyclopentadiene	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Hexachloroethane	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Hexanone[2-]	0.01	U
54-1023	0554-95-0294	804-822	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Iodomethane	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Isophorone	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Isopropylbenzene	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Isopropyltoluene[4-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Methoxychlor[4,4'-]	0.017	U
54-1023	0554-95-0294	804-822	Qbt 1v	Methyl-2-pentanone[4-]	0.01	U
54-1023	0554-95-0294	804-822	Qbt 1v	Methylene chloride	0.01	U
54-1023	0554-95-0294	804-822	Qbt 1v	Methylnaphthalene[2-]	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Methylphenol[2-]	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Methylphenol[4-]	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Naphthalene	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Nitroaniline[2-]	0.82	U
54-1023	0554-95-0294	804-822	Qbt 1v	Nitroaniline[3-]	0.82	U
54-1023	0554-95-0294	804-822	Qbt 1v	Nitroaniline[4-]	0.82	U
54-1023	0554-95-0294	804-822	Qbt 1v	Nitrobenzene	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Nitrophenol[2-]	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Nitrophenol[4-]	0.82	U
54-1023	0554-95-0294	804-822	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Nitrosodimethylamine[N-]	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Nitrosodiphenylamine[N-]	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Pentachlorophenol	0.82	U
54-1023	0554-95-0294	804-822	Qbt 1v	Phenanthrene	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0294	804-822	Qbt 1v	Phenol	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Propylbenzene[1-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Pyrene	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Styrene	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.01	U
54-1023	0554-95-0294	804-822	Qbt 1v	Tetrachloroethene	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Toluene	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Toxaphene (technical grade)	0.17	U
54-1023	0554-95-0294	804-822	Qbt 1v	Trichlorobenzene[1,2,4-]	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Trichloroethane[1,1,1-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Trichloroethane[1,1,2-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Trichloroethene	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Trichlorofluoromethane	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Trichlorophenol[2,4,5-]	0.82	U
54-1023	0554-95-0294	804-822	Qbt 1v	Trichlorophenol[2,4,6-]	0.33	U
54-1023	0554-95-0294	804-822	Qbt 1v	Trichloropropane[1,2,3-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Trichlorotrifluoroethane	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Trimethylbenzene[1,2,4-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Trimethylbenzene[1,3,5-]	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Vinyl chloride	0.01	U
54-1023	0554-95-0294	804-822	Qbt 1v	Xylene (total)	0.005	U
54-1023	0554-95-0294	804-822	Qbt 1v	Xylene[1,2-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Acenaphthene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Acenaphthylene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Acetone	0.01	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Aldrin	0.0017	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Aniline	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Anthracene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Aroclor-1016	0.033	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Aroclor-1221	0.066	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Aroclor-1232	0.033	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Aroclor-1242	0.033	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Aroclor-1248	0.033	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Aroclor-1254	0.033	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Aroclor-1260	0.033	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Azobenzene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Benzene	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Benzo(a)anthracene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Benzo(a)pyrene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Benzo(b)fluoranthene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Benzo(g,h,i)perylene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Benzo(k)fluoranthene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Benzoic acid	0.83	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Benzyl alcohol	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	BHC[alpha-]	0.0017	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	BHC[beta-]	0.0017	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	BHC[delta-]	0.0017	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	BHC[gamma-]	0.0017	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Bis(2-chloroethoxy)methane	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Bis(2-chloroethyl)ether	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.091	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Bromobenzene	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Bromodichloromethane	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Bromoform	0.01	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Bromomethane	0.01	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Bromophenyl-phenylether[4-]	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Butanone[2-]	0.01	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Butylbenzene[n-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Butylbenzene[sec-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Butylbenzene[tert-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Butylbenzylphthalate	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Carbon disulfide	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Carbon tetrachloride	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Chlordane[alpha-]	0.0017	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Chlordane[gamma-]	0.0017	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Chloro-3-methylphenol[4-]	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Chloroaniline[4-]	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Chlorobenzene	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Chlorodibromomethane	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Chloroethane	0.01	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Chloroform	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Chloromethane	0.01	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Chloronaphthalene[2-]	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Chlorophenol[2-]	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Chlorotoluene[2-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Chlorotoluene[4-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Chrysene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	DDD[4,4'-]	0.0033	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	DDE[4,4'-]	0.0033	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	DDT[4,4'-]	0.0033	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Di-n-butylphthalate	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Di-n-octylphthalate	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dibenz(a,h)anthracene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dibenzofuran	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dibromoethane[1,2-]	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dibromomethane	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dichlorobenzene[1,2-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dichlorobenzene[1,3-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dichlorobenzene[1,4-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dichlorobenzidine[3,3'-]	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dichlorodifluoromethane	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dichloroethane[1,1-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dichloroethane[1,2-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dichloroethene[1,1-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dichloroethene[cis-1,2-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dichloroethene[trans-1,2-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dichlorophenol[2,4-]	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dichloropropane[1,2-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dichloropropane[1,3-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dichloropropane[2,2-]	0.01	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dichloropropene[1,1-]	0.01	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dichloropropene[cis-1,3-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dichloropropene[trans-1,3-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dieldrin	0.0033	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Diethylphthalate	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dimethyl phthalate	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dimethylphenol[2,4-]	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dinitro-2-methylphenol[4,6-]	0.83	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dinitrophenol[2,4-]	0.83	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dinitrotoluene[2,4-]	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Dinitrotoluene[2,6-]	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Endosulfan I	0.0017	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Endosulfan II	0.0033	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Endosulfan sulfate	0.0033	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Endrin	0.0033	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Endrin aldehyde	0.0033	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Endrin ketone	0.0033	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Ethylbenzene	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Fluoranthene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Fluorene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Heptachlor	0.0017	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Heptachlor epoxide	0.0017	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Hexachlorobenzene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Hexachlorobutadiene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Hexachlorocyclopentadiene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Hexachloroethane	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Hexanone[2-]	0.01	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Iodomethane	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Isophorone	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Isopropylbenzene	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Isopropyltoluene[4-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Methoxychlor[4,4'-]	0.017	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Methyl-2-pentanone[4-]	0.01	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Methylene chloride	0.01	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Methylnaphthalene[2-]	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Methylphenol[2-]	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Methylphenol[4-]	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Naphthalene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Nitroaniline[2-]	0.83	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Nitroaniline[3-]	0.83	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Nitroaniline[4-]	0.83	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Nitrobenzene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Nitrophenol[2-]	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Nitrophenol[4-]	0.83	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Nitrosodimethylamine[N-]	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Nitrosodiphenylamine[N-]	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Pentachlorophenol	0.83	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Phenanthrene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Phenol	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Propylbenzene[1-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Pyrene	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Styrene	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.01	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Tetrachloroethene	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Toluene	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Toxaphene (technical grade)	0.17	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Trichlorobenzene[1,2,4-]	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Trichloroethane[1,1,1-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Trichloroethane[1,1,2-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Trichloroethene	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Trichlorofluoromethane	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Trichlorophenol[2,4,5-]	0.83	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Trichlorophenol[2,4,6-]	0.33	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Trichloropropane[1,2,3-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Trichlorotrifluoroethane	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Trimethylbenzene[1,2,4-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Trimethylbenzene[1,3,5-]	0.005	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Vinyl chloride	0.01	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Xylene (total)	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Xylene[1,2-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Acenaphthene	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Acenaphthylene	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Acetone	0.016	None
54-1024	0554-95-0321	108-110.4	Qbt 2	Aldrin	0.0017	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Aniline	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Anthracene	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Aroclor-1016	0.033	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Aroclor-1221	0.068	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Aroclor-1232	0.033	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Aroclor-1242	0.033	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Aroclor-1248	0.033	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Aroclor-1254	0.033	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Aroclor-1260	0.033	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Azobenzene	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Benzene	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Benzo(a)anthracene	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Benzo(a)pyrene	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Benzo(b)fluoranthene	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Benzo(g,h,i)perylene	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Benzo(k)fluoranthene	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Benzoic acid	0.83	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Benzyl alcohol	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	BHC[alpha-]	0.0017	U
54-1024	0554-95-0321	108-110.4	Qbt 2	BHC[beta-]	0.0017	U
54-1024	0554-95-0321	108-110.4	Qbt 2	BHC[delta-]	0.0017	U
54-1024	0554-95-0321	108-110.4	Qbt 2	BHC[gamma-]	0.0017	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Bis(2-chloroethoxy)methane	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Bis(2-chloroethyl)ether	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Bis(2-ethylhexyl)phthalate	0.23	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Bromobenzene	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Bromodichloromethane	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Bromoform	0.01	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Bromomethane	0.01	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Bromophenyl-phenylether[4-]	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Butanone[2-]	0.01	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Butylbenzene[n-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Butylbenzene[sec-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Butylbenzene[tert-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Butylbenzylphthalate	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Carbon disulfide	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Carbon tetrachloride	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Chlordane[alpha-]	0.0017	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Chlordane[gamma-]	0.0017	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0321	108-110.4	Qbt 2	Chloro-3-methylphenol[4-]	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Chloroaniline[4-]	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Chlorobenzene	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Chlorodibromomethane	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Chloroethane	0.01	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Chloroform	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Chloromethane	0.01	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Chloronaphthalene[2-]	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Chlorophenol[2-]	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Chlorophenyl-phenyl[4-] ether	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Chlorotoluene[2-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Chlorotoluene[4-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Chrysene	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	DDD[4,4'-]	0.0033	U
54-1024	0554-95-0321	108-110.4	Qbt 2	DDE[4,4'-]	0.0033	U
54-1024	0554-95-0321	108-110.4	Qbt 2	DDT[4,4'-]	0.0033	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Di-n-butylphthalate	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Di-n-octylphthalate	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dibenz(a,h)anthracene	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dibenzofuran	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dibromo-3-chloropropane[1,2-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dibromoethane[1,2-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dibromomethane	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dichlorobenzene[1,2-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dichlorobenzene[1,3-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dichlorobenzene[1,4-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dichlorobenzidine[3,3'-]	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dichlorodifluoromethane	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dichloroethane[1,1-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dichloroethane[1,2-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dichloroethene[1,1-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dichloroethene[cis-1,2-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dichloroethene[trans-1,2-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dichlorophenol[2,4-]	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dichloropropane[1,2-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dichloropropane[1,3-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dichloropropane[2,2-]	0.01	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dichloropropene[1,1-]	0.01	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dichloropropene[cis-1,3-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dichloropropene[trans-1,3-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dieldrin	0.0033	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Diethylphthalate	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dimethyl phthalate	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dimethylphenol[2,4-]	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0321	108-110.4	Qbt 2	Dinitro-2-methylphenol[4,6-]	0.83	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dinitrophenol[2,4-]	0.83	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dinitrotoluene[2,4-]	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Dinitrotoluene[2,6-]	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Endosulfan I	0.0017	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Endosulfan II	0.0033	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Endosulfan sulfate	0.0033	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Endrin	0.0033	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Endrin aldehyde	0.0033	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Endrin ketone	0.0033	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Ethylbenzene	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Fluoranthene	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Fluorene	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Heptachlor	0.0017	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Heptachlor epoxide	0.0017	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Hexachlorobenzene	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Hexachlorobutadiene	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Hexachlorocyclopentadiene	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Hexachloroethane	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Hexanone[2-]	0.01	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Indeno(1,2,3-cd)pyrene	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Iodomethane	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Isophorone	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Isopropylbenzene	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Isopropyltoluene[4-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Methoxychlor[4,4'-]	0.017	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Methyl-2-pentanone[4-]	0.01	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Methylene chloride	0.01	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Methylnaphthalene[2-]	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Methylphenol[2-]	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Methylphenol[4-]	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Naphthalene	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Nitroaniline[2-]	0.83	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Nitroaniline[3-]	0.83	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Nitroaniline[4-]	0.83	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Nitrobenzene	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Nitrophenol[2-]	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Nitrophenol[4-]	0.83	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Nitroso-di-n-propylamine[N-]	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Nitrosodimethylamine[N-]	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Nitrosodiphenylamine[N-]	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Oxybis(1-chloropropane)[2,2'-]	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Pentachlorophenol	0.83	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Phenanthrene	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0321	108-110.4	Qbt 2	Phenol	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Propylbenzene[1-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Pyrene	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Styrene	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Tetrachloroethane[1,1,2,2-]	0.01	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Tetrachloroethene	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Toluene	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Toxaphene (technical grade)	0.17	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Trichlorobenzene[1,2,4-]	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Trichloroethane[1,1,1-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Trichloroethane[1,1,2-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Trichloroethene	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Trichlorofluoromethane	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Trichlorophenol[2,4,5-]	0.83	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Trichlorophenol[2,4,6-]	0.33	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Trichloropropane[1,2,3-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Trichlorotrifluoroethane	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Trimethylbenzene[1,2,4-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Trimethylbenzene[1,3,5-]	0.005	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Vinyl chloride	0.01	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Xylene (total)	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Acenaphthene	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Acenaphthylene	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Acetone	0.021	U
54-1024	0554-95-0323	222-240	Qbt 2	Aldrin	1.808511E-03	U
54-1024	0554-95-0323	222-240	Qbt 2	Aniline	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Anthracene	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Aroclor-1016	3.510638E-02	U
54-1024	0554-95-0323	222-240	Qbt 2	Aroclor-1221	7.021277E-02	U
54-1024	0554-95-0323	222-240	Qbt 2	Aroclor-1232	3.510638E-02	U
54-1024	0554-95-0323	222-240	Qbt 2	Aroclor-1242	3.510638E-02	U
54-1024	0554-95-0323	222-240	Qbt 2	Aroclor-1248	3.510638E-02	U
54-1024	0554-95-0323	222-240	Qbt 2	Aroclor-1254	3.510638E-02	U
54-1024	0554-95-0323	222-240	Qbt 2	Aroclor-1260	3.510638E-02	U
54-1024	0554-95-0323	222-240	Qbt 2	Azobenzene	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Benzene	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Benzidine	0.71	U
54-1024	0554-95-0323	222-240	Qbt 2	Benzo(a)anthracene	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Benzo(a)pyrene	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Benzo(b)fluoranthene	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Benzo(g,h,i)perylene	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Benzo(k)fluoranthene	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Benzoic acid	3.5	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0323	222-240	Qbt 2	Benzyl alcohol	1.4	U
54-1024	0554-95-0323	222-240	Qbt 2	BHC[alpha-]	1.808511E-03	U
54-1024	0554-95-0323	222-240	Qbt 2	BHC[beta-]	1.808511E-03	U
54-1024	0554-95-0323	222-240	Qbt 2	BHC[delta-]	1.808511E-03	U
54-1024	0554-95-0323	222-240	Qbt 2	BHC[gamma-]	1.808511E-03	U
54-1024	0554-95-0323	222-240	Qbt 2	Bis(2-chloroethoxy)methane	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Bis(2-chloroethyl)ether	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Bis(2-ethylhexyl)phthalate	1.3	None
54-1024	0554-95-0323	222-240	Qbt 2	Bromobenzene	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Bromochloromethane	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Bromodichloromethane	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Bromoform	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Bromomethane	0.011	U
54-1024	0554-95-0323	222-240	Qbt 2	Bromophenyl-phenylether[4-]	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Butanone[2-]	0.021	U
54-1024	0554-95-0323	222-240	Qbt 2	Butylbenzene[n-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Butylbenzene[sec-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Butylbenzene[tert-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Butylbenzylphthalate	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Carbazole	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Carbon disulfide	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Carbon tetrachloride	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Chlordane[alpha-]	1.808511E-03	U
54-1024	0554-95-0323	222-240	Qbt 2	Chlordane[gamma-]	1.808511E-03	U
54-1024	0554-95-0323	222-240	Qbt 2	Chloro-3-methylphenol[4-]	0.71	U
54-1024	0554-95-0323	222-240	Qbt 2	Chloroaniline[4-]	1.4	U
54-1024	0554-95-0323	222-240	Qbt 2	Chlorobenzene	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Chlorodibromomethane	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Chloroethane	0.011	U
54-1024	0554-95-0323	222-240	Qbt 2	Chloroform	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Chloromethane	0.011	U
54-1024	0554-95-0323	222-240	Qbt 2	Chloronaphthalene[2-]	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Chlorophenol[2-]	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Chlorophenyl-phenyl[4-] ether	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Chlorotoluene[2-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Chlorotoluene[4-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Chrysene	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	DDD[4,4'-]	3.510638E-03	U
54-1024	0554-95-0323	222-240	Qbt 2	DDE[4,4'-]	3.510638E-03	U
54-1024	0554-95-0323	222-240	Qbt 2	DDT[4,4'-]	3.510638E-03	U
54-1024	0554-95-0323	222-240	Qbt 2	Di-n-butylphthalate	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Di-n-octylphthalate	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Dibenz(a,h)anthracene	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Dibenzofuran	0.35	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0323	222-240	Qbt 2	Dibromo-3-chloropropane[1,2-]	0.011	U
54-1024	0554-95-0323	222-240	Qbt 2	Dibromoethane[1,2-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Dibromomethane	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Dichlorobenzene[1,2-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Dichlorobenzene[1,3-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Dichlorobenzene[1,4-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Dichlorobenzidine[3,3'-]	0.71	U
54-1024	0554-95-0323	222-240	Qbt 2	Dichlorodifluoromethane	0.011	U
54-1024	0554-95-0323	222-240	Qbt 2	Dichloroethane[1,1-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Dichloroethane[1,2-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Dichloroethene[1,1-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Dichloroethene[cis-1,2-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Dichloroethene[trans-1,2-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Dichlorophenol[2,4-]	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Dichloropropane[1,2-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Dichloropropane[1,3-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Dichloropropane[2,2-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Dichloropropene[1,1-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Dichloropropene[cis-1,3-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Dichloropropene[trans-1,3-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Dieldrin	3.510638E-03	U
54-1024	0554-95-0323	222-240	Qbt 2	Diethylphthalate	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Dimethyl phthalate	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Dimethylphenol[2,4-]	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Dinitro-2-methylphenol[4,6-]	1.8	U
54-1024	0554-95-0323	222-240	Qbt 2	Dinitrophenol[2,4-]	1.8	U
54-1024	0554-95-0323	222-240	Qbt 2	Dinitrotoluene[2,4-]	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Dinitrotoluene[2,6-]	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Endosulfan I	1.808511E-03	U
54-1024	0554-95-0323	222-240	Qbt 2	Endosulfan II	3.510638E-03	U
54-1024	0554-95-0323	222-240	Qbt 2	Endosulfan sulfate	3.510638E-03	U
54-1024	0554-95-0323	222-240	Qbt 2	Endrin	3.510638E-03	U
54-1024	0554-95-0323	222-240	Qbt 2	Endrin aldehyde	3.510638E-03	U
54-1024	0554-95-0323	222-240	Qbt 2	Ethylbenzene	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Fluoranthene	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Fluorene	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Heptachlor	1.808511E-03	U
54-1024	0554-95-0323	222-240	Qbt 2	Heptachlor epoxide	1.808511E-03	U
54-1024	0554-95-0323	222-240	Qbt 2	Hexachlorobenzene	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Hexachlorobutadiene	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Hexachlorocyclopentadiene	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Hexachloroethane	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Hexanone[2-]	0.021	U
54-1024	0554-95-0323	222-240	Qbt 2	Indeno(1,2,3-cd)pyrene	0.35	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0323	222-240	Qbt 2	Iodomethane	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Isophorone	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Isopropylbenzene	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Isopropyltoluene[4-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Methoxychlor[4,4'-]	1.808511E-02	U
54-1024	0554-95-0323	222-240	Qbt 2	Methyl-2-pentanone[4-]	0.021	U
54-1024	0554-95-0323	222-240	Qbt 2	Methylene chloride	0.003	U
54-1024	0554-95-0323	222-240	Qbt 2	Methylnaphthalene[2-]	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Methylphenol[2-]	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Methylphenol[4-]	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Naphthalene	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Nitroaniline[2-]	1.8	U
54-1024	0554-95-0323	222-240	Qbt 2	Nitroaniline[3-]	1.8	U
54-1024	0554-95-0323	222-240	Qbt 2	Nitroaniline[4-]	0.64	U
54-1024	0554-95-0323	222-240	Qbt 2	Nitrobenzene	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Nitrophenol[2-]	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Nitrophenol[4-]	1.8	U
54-1024	0554-95-0323	222-240	Qbt 2	Nitroso-di-n-propylamine[N-]	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Nitrosodimethylamine[N-]	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Nitrosodiphenylamine[N-]	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Oxybis(1-chloropropane)[2,2'-]	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Pentachlorophenol	1.8	U
54-1024	0554-95-0323	222-240	Qbt 2	Phenanthrene	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Phenol	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Propylbenzene[1-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Pyrene	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Pyridine	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Styrene	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Tetrachloroethane[1,1,2,2-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Tetrachloroethene	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Toluene	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Toxaphene (technical grade)	0.18	U
54-1024	0554-95-0323	222-240	Qbt 2	Trichloro-1,2,2-trifluoroethane[1,1,2-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Trichlorobenzene[1,2,3-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Trichlorobenzene[1,2,4-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Trichloroethane[1,1,1-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Trichloroethane[1,1,2-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Trichloroethene	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Trichlorofluoromethane	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Trichlorophenol[2,4,5-]	1.8	U
54-1024	0554-95-0323	222-240	Qbt 2	Trichlorophenol[2,4,6-]	0.35	U
54-1024	0554-95-0323	222-240	Qbt 2	Trichloropropane[1,2,3-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Trimethylbenzene[1,2,4-]	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0323	222-240	Qbt 2	Trimethylbenzene[1,3,5-]	0.005	U
54-1024	0554-95-0323	222-240	Qbt 2	Vinyl chloride	0.011	U
54-1024	0554-95-0323	222-240	Qbt 2	Xylene (total)	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Acenaphthene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Acenaphthylene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Acetone	0.025	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Aldrin	0.000676	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Aniline	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Anthracene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Aroclor-1016	0.0135	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Aroclor-1221	0.0135	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Aroclor-1232	0.0135	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Aroclor-1242	0.0135	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Aroclor-1248	0.0135	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Aroclor-1254	0.0135	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Aroclor-1260	0.0135	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Azobenzene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Benzene	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Benzo(a)anthracene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Benzo(a)pyrene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Benzo(b)fluoranthene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Benzo(g,h,i)perylene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Benzo(k)fluoranthene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Benzoic acid	3.3	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Benzyl alcohol	1.3	U
54-1024	0554-95-0325	312-333.6	Qbt 2	BHC[alpha-]	0.000676	U
54-1024	0554-95-0325	312-333.6	Qbt 2	BHC[beta-]	0.000676	U
54-1024	0554-95-0325	312-333.6	Qbt 2	BHC[delta-]	0.000676	U
54-1024	0554-95-0325	312-333.6	Qbt 2	BHC[gamma-]	0.000676	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Bis(2-chloroethoxy)methane	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Bis(2-chloroethyl)ether	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Bis(2-ethylhexyl)phthalate	0.92	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Bromobenzene	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Bromochloromethane	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Bromodichloromethane	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Bromoform	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Bromomethane	0.01	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Bromophenyl-phenylether[4-]	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Butanone[2-]	0.02	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Butylbenzene[n-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Butylbenzene[sec-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Butylbenzene[tert-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Butylbenzylphthalate	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Carbon disulfide	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0325	312-333.6	Qbt 2	Carbon tetrachloride	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Chlordane (technical grade)	0.00338	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Chlordane[alpha-]	0.000676	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Chlordane[gamma-]	0.000676	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Chloro-3-methylphenol[4-]	0.67	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Chloroaniline[4-]	1.3	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Chlorobenzene	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Chlorodibromomethane	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Chloroethane	0.01	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Chloroform	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Chloromethane	0.01	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Chloronaphthalene[2-]	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Chlorophenol[2-]	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Chlorophenyl-phenyl[4-] ether	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Chlorotoluene[2-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Chlorotoluene[4-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Chrysene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	DDD[4,4'-]	0.000676	U
54-1024	0554-95-0325	312-333.6	Qbt 2	DDE[4,4'-]	0.000676	U
54-1024	0554-95-0325	312-333.6	Qbt 2	DDT[4,4'-]	0.000676	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Di-n-butylphthalate	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Di-n-octylphthalate	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dibenz(a,h)anthracene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dibenzofuran	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dibromo-3-chloropropane[1,2-]	0.01	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dibromoethane[1,2-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dibromomethane	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dichlorobenzene[1,2-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dichlorobenzene[1,3-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dichlorobenzene[1,4-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dichlorobenzidine[3,3'-]	0.67	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dichlorodifluoromethane	0.01	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dichloroethane[1,1-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dichloroethane[1,2-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dichloroethene[1,1-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dichloroethene[cis-1,2-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dichloroethene[trans-1,2-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dichlorophenol[2,4-]	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dichloropropane[1,2-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dichloropropane[1,3-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dichloropropane[2,2-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dichloropropene[1,1-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dichloropropene[cis-1,3-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dichloropropene[trans-1,3-]	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0325	312-333.6	Qbt 2	Dieldrin	0.000676	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Diethylphthalate	0.28	J
54-1024	0554-95-0325	312-333.6	Qbt 2	Dimethyl phthalate	0.042	J
54-1024	0554-95-0325	312-333.6	Qbt 2	Dimethylphenol[2,4-]	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dinitro-2-methylphenol[4,6-]	1.6	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dinitrophenol[2,4-]	1.6	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dinitrotoluene[2,4-]	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Dinitrotoluene[2,6-]	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Endosulfan I	0.000676	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Endosulfan II	0.000676	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Endosulfan sulfate	0.000676	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Endrin	0.000676	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Endrin aldehyde	0.000676	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Ethylbenzene	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Fluoranthene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Fluorene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Heptachlor	0.000676	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Heptachlor epoxide	0.000676	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Hexachlorobenzene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Hexachlorobutadiene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Hexachlorocyclopentadiene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Hexachloroethane	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Hexanone[2-]	0.02	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Indeno(1,2,3-cd)pyrene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Iodomethane	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Isophorone	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Isopropylbenzene	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Isopropyltoluene[4-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Methoxychlor[4,4'-]	0.000676	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Methyl-2-pentanone[4-]	0.02	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Methylene chloride	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Methylnaphthalene[2-]	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Methylphenol[2-]	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Methylphenol[4-]	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Naphthalene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Nitroaniline[2-]	1.6	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Nitroaniline[3-]	1.6	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Nitroaniline[4-]	0.61	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Nitrobenzene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Nitrophenol[2-]	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Nitrophenol[4-]	1.6	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Nitroso-di-n-propylamine[N-]	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Nitrosodimethylamine[N-]	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Nitrosodiphenylamine[N-]	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0325	312-333.6	Qbt 2	Oxybis(1-chloropropane)[2,2'-]	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Pentachlorophenol	1.6	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Phenanthrene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Phenol	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Propylbenzene[1-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Pyrene	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Styrene	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Tetrachloroethane[1,1,2,2-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Tetrachloroethene	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Toluene	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Toxaphene (technical grade)	0.0676	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Trichloro-1,2,2-trifluoroethane[1,1,2-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Trichlorobenzene[1,2,4-]	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Trichloroethane[1,1,1-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Trichloroethane[1,1,2-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Trichloroethene	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Trichlorofluoromethane	0.004	J
54-1024	0554-95-0325	312-333.6	Qbt 2	Trichlorophenol[2,4,5-]	1.6	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Trichlorophenol[2,4,6-]	0.33	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Trichloropropane[1,2,3-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Trimethylbenzene[1,2,4-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Trimethylbenzene[1,3,5-]	0.005	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Vinyl chloride	0.01	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Xylene (total)	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Acenaphthene	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Acenaphthylene	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Acetone	0.007	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Aldrin	0.000674	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Aniline	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Anthracene	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Aroclor-1016	0.0135	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Aroclor-1221	0.0135	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Aroclor-1232	0.0135	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Aroclor-1242	0.0135	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Aroclor-1248	0.0135	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Aroclor-1254	0.0135	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Aroclor-1260	0.0135	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Azobenzene	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Benzene	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Benzo(a)anthracene	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Benzo(a)pyrene	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Benzo(b)fluoranthene	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Benzo(g,h,i)perylene	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0327	432-453.6	Qbt 2	Benzo(k)fluoranthene	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Benzoic acid	3.3	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Benzyl alcohol	1.3	U
54-1024	0554-95-0327	432-453.6	Qbt 2	BHC[alpha-]	0.000674	U
54-1024	0554-95-0327	432-453.6	Qbt 2	BHC[beta-]	0.000674	U
54-1024	0554-95-0327	432-453.6	Qbt 2	BHC[delta-]	0.000674	U
54-1024	0554-95-0327	432-453.6	Qbt 2	BHC[gamma-]	0.000674	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Bis(2-chloroethoxy)methane	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Bis(2-chloroethyl)ether	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Bis(2-ethylhexyl)phthalate	0.06	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Bromobenzene	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Bromochloromethane	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Bromodichloromethane	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Bromoform	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Bromomethane	0.01	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Bromophenyl-phenylether[4-]	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Butanone[2-]	0.02	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Butylbenzene[n-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Butylbenzene[sec-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Butylbenzene[tert-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Butylbenzylphthalate	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Carbon disulfide	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Carbon tetrachloride	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Chlordane (technical grade)	0.00337	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Chlordane[alpha-]	0.000674	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Chlordane[gamma-]	0.000674	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Chloro-3-methylphenol[4-]	0.67	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Chloroaniline[4-]	1.3	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Chlorobenzene	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Chlorodibromomethane	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Chloroethane	0.01	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Chloroform	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Chloromethane	0.01	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Chloronaphthalene[2-]	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Chlorophenol[2-]	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Chlorophenyl-phenyl[4-] ether	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Chlorotoluene[2-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Chlorotoluene[4-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Chrysene	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	DDD[4,4'-]	0.000674	U
54-1024	0554-95-0327	432-453.6	Qbt 2	DDE[4,4'-]	0.000674	U
54-1024	0554-95-0327	432-453.6	Qbt 2	DDT[4,4'-]	0.000674	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Di-n-butylphthalate	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Di-n-octylphthalate	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0327	432-453.6	Qbt 2	Dibenz(a,h)anthracene	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dibenzofuran	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dibromo-3-chloropropane[1,2-]	0.01	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dibromoethane[1,2-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dibromomethane	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dichlorobenzene[1,2-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dichlorobenzene[1,3-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dichlorobenzene[1,4-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dichlorobenzidine[3,3'-]	0.67	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dichlorodifluoromethane	0.01	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dichloroethane[1,1-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dichloroethane[1,2-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dichloroethene[1,1-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dichloroethene[cis-1,2-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dichloroethene[trans-1,2-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dichlorophenol[2,4-]	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dichloropropane[1,2-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dichloropropane[1,3-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dichloropropane[2,2-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dichloropropene[1,1-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dichloropropene[cis-1,3-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dichloropropene[trans-1,3-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dieldrin	0.000674	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Diethylphthalate	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dimethyl phthalate	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dimethylphenol[2,4-]	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dinitro-2-methylphenol[4,6-]	1.6	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dinitrophenol[2,4-]	1.6	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dinitrotoluene[2,4-]	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Dinitrotoluene[2,6-]	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Endosulfan I	0.000674	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Endosulfan II	0.000674	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Endosulfan sulfate	0.000674	None
54-1024	0554-95-0327	432-453.6	Qbt 2	Endrin	0.000674	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Endrin aldehyde	0.000674	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Ethylbenzene	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Fluoranthene	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Fluorene	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Heptachlor	0.000674	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Heptachlor epoxide	0.000674	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Hexachlorobenzene	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Hexachlorobutadiene	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Hexachlorocyclopentadiene	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Hexachloroethane	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0327	432-453.6	Qbt 2	Hexanone[2-]	0.02	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Indeno(1,2,3-cd)pyrene	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Iodomethane	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Isophorone	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Isopropylbenzene	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Isopropyltoluene[4-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Methoxychlor[4,4'-]	0.000674	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Methyl-2-pentanone[4-]	0.02	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Methylene chloride	0.002	J
54-1024	0554-95-0327	432-453.6	Qbt 2	Methylnaphthalene[2-]	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Methylphenol[2-]	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Methylphenol[4-]	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Naphthalene	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Nitroaniline[2-]	1.6	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Nitroaniline[3-]	1.6	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Nitroaniline[4-]	0.61	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Nitrobenzene	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Nitrophenol[2-]	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Nitrophenol[4-]	1.6	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Nitroso-di-n-propylamine[N-]	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Nitrosodimethylamine[N-]	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Nitrosodiphenylamine[N-]	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Oxybis(1-chloropropane)[2,2'-]	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Pentachlorophenol	1.6	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Phenanthrene	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Phenol	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Propylbenzene[1-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Pyrene	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Styrene	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Tetrachloroethane[1,1,2,2-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Tetrachloroethene	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Toluene	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Toxaphene (technical grade)	0.0674	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Trichloro-1,2,2-trifluoroethane[1,1,2-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Trichlorobenzene[1,2,4-]	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Trichloroethane[1,1,1-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Trichloroethane[1,1,2-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Trichloroethene	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Trichlorofluoromethane	0.007	None
54-1024	0554-95-0327	432-453.6	Qbt 2	Trichlorophenol[2,4,5-]	1.6	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Trichlorophenol[2,4,6-]	0.33	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Trichloropropane[1,2,3-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Trimethylbenzene[1,2,4-]	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0327	432-453.6	Qbt 2	Trimethylbenzene[1,3,5-]	0.005	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Vinyl chloride	0.01	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Xylene (total)	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Acenaphthene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Acenaphthylene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Acetone	0.007	U
54-1024	0554-95-0329	612-630	Qbt 1v	Aldrin	0.000671	U
54-1024	0554-95-0329	612-630	Qbt 1v	Aniline	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Anthracene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Aroclor-1016	0.0134	U
54-1024	0554-95-0329	612-630	Qbt 1v	Aroclor-1221	0.0134	U
54-1024	0554-95-0329	612-630	Qbt 1v	Aroclor-1232	0.0134	U
54-1024	0554-95-0329	612-630	Qbt 1v	Aroclor-1242	0.0134	U
54-1024	0554-95-0329	612-630	Qbt 1v	Aroclor-1248	0.0134	U
54-1024	0554-95-0329	612-630	Qbt 1v	Aroclor-1254	0.0134	U
54-1024	0554-95-0329	612-630	Qbt 1v	Aroclor-1260	0.0134	U
54-1024	0554-95-0329	612-630	Qbt 1v	Azobenzene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Benzene	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Benzo(a)anthracene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Benzo(a)pyrene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Benzo(b)fluoranthene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Benzo(g,h,i)perylene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Benzo(k)fluoranthene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Benzoic acid	3.3	U
54-1024	0554-95-0329	612-630	Qbt 1v	Benzyl alcohol	1.3	U
54-1024	0554-95-0329	612-630	Qbt 1v	BHC[alpha-]	0.000671	U
54-1024	0554-95-0329	612-630	Qbt 1v	BHC[beta-]	0.000671	U
54-1024	0554-95-0329	612-630	Qbt 1v	BHC[delta-]	0.000671	U
54-1024	0554-95-0329	612-630	Qbt 1v	BHC[gamma-]	0.000671	U
54-1024	0554-95-0329	612-630	Qbt 1v	Bis(2-chloroethoxy)methane	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Bis(2-chloroethyl)ether	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.11	U
54-1024	0554-95-0329	612-630	Qbt 1v	Bromobenzene	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Bromochloromethane	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Bromodichloromethane	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Bromoform	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Bromomethane	0.01	U
54-1024	0554-95-0329	612-630	Qbt 1v	Bromophenyl-phenylether[4-]	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Butanone[2-]	0.02	U
54-1024	0554-95-0329	612-630	Qbt 1v	Butylbenzene[n-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Butylbenzene[sec-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Butylbenzene[tert-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Butylbenzylphthalate	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Carbon disulfide	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0329	612-630	Qbt 1v	Carbon tetrachloride	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Chlordane (technical grade)	0.00336	U
54-1024	0554-95-0329	612-630	Qbt 1v	Chlordane[alpha-]	0.000671	U
54-1024	0554-95-0329	612-630	Qbt 1v	Chlordane[gamma-]	0.000671	U
54-1024	0554-95-0329	612-630	Qbt 1v	Chloro-3-methylphenol[4-]	0.66	U
54-1024	0554-95-0329	612-630	Qbt 1v	Chloroaniline[4-]	1.3	U
54-1024	0554-95-0329	612-630	Qbt 1v	Chlorobenzene	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Chlorodibromomethane	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Chloroethane	0.01	U
54-1024	0554-95-0329	612-630	Qbt 1v	Chloroform	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Chloromethane	0.01	U
54-1024	0554-95-0329	612-630	Qbt 1v	Chloronaphthalene[2-]	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Chlorophenol[2-]	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Chlorotoluene[2-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Chlorotoluene[4-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Chrysene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	DDD[4,4'-]	0.000671	U
54-1024	0554-95-0329	612-630	Qbt 1v	DDE[4,4'-]	0.000671	U
54-1024	0554-95-0329	612-630	Qbt 1v	DDT[4,4'-]	0.000671	U
54-1024	0554-95-0329	612-630	Qbt 1v	Di-n-butylphthalate	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Di-n-octylphthalate	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dibenz(a,h)anthracene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dibenzofuran	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.01	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dibromoethane[1,2-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dibromomethane	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dichlorobenzene[1,2-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dichlorobenzene[1,3-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dichlorobenzene[1,4-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dichlorobenzidine[3,3'-]	0.66	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dichlorodifluoromethane	0.01	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dichloroethane[1,1-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dichloroethane[1,2-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dichloroethene[1,1-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dichloroethene[cis-1,2-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dichloroethene[trans-1,2-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dichlorophenol[2,4-]	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dichloropropane[1,2-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dichloropropane[1,3-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dichloropropane[2,2-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dichloropropene[1,1-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dichloropropene[cis-1,3-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dichloropropene[trans-1,3-]	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0329	612-630	Qbt 1v	Dieldrin	0.000671	U
54-1024	0554-95-0329	612-630	Qbt 1v	Diethylphthalate	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dimethyl phthalate	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dimethylphenol[2,4-]	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dinitro-2-methylphenol[4,6-]	1.6	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dinitrophenol[2,4-]	1.6	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dinitrotoluene[2,4-]	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Dinitrotoluene[2,6-]	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Endosulfan I	0.000671	U
54-1024	0554-95-0329	612-630	Qbt 1v	Endosulfan II	0.000671	U
54-1024	0554-95-0329	612-630	Qbt 1v	Endosulfan sulfate	0.000671	U
54-1024	0554-95-0329	612-630	Qbt 1v	Endrin	0.000671	U
54-1024	0554-95-0329	612-630	Qbt 1v	Endrin aldehyde	0.000671	U
54-1024	0554-95-0329	612-630	Qbt 1v	Ethylbenzene	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Fluoranthene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Fluorene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Heptachlor	0.000671	U
54-1024	0554-95-0329	612-630	Qbt 1v	Heptachlor epoxide	0.000671	U
54-1024	0554-95-0329	612-630	Qbt 1v	Hexachlorobenzene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Hexachlorobutadiene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Hexachlorocyclopentadiene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Hexachloroethane	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Hexanone[2-]	0.02	U
54-1024	0554-95-0329	612-630	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Iodomethane	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Isophorone	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Isopropylbenzene	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Isopropyltoluene[4-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Methoxychlor[4,4'-]	0.000671	U
54-1024	0554-95-0329	612-630	Qbt 1v	Methyl-2-pentanone[4-]	0.02	U
54-1024	0554-95-0329	612-630	Qbt 1v	Methylene chloride	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Methylnaphthalene[2-]	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Methylphenol[2-]	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Methylphenol[4-]	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Naphthalene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Nitroaniline[2-]	1.6	U
54-1024	0554-95-0329	612-630	Qbt 1v	Nitroaniline[3-]	1.6	U
54-1024	0554-95-0329	612-630	Qbt 1v	Nitroaniline[4-]	0.6	U
54-1024	0554-95-0329	612-630	Qbt 1v	Nitrobenzene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Nitrophenol[2-]	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Nitrophenol[4-]	1.6	U
54-1024	0554-95-0329	612-630	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Nitrosodimethylamine[N-]	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Nitrosodiphenylamine[N-]	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0329	612-630	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Pentachlorophenol	1.6	U
54-1024	0554-95-0329	612-630	Qbt 1v	Phenanthrene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Phenol	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Propylbenzene[1-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Pyrene	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Styrene	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Tetrachloroethene	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Toluene	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Toxaphene (technical grade)	0.0671	U
54-1024	0554-95-0329	612-630	Qbt 1v	Trichloro-1,2,2-trifluoroethane[1,1,2-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Trichlorobenzene[1,2,4-]	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Trichloroethane[1,1,1-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Trichloroethane[1,1,2-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Trichloroethene	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Trichlorofluoromethane	0.002	J
54-1024	0554-95-0329	612-630	Qbt 1v	Trichlorophenol[2,4,5-]	1.6	U
54-1024	0554-95-0329	612-630	Qbt 1v	Trichlorophenol[2,4,6-]	0.33	U
54-1024	0554-95-0329	612-630	Qbt 1v	Trichloropropane[1,2,3-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Trimethylbenzene[1,2,4-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Trimethylbenzene[1,3,5-]	0.005	U
54-1024	0554-95-0329	612-630	Qbt 1v	Vinyl chloride	0.01	U
54-1024	0554-95-0329	612-630	Qbt 1v	Xylene (total)	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Acenaphthene	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Acenaphthylene	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Acetone	0.016	U
54-1024	0554-95-0331	732-750	Qbt 1v	Aldrin	0.000671	U
54-1024	0554-95-0331	732-750	Qbt 1v	Aniline	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Anthracene	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Aroclor-1016	0.0134	U
54-1024	0554-95-0331	732-750	Qbt 1v	Aroclor-1221	0.0134	U
54-1024	0554-95-0331	732-750	Qbt 1v	Aroclor-1232	0.0134	U
54-1024	0554-95-0331	732-750	Qbt 1v	Aroclor-1242	0.0134	U
54-1024	0554-95-0331	732-750	Qbt 1v	Aroclor-1248	0.0134	U
54-1024	0554-95-0331	732-750	Qbt 1v	Aroclor-1254	0.0134	U
54-1024	0554-95-0331	732-750	Qbt 1v	Aroclor-1260	0.0134	U
54-1024	0554-95-0331	732-750	Qbt 1v	Azobenzene	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Benzene	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Benzo(a)anthracene	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Benzo(a)pyrene	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Benzo(b)fluoranthene	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Benzo(g,h,i)perylene	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0331	732-750	Qbt 1v	Benzo(k)fluoranthene	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Benzoic acid	3.3	U
54-1024	0554-95-0331	732-750	Qbt 1v	Benzyl alcohol	1.3	U
54-1024	0554-95-0331	732-750	Qbt 1v	BHC[alpha-]	0.000671	U
54-1024	0554-95-0331	732-750	Qbt 1v	BHC[beta-]	0.000671	U
54-1024	0554-95-0331	732-750	Qbt 1v	BHC[delta-]	0.000671	U
54-1024	0554-95-0331	732-750	Qbt 1v	BHC[gamma-]	0.000671	U
54-1024	0554-95-0331	732-750	Qbt 1v	Bis(2-chloroethoxy)methane	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Bis(2-chloroethyl)ether	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.084	U
54-1024	0554-95-0331	732-750	Qbt 1v	Bromobenzene	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Bromochloromethane	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Bromodichloromethane	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Bromoform	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Bromomethane	0.01	U
54-1024	0554-95-0331	732-750	Qbt 1v	Bromophenyl-phenylether[4-]	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Butanone[2-]	0.02	U
54-1024	0554-95-0331	732-750	Qbt 1v	Butylbenzene[n-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Butylbenzene[sec-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Butylbenzene[tert-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Butylbenzylphthalate	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Carbon disulfide	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Carbon tetrachloride	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Chlordane (technical grade)	0.00336	U
54-1024	0554-95-0331	732-750	Qbt 1v	Chlordane[alpha-]	0.000671	U
54-1024	0554-95-0331	732-750	Qbt 1v	Chlordane[gamma-]	0.000671	U
54-1024	0554-95-0331	732-750	Qbt 1v	Chloro-3-methylphenol[4-]	0.66	U
54-1024	0554-95-0331	732-750	Qbt 1v	Chloroaniline[4-]	1.3	U
54-1024	0554-95-0331	732-750	Qbt 1v	Chlorobenzene	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Chlorodibromomethane	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Chloroethane	0.01	U
54-1024	0554-95-0331	732-750	Qbt 1v	Chloroform	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Chloromethane	0.01	U
54-1024	0554-95-0331	732-750	Qbt 1v	Chloronaphthalene[2-]	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Chlorophenol[2-]	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Chlorotoluene[2-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Chlorotoluene[4-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Chrysene	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	DDD[4,4'-]	0.000671	U
54-1024	0554-95-0331	732-750	Qbt 1v	DDE[4,4'-]	0.000671	U
54-1024	0554-95-0331	732-750	Qbt 1v	DDT[4,4'-]	0.000671	U
54-1024	0554-95-0331	732-750	Qbt 1v	Di-n-butylphthalate	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Di-n-octylphthalate	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0331	732-750	Qbt 1v	Dibenz(a,h)anthracene	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dibenzofuran	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.01	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dibromoethane[1,2-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dibromomethane	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dichlorobenzene[1,2-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dichlorobenzene[1,3-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dichlorobenzene[1,4-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dichlorobenzidine[3,3'-]	0.66	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dichlorodifluoromethane	0.01	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dichloroethane[1,1-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dichloroethane[1,2-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dichloroethene[1,1-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dichloroethene[cis-1,2-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dichloroethene[trans-1,2-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dichlorophenol[2,4-]	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dichloropropane[1,2-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dichloropropane[1,3-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dichloropropane[2,2-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dichloropropene[1,1-]	0.02	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dichloropropene[cis-1,3-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dichloropropene[trans-1,3-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dieldrin	0.000671	U
54-1024	0554-95-0331	732-750	Qbt 1v	Diethylphthalate	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dimethyl phthalate	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dimethylphenol[2,4-]	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dinitro-2-methylphenol[4,6-]	1.6	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dinitrophenol[2,4-]	1.6	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dinitrotoluene[2,4-]	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Dinitrotoluene[2,6-]	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Endosulfan I	0.000671	U
54-1024	0554-95-0331	732-750	Qbt 1v	Endosulfan II	0.000671	U
54-1024	0554-95-0331	732-750	Qbt 1v	Endosulfan sulfate	0.000671	U
54-1024	0554-95-0331	732-750	Qbt 1v	Endrin	0.000671	U
54-1024	0554-95-0331	732-750	Qbt 1v	Endrin aldehyde	0.000671	U
54-1024	0554-95-0331	732-750	Qbt 1v	Ethylbenzene	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Fluoranthene	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Fluorene	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Heptachlor	0.000671	U
54-1024	0554-95-0331	732-750	Qbt 1v	Heptachlor epoxide	0.000671	U
54-1024	0554-95-0331	732-750	Qbt 1v	Hexachlorobenzene	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Hexachlorobutadiene	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Hexachlorocyclopentadiene	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Hexachloroethane	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0331	732-750	Qbt 1v	Hexanone[2-]	0.02	U
54-1024	0554-95-0331	732-750	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Iodomethane	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Isophorone	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Isopropylbenzene	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Isopropyltoluene[4-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Methoxychlor[4,4'-]	0.000671	U
54-1024	0554-95-0331	732-750	Qbt 1v	Methyl-2-pentanone[4-]	0.02	U
54-1024	0554-95-0331	732-750	Qbt 1v	Methylene chloride	0.002	J
54-1024	0554-95-0331	732-750	Qbt 1v	Methylnaphthalene[2-]	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Methylphenol[2-]	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Methylphenol[4-]	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Naphthalene	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Nitroaniline[2-]	1.6	U
54-1024	0554-95-0331	732-750	Qbt 1v	Nitroaniline[3-]	1.6	U
54-1024	0554-95-0331	732-750	Qbt 1v	Nitroaniline[4-]	0.6	U
54-1024	0554-95-0331	732-750	Qbt 1v	Nitrobenzene	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Nitrophenol[2-]	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Nitrophenol[4-]	1.6	U
54-1024	0554-95-0331	732-750	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Nitrosodimethylamine[N-]	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Nitrosodiphenylamine[N-]	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Pentachlorophenol	1.6	U
54-1024	0554-95-0331	732-750	Qbt 1v	Phenanthrene	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Phenol	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Propylbenzene[1-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Pyrene	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Styrene	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Tetrachloroethene	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Toluene	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Toxaphene (technical grade)	0.0671	U
54-1024	0554-95-0331	732-750	Qbt 1v	Trichloro-1,2,2-trifluoroethane[1,1,2-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Trichlorobenzene[1,2,4-]	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Trichloroethane[1,1,1-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Trichloroethane[1,1,2-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Trichloroethene	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Trichlorofluoromethane	0.006	None
54-1024	0554-95-0331	732-750	Qbt 1v	Trichlorophenol[2,4,5-]	1.6	U
54-1024	0554-95-0331	732-750	Qbt 1v	Trichlorophenol[2,4,6-]	0.33	U
54-1024	0554-95-0331	732-750	Qbt 1v	Trichloropropane[1,2,3-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Trimethylbenzene[1,2,4-]	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0331	732-750	Qbt 1v	Trimethylbenzene[1,3,5-]	0.005	U
54-1024	0554-95-0331	732-750	Qbt 1v	Vinyl chloride	0.01	U
54-1024	0554-95-0331	732-750	Qbt 1v	Xylene (total)	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Acenaphthene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Acenaphthylene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Acetone	0.015	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Aldrin	0.000678	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Aniline	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Anthracene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Aroclor-1016	0.0136	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Aroclor-1221	0.0136	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Aroclor-1232	0.0136	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Aroclor-1242	0.0136	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Aroclor-1248	0.0136	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Aroclor-1254	0.0136	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Aroclor-1260	0.0136	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Azobenzene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Benzene	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Benzo(a)anthracene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Benzo(a)pyrene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Benzo(b)fluoranthene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Benzo(g,h,i)perylene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Benzo(k)fluoranthene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Benzoic acid	3.4	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Benzyl alcohol	1.3	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	BHC[alpha-]	0.000678	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	BHC[beta-]	0.000678	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	BHC[delta-]	0.000678	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	BHC[gamma-]	0.000678	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Bis(2-chloroethoxy)methane	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Bis(2-chloroethyl)ether	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.038	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Bromobenzene	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Bromochloromethane	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Bromodichloromethane	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Bromoform	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Bromomethane	0.01	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Bromophenyl-phenylether[4-]	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Butanone[2-]	0.02	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Butylbenzene[n-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Butylbenzene[sec-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Butylbenzene[tert-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Butylbenzylphthalate	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Carbon disulfide	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0333	852-873.6	Qbt 1v	Carbon tetrachloride	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Chlordane (technical grade)	0.00339	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Chlordane[alpha-]	0.000678	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Chlordane[gamma-]	0.000678	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Chloro-3-methylphenol[4-]	0.67	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Chloroaniline[4-]	1.3	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Chlorobenzene	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Chlorodibromomethane	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Chloroethane	0.01	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Chloroform	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Chloromethane	0.01	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Chloronaphthalene[2-]	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Chlorophenol[2-]	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Chlorotoluene[2-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Chlorotoluene[4-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Chrysene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	DDD[4,4'-]	0.000678	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	DDE[4,4'-]	0.000678	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	DDT[4,4'-]	0.000678	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Di-n-butylphthalate	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Di-n-octylphthalate	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dibenz(a,h)anthracene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dibenzofuran	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.01	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dibromoethane[1,2-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dibromomethane	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dichlorobenzene[1,2-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dichlorobenzene[1,3-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dichlorobenzene[1,4-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dichlorobenzidine[3,3'-]	0.67	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dichlorodifluoromethane	0.01	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dichloroethane[1,1-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dichloroethane[1,2-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dichloroethene[1,1-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dichloroethene[cis-1,2-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dichloroethene[trans-1,2-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dichlorophenol[2,4-]	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dichloropropane[1,2-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dichloropropane[1,3-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dichloropropane[2,2-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dichloropropene[1,1-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dichloropropene[cis-1,3-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dichloropropene[trans-1,3-]	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dieldrin	0.000678	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Diethyl phthalate	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dimethyl phthalate	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dimethylphenol[2,4-]	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dinitro-2-methylphenol[4,6-]	1.6	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dinitrophenol[2,4-]	1.6	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dinitrotoluene[2,4-]	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Dinitrotoluene[2,6-]	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Endosulfan I	0.000678	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Endosulfan II	0.000678	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Endosulfan sulfate	0.000678	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Endrin	0.000678	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Endrin aldehyde	0.000678	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Ethylbenzene	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Fluoranthene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Fluorene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Heptachlor	0.000678	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Heptachlor epoxide	0.000678	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Hexachlorobenzene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Hexachlorobutadiene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Hexachlorocyclopentadiene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Hexachloroethane	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Hexanone[2-]	0.02	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Iodomethane	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Isophorone	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Isopropylbenzene	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Isopropyltoluene[4-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Methoxychlor[4,4'-]	0.000678	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Methyl-2-pentanone[4-]	0.02	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Methylene chloride	0.002	J
54-1024	0554-95-0333	852-873.6	Qbt 1v	Methylnaphthalene[2-]	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Methylphenol[2-]	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Methylphenol[4-]	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Naphthalene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Nitroaniline[2-]	1.6	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Nitroaniline[3-]	1.6	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Nitroaniline[4-]	0.61	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Nitrobenzene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Nitrophenol[2-]	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Nitrophenol[4-]	1.6	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Nitrosodimethylamine[N-]	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Nitrosodiphenylamine[N-]	0.34	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0333	852-873.6	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Pentachlorophenol	1.6	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Phenanthrene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Phenol	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Propylbenzene[1-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Pyrene	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Styrene	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Tetrachloroethene	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Toluene	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Toxaphene (technical grade)	0.0678	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Trichloro-1,2,2-trifluoroethane[1,1,2-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Trichlorobenzene[1,2,4-]	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Trichloroethane[1,1,1-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Trichloroethane[1,1,2-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Trichloroethene	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Trichlorofluoromethane	0.006	None
54-1024	0554-95-0333	852-873.6	Qbt 1v	Trichlorophenol[2,4,5-]	1.6	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Trichlorophenol[2,4,6-]	0.34	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Trichloropropane[1,2,3-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Trimethylbenzene[1,2,4-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Trimethylbenzene[1,3,5-]	0.005	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Vinyl chloride	0.01	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Xylene (total)	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Acenaphthene	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Acenaphthylene	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Acetone	0.006	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Aldrin	0.000674	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Aniline	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Anthracene	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Aroclor-1016	0.0135	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Aroclor-1221	0.0135	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Aroclor-1232	0.0135	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Aroclor-1242	0.0135	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Aroclor-1248	0.0135	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Aroclor-1254	0.0135	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Aroclor-1260	0.0135	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Azobenzene	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Benzene	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Benzo(a)anthracene	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Benzo(a)pyrene	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Benzo(b)fluoranthene	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Benzo(g,h,i)perylene	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Benzo(k)fluoranthene	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Benzoic acid	3.3	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Benzyl alcohol	1.3	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	BHC[alpha-]	0.000674	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	BHC[beta-]	0.000674	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	BHC[delta-]	0.000674	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	BHC[gamma-]	0.000674	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Bis(2-chloroethoxy)methane	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Bis(2-chloroethyl)ether	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.13	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Bromobenzene	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Bromochloromethane	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Bromodichloromethane	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Bromoform	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Bromomethane	0.01	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Bromophenyl-phenylether[4-]	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Butanone[2-]	0.02	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Butylbenzene[n-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Butylbenzene[sec-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Butylbenzene[tert-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Butylbenzylphthalate	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Carbon disulfide	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Carbon tetrachloride	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Chlordane (technical grade)	0.00337	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Chlordane[alpha-]	0.000674	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Chlordane[gamma-]	0.000674	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Chloro-3-methylphenol[4-]	0.67	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Chloroaniline[4-]	1.3	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Chlorobenzene	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Chlorodibromomethane	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Chloroethane	0.01	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Chloroform	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Chloromethane	0.01	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Chloronaphthalene[2-]	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Chlorophenol[2-]	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Chlorotoluene[2-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Chlorotoluene[4-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Chrysene	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	DDD[4,4'-]	0.000674	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	DDE[4,4'-]	0.000674	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	DDT[4,4'-]	0.000674	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Di-n-butylphthalate	0.046	J
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Di-n-octylphthalate	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dibenz(a,h)anthracene	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dibenzofuran	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.01	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dibromoethane[1,2-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dibromomethane	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dichlorobenzene[1,2-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dichlorobenzene[1,3-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dichlorobenzene[1,4-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dichlorobenzidine[3,3'-]	0.67	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dichlorodifluoromethane	0.01	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dichloroethane[1,1-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dichloroethane[1,2-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dichloroethene[1,1-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dichloroethene[cis-1,2-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dichloroethene[trans-1,2-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dichlorophenol[2,4-]	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dichloropropane[1,2-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dichloropropane[1,3-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dichloropropane[2,2-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dichloropropene[1,1-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dichloropropene[cis-1,3-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dichloropropene[trans-1,3-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dieldrin	0.000674	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Diethylphthalate	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dimethyl phthalate	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dimethylphenol[2,4-]	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dinitro-2-methylphenol[4,6-]	1.6	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dinitrophenol[2,4-]	1.6	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dinitrotoluene[2,4-]	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Dinitrotoluene[2,6-]	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Endosulfan I	0.000674	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Endosulfan II	0.000674	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Endosulfan sulfate	0.000674	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Endrin	0.000674	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Endrin aldehyde	0.000674	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Ethylbenzene	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Fluoranthene	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Fluorene	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Heptachlor	0.000674	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Heptachlor epoxide	0.000674	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Hexachlorobenzene	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Hexachlorobutadiene	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Hexachlorocyclopentadiene	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Hexachloroethane	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Hexanone[2-]	0.02	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Iodomethane	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Isophorone	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Isopropylbenzene	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Isopropyltoluene[4-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Methoxychlor[4,4'-]	0.000674	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Methyl-2-pentanone[4-]	0.02	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Methylene chloride	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Methylnaphthalene[2-]	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Methylphenol[2-]	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Methylphenol[4-]	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Naphthalene	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Nitroaniline[2-]	1.6	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Nitroaniline[3-]	1.6	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Nitroaniline[4-]	0.61	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Nitrobenzene	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Nitrophenol[2-]	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Nitrophenol[4-]	1.6	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Nitrosodimethylamine[N-]	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Nitrosodiphenylamine[N-]	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Pentachlorophenol	1.6	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Phenanthrene	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Phenol	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Propylbenzene[1-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Pyrene	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Styrene	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Tetrachloroethene	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Toluene	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Toxaphene (technical grade)	0.0674	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Trichloro-1,2,2-trifluoroethane[1,1,2-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Trichlorobenzene[1,2,4-]	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Trichloroethane[1,1,1-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Trichloroethane[1,1,2-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Trichloroethene	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Trichlorofluoromethane	0.007	None
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Trichlorophenol[2,4,5-]	1.6	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Trichlorophenol[2,4,6-]	0.33	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Trichloropropane[1,2,3-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Trimethylbenzene[1,2,4-]	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Trimethylbenzene[1,3,5-]	0.005	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Vinyl chloride	0.01	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Xylene (total)	0.005	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Acenaphthene	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Acenaphthylene	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Acetone	0.01	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Aldrin	0.0017	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Aniline	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Anthracene	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Aroclor-1016	0.034	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Aroclor-1221	0.068	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Aroclor-1232	0.034	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Aroclor-1242	0.034	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Aroclor-1248	0.034	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Aroclor-1254	0.034	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Aroclor-1260	0.034	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Azobenzene	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Benzene	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Benzidine	0.69	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Benzo(a)anthracene	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Benzo(a)pyrene	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Benzo(b)fluoranthene	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Benzo(g,h,i)perylene	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Benzo(k)fluoranthene	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Benzoic acid	3.4	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Benzyl alcohol	1.4	U
54-1025	0554-95-0339	108-110.4	Qbt 2	BHC[alpha-]	0.0017	U
54-1025	0554-95-0339	108-110.4	Qbt 2	BHC[beta-]	0.0017	U
54-1025	0554-95-0339	108-110.4	Qbt 2	BHC[delta-]	0.0017	U
54-1025	0554-95-0339	108-110.4	Qbt 2	BHC[gamma-]	0.0017	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Bis(2-chloroethoxy)methane	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Bis(2-chloroethyl)ether	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Bis(2-ethylhexyl)phthalate	0.083	J
54-1025	0554-95-0339	108-110.4	Qbt 2	Bromobenzene	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Bromochloromethane	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Bromodichloromethane	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Bromoform	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Bromomethane	0.01	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Bromophenyl-phenylether[4-]	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Butanone[2-]	0.021	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Butylbenzene[n-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Butylbenzene[sec-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Butylbenzene[tert-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Butylbenzylphthalate	0.34	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0339	108-110.4	Qbt 2	Carbazole	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Carbon disulfide	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Carbon tetrachloride	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Chlordane[alpha-]	0.0017	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Chlordane[gamma-]	0.0017	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Chloro-3-methylphenol[4-]	0.69	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Chloroaniline[4-]	1.4	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Chlorobenzene	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Chlorodibromomethane	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Chloroethane	0.01	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Chloroform	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Chloromethane	0.01	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Chloronaphthalene[2-]	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Chlorophenol[2-]	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Chlorophenyl-phenyl[4-] ether	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Chlorotoluene[2-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Chlorotoluene[4-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Chrysene	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	DDD[4,4'-]	0.0034	U
54-1025	0554-95-0339	108-110.4	Qbt 2	DDE[4,4'-]	0.0034	U
54-1025	0554-95-0339	108-110.4	Qbt 2	DDT[4,4'-]	0.0034	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Di-n-butylphthalate	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Di-n-octylphthalate	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dibenz(a,h)anthracene	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dibenzofuran	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dibromo-3-chloropropane[1,2-]	0.01	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dibromoethane[1,2-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dibromomethane	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dichlorobenzene[1,2-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dichlorobenzene[1,3-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dichlorobenzene[1,4-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dichlorobenzidine[3,3'-]	0.69	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dichlorodifluoromethane	0.01	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dichloroethane[1,1-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dichloroethane[1,2-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dichloroethene[1,1-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dichloroethene[cis-1,2-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dichloroethene[trans-1,2-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dichlorophenol[2,4-]	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dichloropropane[1,2-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dichloropropane[1,3-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dichloropropane[2,2-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dichloropropene[1,1-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dichloropropene[cis-1,3-]	0.0052	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0339	108-110.4	Qbt 2	Dichloropropene[trans-1,3-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dieldrin	0.0034	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Diethylphthalate	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dimethyl phthalate	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dimethylphenol[2,4-]	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dinitro-2-methylphenol[4,6-]	1.7	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dinitrophenol[2,4-]	1.7	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dinitrotoluene[2,4-]	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Dinitrotoluene[2,6-]	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Endosulfan I	0.0017	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Endosulfan II	0.0034	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Endosulfan sulfate	0.0034	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Endrin	0.0034	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Endrin aldehyde	0.0034	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Ethylbenzene	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Fluoranthene	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Fluorene	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Heptachlor	0.0017	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Heptachlor epoxide	0.0017	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Hexachlorobenzene	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Hexachlorobutadiene	0.005	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Hexachlorocyclopentadiene	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Hexachloroethane	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Hexanone[2-]	0.021	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Indeno(1,2,3-cd)pyrene	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Iodomethane	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Isophorone	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Isopropylbenzene	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Isopropyltoluene[4-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Methoxychlor[4,4'-]	0.017	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Methyl-2-pentanone[4-]	0.021	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Methylene chloride	0.004	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Methylnaphthalene[2-]	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Methylphenol[2-]	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Methylphenol[4-]	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Naphthalene	0.005	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Nitroaniline[2-]	1.7	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Nitroaniline[3-]	1.7	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Nitroaniline[4-]	0.62	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Nitrobenzene	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Nitrophenol[2-]	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Nitrophenol[4-]	1.7	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Nitroso-di-n-propylamine[N-]	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Nitrosodimethylamine[N-]	0.34	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0339	108-110.4	Qbt 2	Nitrosodiphenylamine[N-]	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Oxybis(1-chloropropane)[2,2'-]	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Pentachlorophenol	1.7	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Phenanthrene	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Phenol	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Propylbenzene[1-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Pyrene	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Pyridine	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Styrene	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Tetrachloroethane[1,1,1,2-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Tetrachloroethane[1,1,2,2-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Tetrachloroethene	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Toluene	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Toxaphene (technical grade)	0.17	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Trichloro-1,2,2-trifluoroethane[1,1,2-]	0.005	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Trichlorobenzene[1,2,3-]	0.005	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Trichlorobenzene[1,2,4-]	0.005	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Trichloroethane[1,1,1-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Trichloroethane[1,1,2-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Trichloroethene	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Trichlorofluoromethane	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Trichlorophenol[2,4,5-]	1.7	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Trichlorophenol[2,4,6-]	0.34	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Trichloropropane[1,2,3-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Trimethylbenzene[1,2,4-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Trimethylbenzene[1,3,5-]	0.0052	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Vinyl chloride	0.01	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Xylene (total)	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Acenaphthene	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Acenaphthylene	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Acetone	0.021	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Aldrin	0.0017	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Aniline	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Anthracene	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Aroclor-1016	0.034	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Aroclor-1221	0.068	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Aroclor-1232	0.034	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Aroclor-1242	0.034	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Aroclor-1248	0.034	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Aroclor-1254	0.034	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Aroclor-1260	0.034	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Azobenzene	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Benzene	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Benzidine	0.69	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0341	204-225.6	Qbt 2	Benzo(a)anthracene	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Benzo(a)pyrene	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Benzo(b)fluoranthene	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Benzo(g,h,i)perylene	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Benzo(k)fluoranthene	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Benzoic acid	3.4	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Benzyl alcohol	1.4	U
54-1025	0554-95-0341	204-225.6	Qbt 2	BHC[alpha-]	0.0017	U
54-1025	0554-95-0341	204-225.6	Qbt 2	BHC[beta-]	0.0017	U
54-1025	0554-95-0341	204-225.6	Qbt 2	BHC[delta-]	0.0017	U
54-1025	0554-95-0341	204-225.6	Qbt 2	BHC[gamma-]	0.0017	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Bis(2-chloroethoxy)methane	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Bis(2-chloroethyl)ether	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Bis(2-ethylhexyl)phthalate	3.8	None
54-1025	0554-95-0341	204-225.6	Qbt 2	Bromobenzene	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Bromochloromethane	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Bromodichloromethane	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Bromoform	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Bromomethane	0.01	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Bromophenyl-phenylether[4-]	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Butanone[2-]	0.021	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Butylbenzene[n-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Butylbenzene[sec-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Butylbenzene[tert-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Butylbenzylphthalate	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Carbazole	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Carbon disulfide	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Carbon tetrachloride	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Chlordane[alpha-]	0.0017	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Chlordane[gamma-]	0.0017	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Chloro-3-methylphenol[4-]	0.69	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Chloroaniline[4-]	1.4	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Chlorobenzene	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Chlorodibromomethane	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Chloroethane	0.01	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Chloroform	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Chloromethane	0.01	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Chloronaphthalene[2-]	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Chlorophenol[2-]	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Chlorophenyl-phenyl[4-] ether	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Chlorotoluene[2-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Chlorotoluene[4-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Chrysene	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	DDD[4,4'-]	0.0034	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0341	204-225.6	Qbt 2	DDE[4,4'-]	0.0034	U
54-1025	0554-95-0341	204-225.6	Qbt 2	DDT[4,4'-]	0.0034	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Di-n-butylphthalate	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Di-n-octylphthalate	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dibenz(a,h)anthracene	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dibenzofuran	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dibromo-3-chloropropane[1,2-]	0.01	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dibromoethane[1,2-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dibromomethane	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dichlorobenzene[1,2-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dichlorobenzene[1,3-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dichlorobenzene[1,4-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dichlorobenzidine[3,3'-]	0.69	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dichlorodifluoromethane	0.01	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dichloroethane[1,1-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dichloroethane[1,2-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dichloroethene[1,1-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dichloroethene[cis-1,2-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dichloroethene[trans-1,2-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dichlorophenol[2,4-]	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dichloropropane[1,2-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dichloropropane[1,3-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dichloropropane[2,2-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dichloropropene[1,1-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dichloropropene[cis-1,3-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dichloropropene[trans-1,3-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dieldrin	0.0034	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Diethylphthalate	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dimethyl phthalate	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dimethylphenol[2,4-]	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dinitro-2-methylphenol[4,6-]	1.7	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dinitrophenol[2,4-]	1.7	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dinitrotoluene[2,4-]	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Dinitrotoluene[2,6-]	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Endosulfan I	0.0017	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Endosulfan II	0.0034	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Endosulfan sulfate	0.0034	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Endrin	0.0034	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Endrin aldehyde	0.0034	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Ethylbenzene	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Fluoranthene	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Fluorene	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Heptachlor	0.0017	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Heptachlor epoxide	0.0017	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0341	204-225.6	Qbt 2	Hexachlorobenzene	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Hexachlorobutadiene	0.005	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Hexachlorocyclopentadiene	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Hexachloroethane	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Hexanone[2-]	0.021	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Indeno(1,2,3-cd)pyrene	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Iodomethane	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Isophorone	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Isopropylbenzene	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Isopropyltoluene[4-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Methoxychlor[4,4'-]	0.017	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Methyl-2-pentanone[4-]	0.021	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Methylene chloride	0.0069	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Methylnaphthalene[2-]	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Methylphenol[2-]	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Methylphenol[4-]	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Naphthalene	0.005	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Nitroaniline[2-]	1.7	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Nitroaniline[3-]	1.7	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Nitroaniline[4-]	0.62	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Nitrobenzene	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Nitrophenol[2-]	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Nitrophenol[4-]	1.7	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Nitroso-di-n-propylamine[N-]	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Nitrosodimethylamine[N-]	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Nitrosodiphenylamine[N-]	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Oxybis(1-chloropropane)[2,2'-]	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Pentachlorophenol	1.7	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Phenanthrene	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Phenol	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Propylbenzene[1-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Pyrene	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Pyridine	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Styrene	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Tetrachloroethane[1,1,1,2-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Tetrachloroethane[1,1,2,2-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Tetrachloroethene	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Toluene	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Toxaphene (technical grade)	0.17	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Trichloro-1,2,2-trifluoroethane[1,1,2-]	0.005	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Trichlorobenzene[1,2,3-]	0.005	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Trichlorobenzene[1,2,4-]	0.005	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Trichloroethane[1,1,1-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Trichloroethane[1,1,2-]	0.0052	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0341	204-225.6	Qbt 2	Trichloroethene	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Trichlorofluoromethane	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Trichlorophenol[2,4,5-]	1.7	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Trichlorophenol[2,4,6-]	0.34	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Trichloropropane[1,2,3-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Trimethylbenzene[1,2,4-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Trimethylbenzene[1,3,5-]	0.0052	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Vinyl chloride	0.01	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Xylene (total)	0.0052	U
54-1025	0554-95-0343	336-354	Qbt 2	Acenaphthene	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Acenaphthylene	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Acetone	0.0058	U
54-1025	0554-95-0343	336-354	Qbt 2	Aldrin	0.0017	U
54-1025	0554-95-0343	336-354	Qbt 2	Aniline	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Anthracene	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Aroclor-1016	0.034	U
54-1025	0554-95-0343	336-354	Qbt 2	Aroclor-1221	0.067	U
54-1025	0554-95-0343	336-354	Qbt 2	Aroclor-1232	0.034	U
54-1025	0554-95-0343	336-354	Qbt 2	Aroclor-1242	0.034	U
54-1025	0554-95-0343	336-354	Qbt 2	Aroclor-1248	0.034	U
54-1025	0554-95-0343	336-354	Qbt 2	Aroclor-1254	0.034	U
54-1025	0554-95-0343	336-354	Qbt 2	Aroclor-1260	0.034	U
54-1025	0554-95-0343	336-354	Qbt 2	Azobenzene	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Benzene	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Benidine	0.68	U
54-1025	0554-95-0343	336-354	Qbt 2	Benzo(a)anthracene	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Benzo(a)pyrene	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Benzo(b)fluoranthene	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Benzo(g,h,i)perylene	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Benzo(k)fluoranthene	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Benzoic acid	3.4	U
54-1025	0554-95-0343	336-354	Qbt 2	Benzyl alcohol	1.4	U
54-1025	0554-95-0343	336-354	Qbt 2	BHC[alpha-]	0.0017	U
54-1025	0554-95-0343	336-354	Qbt 2	BHC[beta-]	0.0017	U
54-1025	0554-95-0343	336-354	Qbt 2	BHC[delta-]	0.0017	U
54-1025	0554-95-0343	336-354	Qbt 2	BHC[gamma-]	0.0017	U
54-1025	0554-95-0343	336-354	Qbt 2	Bis(2-chloroethoxy)methane	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Bis(2-chloroethyl)ether	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Bis(2-ethylhexyl)phthalate	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Bromobenzene	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Bromochloromethane	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Bromodichloromethane	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Bromoform	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Bromomethane	0.01	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0343	336-354	Qbt 2	Bromophenyl-phenylether[4-]	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Butanone[2-]	0.02	U
54-1025	0554-95-0343	336-354	Qbt 2	Butylbenzene[n-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Butylbenzene[sec-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Butylbenzene[tert-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Butylbenzylphthalate	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Carbazole	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Carbon disulfide	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Carbon tetrachloride	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Chlordane[alpha-]	0.0017	U
54-1025	0554-95-0343	336-354	Qbt 2	Chlordane[gamma-]	0.0017	U
54-1025	0554-95-0343	336-354	Qbt 2	Chloro-3-methylphenol[4-]	0.68	U
54-1025	0554-95-0343	336-354	Qbt 2	Chloroaniline[4-]	1.4	U
54-1025	0554-95-0343	336-354	Qbt 2	Chlorobenzene	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Chlorodibromomethane	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Chloroethane	0.01	U
54-1025	0554-95-0343	336-354	Qbt 2	Chloroform	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Chloromethane	0.01	U
54-1025	0554-95-0343	336-354	Qbt 2	Chloronaphthalene[2-]	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Chlorophenol[2-]	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Chlorophenyl-phenyl[4-] ether	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Chlorotoluene[2-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Chlorotoluene[4-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Chrysene	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	DDD[4,4'-]	0.0034	U
54-1025	0554-95-0343	336-354	Qbt 2	DDE[4,4'-]	0.0034	U
54-1025	0554-95-0343	336-354	Qbt 2	DDT[4,4'-]	0.0034	U
54-1025	0554-95-0343	336-354	Qbt 2	Di-n-butylphthalate	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Di-n-octylphthalate	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Dibenz(a,h)anthracene	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Dibenzofuran	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Dibromo-3-chloropropane[1,2-]	0.01	U
54-1025	0554-95-0343	336-354	Qbt 2	Dibromoethane[1,2-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Dibromomethane	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Dichlorobenzene[1,2-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Dichlorobenzene[1,3-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Dichlorobenzene[1,4-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Dichlorobenzidine[3,3'-]	0.68	U
54-1025	0554-95-0343	336-354	Qbt 2	Dichlorodifluoromethane	0.01	U
54-1025	0554-95-0343	336-354	Qbt 2	Dichloroethane[1,1-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Dichloroethane[1,2-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Dichloroethene[1,1-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Dichloroethene[cis-1,2-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Dichloroethene[trans-1,2-]	0.0051	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0343	336-354	Qbt 2	Dichlorophenol[2,4-]	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Dichloropropane[1,2-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Dichloropropane[1,3-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Dichloropropane[2,2-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Dichloropropene[1,1-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Dichloropropene[cis-1,3-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Dichloropropene[trans-1,3-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Dieldrin	0.0034	U
54-1025	0554-95-0343	336-354	Qbt 2	Diethylphthalate	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Dimethyl phthalate	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Dimethylphenol[2,4-]	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Dinitro-2-methylphenol[4,6-]	1.7	U
54-1025	0554-95-0343	336-354	Qbt 2	Dinitrophenol[2,4-]	1.7	U
54-1025	0554-95-0343	336-354	Qbt 2	Dinitrotoluene[2,4-]	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Dinitrotoluene[2,6-]	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Endosulfan I	0.0017	U
54-1025	0554-95-0343	336-354	Qbt 2	Endosulfan II	0.0034	U
54-1025	0554-95-0343	336-354	Qbt 2	Endosulfan sulfate	0.0034	U
54-1025	0554-95-0343	336-354	Qbt 2	Endrin	0.0034	U
54-1025	0554-95-0343	336-354	Qbt 2	Endrin aldehyde	0.0034	U
54-1025	0554-95-0343	336-354	Qbt 2	Ethylbenzene	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Fluoranthene	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Fluorene	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Heptachlor	0.0017	U
54-1025	0554-95-0343	336-354	Qbt 2	Heptachlor epoxide	0.0017	U
54-1025	0554-95-0343	336-354	Qbt 2	Hexachlorobenzene	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Hexachlorobutadiene	0.005	U
54-1025	0554-95-0343	336-354	Qbt 2	Hexachlorocyclopentadiene	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Hexachloroethane	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Hexanone[2-]	0.02	U
54-1025	0554-95-0343	336-354	Qbt 2	Indeno(1,2,3-cd)pyrene	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Iodomethane	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Isophorone	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Isopropylbenzene	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Isopropyltoluene[4-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Methoxychlor[4,4'-]	0.017	U
54-1025	0554-95-0343	336-354	Qbt 2	Methyl-2-pentanone[4-]	0.02	U
54-1025	0554-95-0343	336-354	Qbt 2	Methylene chloride	0.0062	U
54-1025	0554-95-0343	336-354	Qbt 2	Methylnaphthalene[2-]	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Methylphenol[2-]	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Methylphenol[4-]	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Naphthalene	0.005	U
54-1025	0554-95-0343	336-354	Qbt 2	Nitroaniline[2-]	1.7	U
54-1025	0554-95-0343	336-354	Qbt 2	Nitroaniline[3-]	1.7	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0343	336-354	Qbt 2	Nitroaniline[4-]	0.61	U
54-1025	0554-95-0343	336-354	Qbt 2	Nitrobenzene	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Nitrophenol[2-]	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Nitrophenol[4-]	1.7	U
54-1025	0554-95-0343	336-354	Qbt 2	Nitroso-di-n-propylamine[N-]	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Nitrosodimethylamine[N-]	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Nitrosodiphenylamine[N-]	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Oxybis(1-chloropropane)[2,2'-]	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Pentachlorophenol	1.7	U
54-1025	0554-95-0343	336-354	Qbt 2	Phenanthrene	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Phenol	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Propylbenzene[1-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Pyrene	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Pyridine	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Styrene	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Tetrachloroethane[1,1,1,2-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Tetrachloroethane[1,1,2,2-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Tetrachloroethene	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Toluene	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Toxaphene (technical grade)	0.17	U
54-1025	0554-95-0343	336-354	Qbt 2	Trichloro-1,2,2-trifluoroethane[1,1,2-]	0.005	U
54-1025	0554-95-0343	336-354	Qbt 2	Trichlorobenzene[1,2,3-]	0.005	U
54-1025	0554-95-0343	336-354	Qbt 2	Trichlorobenzene[1,2,4-]	0.005	U
54-1025	0554-95-0343	336-354	Qbt 2	Trichloroethane[1,1,1-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Trichloroethane[1,1,2-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Trichloroethene	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Trichlorofluoromethane	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Trichlorophenol[2,4,5-]	1.7	U
54-1025	0554-95-0343	336-354	Qbt 2	Trichlorophenol[2,4,6-]	0.34	U
54-1025	0554-95-0343	336-354	Qbt 2	Trichloropropane[1,2,3-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Trimethylbenzene[1,2,4-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Trimethylbenzene[1,3,5-]	0.0051	U
54-1025	0554-95-0343	336-354	Qbt 2	Vinyl chloride	0.01	U
54-1025	0554-95-0343	336-354	Qbt 2	Xylene (total)	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Acenaphthene	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Acenaphthylene	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Acetone	0.0047	U
54-1025	0554-95-0345	492-510	Qbt 1v	Aldrin	0.0017	U
54-1025	0554-95-0345	492-510	Qbt 1v	Aniline	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Anthracene	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Aroclor-1016	0.033	U
54-1025	0554-95-0345	492-510	Qbt 1v	Aroclor-1221	0.067	U
54-1025	0554-95-0345	492-510	Qbt 1v	Aroclor-1232	0.033	U
54-1025	0554-95-0345	492-510	Qbt 1v	Aroclor-1242	0.033	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0345	492-510	Qbt 1v	Aroclor-1248	0.033	U
54-1025	0554-95-0345	492-510	Qbt 1v	Aroclor-1254	0.033	U
54-1025	0554-95-0345	492-510	Qbt 1v	Aroclor-1260	0.033	U
54-1025	0554-95-0345	492-510	Qbt 1v	Azobenzene	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Benzene	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Benzidine	0.68	U
54-1025	0554-95-0345	492-510	Qbt 1v	Benzo(a)anthracene	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Benzo(a)pyrene	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Benzo(b)fluoranthene	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Benzo(g,h,i)perylene	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Benzo(k)fluoranthene	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Benzoic acid	3.4	U
54-1025	0554-95-0345	492-510	Qbt 1v	Benzyl alcohol	1.3	U
54-1025	0554-95-0345	492-510	Qbt 1v	BHC[alpha-]	0.0017	U
54-1025	0554-95-0345	492-510	Qbt 1v	BHC[beta-]	0.0017	U
54-1025	0554-95-0345	492-510	Qbt 1v	BHC[delta-]	0.0017	U
54-1025	0554-95-0345	492-510	Qbt 1v	BHC[gamma-]	0.0017	U
54-1025	0554-95-0345	492-510	Qbt 1v	Bis(2-chloroethoxy)methane	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Bis(2-chloroethyl)ether	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Bromobenzene	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Bromochloromethane	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Bromodichloromethane	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Bromoform	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Bromomethane	0.01	U
54-1025	0554-95-0345	492-510	Qbt 1v	Bromophenyl-phenylether[4-]	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Butanone[2-]	0.02	U
54-1025	0554-95-0345	492-510	Qbt 1v	Butylbenzene[n-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Butylbenzene[sec-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Butylbenzene[tert-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Butylbenzylphthalate	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Carbazole	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Carbon disulfide	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Carbon tetrachloride	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Chlordane[alpha-]	0.0017	U
54-1025	0554-95-0345	492-510	Qbt 1v	Chlordane[gamma-]	0.0017	U
54-1025	0554-95-0345	492-510	Qbt 1v	Chloro-3-methylphenol[4-]	0.67	U
54-1025	0554-95-0345	492-510	Qbt 1v	Chloroaniline[4-]	1.3	U
54-1025	0554-95-0345	492-510	Qbt 1v	Chlorobenzene	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Chlorodibromomethane	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Chloroethane	0.01	U
54-1025	0554-95-0345	492-510	Qbt 1v	Chloroform	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Chloromethane	0.01	U
54-1025	0554-95-0345	492-510	Qbt 1v	Chloronaphthalene[2-]	0.34	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0345	492-510	Qbt 1v	Chlorophenol[2-]	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Chlorotoluene[2-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Chlorotoluene[4-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Chrysene	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	DDD[4,4'-]	0.0033	U
54-1025	0554-95-0345	492-510	Qbt 1v	DDE[4,4'-]	0.0033	U
54-1025	0554-95-0345	492-510	Qbt 1v	DDT[4,4'-]	0.0033	U
54-1025	0554-95-0345	492-510	Qbt 1v	Di-n-butylphthalate	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Di-n-octylphthalate	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dibenz(a,h)anthracene	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dibenzofuran	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.01	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dibromoethane[1,2-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dibromomethane	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dichlorobenzene[1,2-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dichlorobenzene[1,3-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dichlorobenzene[1,4-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dichlorobenzidine[3,3'-]	0.67	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dichlorodifluoromethane	0.01	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dichloroethane[1,1-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dichloroethane[1,2-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dichloroethene[1,1-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dichloroethene[cis-1,2-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dichloroethene[trans-1,2-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dichlorophenol[2,4-]	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dichloropropane[1,2-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dichloropropane[1,3-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dichloropropane[2,2-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dichloropropene[1,1-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dichloropropene[cis-1,3-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dichloropropene[trans-1,3-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dieldrin	0.0033	U
54-1025	0554-95-0345	492-510	Qbt 1v	Diethylphthalate	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dimethyl phthalate	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dimethylphenol[2,4-]	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dinitro-2-methylphenol[4,6-]	1.7	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dinitrophenol[2,4-]	1.7	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dinitrotoluene[2,4-]	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Dinitrotoluene[2,6-]	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Endosulfan I	0.0017	U
54-1025	0554-95-0345	492-510	Qbt 1v	Endosulfan II	0.0033	U
54-1025	0554-95-0345	492-510	Qbt 1v	Endosulfan sulfate	0.0033	U
54-1025	0554-95-0345	492-510	Qbt 1v	Endrin	0.0033	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0345	492-510	Qbt 1v	Endrin aldehyde	0.0033	U
54-1025	0554-95-0345	492-510	Qbt 1v	Ethylbenzene	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Fluoranthene	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Fluorene	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Heptachlor	0.0017	U
54-1025	0554-95-0345	492-510	Qbt 1v	Heptachlor epoxide	0.0017	U
54-1025	0554-95-0345	492-510	Qbt 1v	Hexachlorobenzene	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Hexachlorobutadiene	0.005	U
54-1025	0554-95-0345	492-510	Qbt 1v	Hexachlorocyclopentadiene	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Hexachloroethane	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Hexanone[2-]	0.02	U
54-1025	0554-95-0345	492-510	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Iodomethane	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Isophorone	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Isopropylbenzene	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Isopropyltoluene[4-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Methoxychlor[4,4'-]	0.017	U
54-1025	0554-95-0345	492-510	Qbt 1v	Methyl-2-pentanone[4-]	0.02	U
54-1025	0554-95-0345	492-510	Qbt 1v	Methylene chloride	0.007	U
54-1025	0554-95-0345	492-510	Qbt 1v	Methylnaphthalene[2-]	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Methylphenol[2-]	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Methylphenol[4-]	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Naphthalene	0.005	U
54-1025	0554-95-0345	492-510	Qbt 1v	Nitroaniline[2-]	1.7	U
54-1025	0554-95-0345	492-510	Qbt 1v	Nitroaniline[3-]	1.7	U
54-1025	0554-95-0345	492-510	Qbt 1v	Nitroaniline[4-]	0.61	U
54-1025	0554-95-0345	492-510	Qbt 1v	Nitrobenzene	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Nitrophenol[2-]	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Nitrophenol[4-]	1.7	U
54-1025	0554-95-0345	492-510	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Nitrosodimethylamine[N-]	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Nitrosodiphenylamine[N-]	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Pentachlorophenol	1.7	U
54-1025	0554-95-0345	492-510	Qbt 1v	Phenanthrene	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Phenol	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Propylbenzene[1-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Pyrene	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Pyridine	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Styrene	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Tetrachloroethene	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Toluene	0.0051	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0345	492-510	Qbt 1v	Toxaphene (technical grade)	0.17	U
54-1025	0554-95-0345	492-510	Qbt 1v	Trichloro-1,2,2-trifluoroethane[1,1,2-]	0.005	U
54-1025	0554-95-0345	492-510	Qbt 1v	Trichlorobenzene[1,2,3-]	0.005	U
54-1025	0554-95-0345	492-510	Qbt 1v	Trichlorobenzene[1,2,4-]	0.005	U
54-1025	0554-95-0345	492-510	Qbt 1v	Trichloroethane[1,1,1-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Trichloroethane[1,1,2-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Trichloroethene	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Trichlorofluoromethane	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Trichlorophenol[2,4,5-]	1.7	U
54-1025	0554-95-0345	492-510	Qbt 1v	Trichlorophenol[2,4,6-]	0.34	U
54-1025	0554-95-0345	492-510	Qbt 1v	Trichloropropane[1,2,3-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Trimethylbenzene[1,2,4-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Trimethylbenzene[1,3,5-]	0.0051	U
54-1025	0554-95-0345	492-510	Qbt 1v	Vinyl chloride	0.01	U
54-1025	0554-95-0345	492-510	Qbt 1v	Xylene (total)	0.0051	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Acenaphthene	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Acenaphthylene	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Acetone	0.007	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Aldrin	0.0017	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Aniline	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Anthracene	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Aroclor-1016	0.033	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Aroclor-1221	0.066	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Aroclor-1232	0.033	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Aroclor-1242	0.033	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Aroclor-1248	0.033	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Aroclor-1254	0.033	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Aroclor-1260	0.033	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Azobenzene	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Benzene	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Benidine	0.66	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Benzo(a)anthracene	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Benzo(a)pyrene	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Benzo(b)fluoranthene	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Benzo(g,h,i)perylene	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Benzo(k)fluoranthene	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Benzoic acid	3.3	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Benzyl alcohol	1.3	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	BHC[alpha-]	0.0017	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	BHC[beta-]	0.0017	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	BHC[delta-]	0.0017	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	BHC[gamma-]	0.0017	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Bis(2-chloroethoxy)methane	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Bis(2-chloroethyl)ether	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0347	612-632.4	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.085	J
54-1025	0554-95-0347	612-632.4	Qbt 1v	Bromobenzene	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Bromochloromethane	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Bromodichloromethane	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Bromoform	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Bromomethane	0.01	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Bromophenyl-phenylether[4-]	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Butanone[2-]	0.02	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Butylbenzene[n-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Butylbenzene[sec-]	0.0011	J
54-1025	0554-95-0347	612-632.4	Qbt 1v	Butylbenzene[tert-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Butylbenzylphthalate	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Carbazole	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Carbon disulfide	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Carbon tetrachloride	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Chlordane[alpha-]	0.0017	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Chlordane[gamma-]	0.0017	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Chloro-3-methylphenol[4-]	0.66	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Chloroaniline[4-]	1.3	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Chlorobenzene	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Chlorodibromomethane	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Chloroethane	0.01	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Chloroform	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Chloromethane	0.01	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Chloronaphthalene[2-]	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Chlorophenol[2-]	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Chlorotoluene[2-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Chlorotoluene[4-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Chrysene	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	DDD[4,4'-]	0.0033	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	DDE[4,4'-]	0.0033	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	DDT[4,4'-]	0.0033	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Di-n-butylphthalate	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Di-n-octylphthalate	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dibenz(a,h)anthracene	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dibenzofuran	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.01	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dibromoethane[1,2-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dibromomethane	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dichlorobenzene[1,2-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dichlorobenzene[1,3-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dichlorobenzene[1,4-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dichlorobenzidine[3,3'-]	0.66	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dichlorodifluoromethane	0.01	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dichloroethane[1,1-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dichloroethane[1,2-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dichloroethene[1,1-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dichloroethene[cis-1,2-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dichloroethene[trans-1,2-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dichlorophenol[2,4-]	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dichloropropane[1,2-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dichloropropane[1,3-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dichloropropane[2,2-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dichloropropene[1,1-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dichloropropene[cis-1,3-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dichloropropene[trans-1,3-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dieldrin	0.0033	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Diethylphthalate	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dimethyl phthalate	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dimethylphenol[2,4-]	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dinitro-2-methylphenol[4,6-]	1.6	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dinitrophenol[2,4-]	1.6	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dinitrotoluene[2,4-]	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Dinitrotoluene[2,6-]	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Endosulfan I	0.0017	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Endosulfan II	0.0033	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Endosulfan sulfate	0.0033	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Endrin	0.0033	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Endrin aldehyde	0.0033	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Ethylbenzene	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Fluoranthene	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Fluorene	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Heptachlor	0.0017	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Heptachlor epoxide	0.0017	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Hexachlorobenzene	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Hexachlorobutadiene	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Hexachlorocyclopentadiene	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Hexachloroethane	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Hexanone[2-]	0.02	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Iodomethane	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Isophorone	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Isopropylbenzene	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Isopropyltoluene[4-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Methoxychlor[4,4'-]	0.017	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Methyl-2-pentanone[4-]	0.02	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Methylene chloride	0.0063	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0347	612-632.4	Qbt 1v	Methylnaphthalene[2-]	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Methylphenol[2-]	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Methylphenol[4-]	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Naphthalene	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Nitroaniline[2-]	1.6	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Nitroaniline[3-]	1.6	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Nitroaniline[4-]	0.6	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Nitrobenzene	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Nitrophenol[2-]	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Nitrophenol[4-]	1.6	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Nitrosodimethylamine[N-]	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Nitrosodiphenylamine[N-]	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Pentachlorophenol	1.6	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Phenanthrene	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Phenol	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Propylbenzene[1-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Pyrene	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Pyridine	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Styrene	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Tetrachloroethene	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Toluene	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Toxaphene (technical grade)	0.17	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Trichloro-1,2,2-trifluoroethane[1,1,2-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Trichlorobenzene[1,2,3-]	0.001	J
54-1025	0554-95-0347	612-632.4	Qbt 1v	Trichlorobenzene[1,2,4-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Trichloroethane[1,1,1-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Trichloroethane[1,1,2-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Trichloroethene	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Trichlorofluoromethane	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Trichlorophenol[2,4,5-]	1.6	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Trichlorophenol[2,4,6-]	0.33	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Trichloropropane[1,2,3-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Trimethylbenzene[1,2,4-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Trimethylbenzene[1,3,5-]	0.005	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Vinyl chloride	0.01	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Xylene (total)	0.005	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Acenaphthene	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Acenaphthylene	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Acetone	0.0078	U

* Field duplicate.

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Aldrin	0.0017	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Aniline	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Anthracene	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Aroclor-1016	0.034	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Aroclor-1221	0.067	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Aroclor-1232	0.034	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Aroclor-1242	0.034	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Aroclor-1248	0.034	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Aroclor-1254	0.034	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Aroclor-1260	0.034	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Azobenzene	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Benzene	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Benzidine	0.68	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Benzo(a)anthracene	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Benzo(a)pyrene	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Benzo(b)fluoranthene	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Benzo(g,h,i)perylene	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Benzo(k)fluoranthene	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Benzoic acid	3.4	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Benzyl alcohol	1.4	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	BHC[alpha-]	0.0017	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	BHC[beta-]	0.0017	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	BHC[delta-]	0.0017	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	BHC[gamma-]	0.0017	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Bis(2-chloroethoxy)methane	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Bis(2-chloroethyl)ether	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Bromobenzene	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Bromochloromethane	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Bromodichloromethane	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Bromoform	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Bromomethane	0.01	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Bromophenyl-phenylether[4-]	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Butanone[2-]	0.02	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Butylbenzene[n-]	0.0013	J
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Butylbenzene[sec-]	0.0012	J
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Butylbenzene[tert-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Butylbenzylphthalate	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Carbazole	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Carbon disulfide	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Carbon tetrachloride	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Chlordane[alpha-]	0.0017	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Chlordane[gamma-]	0.0017	U

* Field duplicate.

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Chloro-3-methylphenol[4-]	0.68	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Chloroaniline[4-]	1.4	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Chlorobenzene	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Chlorodibromomethane	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Chloroethane	0.01	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Chloroform	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Chloromethane	0.01	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Chloronaphthalene[2-]	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Chlorophenol[2-]	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Chlorotoluene[2-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Chlorotoluene[4-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Chrysene	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	DDD[4,4'-]	0.0034	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	DDE[4,4'-]	0.0034	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	DDT[4,4'-]	0.0034	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Di-n-butylphthalate	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Di-n-octylphthalate	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dibenz(a,h)anthracene	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dibenzofuran	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.01	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dibromoethane[1,2-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dibromomethane	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dichlorobenzene[1,2-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dichlorobenzene[1,3-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dichlorobenzene[1,4-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dichlorobenzidine[3,3'-]	0.68	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dichlorodifluoromethane	0.01	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dichloroethane[1,1-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dichloroethane[1,2-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dichloroethene[1,1-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dichloroethene[cis-1,2-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dichloroethene[trans-1,2-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dichlorophenol[2,4-]	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dichloropropane[1,2-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dichloropropane[1,3-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dichloropropane[2,2-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dichloropropene[1,1-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dichloropropene[cis-1,3-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dichloropropene[trans-1,3-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dieldrin	0.0034	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Diethylphthalate	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dimethyl phthalate	0.34	U

* Field duplicate.

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dimethylphenol[2,4-]	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dinitro-2-methylphenol[4,6-]	1.7	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dinitrophenol[2,4-]	1.7	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dinitrotoluene[2,4-]	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Dinitrotoluene[2,6-]	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Endosulfan I	0.0017	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Endosulfan II	0.0034	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Endosulfan sulfate	0.0034	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Endrin	0.0034	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Endrin aldehyde	0.0034	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Ethylbenzene	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Fluoranthene	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Fluorene	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Heptachlor	0.0017	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Heptachlor epoxide	0.0017	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Hexachlorobenzene	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Hexachlorobutadiene	0.002	J
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Hexachlorocyclopentadiene	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Hexachloroethane	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Hexanone[2-]	0.02	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Iodomethane	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Isophorone	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Isopropylbenzene	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Isopropyltoluene[4-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Methoxychlor[4,4'-]	0.017	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Methyl-2-pentanone[4-]	0.02	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Methylene chloride	0.0065	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Methylnaphthalene[2-]	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Methylphenol[2-]	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Methylphenol[4-]	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Naphthalene	0.001	J
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Nitroaniline[2-]	1.7	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Nitroaniline[3-]	1.7	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Nitroaniline[4-]	0.61	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Nitrobenzene	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Nitrophenol[2-]	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Nitrophenol[4-]	1.7	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Nitrosodimethylamine[N-]	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Nitrosodiphenylamine[N-]	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Pentachlorophenol	1.7	U

* Field duplicate.

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Phenanthrene	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Phenol	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Propylbenzene[1-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Pyrene	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Pyridine	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Styrene	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Tetrachloroethene	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Toluene	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Toxaphene (technical grade)	0.17	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Trichloro-1,2,2-trifluoroethane[1,1,2-]	0.005	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Trichlorobenzene[1,2,3-]	0.002	J
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Trichlorobenzene[1,2,4-]	0.001	J
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Trichloroethane[1,1,1-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Trichloroethane[1,1,2-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Trichloroethene	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Trichlorofluoromethane	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Trichlorophenol[2,4,5-]	1.7	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Trichlorophenol[2,4,6-]	0.34	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Trichloropropane[1,2,3-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Trimethylbenzene[1,2,4-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Trimethylbenzene[1,3,5-]	0.0051	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Vinyl chloride	0.01	U
54-1025*	0554-95-0349	732-753.6	Qbt 1v	Xylene (total)	0.0051	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Acenaphthene	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Acenaphthylene	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Acetone	0.0042	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Aldrin	0.0017	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Aniline	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Anthracene	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Aroclor-1016	0.033	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Aroclor-1221	0.066	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Aroclor-1232	0.033	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Aroclor-1242	0.033	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Aroclor-1248	0.033	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Aroclor-1254	0.033	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Aroclor-1260	0.033	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Azobenzene	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Benzene	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Benzidine	0.66	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Benzo(a)anthracene	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Benzo(a)pyrene	0.33	U

* Field duplicate.

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0351	852-861.6	Qbt 1v	Benzo(b)fluoranthene	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Benzo(g,h,i)perylene	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Benzo(k)fluoranthene	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Benzoic acid	3.3	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Benzyl alcohol	1.3	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	BHC[alpha-]	0.0017	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	BHC[beta-]	0.0017	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	BHC[delta-]	0.0017	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	BHC[gamma-]	0.0017	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Bis(2-chloroethoxy)methane	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Bis(2-chloroethyl)ether	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Bromobenzene	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Bromochloromethane	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Bromodichloromethane	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Bromoform	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Bromomethane	0.01	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Bromophenyl-phenylether[4-]	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Butanone[2-]	0.02	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Butylbenzene[n-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Butylbenzene[sec-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Butylbenzene[tert-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Butylbenzylphthalate	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Carbazole	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Carbon disulfide	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Carbon tetrachloride	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Chlordane[alpha-]	0.0017	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Chlordane[gamma-]	0.0017	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Chloro-3-methylphenol[4-]	0.66	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Chloroaniline[4-]	1.3	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Chlorobenzene	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Chlorodibromomethane	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Chloroethane	0.01	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Chloroform	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Chloromethane	0.01	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Chloronaphthalene[2-]	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Chlorophenol[2-]	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Chlorotoluene[2-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Chlorotoluene[4-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Chrysene	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	DDD[4,4'-]	0.0033	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	DDE[4,4'-]	0.0033	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	DDT[4,4'-]	0.0033	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0351	852-861.6	Qbt 1v	Di-n-butylphthalate	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Di-n-octylphthalate	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dibenz(a,h)anthracene	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dibenzofuran	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.01	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dibromoethane[1,2-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dibromomethane	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dichlorobenzene[1,2-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dichlorobenzene[1,3-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dichlorobenzene[1,4-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dichlorobenzidine[3,3'-]	0.66	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dichlorodifluoromethane	0.01	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dichloroethane[1,1-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dichloroethane[1,2-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dichloroethene[1,1-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dichloroethene[cis-1,2-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dichloroethene[trans-1,2-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dichlorophenol[2,4-]	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dichloropropane[1,2-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dichloropropane[1,3-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dichloropropane[2,2-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dichloropropene[1,1-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dichloropropene[cis-1,3-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dichloropropene[trans-1,3-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dieldrin	0.0033	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Diethylphthalate	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dimethyl phthalate	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dimethylphenol[2,4-]	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dinitro-2-methylphenol[4,6-]	1.6	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dinitrophenol[2,4-]	1.6	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dinitrotoluene[2,4-]	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Dinitrotoluene[2,6-]	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Endosulfan I	0.0017	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Endosulfan II	0.0033	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Endosulfan sulfate	0.0033	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Endrin	0.0033	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Endrin aldehyde	0.0033	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Ethylbenzene	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Fluoranthene	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Fluorene	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Heptachlor	0.0017	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Heptachlor epoxide	0.0017	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Hexachlorobenzene	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Hexachlorobutadiene	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0351	852-861.6	Qbt 1v	Hexachlorocyclopentadiene	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Hexachloroethane	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Hexanone[2-]	0.02	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Iodomethane	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Isophorone	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Isopropylbenzene	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Isopropyltoluene[4-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Methoxychlor[4,4'-]	0.017	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Methyl-2-pentanone[4-]	0.02	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Methylene chloride	0.0061	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Methylnaphthalene[2-]	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Methylphenol[2-]	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Methylphenol[4-]	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Naphthalene	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Nitroaniline[2-]	1.6	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Nitroaniline[3-]	1.6	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Nitroaniline[4-]	0.6	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Nitrobenzene	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Nitrophenol[2-]	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Nitrophenol[4-]	1.6	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Nitrosodimethylamine[N-]	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Nitrosodiphenylamine[N-]	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Pentachlorophenol	1.6	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Phenanthrene	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Phenol	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Propylbenzene[1-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Pyrene	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Pyridine	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Styrene	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Tetrachloroethene	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Toluene	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Toxaphene (technical grade)	0.17	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Trichloro-1,2,2-trifluoroethane[1,1,2-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Trichlorobenzene[1,2,3-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Trichlorobenzene[1,2,4-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Trichloroethane[1,1,1-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Trichloroethane[1,1,2-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Trichloroethene	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Trichlorofluoromethane	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0351	852-861.6	Qbt 1v	Trichlorophenol[2,4,5-]	1.6	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Trichlorophenol[2,4,6-]	0.33	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Trichloropropane[1,2,3-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Trimethylbenzene[1,2,4-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Trimethylbenzene[1,3,5-]	0.005	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Vinyl chloride	0.01	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Xylene (total)	0.005	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Acenaphthene	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Acenaphthylene	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Acetone	0.0041	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Aldrin	0.0017	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Aniline	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Anthracene	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Aroclor-1016	0.033	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Aroclor-1221	0.067	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Aroclor-1232	0.033	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Aroclor-1242	0.033	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Aroclor-1248	0.033	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Aroclor-1254	0.033	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Aroclor-1260	0.033	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Azobenzene	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Benzene	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Benzidine	0.67	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Benzo(a)anthracene	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Benzo(a)pyrene	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Benzo(b)fluoranthene	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Benzo(g,h,i)perylene	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Benzo(k)fluoranthene	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Benzoic acid	3.4	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Benzyl alcohol	1.3	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	BHC[alpha-]	0.0017	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	BHC[beta-]	0.0017	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	BHC[delta-]	0.0017	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	BHC[gamma-]	0.0017	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Bis(2-chloroethoxy)methane	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Bis(2-chloroethyl)ether	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.19	J
54-1025	0554-95-0355	1032-1080	Qbt 1v	Bromobenzene	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Bromochloromethane	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Bromodichloromethane	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Bromoform	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Bromomethane	0.01	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Bromophenyl-phenylether[4-]	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Butanone[2-]	0.02	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0355	1032-1080	Qbt 1v	Butylbenzene[n-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Butylbenzene[sec-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Butylbenzene[tert-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Butylbenzylphthalate	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Carbazole	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Carbon disulfide	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Carbon tetrachloride	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Chlordane[alpha-]	0.0017	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Chlordane[gamma-]	0.0017	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Chloro-3-methylphenol[4-]	0.67	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Chloroaniline[4-]	1.3	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Chlorobenzene	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Chlorodibromomethane	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Chloroethane	0.01	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Chloroform	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Chloromethane	0.01	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Chloronaphthalene[2-]	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Chlorophenol[2-]	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Chlorotoluene[2-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Chlorotoluene[4-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Chrysene	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	DDD[4,4'-]	0.0033	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	DDE[4,4'-]	0.0033	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	DDT[4,4'-]	0.0033	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Di-n-butylphthalate	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Di-n-octylphthalate	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dibenz(a,h)anthracene	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dibenzofuran	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.01	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dibromoethane[1,2-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dibromomethane	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dichlorobenzene[1,2-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dichlorobenzene[1,3-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dichlorobenzene[1,4-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dichlorobenzidine[3,3'-]	0.67	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dichlorodifluoromethane	0.01	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dichloroethane[1,1-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dichloroethane[1,2-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dichloroethene[1,1-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dichloroethene[cis-1,2-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dichloroethene[trans-1,2-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dichlorophenol[2,4-]	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dichloropropane[1,2-]	0.0051	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dichloropropane[1,3-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dichloropropane[2,2-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dichloropropene[1,1-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dichloropropene[cis-1,3-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dichloropropene[trans-1,3-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dieldrin	0.0033	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Diethylphthalate	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dimethyl phthalate	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dimethylphenol[2,4-]	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dinitro-2-methylphenol[4,6-]	1.7	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dinitrophenol[2,4-]	1.7	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dinitrotoluene[2,4-]	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Dinitrotoluene[2,6-]	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Endosulfan I	0.0017	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Endosulfan II	0.0033	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Endosulfan sulfate	0.0033	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Endrin	0.0033	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Endrin aldehyde	0.0033	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Ethylbenzene	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Fluoranthene	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Fluorene	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Heptachlor	0.0017	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Heptachlor epoxide	0.0017	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Hexachlorobenzene	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Hexachlorobutadiene	0.005	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Hexachlorocyclopentadiene	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Hexachloroethane	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Hexanone[2-]	0.02	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Iodomethane	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Isophorone	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Isopropylbenzene	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Isopropyltoluene[4-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Methoxychlor[4,4'-]	0.017	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Methyl-2-pentanone[4-]	0.02	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Methylene chloride	0.0061	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Methylnaphthalene[2-]	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Methylphenol[2-]	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Methylphenol[4-]	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Naphthalene	0.005	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Nitroaniline[2-]	1.7	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Nitroaniline[3-]	1.7	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Nitroaniline[4-]	0.61	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Nitrobenzene	0.34	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0355	1032-1080	Qbt 1v	Nitrophenol[2-]	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Nitrophenol[4-]	1.7	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Nitrosodimethylamine[N-]	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Nitrosodiphenylamine[N-]	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Pentachlorophenol	1.7	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Phenanthrene	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Phenol	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Propylbenzene[1-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Pyrene	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Pyridine	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Styrene	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Tetrachloroethene	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Toluene	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Toxaphene (technical grade)	0.17	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Trichloro-1,2,2-trifluoroethane[1,1,2-]	0.005	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Trichlorobenzene[1,2,3-]	0.005	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Trichlorobenzene[1,2,4-]	0.005	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Trichloroethane[1,1,1-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Trichloroethane[1,1,2-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Trichloroethene	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Trichlorofluoromethane	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Trichlorophenol[2,4,5-]	1.7	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Trichlorophenol[2,4,6-]	0.34	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Trichloropropane[1,2,3-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Trimethylbenzene[1,2,4-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Trimethylbenzene[1,3,5-]	0.0051	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Vinyl chloride	0.01	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Xylene (total)	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Acenaphthene	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Acenaphthylene	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Acetone	0.0078	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Aldrin	0.0017	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Aniline	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Anthracene	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Aroclor-1016	0.034	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Aroclor-1221	0.067	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Aroclor-1232	0.034	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Aroclor-1242	0.034	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Aroclor-1248	0.034	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Aroclor-1254	0.034	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0356	1032-1080	Qbt 1v	Aroclor-1260	0.034	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Azobenzene	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Benzene	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Benzidine	0.68	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Benzo(a)anthracene	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Benzo(a)pyrene	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Benzo(b)fluoranthene	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Benzo(g,h,i)perylene	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Benzo(k)fluoranthene	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Benzoic acid	3.4	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Benzyl alcohol	1.4	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	BHC[alpha-]	0.0017	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	BHC[beta-]	0.0017	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	BHC[delta-]	0.0017	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	BHC[gamma-]	0.0017	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Bis(2-chloroethoxy)methane	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Bis(2-chloroethyl)ether	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.3	J
54-1025	0554-95-0356	1032-1080	Qbt 1v	Bromobenzene	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Bromochloromethane	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Bromodichloromethane	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Bromoform	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Bromomethane	0.01	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Bromophenyl-phenylether[4-]	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Butanone[2-]	0.02	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Butylbenzene[n-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Butylbenzene[sec-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Butylbenzene[tert-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Butylbenzylphthalate	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Carbazole	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Carbon disulfide	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Carbon tetrachloride	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Chlordane[alpha-]	0.0017	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Chlordane[gamma-]	0.0017	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Chloro-3-methylphenol[4-]	0.68	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Chloroaniline[4-]	1.4	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Chlorobenzene	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Chlorodibromomethane	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Chloroethane	0.01	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Chloroform	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Chloromethane	0.01	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Chloronaphthalene[2-]	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Chlorophenol[2-]	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.34	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0356	1032-1080	Qbt 1v	Chlorotoluene[2-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Chlorotoluene[4-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Chrysene	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	DDD[4,4'-]	0.0034	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	DDE[4,4'-]	0.0034	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	DDT[4,4'-]	0.0034	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Di-n-butylphthalate	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Di-n-octylphthalate	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dibenz(a,h)anthracene	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dibenzofuran	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.01	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dibromoethane[1,2-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dibromomethane	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dichlorobenzene[1,2-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dichlorobenzene[1,3-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dichlorobenzene[1,4-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dichlorobenzidine[3,3'-]	0.68	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dichlorodifluoromethane	0.01	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dichloroethane[1,1-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dichloroethane[1,2-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dichloroethene[1,1-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dichloroethene[cis-1,2-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dichloroethene[trans-1,2-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dichlorophenol[2,4-]	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dichloropropane[1,2-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dichloropropane[1,3-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dichloropropane[2,2-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dichloropropene[1,1-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dichloropropene[cis-1,3-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dichloropropene[trans-1,3-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dieldrin	0.0034	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Diethylphthalate	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dimethyl phthalate	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dimethylphenol[2,4-]	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dinitro-2-methylphenol[4,6-]	1.7	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dinitrophenol[2,4-]	1.7	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dinitrotoluene[2,4-]	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Dinitrotoluene[2,6-]	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Endosulfan I	0.0017	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Endosulfan II	0.0034	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Endosulfan sulfate	0.0034	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Endrin	0.0034	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Endrin aldehyde	0.0034	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Ethylbenzene	0.0051	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0356	1032-1080	Qbt 1v	Fluoranthene	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Fluorene	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Heptachlor	0.0017	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Heptachlor epoxide	0.0017	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Hexachlorobenzene	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Hexachlorobutadiene	0.005	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Hexachlorocyclopentadiene	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Hexachloroethane	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Hexanone[2-]	0.02	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Iodomethane	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Isophorone	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Isopropylbenzene	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Isopropyltoluene[4-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Methoxychlor[4,4'-]	0.017	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Methyl-2-pentanone[4-]	0.02	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Methylene chloride	0.0035	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Methylnaphthalene[2-]	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Methylphenol[2-]	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Methylphenol[4-]	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Naphthalene	0.005	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Nitroaniline[2-]	1.7	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Nitroaniline[3-]	1.7	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Nitroaniline[4-]	0.61	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Nitrobenzene	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Nitrophenol[2-]	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Nitrophenol[4-]	1.7	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Nitrosodimethylamine[N-]	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Nitrosodiphenylamine[N-]	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Pentachlorophenol	1.7	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Phenanthrene	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Phenol	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Propylbenzene[1-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Pyrene	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Pyridine	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Styrene	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Tetrachloroethene	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Toluene	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Toxaphene (technical grade)	0.17	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Trichloro-1,2,2-trifluoroethane[1,1,2-]	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1025	0554-95-0356	1032-1080	Qbt 1v	Trichlorobenzene[1,2,3-]	0.005	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Trichlorobenzene[1,2,4-]	0.005	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Trichloroethane[1,1,1-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Trichloroethane[1,1,2-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Trichloroethene	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Trichlorofluoromethane	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Trichlorophenol[2,4,5-]	1.7	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Trichlorophenol[2,4,6-]	0.34	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Trichloropropane[1,2,3-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Trimethylbenzene[1,2,4-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Trimethylbenzene[1,3,5-]	0.0051	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Vinyl chloride	0.01	U
54-1025	0554-95-0356	1032-1080	Qbt 1v	Xylene (total)	0.0051	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Acenaphthene	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Acenaphthylene	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Acetone	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Aldrin	0.0018	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Aniline	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Anthracene	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Aroclor-1016	0.034	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Aroclor-1221	0.069	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Aroclor-1232	0.034	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Aroclor-1242	0.034	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Aroclor-1248	0.034	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Aroclor-1254	0.034	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Aroclor-1260	0.034	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Azobenzene	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Benzene	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Benzo(a)anthracene	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Benzo(a)pyrene	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Benzo(b)fluoranthene	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Benzo(g,h,i)perylene	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Benzo(k)fluoranthene	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Benzoic acid	0.49	J
54-1026	0554-95-0300	198-217.2	Qbt 2	Benzyl alcohol	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	BHC[alpha-]	0.0018	U
54-1026	0554-95-0300	198-217.2	Qbt 2	BHC[beta-]	0.0018	U
54-1026	0554-95-0300	198-217.2	Qbt 2	BHC[delta-]	0.0018	U
54-1026	0554-95-0300	198-217.2	Qbt 2	BHC[gamma-]	0.0018	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Bis(2-chloroethoxy)methane	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Bis(2-chloroethyl)ether	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Bis(2-ethylhexyl)phthalate	0.055	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Bromobenzene	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Bromodichloromethane	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0300	198-217.2	Qbt 2	Bromoform	0.01	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Bromomethane	0.01	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Bromophenyl-phenylether[4-]	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Butanone[2-]	0.01	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Butylbenzene[n-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Butylbenzene[sec-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Butylbenzene[tert-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Butylbenzylphthalate	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Carbon disulfide	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Carbon tetrachloride	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Chlordane[alpha-]	0.0018	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Chlordane[gamma-]	0.0018	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Chloro-3-methylphenol[4-]	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Chloroaniline[4-]	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Chlorobenzene	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Chlorodibromomethane	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Chloroethane	0.01	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Chloroform	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Chloromethane	0.01	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Chloronaphthalene[2-]	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Chlorophenol[2-]	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Chlorophenyl-phenyl[4-] ether	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Chlorotoluene[2-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Chlorotoluene[4-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Chrysene	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	DDD[4,4'-]	0.0034	U
54-1026	0554-95-0300	198-217.2	Qbt 2	DDE[4,4'-]	0.0034	U
54-1026	0554-95-0300	198-217.2	Qbt 2	DDT[4,4'-]	0.0034	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Di-n-butylphthalate	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Di-n-octylphthalate	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dibenz(a,h)anthracene	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dibenzofuran	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dibromo-3-chloropropane[1,2-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dibromoethane[1,2-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dibromomethane	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dichlorobenzene[1,2-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dichlorobenzene[1,3-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dichlorobenzene[1,4-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dichlorobenzidine[3,3'-]	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dichlorodifluoromethane	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dichloroethane[1,1-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dichloroethane[1,2-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dichloroethene[1,1-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dichloroethene[cis-1,2-]	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0300	198-217.2	Qbt 2	Dichloroethene[trans-1,2-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dichlorophenol[2,4-]	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dichloropropane[1,2-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dichloropropane[1,3-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dichloropropane[2,2-]	0.01	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dichloropropene[1,1-]	0.01	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dichloropropene[cis-1,3-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dichloropropene[trans-1,3-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dieldrin	0.0034	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Diethylphthalate	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dimethyl phthalate	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dimethylphenol[2,4-]	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dinitro-2-methylphenol[4,6-]	0.86	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dinitrophenol[2,4-]	0.86	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dinitrotoluene[2,4-]	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Dinitrotoluene[2,6-]	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Endosulfan I	0.0018	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Endosulfan II	0.0034	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Endosulfan sulfate	0.0034	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Endrin	0.0034	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Endrin aldehyde	0.0034	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Endrin ketone	0.0034	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Ethylbenzene	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Fluoranthene	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Fluorene	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Heptachlor	0.0018	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Heptachlor epoxide	0.0018	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Hexachlorobenzene	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Hexachlorobutadiene	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Hexachlorocyclopentadiene	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Hexachloroethane	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Hexanone[2-]	0.01	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Indeno(1,2,3-cd)pyrene	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Iodomethane	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Isophorone	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Isopropylbenzene	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Isopropyltoluene[4-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Methoxychlor[4,4'-]	0.018	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Methyl-2-pentanone[4-]	0.01	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Methylene chloride	0.01	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Methylnaphthalene[2-]	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Methylphenol[2-]	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Methylphenol[4-]	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Naphthalene	0.34	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0300	198-217.2	Qbt 2	Nitroaniline[2-]	0.86	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Nitroaniline[3-]	0.86	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Nitroaniline[4-]	0.86	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Nitrobenzene	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Nitrophenol[2-]	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Nitrophenol[4-]	0.86	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Nitroso-di-n-propylamine[N-]	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Nitrosodimethylamine[N-]	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Nitrosodiphenylamine[N-]	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Oxybis(1-chloropropane)[2,2'-]	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Pentachlorophenol	0.86	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Phenanthrene	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Phenol	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Propylbenzene[1-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Pyrene	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Styrene	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Tetrachloroethane[1,1,2,2-]	0.01	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Tetrachloroethene	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Toluene	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Toxaphene (technical grade)	0.18	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Trichlorobenzene[1,2,4-]	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Trichloroethane[1,1,1-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Trichloroethane[1,1,2-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Trichloroethene	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Trichlorofluoromethane	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Trichlorophenol[2,4,5-]	0.86	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Trichlorophenol[2,4,6-]	0.34	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Trichloropropane[1,2,3-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Trichlorotrifluoroethane	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Trimethylbenzene[1,2,4-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Trimethylbenzene[1,3,5-]	0.005	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Vinyl chloride	0.01	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Xylene (total)	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Acenaphthene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Acenaphthylene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Acetone	0.006	U
54-1026	0554-95-0302	318-336	Qbt 2	Aldrin	0.0017	U
54-1026	0554-95-0302	318-336	Qbt 2	Aniline	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Anthracene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Aroclor-1016	0.033	U
54-1026	0554-95-0302	318-336	Qbt 2	Aroclor-1221	0.068	U
54-1026	0554-95-0302	318-336	Qbt 2	Aroclor-1232	0.033	U
54-1026	0554-95-0302	318-336	Qbt 2	Aroclor-1242	0.033	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0302	318-336	Qbt 2	Aroclor-1248	0.033	U
54-1026	0554-95-0302	318-336	Qbt 2	Aroclor-1254	0.033	U
54-1026	0554-95-0302	318-336	Qbt 2	Aroclor-1260	0.033	U
54-1026	0554-95-0302	318-336	Qbt 2	Azobenzene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Benzene	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Benzo(a)anthracene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Benzo(a)pyrene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Benzo(b)fluoranthene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Benzo(g,h,i)perylene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Benzo(k)fluoranthene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Benzoic acid	0.83	U
54-1026	0554-95-0302	318-336	Qbt 2	Benzyl alcohol	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	BHC[alpha-]	0.0017	U
54-1026	0554-95-0302	318-336	Qbt 2	BHC[beta-]	0.0017	U
54-1026	0554-95-0302	318-336	Qbt 2	BHC[delta-]	0.0017	U
54-1026	0554-95-0302	318-336	Qbt 2	BHC[gamma-]	0.0017	U
54-1026	0554-95-0302	318-336	Qbt 2	Bis(2-chloroethoxy)methane	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Bis(2-chloroethyl)ether	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Bis(2-ethylhexyl)phthalate	0.04	U
54-1026	0554-95-0302	318-336	Qbt 2	Bromobenzene	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Bromodichloromethane	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Bromoform	0.01	U
54-1026	0554-95-0302	318-336	Qbt 2	Bromomethane	0.01	U
54-1026	0554-95-0302	318-336	Qbt 2	Bromophenyl-phenylether[4-]	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Butanone[2-]	0.01	U
54-1026	0554-95-0302	318-336	Qbt 2	Butylbenzene[n-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Butylbenzene[sec-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Butylbenzene[tert-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Butylbenzylphthalate	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Carbon disulfide	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Carbon tetrachloride	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Chlordane[alpha-]	0.0017	U
54-1026	0554-95-0302	318-336	Qbt 2	Chlordane[gamma-]	0.0017	U
54-1026	0554-95-0302	318-336	Qbt 2	Chloro-3-methylphenol[4-]	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Chloroaniline[4-]	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Chlorobenzene	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Chlorodibromomethane	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Chloroethane	0.01	U
54-1026	0554-95-0302	318-336	Qbt 2	Chloroform	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Chloromethane	0.01	U
54-1026	0554-95-0302	318-336	Qbt 2	Chloronaphthalene[2-]	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Chlorophenol[2-]	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Chlorophenyl-phenyl[4-] ether	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Chlorotoluene[2-]	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0302	318-336	Qbt 2	Chlorotoluene[4-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Chrysene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	DDD[4,4'-]	0.0033	U
54-1026	0554-95-0302	318-336	Qbt 2	DDE[4,4'-]	0.0033	U
54-1026	0554-95-0302	318-336	Qbt 2	DDT[4,4'-]	0.0033	U
54-1026	0554-95-0302	318-336	Qbt 2	Di-n-butylphthalate	0.047	J
54-1026	0554-95-0302	318-336	Qbt 2	Di-n-octylphthalate	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Dibenz(a,h)anthracene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Dibenzofuran	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Dibromo-3-chloropropane[1,2-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Dibromoethane[1,2-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Dibromomethane	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Dichlorobenzene[1,2-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Dichlorobenzene[1,3-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Dichlorobenzene[1,4-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Dichlorobenzidine[3,3'-]	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Dichlorodifluoromethane	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Dichloroethane[1,1-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Dichloroethane[1,2-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Dichloroethene[1,1-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Dichloroethene[cis-1,2-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Dichloroethene[trans-1,2-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Dichlorophenol[2,4-]	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Dichloropropane[1,2-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Dichloropropane[1,3-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Dichloropropane[2,2-]	0.01	U
54-1026	0554-95-0302	318-336	Qbt 2	Dichloropropene[1,1-]	0.01	U
54-1026	0554-95-0302	318-336	Qbt 2	Dichloropropene[cis-1,3-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Dichloropropene[trans-1,3-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Dieldrin	0.0033	U
54-1026	0554-95-0302	318-336	Qbt 2	Diethylphthalate	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Dimethyl phthalate	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Dimethylphenol[2,4-]	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Dinitro-2-methylphenol[4,6-]	0.83	U
54-1026	0554-95-0302	318-336	Qbt 2	Dinitrophenol[2,4-]	0.83	U
54-1026	0554-95-0302	318-336	Qbt 2	Dinitrotoluene[2,4-]	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Dinitrotoluene[2,6-]	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Endosulfan I	0.0017	U
54-1026	0554-95-0302	318-336	Qbt 2	Endosulfan II	0.0033	U
54-1026	0554-95-0302	318-336	Qbt 2	Endosulfan sulfate	0.0033	U
54-1026	0554-95-0302	318-336	Qbt 2	Endrin	0.0033	U
54-1026	0554-95-0302	318-336	Qbt 2	Endrin aldehyde	0.0033	U
54-1026	0554-95-0302	318-336	Qbt 2	Endrin ketone	0.0033	U
54-1026	0554-95-0302	318-336	Qbt 2	Ethylbenzene	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0302	318-336	Qbt 2	Fluoranthene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Fluorene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Heptachlor	0.0017	U
54-1026	0554-95-0302	318-336	Qbt 2	Heptachlor epoxide	0.0017	U
54-1026	0554-95-0302	318-336	Qbt 2	Hexachlorobenzene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Hexachlorobutadiene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Hexachlorocyclopentadiene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Hexachloroethane	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Hexanone[2-]	0.01	U
54-1026	0554-95-0302	318-336	Qbt 2	Indeno(1,2,3-cd)pyrene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Iodomethane	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Isophorone	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Isopropylbenzene	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Isopropyltoluene[4-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Methoxychlor[4,4'-]	0.017	U
54-1026	0554-95-0302	318-336	Qbt 2	Methyl-2-pentanone[4-]	0.01	U
54-1026	0554-95-0302	318-336	Qbt 2	Methylene chloride	0.01	U
54-1026	0554-95-0302	318-336	Qbt 2	Methylnaphthalene[2-]	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Methylphenol[2-]	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Methylphenol[4-]	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Naphthalene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Nitroaniline[2-]	0.83	U
54-1026	0554-95-0302	318-336	Qbt 2	Nitroaniline[3-]	0.83	U
54-1026	0554-95-0302	318-336	Qbt 2	Nitroaniline[4-]	0.83	U
54-1026	0554-95-0302	318-336	Qbt 2	Nitrobenzene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Nitrophenol[2-]	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Nitrophenol[4-]	0.83	U
54-1026	0554-95-0302	318-336	Qbt 2	Nitroso-di-n-propylamine[N-]	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Nitrosodimethylamine[N-]	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Nitrosodiphenylamine[N-]	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Oxybis(1-chloropropane)[2,2'-]	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Pentachlorophenol	0.83	U
54-1026	0554-95-0302	318-336	Qbt 2	Phenanthrene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Phenol	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Propylbenzene[1-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Pyrene	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Styrene	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Tetrachloroethane[1,1,2,2-]	0.01	U
54-1026	0554-95-0302	318-336	Qbt 2	Tetrachloroethene	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Toluene	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Toxaphene (technical grade)	0.17	U
54-1026	0554-95-0302	318-336	Qbt 2	Trichlorobenzene[1,2,4-]	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Trichloroethane[1,1,1-]	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0302	318-336	Qbt 2	Trichloroethane[1,1,2-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Trichloroethene	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Trichlorofluoromethane	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Trichlorophenol[2,4,5-]	0.83	U
54-1026	0554-95-0302	318-336	Qbt 2	Trichlorophenol[2,4,6-]	0.33	U
54-1026	0554-95-0302	318-336	Qbt 2	Trichloropropane[1,2,3-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Trichlorotrifluoroethane	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Trimethylbenzene[1,2,4-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Trimethylbenzene[1,3,5-]	0.005	U
54-1026	0554-95-0302	318-336	Qbt 2	Vinyl chloride	0.01	U
54-1026	0554-95-0302	318-336	Qbt 2	Xylene (total)	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Acenaphthene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Acenaphthylene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Acetone	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Aldrin	0.0017	U
54-1026	0554-95-0304	492-498	Qbt 1v	Aniline	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Anthracene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Aroclor-1016	0.032	U
54-1026	0554-95-0304	492-498	Qbt 1v	Aroclor-1221	0.066	U
54-1026	0554-95-0304	492-498	Qbt 1v	Aroclor-1232	0.032	U
54-1026	0554-95-0304	492-498	Qbt 1v	Aroclor-1242	0.032	U
54-1026	0554-95-0304	492-498	Qbt 1v	Aroclor-1248	0.032	U
54-1026	0554-95-0304	492-498	Qbt 1v	Aroclor-1254	0.032	U
54-1026	0554-95-0304	492-498	Qbt 1v	Aroclor-1260	0.032	U
54-1026	0554-95-0304	492-498	Qbt 1v	Azobenzene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Benzene	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Benzo(a)anthracene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Benzo(a)pyrene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Benzo(b)fluoranthene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Benzo(g,h,i)perylene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Benzo(k)fluoranthene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Benzoic acid	0.83	U
54-1026	0554-95-0304	492-498	Qbt 1v	Benzyl alcohol	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	BHC[alpha-]	0.0017	U
54-1026	0554-95-0304	492-498	Qbt 1v	BHC[beta-]	0.0017	U
54-1026	0554-95-0304	492-498	Qbt 1v	BHC[delta-]	0.0017	U
54-1026	0554-95-0304	492-498	Qbt 1v	BHC[gamma-]	0.0017	U
54-1026	0554-95-0304	492-498	Qbt 1v	Bis(2-chloroethoxy)methane	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Bis(2-chloroethyl)ether	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.047	U
54-1026	0554-95-0304	492-498	Qbt 1v	Bromobenzene	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Bromodichloromethane	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Bromoform	0.01	U
54-1026	0554-95-0304	492-498	Qbt 1v	Bromomethane	0.01	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0304	492-498	Qbt 1v	Bromophenyl-phenylether[4-]	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Butanone[2-]	0.01	U
54-1026	0554-95-0304	492-498	Qbt 1v	Butylbenzene[n-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Butylbenzene[sec-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Butylbenzene[tert-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Butylbenzylphthalate	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Carbon disulfide	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Carbon tetrachloride	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Chlordane[alpha-]	0.0017	U
54-1026	0554-95-0304	492-498	Qbt 1v	Chlordane[gamma-]	0.0017	U
54-1026	0554-95-0304	492-498	Qbt 1v	Chloro-3-methylphenol[4-]	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Chloroaniline[4-]	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Chlorobenzene	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Chlorodibromomethane	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Chloroethane	0.01	U
54-1026	0554-95-0304	492-498	Qbt 1v	Chloroform	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Chloromethane	0.01	U
54-1026	0554-95-0304	492-498	Qbt 1v	Chloronaphthalene[2-]	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Chlorophenol[2-]	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Chlorotoluene[2-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Chlorotoluene[4-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Chrysene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	DDD[4,4'-]	0.0032	U
54-1026	0554-95-0304	492-498	Qbt 1v	DDE[4,4'-]	0.0032	U
54-1026	0554-95-0304	492-498	Qbt 1v	DDT[4,4'-]	0.0032	U
54-1026	0554-95-0304	492-498	Qbt 1v	Di-n-butylphthalate	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Di-n-octylphthalate	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dibenz(a,h)anthracene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dibenzofuran	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dibromoethane[1,2-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dibromomethane	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dichlorobenzene[1,2-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dichlorobenzene[1,3-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dichlorobenzene[1,4-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dichlorobenzidine[3,3'-]	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dichlorodifluoromethane	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dichloroethane[1,1-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dichloroethane[1,2-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dichloroethene[1,1-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dichloroethene[cis-1,2-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dichloroethene[trans-1,2-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dichlorophenol[2,4-]	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0304	492-498	Qbt 1v	Dichloropropane[1,2-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dichloropropane[1,3-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dichloropropane[2,2-]	0.01	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dichloropropene[1,1-]	0.01	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dichloropropene[cis-1,3-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dichloropropene[trans-1,3-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dieldrin	0.0032	U
54-1026	0554-95-0304	492-498	Qbt 1v	Diethylphthalate	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dimethyl phthalate	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dimethylphenol[2,4-]	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dinitro-2-methylphenol[4,6-]	0.83	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dinitrophenol[2,4-]	0.83	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dinitrotoluene[2,4-]	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Dinitrotoluene[2,6-]	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Endosulfan I	0.0017	U
54-1026	0554-95-0304	492-498	Qbt 1v	Endosulfan II	0.0032	U
54-1026	0554-95-0304	492-498	Qbt 1v	Endosulfan sulfate	0.0032	U
54-1026	0554-95-0304	492-498	Qbt 1v	Endrin	0.0032	U
54-1026	0554-95-0304	492-498	Qbt 1v	Endrin aldehyde	0.0032	U
54-1026	0554-95-0304	492-498	Qbt 1v	Endrin ketone	0.0032	U
54-1026	0554-95-0304	492-498	Qbt 1v	Ethylbenzene	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Fluoranthene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Fluorene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Heptachlor	0.0017	U
54-1026	0554-95-0304	492-498	Qbt 1v	Heptachlor epoxide	0.0017	U
54-1026	0554-95-0304	492-498	Qbt 1v	Hexachlorobenzene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Hexachlorobutadiene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Hexachlorocyclopentadiene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Hexachloroethane	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Hexanone[2-]	0.01	U
54-1026	0554-95-0304	492-498	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Iodomethane	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Isophorone	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Isopropylbenzene	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Isopropyltoluene[4-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Methoxychlor[4,4'-]	0.017	U
54-1026	0554-95-0304	492-498	Qbt 1v	Methyl-2-pentanone[4-]	0.01	U
54-1026	0554-95-0304	492-498	Qbt 1v	Methylene chloride	0.01	U
54-1026	0554-95-0304	492-498	Qbt 1v	Methylnaphthalene[2-]	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Methylphenol[2-]	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Methylphenol[4-]	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Naphthalene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Nitroaniline[2-]	0.83	U
54-1026	0554-95-0304	492-498	Qbt 1v	Nitroaniline[3-]	0.83	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0304	492-498	Qbt 1v	Nitroaniline[4-]	0.83	U
54-1026	0554-95-0304	492-498	Qbt 1v	Nitrobenzene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Nitrophenol[2-]	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Nitrophenol[4-]	0.83	U
54-1026	0554-95-0304	492-498	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Nitrosodimethylamine[N-]	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Nitrosodiphenylamine[N-]	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Pentachlorophenol	0.83	U
54-1026	0554-95-0304	492-498	Qbt 1v	Phenanthrene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Phenol	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Propylbenzene[1-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Pyrene	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Styrene	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.01	U
54-1026	0554-95-0304	492-498	Qbt 1v	Tetrachloroethene	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Toluene	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Toxaphene (technical grade)	0.17	U
54-1026	0554-95-0304	492-498	Qbt 1v	Trichlorobenzene[1,2,4-]	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Trichloroethane[1,1,1-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Trichloroethane[1,1,2-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Trichloroethene	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Trichlorofluoromethane	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Trichlorophenol[2,4,5-]	0.83	U
54-1026	0554-95-0304	492-498	Qbt 1v	Trichlorophenol[2,4,6-]	0.33	U
54-1026	0554-95-0304	492-498	Qbt 1v	Trichloropropane[1,2,3-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Trichlorotrifluoroethane	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Trimethylbenzene[1,2,4-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Trimethylbenzene[1,3,5-]	0.005	U
54-1026	0554-95-0304	492-498	Qbt 1v	Vinyl chloride	0.01	U
54-1026	0554-95-0304	492-498	Qbt 1v	Xylene (total)	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Acenaphthene	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Acenaphthylene	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Acetone	0.01	U
54-1026	0554-95-0306	558-576	Qbt 1v	Aldrin	0.0017	U
54-1026	0554-95-0306	558-576	Qbt 1v	Aniline	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Anthracene	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Aroclor-1016	0.033	U
54-1026	0554-95-0306	558-576	Qbt 1v	Aroclor-1221	0.066	U
54-1026	0554-95-0306	558-576	Qbt 1v	Aroclor-1232	0.033	U
54-1026	0554-95-0306	558-576	Qbt 1v	Aroclor-1242	0.033	U
54-1026	0554-95-0306	558-576	Qbt 1v	Aroclor-1248	0.033	U
54-1026	0554-95-0306	558-576	Qbt 1v	Aroclor-1254	0.033	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0306	558-576	Qbt 1v	Aroclor-1260	0.033	U
54-1026	0554-95-0306	558-576	Qbt 1v	Azobenzene	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Benzene	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Benzo(a)anthracene	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Benzo(a)pyrene	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Benzo(b)fluoranthene	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Benzo(g,h,i)perylene	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Benzo(k)fluoranthene	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Benzoic acid	0.81	U
54-1026	0554-95-0306	558-576	Qbt 1v	Benzyl alcohol	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	BHC[alpha-]	0.0017	U
54-1026	0554-95-0306	558-576	Qbt 1v	BHC[beta-]	0.0017	U
54-1026	0554-95-0306	558-576	Qbt 1v	BHC[delta-]	0.0017	U
54-1026	0554-95-0306	558-576	Qbt 1v	BHC[gamma-]	0.0017	U
54-1026	0554-95-0306	558-576	Qbt 1v	Bis(2-chloroethoxy)methane	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Bis(2-chloroethyl)ether	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.053	U
54-1026	0554-95-0306	558-576	Qbt 1v	Bromobenzene	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Bromodichloromethane	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Bromoform	0.01	U
54-1026	0554-95-0306	558-576	Qbt 1v	Bromomethane	0.01	U
54-1026	0554-95-0306	558-576	Qbt 1v	Bromophenyl-phenylether[4-]	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Butanone[2-]	0.01	U
54-1026	0554-95-0306	558-576	Qbt 1v	Butylbenzene[n-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Butylbenzene[sec-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Butylbenzene[tert-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Butylbenzylphthalate	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Carbon disulfide	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Carbon tetrachloride	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Chlordane[alpha-]	0.0017	U
54-1026	0554-95-0306	558-576	Qbt 1v	Chlordane[gamma-]	0.0017	U
54-1026	0554-95-0306	558-576	Qbt 1v	Chloro-3-methylphenol[4-]	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Chloroaniline[4-]	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Chlorobenzene	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Chlorodibromomethane	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Chloroethane	0.01	U
54-1026	0554-95-0306	558-576	Qbt 1v	Chloroform	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Chloromethane	0.01	U
54-1026	0554-95-0306	558-576	Qbt 1v	Chloronaphthalene[2-]	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Chlorophenol[2-]	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Chlorotoluene[2-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Chlorotoluene[4-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Chrysene	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0306	558-576	Qbt 1v	DDD[4,4'-]	0.0033	U
54-1026	0554-95-0306	558-576	Qbt 1v	DDE[4,4'-]	0.0033	U
54-1026	0554-95-0306	558-576	Qbt 1v	DDT[4,4'-]	0.0033	U
54-1026	0554-95-0306	558-576	Qbt 1v	Di-n-butylphthalate	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Di-n-octylphthalate	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dibenz(a,h)anthracene	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dibenzofuran	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dibromoethane[1,2-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dibromomethane	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dichlorobenzene[1,2-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dichlorobenzene[1,3-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dichlorobenzene[1,4-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dichlorobenzidine[3,3'-]	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dichlorodifluoromethane	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dichloroethane[1,1-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dichloroethane[1,2-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dichloroethene[1,1-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dichloroethene[cis-1,2-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dichloroethene[trans-1,2-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dichlorophenol[2,4-]	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dichloropropane[1,2-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dichloropropane[1,3-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dichloropropane[2,2-]	0.01	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dichloropropene[1,1-]	0.01	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dichloropropene[cis-1,3-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dichloropropene[trans-1,3-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dieldrin	0.0033	U
54-1026	0554-95-0306	558-576	Qbt 1v	Diethylphthalate	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dimethyl phthalate	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dimethylphenol[2,4-]	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dinitro-2-methylphenol[4,6-]	0.81	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dinitrophenol[2,4-]	0.81	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dinitrotoluene[2,4-]	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Dinitrotoluene[2,6-]	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Endosulfan I	0.0017	U
54-1026	0554-95-0306	558-576	Qbt 1v	Endosulfan II	0.0033	U
54-1026	0554-95-0306	558-576	Qbt 1v	Endosulfan sulfate	0.0033	U
54-1026	0554-95-0306	558-576	Qbt 1v	Endrin	0.0033	U
54-1026	0554-95-0306	558-576	Qbt 1v	Endrin aldehyde	0.0033	U
54-1026	0554-95-0306	558-576	Qbt 1v	Endrin ketone	0.0033	U
54-1026	0554-95-0306	558-576	Qbt 1v	Ethylbenzene	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Fluoranthene	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Fluorene	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0306	558-576	Qbt 1v	Heptachlor	0.0017	U
54-1026	0554-95-0306	558-576	Qbt 1v	Heptachlor epoxide	0.0017	U
54-1026	0554-95-0306	558-576	Qbt 1v	Hexachlorobenzene	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Hexachlorobutadiene	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Hexachlorocyclopentadiene	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Hexachloroethane	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Hexanone[2-]	0.01	U
54-1026	0554-95-0306	558-576	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Iodomethane	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Isophorone	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Isopropylbenzene	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Isopropyltoluene[4-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Methoxychlor[4,4'-]	0.017	U
54-1026	0554-95-0306	558-576	Qbt 1v	Methyl-2-pentanone[4-]	0.01	U
54-1026	0554-95-0306	558-576	Qbt 1v	Methylene chloride	0.01	U
54-1026	0554-95-0306	558-576	Qbt 1v	Methylnaphthalene[2-]	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Methylphenol[2-]	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Methylphenol[4-]	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Naphthalene	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Nitroaniline[2-]	0.81	U
54-1026	0554-95-0306	558-576	Qbt 1v	Nitroaniline[3-]	0.81	U
54-1026	0554-95-0306	558-576	Qbt 1v	Nitroaniline[4-]	0.81	U
54-1026	0554-95-0306	558-576	Qbt 1v	Nitrobenzene	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Nitrophenol[2-]	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Nitrophenol[4-]	0.81	U
54-1026	0554-95-0306	558-576	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Nitrosodimethylamine[N-]	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Nitrosodiphenylamine[N-]	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Pentachlorophenol	0.81	U
54-1026	0554-95-0306	558-576	Qbt 1v	Phenanthrene	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Phenol	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Propylbenzene[1-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Pyrene	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Styrene	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.01	U
54-1026	0554-95-0306	558-576	Qbt 1v	Tetrachloroethene	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Toluene	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Toxaphene (technical grade)	0.17	U
54-1026	0554-95-0306	558-576	Qbt 1v	Trichlorobenzene[1,2,4-]	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Trichloroethane[1,1,1-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Trichloroethane[1,1,2-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Trichloroethene	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0306	558-576	Qbt 1v	Trichlorofluoromethane	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Trichlorophenol[2,4,5-]	0.81	U
54-1026	0554-95-0306	558-576	Qbt 1v	Trichlorophenol[2,4,6-]	0.33	U
54-1026	0554-95-0306	558-576	Qbt 1v	Trichloropropane[1,2,3-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Trichlorotrifluoroethane	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Trimethylbenzene[1,2,4-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Trimethylbenzene[1,3,5-]	0.005	U
54-1026	0554-95-0306	558-576	Qbt 1v	Vinyl chloride	0.01	U
54-1026	0554-95-0306	558-576	Qbt 1v	Xylene (total)	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Acenaphthene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Acenaphthylene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Acetone	0.01	U
54-1026	0554-95-0308	696-720	Qbt 1v	Aldrin	0.0017	U
54-1026	0554-95-0308	696-720	Qbt 1v	Aniline	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Anthracene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Aroclor-1016	0.033	U
54-1026	0554-95-0308	696-720	Qbt 1v	Aroclor-1221	0.068	U
54-1026	0554-95-0308	696-720	Qbt 1v	Aroclor-1232	0.033	U
54-1026	0554-95-0308	696-720	Qbt 1v	Aroclor-1242	0.033	U
54-1026	0554-95-0308	696-720	Qbt 1v	Aroclor-1248	0.033	U
54-1026	0554-95-0308	696-720	Qbt 1v	Aroclor-1254	0.033	U
54-1026	0554-95-0308	696-720	Qbt 1v	Aroclor-1260	0.033	U
54-1026	0554-95-0308	696-720	Qbt 1v	Azobenzene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Benzene	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Benzo(a)anthracene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Benzo(a)pyrene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Benzo(b)fluoranthene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Benzo(g,h,i)perylene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Benzo(k)fluoranthene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Benzoic acid	0.81	U
54-1026	0554-95-0308	696-720	Qbt 1v	Benzyl alcohol	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	BHC[alpha-]	0.0017	U
54-1026	0554-95-0308	696-720	Qbt 1v	BHC[beta-]	0.0017	U
54-1026	0554-95-0308	696-720	Qbt 1v	BHC[delta-]	0.0017	U
54-1026	0554-95-0308	696-720	Qbt 1v	BHC[gamma-]	0.0017	U
54-1026	0554-95-0308	696-720	Qbt 1v	Bis(2-chloroethoxy)methane	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Bis(2-chloroethyl)ether	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.059	U
54-1026	0554-95-0308	696-720	Qbt 1v	Bromobenzene	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Bromodichloromethane	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Bromoform	0.01	U
54-1026	0554-95-0308	696-720	Qbt 1v	Bromomethane	0.01	U
54-1026	0554-95-0308	696-720	Qbt 1v	Bromophenyl-phenylether[4-]	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Butanone[2-]	0.01	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0308	696-720	Qbt 1v	Butylbenzene[n-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Butylbenzene[sec-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Butylbenzene[tert-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Butylbenzylphthalate	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Carbon disulfide	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Carbon tetrachloride	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Chlordane[alpha-]	0.0017	U
54-1026	0554-95-0308	696-720	Qbt 1v	Chlordane[gamma-]	0.0017	U
54-1026	0554-95-0308	696-720	Qbt 1v	Chloro-3-methylphenol[4-]	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Chloroaniline[4-]	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Chlorobenzene	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Chlorodibromomethane	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Chloroethane	0.01	U
54-1026	0554-95-0308	696-720	Qbt 1v	Chloroform	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Chloromethane	0.01	U
54-1026	0554-95-0308	696-720	Qbt 1v	Chloronaphthalene[2-]	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Chlorophenol[2-]	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Chlorotoluene[2-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Chlorotoluene[4-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Chrysene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	DDD[4,4'-]	0.0033	U
54-1026	0554-95-0308	696-720	Qbt 1v	DDE[4,4'-]	0.0033	U
54-1026	0554-95-0308	696-720	Qbt 1v	DDT[4,4'-]	0.0033	U
54-1026	0554-95-0308	696-720	Qbt 1v	Di-n-butylphthalate	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Di-n-octylphthalate	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dibenz(a,h)anthracene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dibenzofuran	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dibromoethane[1,2-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dibromomethane	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dichlorobenzene[1,2-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dichlorobenzene[1,3-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dichlorobenzene[1,4-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dichlorobenzidine[3,3'-]	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dichlorodifluoromethane	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dichloroethane[1,1-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dichloroethane[1,2-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dichloroethene[1,1-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dichloroethene[cis-1,2-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dichloroethene[trans-1,2-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dichlorophenol[2,4-]	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dichloropropane[1,2-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dichloropropane[1,3-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dichloropropane[2,2-]	0.01	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0308	696-720	Qbt 1v	Dichloropropene[1,1-]	0.01	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dichloropropene[cis-1,3-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dichloropropene[trans-1,3-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dieldrin	0.0033	U
54-1026	0554-95-0308	696-720	Qbt 1v	Diethylphthalate	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dimethyl phthalate	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dimethylphenol[2,4-]	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dinitro-2-methylphenol[4,6-]	0.81	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dinitrophenol[2,4-]	0.81	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dinitrotoluene[2,4-]	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Dinitrotoluene[2,6-]	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Endosulfan I	0.0017	U
54-1026	0554-95-0308	696-720	Qbt 1v	Endosulfan II	0.0033	U
54-1026	0554-95-0308	696-720	Qbt 1v	Endosulfan sulfate	0.0033	U
54-1026	0554-95-0308	696-720	Qbt 1v	Endrin	0.0033	U
54-1026	0554-95-0308	696-720	Qbt 1v	Endrin aldehyde	0.0033	U
54-1026	0554-95-0308	696-720	Qbt 1v	Endrin ketone	0.0033	U
54-1026	0554-95-0308	696-720	Qbt 1v	Ethylbenzene	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Fluoranthene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Fluorene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Heptachlor	0.0017	U
54-1026	0554-95-0308	696-720	Qbt 1v	Heptachlor epoxide	0.0017	U
54-1026	0554-95-0308	696-720	Qbt 1v	Hexachlorobenzene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Hexachlorobutadiene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Hexachlorocyclopentadiene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Hexachloroethane	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Hexanone[2-]	0.01	U
54-1026	0554-95-0308	696-720	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Iodomethane	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Isophorone	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Isopropylbenzene	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Isopropyltoluene[4-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Methoxychlor[4,4'-]	0.017	U
54-1026	0554-95-0308	696-720	Qbt 1v	Methyl-2-pentanone[4-]	0.01	U
54-1026	0554-95-0308	696-720	Qbt 1v	Methylene chloride	0.01	U
54-1026	0554-95-0308	696-720	Qbt 1v	Methylnaphthalene[2-]	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Methylphenol[2-]	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Methylphenol[4-]	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Naphthalene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Nitroaniline[2-]	0.81	U
54-1026	0554-95-0308	696-720	Qbt 1v	Nitroaniline[3-]	0.81	U
54-1026	0554-95-0308	696-720	Qbt 1v	Nitroaniline[4-]	0.81	U
54-1026	0554-95-0308	696-720	Qbt 1v	Nitrobenzene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Nitrophenol[2-]	0.32	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0308	696-720	Qbt 1v	Nitrophenol[4-]	0.81	U
54-1026	0554-95-0308	696-720	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Nitrosodimethylamine[N-]	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Nitrosodiphenylamine[N-]	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Pentachlorophenol	0.81	U
54-1026	0554-95-0308	696-720	Qbt 1v	Phenanthrene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Phenol	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Propylbenzene[1-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Pyrene	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Styrene	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.01	U
54-1026	0554-95-0308	696-720	Qbt 1v	Tetrachloroethene	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Toluene	0.002	J
54-1026	0554-95-0308	696-720	Qbt 1v	Toxaphene (technical grade)	0.17	U
54-1026	0554-95-0308	696-720	Qbt 1v	Trichlorobenzene[1,2,4-]	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Trichloroethane[1,1,1-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Trichloroethane[1,1,2-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Trichloroethene	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Trichlorofluoromethane	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Trichlorophenol[2,4,5-]	0.81	U
54-1026	0554-95-0308	696-720	Qbt 1v	Trichlorophenol[2,4,6-]	0.32	U
54-1026	0554-95-0308	696-720	Qbt 1v	Trichloropropane[1,2,3-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Trichlorotrifluoroethane	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Trimethylbenzene[1,2,4-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Trimethylbenzene[1,3,5-]	0.005	U
54-1026	0554-95-0308	696-720	Qbt 1v	Vinyl chloride	0.01	U
54-1026	0554-95-0308	696-720	Qbt 1v	Xylene (total)	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Acenaphthene	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Acenaphthylene	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Acetone	0.01	U
54-1026	0554-95-0310	798-816	Qbt 1v	Aldrin	0.0017	U
54-1026	0554-95-0310	798-816	Qbt 1v	Aniline	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Anthracene	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Aroclor-1016	0.032	U
54-1026	0554-95-0310	798-816	Qbt 1v	Aroclor-1221	0.066	U
54-1026	0554-95-0310	798-816	Qbt 1v	Aroclor-1232	0.032	U
54-1026	0554-95-0310	798-816	Qbt 1v	Aroclor-1242	0.032	U
54-1026	0554-95-0310	798-816	Qbt 1v	Aroclor-1248	0.032	U
54-1026	0554-95-0310	798-816	Qbt 1v	Aroclor-1254	0.032	U
54-1026	0554-95-0310	798-816	Qbt 1v	Aroclor-1260	0.032	U
54-1026	0554-95-0310	798-816	Qbt 1v	Azobenzene	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Benzene	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0310	798-816	Qbt 1v	Benzo(a)anthracene	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Benzo(a)pyrene	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Benzo(b)fluoranthene	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Benzo(g,h,i)perylene	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Benzo(k)fluoranthene	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Benzoic acid	0.82	U
54-1026	0554-95-0310	798-816	Qbt 1v	Benzyl alcohol	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	BHC[alpha-]	0.0017	U
54-1026	0554-95-0310	798-816	Qbt 1v	BHC[beta-]	0.0017	U
54-1026	0554-95-0310	798-816	Qbt 1v	BHC[delta-]	0.0017	U
54-1026	0554-95-0310	798-816	Qbt 1v	BHC[gamma-]	0.0017	U
54-1026	0554-95-0310	798-816	Qbt 1v	Bis(2-chloroethoxy)methane	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Bis(2-chloroethyl)ether	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.12	U
54-1026	0554-95-0310	798-816	Qbt 1v	Bromobenzene	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Bromodichloromethane	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Bromoform	0.01	U
54-1026	0554-95-0310	798-816	Qbt 1v	Bromomethane	0.01	U
54-1026	0554-95-0310	798-816	Qbt 1v	Bromophenyl-phenylether[4-]	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Butanone[2-]	0.01	U
54-1026	0554-95-0310	798-816	Qbt 1v	Butylbenzene[n-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Butylbenzene[sec-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Butylbenzene[tert-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Butylbenzylphthalate	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Carbon disulfide	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Carbon tetrachloride	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Chlordane[alpha-]	0.0017	U
54-1026	0554-95-0310	798-816	Qbt 1v	Chlordane[gamma-]	0.0017	U
54-1026	0554-95-0310	798-816	Qbt 1v	Chloro-3-methylphenol[4-]	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Chloroaniline[4-]	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Chlorobenzene	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Chlorodibromomethane	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Chloroethane	0.01	U
54-1026	0554-95-0310	798-816	Qbt 1v	Chloroform	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Chloromethane	0.01	U
54-1026	0554-95-0310	798-816	Qbt 1v	Chloronaphthalene[2-]	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Chlorophenol[2-]	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Chlorotoluene[2-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Chlorotoluene[4-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Chrysene	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	DDD[4,4'-]	0.0032	U
54-1026	0554-95-0310	798-816	Qbt 1v	DDE[4,4'-]	0.0032	U
54-1026	0554-95-0310	798-816	Qbt 1v	DDT[4,4'-]	0.0032	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0310	798-816	Qbt 1v	Di-n-butylphthalate	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Di-n-octylphthalate	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dibenz(a,h)anthracene	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dibenzofuran	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dibromoethane[1,2-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dibromomethane	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dichlorobenzene[1,2-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dichlorobenzene[1,3-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dichlorobenzene[1,4-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dichlorobenzidine[3,3'-]	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dichlorodifluoromethane	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dichloroethane[1,1-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dichloroethane[1,2-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dichloroethene[1,1-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dichloroethene[cis-1,2-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dichloroethene[trans-1,2-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dichlorophenol[2,4-]	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dichloropropane[1,2-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dichloropropane[1,3-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dichloropropane[2,2-]	0.01	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dichloropropene[1,1-]	0.01	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dichloropropene[cis-1,3-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dichloropropene[trans-1,3-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dieldrin	0.0032	U
54-1026	0554-95-0310	798-816	Qbt 1v	Diethylphthalate	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dimethyl phthalate	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dimethylphenol[2,4-]	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dinitro-2-methylphenol[4,6-]	0.82	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dinitrophenol[2,4-]	0.82	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dinitrotoluene[2,4-]	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Dinitrotoluene[2,6-]	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Endosulfan I	0.0017	U
54-1026	0554-95-0310	798-816	Qbt 1v	Endosulfan II	0.0032	U
54-1026	0554-95-0310	798-816	Qbt 1v	Endosulfan sulfate	0.0032	U
54-1026	0554-95-0310	798-816	Qbt 1v	Endrin	0.0032	U
54-1026	0554-95-0310	798-816	Qbt 1v	Endrin aldehyde	0.0032	U
54-1026	0554-95-0310	798-816	Qbt 1v	Endrin ketone	0.0032	U
54-1026	0554-95-0310	798-816	Qbt 1v	Ethylbenzene	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Fluoranthene	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Fluorene	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Heptachlor	0.0017	U
54-1026	0554-95-0310	798-816	Qbt 1v	Heptachlor epoxide	0.0017	U
54-1026	0554-95-0310	798-816	Qbt 1v	Hexachlorobenzene	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0310	798-816	Qbt 1v	Hexachlorobutadiene	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Hexachlorocyclopentadiene	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Hexachloroethane	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Hexanone[2-]	0.01	U
54-1026	0554-95-0310	798-816	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Iodomethane	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Isophorone	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Isopropylbenzene	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Isopropyltoluene[4-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Methoxychlor[4,4'-]	0.017	U
54-1026	0554-95-0310	798-816	Qbt 1v	Methyl-2-pentanone[4-]	0.01	U
54-1026	0554-95-0310	798-816	Qbt 1v	Methylene chloride	0.01	U
54-1026	0554-95-0310	798-816	Qbt 1v	Methylnaphthalene[2-]	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Methylphenol[2-]	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Methylphenol[4-]	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Naphthalene	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Nitroaniline[2-]	0.82	U
54-1026	0554-95-0310	798-816	Qbt 1v	Nitroaniline[3-]	0.82	U
54-1026	0554-95-0310	798-816	Qbt 1v	Nitroaniline[4-]	0.82	U
54-1026	0554-95-0310	798-816	Qbt 1v	Nitrobenzene	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Nitrophenol[2-]	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Nitrophenol[4-]	0.82	U
54-1026	0554-95-0310	798-816	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Nitrosodimethylamine[N-]	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Nitrosodiphenylamine[N-]	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Pentachlorophenol	0.82	U
54-1026	0554-95-0310	798-816	Qbt 1v	Phenanthrene	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Phenol	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Propylbenzene[1-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Pyrene	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Styrene	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.01	U
54-1026	0554-95-0310	798-816	Qbt 1v	Tetrachloroethene	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Toluene	0.001	J
54-1026	0554-95-0310	798-816	Qbt 1v	Toxaphene (technical grade)	0.17	U
54-1026	0554-95-0310	798-816	Qbt 1v	Trichlorobenzene[1,2,4-]	0.33	U
54-1026	0554-95-0310	798-816	Qbt 1v	Trichloroethane[1,1,1-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Trichloroethane[1,1,2-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Trichloroethene	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Trichlorofluoromethane	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Trichlorophenol[2,4,5-]	0.82	U
54-1026	0554-95-0310	798-816	Qbt 1v	Trichlorophenol[2,4,6-]	0.33	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0310	798-816	Qbt 1v	Trichloropropane[1,2,3-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Trichlorotrifluoroethane	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Trimethylbenzene[1,2,4-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Trimethylbenzene[1,3,5-]	0.005	U
54-1026	0554-95-0310	798-816	Qbt 1v	Vinyl chloride	0.01	U
54-1026	0554-95-0310	798-816	Qbt 1v	Xylene (total)	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Acenaphthene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Acenaphthylene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Acetone	0.011	None
54-1026	0554-95-0312	918-936	Qbt 1v	Aldrin	0.0016	U
54-1026	0554-95-0312	918-936	Qbt 1v	Aniline	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Anthracene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Aroclor-1016	0.032	U
54-1026	0554-95-0312	918-936	Qbt 1v	Aroclor-1221	0.065	U
54-1026	0554-95-0312	918-936	Qbt 1v	Aroclor-1232	0.032	U
54-1026	0554-95-0312	918-936	Qbt 1v	Aroclor-1242	0.032	U
54-1026	0554-95-0312	918-936	Qbt 1v	Aroclor-1248	0.032	U
54-1026	0554-95-0312	918-936	Qbt 1v	Aroclor-1254	0.032	U
54-1026	0554-95-0312	918-936	Qbt 1v	Aroclor-1260	0.032	U
54-1026	0554-95-0312	918-936	Qbt 1v	Azobenzene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Benzene	0.003	J
54-1026	0554-95-0312	918-936	Qbt 1v	Benzo(a)anthracene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Benzo(a)pyrene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Benzo(b)fluoranthene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Benzo(g,h,i)perylene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Benzo(k)fluoranthene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Benzoic acid	0.81	U
54-1026	0554-95-0312	918-936	Qbt 1v	Benzyl alcohol	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	BHC[alpha-]	0.0016	U
54-1026	0554-95-0312	918-936	Qbt 1v	BHC[beta-]	0.0016	U
54-1026	0554-95-0312	918-936	Qbt 1v	BHC[delta-]	0.0016	U
54-1026	0554-95-0312	918-936	Qbt 1v	BHC[gamma-]	0.0016	U
54-1026	0554-95-0312	918-936	Qbt 1v	Bis(2-chloroethoxy)methane	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Bis(2-chloroethyl)ether	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.15	U
54-1026	0554-95-0312	918-936	Qbt 1v	Bromobenzene	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Bromodichloromethane	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Bromoform	0.01	U
54-1026	0554-95-0312	918-936	Qbt 1v	Bromomethane	0.01	U
54-1026	0554-95-0312	918-936	Qbt 1v	Bromophenyl-phenylether[4-]	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Butanone[2-]	0.01	U
54-1026	0554-95-0312	918-936	Qbt 1v	Butylbenzene[n-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Butylbenzene[sec-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Butylbenzene[tert-]	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0312	918-936	Qbt 1v	Butylbenzylphthalate	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Carbon disulfide	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Carbon tetrachloride	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Chlordane[alpha-]	0.0016	U
54-1026	0554-95-0312	918-936	Qbt 1v	Chlordane[gamma-]	0.0016	U
54-1026	0554-95-0312	918-936	Qbt 1v	Chloro-3-methylphenol[4-]	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Chloroaniline[4-]	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Chlorobenzene	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Chlorodibromomethane	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Chloroethane	0.01	U
54-1026	0554-95-0312	918-936	Qbt 1v	Chloroform	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Chloromethane	0.01	U
54-1026	0554-95-0312	918-936	Qbt 1v	Chloronaphthalene[2-]	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Chlorophenol[2-]	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Chlorotoluene[2-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Chlorotoluene[4-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Chrysene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	DDD[4,4'-]	0.0032	U
54-1026	0554-95-0312	918-936	Qbt 1v	DDE[4,4'-]	0.0032	U
54-1026	0554-95-0312	918-936	Qbt 1v	DDT[4,4'-]	0.0032	U
54-1026	0554-95-0312	918-936	Qbt 1v	Di-n-butylphthalate	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Di-n-octylphthalate	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dibenz(a,h)anthracene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dibenzofuran	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dibromoethane[1,2-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dibromomethane	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dichlorobenzene[1,2-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dichlorobenzene[1,3-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dichlorobenzene[1,4-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dichlorobenzidine[3,3'-]	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dichlorodifluoromethane	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dichloroethane[1,1-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dichloroethane[1,2-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dichloroethene[1,1-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dichloroethene[cis-1,2-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dichloroethene[trans-1,2-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dichlorophenol[2,4-]	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dichloropropane[1,2-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dichloropropane[1,3-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dichloropropane[2,2-]	0.01	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dichloropropene[1,1-]	0.01	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dichloropropene[cis-1,3-]	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0312	918-936	Qbt 1v	Dichloropropene[trans-1,3-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dieldrin	0.0032	U
54-1026	0554-95-0312	918-936	Qbt 1v	Diethylphthalate	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dimethyl phthalate	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dimethylphenol[2,4-]	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dinitro-2-methylphenol[4,6-]	0.81	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dinitrophenol[2,4-]	0.81	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dinitrotoluene[2,4-]	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Dinitrotoluene[2,6-]	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Endosulfan I	0.0016	U
54-1026	0554-95-0312	918-936	Qbt 1v	Endosulfan II	0.0032	U
54-1026	0554-95-0312	918-936	Qbt 1v	Endosulfan sulfate	0.0032	U
54-1026	0554-95-0312	918-936	Qbt 1v	Endrin	0.0032	U
54-1026	0554-95-0312	918-936	Qbt 1v	Endrin aldehyde	0.0032	U
54-1026	0554-95-0312	918-936	Qbt 1v	Endrin ketone	0.0032	U
54-1026	0554-95-0312	918-936	Qbt 1v	Ethylbenzene	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Fluoranthene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Fluorene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Heptachlor	0.0016	U
54-1026	0554-95-0312	918-936	Qbt 1v	Heptachlor epoxide	0.0016	U
54-1026	0554-95-0312	918-936	Qbt 1v	Hexachlorobenzene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Hexachlorobutadiene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Hexachlorocyclopentadiene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Hexachloroethane	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Hexanone[2-]	0.01	U
54-1026	0554-95-0312	918-936	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Iodomethane	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Isophorone	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Isopropylbenzene	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Isopropyltoluene[4-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Methoxychlor[4,4'-]	0.016	U
54-1026	0554-95-0312	918-936	Qbt 1v	Methyl-2-pentanone[4-]	0.01	U
54-1026	0554-95-0312	918-936	Qbt 1v	Methylene chloride	0.01	U
54-1026	0554-95-0312	918-936	Qbt 1v	Methylnaphthalene[2-]	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Methylphenol[2-]	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Methylphenol[4-]	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Naphthalene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Nitroaniline[2-]	0.81	U
54-1026	0554-95-0312	918-936	Qbt 1v	Nitroaniline[3-]	0.81	U
54-1026	0554-95-0312	918-936	Qbt 1v	Nitroaniline[4-]	0.81	U
54-1026	0554-95-0312	918-936	Qbt 1v	Nitrobenzene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Nitrophenol[2-]	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Nitrophenol[4-]	0.81	U
54-1026	0554-95-0312	918-936	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.32	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0312	918-936	Qbt 1v	Nitrosodimethylamine[N-]	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Nitrosodiphenylamine[N-]	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Pentachlorophenol	0.81	U
54-1026	0554-95-0312	918-936	Qbt 1v	Phenanthrene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Phenol	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Propylbenzene[1-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Pyrene	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Styrene	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.01	U
54-1026	0554-95-0312	918-936	Qbt 1v	Tetrachloroethene	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Toluene	0.001	J
54-1026	0554-95-0312	918-936	Qbt 1v	Toxaphene (technical grade)	0.16	U
54-1026	0554-95-0312	918-936	Qbt 1v	Trichlorobenzene[1,2,4-]	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Trichloroethane[1,1,1-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Trichloroethane[1,1,2-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Trichloroethene	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Trichlorofluoromethane	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Trichlorophenol[2,4,5-]	0.81	U
54-1026	0554-95-0312	918-936	Qbt 1v	Trichlorophenol[2,4,6-]	0.32	U
54-1026	0554-95-0312	918-936	Qbt 1v	Trichloropropane[1,2,3-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Trichlorotrifluoroethane	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Trimethylbenzene[1,2,4-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Trimethylbenzene[1,3,5-]	0.005	U
54-1026	0554-95-0312	918-936	Qbt 1v	Vinyl chloride	0.01	U
54-1026	0554-95-0312	918-936	Qbt 1v	Xylene (total)	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Acenaphthene	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Acenaphthylene	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Acetone	0.01	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Aldrin	0.0017	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Aniline	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Anthracene	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Aroclor-1016	0.033	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Aroclor-1221	0.067	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Aroclor-1232	0.033	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Aroclor-1242	0.033	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Aroclor-1248	0.033	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Aroclor-1254	0.033	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Aroclor-1260	0.033	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Azobenzene	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Benzene	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Benzo(a)anthracene	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Benzo(a)pyrene	0.34	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0316	1068-1086	Qbt 1v	Benzo(b)fluoranthene	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Benzo(g,h,i)perylene	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Benzo(k)fluoranthene	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Benzoic acid	0.84	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Benzyl alcohol	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	BHC[alpha-]	0.0017	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	BHC[beta-]	0.0017	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	BHC[delta-]	0.0017	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	BHC[gamma-]	0.0017	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Bis(2-chloroethoxy)methane	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Bis(2-chloroethyl)ether	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Bis(2-ethylhexyl)phthalate	0.25	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Bromobenzene	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Bromodichloromethane	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Bromoform	0.01	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Bromomethane	0.01	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Bromophenyl-phenylether[4-]	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Butanone[2-]	0.01	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Butylbenzene[n-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Butylbenzene[sec-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Butylbenzene[tert-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Butylbenzylphthalate	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Carbon disulfide	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Carbon tetrachloride	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Chlordane[alpha-]	0.0017	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Chlordane[gamma-]	0.0017	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Chloro-3-methylphenol[4-]	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Chloroaniline[4-]	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Chlorobenzene	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Chlorodibromomethane	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Chloroethane	0.01	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Chloroform	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Chloromethane	0.01	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Chloronaphthalene[2-]	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Chlorophenol[2-]	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Chlorophenyl-phenyl[4-] ether	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Chlorotoluene[2-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Chlorotoluene[4-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Chrysene	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	DDD[4,4'-]	0.0033	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	DDE[4,4'-]	0.0033	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	DDT[4,4'-]	0.0033	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Di-n-butylphthalate	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Di-n-octylphthalate	0.34	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dibenz(a,h)anthracene	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dibenzofuran	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dibromo-3-chloropropane[1,2-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dibromoethane[1,2-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dibromomethane	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dichlorobenzene[1,2-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dichlorobenzene[1,3-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dichlorobenzene[1,4-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dichlorobenzidine[3,3'-]	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dichlorodifluoromethane	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dichloroethane[1,1-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dichloroethane[1,2-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dichloroethene[1,1-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dichloroethene[cis-1,2-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dichloroethene[trans-1,2-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dichlorophenol[2,4-]	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dichloropropane[1,2-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dichloropropane[1,3-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dichloropropane[2,2-]	0.01	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dichloropropene[1,1-]	0.01	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dichloropropene[cis-1,3-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dichloropropene[trans-1,3-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dieldrin	0.0033	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Diethylphthalate	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dimethyl phthalate	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dimethylphenol[2,4-]	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dinitro-2-methylphenol[4,6-]	0.84	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dinitrophenol[2,4-]	0.84	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dinitrotoluene[2,4-]	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Dinitrotoluene[2,6-]	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Endosulfan I	0.0017	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Endosulfan II	0.0033	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Endosulfan sulfate	0.0033	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Endrin	0.0033	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Endrin aldehyde	0.0033	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Endrin ketone	0.0033	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Ethylbenzene	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Fluoranthene	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Fluorene	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Heptachlor	0.0017	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Heptachlor epoxide	0.0017	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Hexachlorobenzene	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Hexachlorobutadiene	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Hexachlorocyclopentadiene	0.34	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0316	1068-1086	Qbt 1v	Hexachloroethane	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Hexanone[2-]	0.01	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Indeno(1,2,3-cd)pyrene	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Iodomethane	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Isophorone	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Isopropylbenzene	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Isopropyltoluene[4-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Methoxychlor[4,4'-]	0.017	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Methyl-2-pentanone[4-]	0.01	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Methylene chloride	0.01	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Methylnaphthalene[2-]	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Methylphenol[2-]	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Methylphenol[4-]	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Naphthalene	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Nitroaniline[2-]	0.84	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Nitroaniline[3-]	0.84	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Nitroaniline[4-]	0.84	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Nitrobenzene	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Nitrophenol[2-]	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Nitrophenol[4-]	0.84	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Nitroso-di-n-propylamine[N-]	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Nitrosodimethylamine[N-]	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Nitrosodiphenylamine[N-]	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Oxybis(1-chloropropane)[2,2'-]	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Pentachlorophenol	0.84	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Phenanthrene	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Phenol	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Propylbenzene[1-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Pyrene	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Styrene	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Tetrachloroethane[1,1,2,2-]	0.01	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Tetrachloroethene	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Toluene	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Toxaphene (technical grade)	0.17	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Trichlorobenzene[1,2,4-]	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Trichloroethane[1,1,1-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Trichloroethane[1,1,2-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Trichloroethene	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Trichlorofluoromethane	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Trichlorophenol[2,4,5-]	0.84	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Trichlorophenol[2,4,6-]	0.34	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Trichloropropane[1,2,3-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Trichlorotrifluoroethane	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0316	1068-1086	Qbt 1v	Trimethylbenzene[1,2,4-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Trimethylbenzene[1,3,5-]	0.005	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Vinyl chloride	0.01	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Xylene (total)	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Acenaphthene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Acenaphthylene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Acetone	0.01	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Aldrin	0.0017	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Aniline	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Anthracene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Aroclor-1016	0.034	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Aroclor-1221	0.068	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Aroclor-1232	0.034	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Aroclor-1242	0.034	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Aroclor-1248	0.034	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Aroclor-1254	0.034	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Aroclor-1260	0.034	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Azobenzene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Benzene	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Benzo(a)anthracene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Benzo(a)pyrene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Benzo(b)fluoranthene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Benzo(g,h,i)perylene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Benzo(k)fluoranthene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Benzoic acid	0.87	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Benzyl alcohol	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	BHC[alpha-]	0.0017	U
54-1026	0554-95-0318	108-110.4	Qbt 2	BHC[beta-]	0.0017	U
54-1026	0554-95-0318	108-110.4	Qbt 2	BHC[delta-]	0.0017	U
54-1026	0554-95-0318	108-110.4	Qbt 2	BHC[gamma-]	0.0017	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Bis(2-chloroethoxy)methane	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Bis(2-chloroethyl)ether	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Bis(2-ethylhexyl)phthalate	0.13	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Bromobenzene	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Bromodichloromethane	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Bromoform	0.011	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Bromomethane	0.011	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Bromophenyl-phenylether[4-]	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Butanone[2-]	0.011	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Butylbenzene[n-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Butylbenzene[sec-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Butylbenzene[tert-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Butylbenzylphthalate	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Carbon disulfide	0.005	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0318	108-110.4	Qbt 2	Carbon tetrachloride	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Chlordane[alpha-]	0.0017	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Chlordane[gamma-]	0.0017	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Chloro-3-methylphenol[4-]	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Chloroaniline[4-]	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Chlorobenzene	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Chlorodibromomethane	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Chloroethane	0.011	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Chloroform	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Chloromethane	0.011	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Chloronaphthalene[2-]	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Chlorophenol[2-]	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Chlorophenyl-phenyl[4-] ether	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Chlorotoluene[2-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Chlorotoluene[4-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Chrysene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	DDD[4,4'-]	0.0034	U
54-1026	0554-95-0318	108-110.4	Qbt 2	DDE[4,4'-]	0.0034	U
54-1026	0554-95-0318	108-110.4	Qbt 2	DDT[4,4'-]	0.0034	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Di-n-butylphthalate	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Di-n-octylphthalate	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dibenz(a,h)anthracene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dibenzofuran	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dibromo-3-chloropropane[1,2-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dibromoethane[1,2-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dibromomethane	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dichlorobenzene[1,2-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dichlorobenzene[1,3-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dichlorobenzene[1,4-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dichlorobenzidine[3,3'-]	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dichlorodifluoromethane	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dichloroethane[1,1-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dichloroethane[1,2-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dichloroethene[1,1-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dichloroethene[cis-1,2-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dichloroethene[trans-1,2-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dichlorophenol[2,4-]	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dichloropropane[1,2-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dichloropropane[1,3-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dichloropropane[2,2-]	0.011	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dichloropropene[1,1-]	0.011	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dichloropropene[cis-1,3-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dichloropropene[trans-1,3-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dieldrin	0.0034	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0318	108-110.4	Qbt 2	Diethylphthalate	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dimethyl phthalate	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dimethylphenol[2,4-]	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dinitro-2-methylphenol[4,6-]	0.87	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dinitrophenol[2,4-]	0.87	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dinitrotoluene[2,4-]	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Dinitrotoluene[2,6-]	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Endosulfan I	0.0017	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Endosulfan II	0.0034	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Endosulfan sulfate	0.0034	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Endrin	0.0034	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Endrin aldehyde	0.0034	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Endrin ketone	0.0034	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Ethylbenzene	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Fluoranthene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Fluorene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Heptachlor	0.0017	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Heptachlor epoxide	0.0017	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Hexachlorobenzene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Hexachlorobutadiene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Hexachlorocyclopentadiene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Hexachloroethane	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Hexanone[2-]	0.011	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Indeno(1,2,3-cd)pyrene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Iodomethane	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Isophorone	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Isopropylbenzene	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Isopropyltoluene[4-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Methoxychlor[4,4'-]	0.017	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Methyl-2-pentanone[4-]	0.011	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Methylene chloride	0.011	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Methylnaphthalene[2-]	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Methylphenol[2-]	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Methylphenol[4-]	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Naphthalene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Nitroaniline[2-]	0.87	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Nitroaniline[3-]	0.87	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Nitroaniline[4-]	0.87	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Nitrobenzene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Nitrophenol[2-]	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Nitrophenol[4-]	0.87	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Nitroso-di-n-propylamine[N-]	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Nitrosodimethylamine[N-]	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Nitrosodiphenylamine[N-]	0.35	U

Table D-2.0-5 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Results (mg/kg)	Qualifier
54-1026	0554-95-0318	108-110.4	Qbt 2	Oxybis(1-chloropropane)[2,2'-]	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Pentachlorophenol	0.87	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Phenanthrene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Phenol	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Propylbenzene[1-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Pyrene	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Styrene	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Tetrachloroethane[1,1,1,2-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Tetrachloroethane[1,1,2,2-]	0.011	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Tetrachloroethene	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Toluene	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Toxaphene (technical grade)	0.17	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Trichlorobenzene[1,2,4-]	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Trichloroethane[1,1,1-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Trichloroethane[1,1,2-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Trichloroethene	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Trichlorofluoromethane	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Trichlorophenol[2,4,5-]	0.87	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Trichlorophenol[2,4,6-]	0.35	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Trichloropropane[1,2,3-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Trichlorotrifluoroethane	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Trimethylbenzene[1,2,4-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Trimethylbenzene[1,3,5-]	0.005	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Vinyl chloride	0.011	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Xylene (total)	0.005	U

Table D-2.0-6
Radionuclide Analytical Data in Tuff at MDA H

Location	Sample ID	Depth (in.)	Media	Analyte	Results	Units	Qualifier
54-1023	0554-95-0282	114–116.4	Qbt 2	Americium-241	-0.0142	pCi/g	U
54-1023	0554-95-0284	186–204	Qbt 2	Americium-241	0.22	pCi/g	U
54-1023	0554-95-0286	324–342	Qbt 2	Americium-241	0.28	pCi/g	U
54-1023	0554-95-0288	444–462	Qbt 1v	Americium-241	0.23	pCi/g	U
54-1023	0554-95-0290	564–582	Qbt 1v	Americium-241	0.23	pCi/g	U
54-1023	0554-95-0292	684–702	Qbt 1v	Americium-241	0.14	pCi/g	U
54-1023	0554-95-0294	804–822	Qbt 1v	Americium-241	0.24	pCi/g	U
54-1023	0554-95-0298	990–1005.6	Qbt 1v	Americium-241	0.24	pCi/g	U
54-1026	0554-95-0300	198–217.2	Qbt 2	Americium-241	0.23	pCi/g	U
54-1026	0554-95-0302	318–336	Qbt 2	Americium-241	0.24	pCi/g	U
54-1026	0554-95-0304	492–498	Qbt 1v	Americium-241	0.11	pCi/g	U
54-1026	0554-95-0306	558–576	Qbt 1v	Americium-241	0.23	pCi/g	U
54-1026	0554-95-0308	696–720	Qbt 1v	Americium-241	0.23	pCi/g	U
54-1026	0554-95-0310	798–816	Qbt 1v	Americium-241	0.23	pCi/g	U
54-1026	0554-95-0312	918–936	Qbt 1v	Americium-241	0.23	pCi/g	U
54-1026	0554-95-0316	1068–1086	Qbt 1v	Americium-241	0.28	pCi/g	U
54-1026	0554-95-0318	108–110.4	Qbt 2	Americium-241	0.25	pCi/g	U
54-1024	0554-95-0321	108–110.4	Qbt 2	Americium-241	0.24	pCi/g	U
54-1024	0554-95-0323	222–240	Qbt 2	Americium-241	-0.038	pCi/g	U
54-1024	0554-95-0325	312–333.6	Qbt 2	Americium-241	-0.066	pCi/g	U
54-1024	0554-95-0327	432–453.6	Qbt 2	Americium-241	0.116	pCi/g	U
54-1024	0554-95-0329	612–630	Qbt 1v	Americium-241	0.37	pCi/g	U
54-1024	0554-95-0331	732–750	Qbt 1v	Americium-241	0.086	pCi/g	U
54-1024	0554-95-0333	852–873.6	Qbt 1v	Americium-241	-0.039	pCi/g	U
54-1024	0554-95-0337	1032–1053.6	Qbt 1v	Americium-241	0.217	pCi/g	U
54-1025	0554-95-0339	108–110.4	Qbt 2	Americium-241	-0.013	pCi/g	U
54-1025	0554-95-0341	204–225.6	Qbt 2	Americium-241	0.048	pCi/g	U
54-1025	0554-95-0343	336–354	Qbt 2	Americium-241	0.112	pCi/g	U
54-1025	0554-95-0345	492–510	Qbt 1v	Americium-241	-0.108	pCi/g	U
54-1025	0554-95-0347	612–632.4	Qbt 1v	Americium-241	0.087	pCi/g	U
54-1025	0554-95-0349	732–753.6	Qbt 1v	Americium-241	-0.01	pCi/g	U
54-1025	0554-95-0351	852–861.6	Qbt 1v	Americium-241	0.003	pCi/g	U
54-1025	0554-95-0355	1032–1080	Qbt 1v	Americium-241	-0.015	pCi/g	U
54-1025*	0554-95-0356	1032–1080	Qbt 1v	Americium-241	0.064	pCi/g	U
54-1023	0554-95-0284	186–204	Qbt 2	Cesium-134	0.14	pCi/g	U
54-1023	0554-95-0286	324–342	Qbt 2	Cesium-134	0.13	pCi/g	U
54-1023	0554-95-0288	444–462	Qbt 1v	Cesium-134	0.1	pCi/g	U
54-1023	0554-95-0290	564–582	Qbt 1v	Cesium-134	0.08	pCi/g	U
54-1023	0554-95-0292	684–702	Qbt 1v	Cesium-134	0.11	pCi/g	U
54-1023	0554-95-0294	804–822	Qbt 1v	Cesium-134	0.09	pCi/g	U
54-1023	0554-95-0298	990–1005.6	Qbt 1v	Cesium-134	0.07	pCi/g	U
54-1026	0554-95-0300	198–217.2	Qbt 2	Cesium-134	0.11	pCi/g	U

*Field duplicate.

Table D-2.0-6 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Result	Units	Qualifier
54-1026	0554-95-0302	318-336	Qbt 2	Cesium-134	0.11	pCi/g	U
54-1026	0554-95-0304	492-498	Qbt 1v	Cesium-134	0.1	pCi/g	U
54-1026	0554-95-0306	558-576	Qbt 1v	Cesium-134	0.11	pCi/g	U
54-1026	0554-95-0308	696-720	Qbt 1v	Cesium-134	0.1	pCi/g	U
54-1026	0554-95-0310	798-816	Qbt 1v	Cesium-134	0.11	pCi/g	U
54-1026	0554-95-0312	918-936	Qbt 1v	Cesium-134	0.11	pCi/g	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Cesium-134	0.12	pCi/g	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Cesium-134	0.12	pCi/g	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Cesium-134	0.05	pCi/g	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Cesium-137	0.0079	pCi/g	U
54-1023	0554-95-0284	186-204	Qbt 2	Cesium-137	0.1	pCi/g	U
54-1023	0554-95-0286	324-342	Qbt 2	Cesium-137	0.09	pCi/g	U
54-1023	0554-95-0288	444-462	Qbt 1v	Cesium-137	0.09	pCi/g	U
54-1023	0554-95-0290	564-582	Qbt 1v	Cesium-137	0.04	pCi/g	U
54-1023	0554-95-0292	684-702	Qbt 1v	Cesium-137	0.08	pCi/g	U
54-1023	0554-95-0294	804-822	Qbt 1v	Cesium-137	0.1	pCi/g	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Cesium-137	0.08	pCi/g	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Cesium-137	0.09	pCi/g	U
54-1026	0554-95-0302	318-336	Qbt 2	Cesium-137	0.1	pCi/g	U
54-1026	0554-95-0304	492-498	Qbt 1v	Cesium-137	0.07	pCi/g	U
54-1026	0554-95-0306	558-576	Qbt 1v	Cesium-137	0.08	pCi/g	U
54-1026	0554-95-0308	696-720	Qbt 1v	Cesium-137	0.08	pCi/g	U
54-1026	0554-95-0310	798-816	Qbt 1v	Cesium-137	0.07	pCi/g	U
54-1026	0554-95-0312	918-936	Qbt 1v	Cesium-137	0.09	pCi/g	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Cesium-137	0.06	pCi/g	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Cesium-137	0.1	pCi/g	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Cesium-137	0.09	pCi/g	U
54-1024	0554-95-0323	222-240	Qbt 2	Cesium-137	0.001	pCi/g	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Cesium-137	-0.027	pCi/g	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Cesium-137	-0.032	pCi/g	U
54-1024	0554-95-0329	612-630	Qbt 1v	Cesium-137	-0.029	pCi/g	U
54-1024	0554-95-0331	732-750	Qbt 1v	Cesium-137	0.022	pCi/g	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Cesium-137	-0.007	pCi/g	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Cesium-137	-0.026	pCi/g	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Cesium-137	0.007	pCi/g	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Cesium-137	0.004	pCi/g	U
54-1025	0554-95-0343	336-354	Qbt 2	Cesium-137	0.002	pCi/g	U
54-1025	0554-95-0345	492-510	Qbt 1v	Cesium-137	-0.005	pCi/g	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Cesium-137	0.003	pCi/g	U
54-1025	0554-95-0349	732-753.6	Qbt 1v	Cesium-137	-0.005	pCi/g	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Cesium-137	-0.013	pCi/g	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Cesium-137	-0.008	pCi/g	U
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Cesium-137	-0.03	pCi/g	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Cobalt-60	0.006	pCi/g	U

*Field duplicate.

Table D-2.0-6 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Result	Units	Qualifier
54-1023	0554-95-0284	186-204	Qbt 2	Cobalt-60	0.09	pCi/g	U
54-1023	0554-95-0286	324-342	Qbt 2	Cobalt-60	0.05	pCi/g	U
54-1023	0554-95-0288	444-462	Qbt 1v	Cobalt-60	0.06	pCi/g	U
54-1023	0554-95-0290	564-582	Qbt 1v	Cobalt-60	0.08	pCi/g	U
54-1023	0554-95-0292	684-702	Qbt 1v	Cobalt-60	0.06	pCi/g	U
54-1023	0554-95-0294	804-822	Qbt 1v	Cobalt-60	0.06	pCi/g	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Cobalt-60	0.08	pCi/g	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Cobalt-60	0.08	pCi/g	U
54-1026	0554-95-0302	318-336	Qbt 2	Cobalt-60	0.08	pCi/g	U
54-1026	0554-95-0304	492-498	Qbt 1v	Cobalt-60	0.07	pCi/g	U
54-1026	0554-95-0306	558-576	Qbt 1v	Cobalt-60	0.06	pCi/g	U
54-1026	0554-95-0308	696-720	Qbt 1v	Cobalt-60	0.05	pCi/g	U
54-1026	0554-95-0310	798-816	Qbt 1v	Cobalt-60	0.08	pCi/g	U
54-1026	0554-95-0312	918-936	Qbt 1v	Cobalt-60	0.08	pCi/g	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Cobalt-60	0.06	pCi/g	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Cobalt-60	0.05	pCi/g	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Cobalt-60	0.04	pCi/g	U
54-1024	0554-95-0323	222-240	Qbt 2	Cobalt-60	-0.008	pCi/g	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Cobalt-60	-0.013	pCi/g	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Cobalt-60	-0.028	pCi/g	U
54-1024	0554-95-0329	612-630	Qbt 1v	Cobalt-60	-0.013	pCi/g	U
54-1024	0554-95-0331	732-750	Qbt 1v	Cobalt-60	0.025	pCi/g	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Cobalt-60	-0.005	pCi/g	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Cobalt-60	-0.026	pCi/g	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Cobalt-60	-0.03	pCi/g	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Cobalt-60	0.008	pCi/g	U
54-1025	0554-95-0343	336-354	Qbt 2	Cobalt-60	0.008	pCi/g	U
54-1025	0554-95-0345	492-510	Qbt 1v	Cobalt-60	0.041	pCi/g	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Cobalt-60	-0.017	pCi/g	U
54-1025	0554-95-0349	732-753.6	Qbt 1v	Cobalt-60	-0.008	pCi/g	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Cobalt-60	0.002	pCi/g	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Cobalt-60	0.012	pCi/g	U
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Cobalt-60	0.011	pCi/g	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Europium-152	0.105	pCi/g	U
54-1024	0554-95-0323	222-240	Qbt 2	Europium-152	0.196	pCi/g	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Europium-152	0.204	pCi/g	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Europium-152	0.093	pCi/g	U
54-1024	0554-95-0329	612-630	Qbt 1v	Europium-152	0.139	pCi/g	U
54-1024	0554-95-0331	732-750	Qbt 1v	Europium-152	0.187	pCi/g	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Europium-152	0.128	pCi/g	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Europium-152	-0.07	pCi/g	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Europium-152	0.207	pCi/g	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Europium-152	0.122	pCi/g	U
54-1025	0554-95-0343	336-354	Qbt 2	Europium-152	0.157	pCi/g	U

*Field duplicate.

Table D-2.0-6 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Result	Units	Qualifier
54-1025	0554-95-0345	492-510	Qbt 1v	Europium-152	0.168	pCi/g	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Europium-152	0.054	pCi/g	U
54-1025	0554-95-0349	732-753.6	Qbt 1v	Europium-152	0.144	pCi/g	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Europium-152	0.232	pCi/g	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Europium-152	0.191	pCi/g	U
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Europium-152	0.26	pCi/g	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Ruthenium-106	-0.086	pCi/g	U
54-1023	0554-95-0284	186-204	Qbt 2	Ruthenium-106	0.39	pCi/g	U
54-1023	0554-95-0286	324-342	Qbt 2	Ruthenium-106	0.48	pCi/g	U
54-1023	0554-95-0288	444-462	Qbt 1v	Ruthenium-106	0.47	pCi/g	U
54-1023	0554-95-0290	564-582	Qbt 1v	Ruthenium-106	0.55	pCi/g	U
54-1023	0554-95-0292	684-702	Qbt 1v	Ruthenium-106	0.22	pCi/g	U
54-1023	0554-95-0294	804-822	Qbt 1v	Ruthenium-106	0.67	pCi/g	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Ruthenium-106	0.56	pCi/g	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Ruthenium-106	0.46	pCi/g	U
54-1026	0554-95-0302	318-336	Qbt 2	Ruthenium-106	0.5	pCi/g	U
54-1026	0554-95-0304	492-498	Qbt 1v	Ruthenium-106	0.33	pCi/g	U
54-1026	0554-95-0306	558-576	Qbt 1v	Ruthenium-106	0.22	pCi/g	U
54-1026	0554-95-0308	696-720	Qbt 1v	Ruthenium-106	0.46	pCi/g	U
54-1026	0554-95-0310	798-816	Qbt 1v	Ruthenium-106	0.5	pCi/g	U
54-1026	0554-95-0312	918-936	Qbt 1v	Ruthenium-106	0.36	pCi/g	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Ruthenium-106	0.63	pCi/g	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Ruthenium-106	0.65	pCi/g	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Ruthenium-106	0.62	pCi/g	U
54-1024	0554-95-0323	222-240	Qbt 2	Ruthenium-106	-0.058	pCi/g	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Ruthenium-106	0.171	pCi/g	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Ruthenium-106	-0.035	pCi/g	U
54-1024	0554-95-0329	612-630	Qbt 1v	Ruthenium-106	0.136	pCi/g	U
54-1024	0554-95-0331	732-750	Qbt 1v	Ruthenium-106	-0.029	pCi/g	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Ruthenium-106	-0.439	pCi/g	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Ruthenium-106	-0.105	pCi/g	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Ruthenium-106	-0.234	pCi/g	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Ruthenium-106	-0.136	pCi/g	U
54-1025	0554-95-0343	336-354	Qbt 2	Ruthenium-106	0.091	pCi/g	U
54-1025	0554-95-0345	492-510	Qbt 1v	Ruthenium-106	0.298	pCi/g	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Ruthenium-106	0.118	pCi/g	U
54-1025	0554-95-0349	732-753.6	Qbt 1v	Ruthenium-106	-0.18	pCi/g	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Ruthenium-106	-0.0312	pCi/g	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Ruthenium-106	0.142	pCi/g	U
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Ruthenium-106	-0.128	pCi/g	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Sodium-22	-0.0518	pCi/g	U
54-1023	0554-95-0284	186-204	Qbt 2	Sodium-22	0.03	pCi/g	U
54-1023	0554-95-0286	324-342	Qbt 2	Sodium-22	0.05	pCi/g	U

*Field duplicate.

Table D-2.0-6 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Result	Units	Qualifier
54-1023	0554-95-0288	444-462	Qbt 1v	Sodium-22	0.03	pCi/g	U
54-1023	0554-95-0290	564-582	Qbt 1v	Sodium-22	0.06	pCi/g	U
54-1023	0554-95-0292	684-702	Qbt 1v	Sodium-22	0.05	pCi/g	U
54-1023	0554-95-0294	804-822	Qbt 1v	Sodium-22	0.05	pCi/g	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Sodium-22	0.04	pCi/g	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Sodium-22	0.08	pCi/g	U
54-1026	0554-95-0302	318-336	Qbt 2	Sodium-22	0.07	pCi/g	U
54-1026	0554-95-0304	492-498	Qbt 1v	Sodium-22	0.03	pCi/g	U
54-1026	0554-95-0306	558-576	Qbt 1v	Sodium-22	0.05	pCi/g	U
54-1026	0554-95-0308	696-720	Qbt 1v	Sodium-22	0.04	pCi/g	U
54-1026	0554-95-0310	798-816	Qbt 1v	Sodium-22	0.05	pCi/g	U
54-1026	0554-95-0312	918-936	Qbt 1v	Sodium-22	0.05	pCi/g	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Sodium-22	0.03	pCi/g	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Sodium-22	0.04	pCi/g	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Sodium-22	0.06	pCi/g	U
54-1024	0554-95-0323	222-240	Qbt 2	Sodium-22	0.007	pCi/g	U
54-1024	0554-95-0325	312-333.6	Qbt 2	Sodium-22	0.006	pCi/g	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Sodium-22	-0.012	pCi/g	U
54-1024	0554-95-0329	612-630	Qbt 1v	Sodium-22	-0.013	pCi/g	U
54-1024	0554-95-0331	732-750	Qbt 1v	Sodium-22	-0.005	pCi/g	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Sodium-22	0.003	pCi/g	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Sodium-22	-0.01	pCi/g	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Sodium-22	0.015	pCi/g	U
54-1025	0554-95-0341	204-225.6	Qbt 2	Sodium-22	-0.005	pCi/g	U
54-1025	0554-95-0343	336-354	Qbt 2	Sodium-22	-0.016	pCi/g	U
54-1025	0554-95-0345	492-510	Qbt 1v	Sodium-22	-0.036	pCi/g	U
54-1025	0554-95-0347	612-632.4	Qbt 1v	Sodium-22	0.003	pCi/g	U
54-1025	0554-95-0349	732-753.6	Qbt 1v	Sodium-22	-0.008	pCi/g	U
54-1025	0554-95-0351	852-861.6	Qbt 1v	Sodium-22	0.008	pCi/g	U
54-1025	0554-95-0355	1032-1080	Qbt 1v	Sodium-22	-0.005	pCi/g	U
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Sodium-22	0.01	pCi/g	U
54-1023	0554-95-0282	114-116.4	Qbt 2	Tritium	5890.00	pCi/mL	None
54-1023	0554-95-0284	186-204	Qbt 2	Tritium	37926.99	pCi/mL	None
54-1023	0554-95-0286	324-342	Qbt 2	Tritium	44535.00	pCi/mL	None
54-1023	0554-95-0288	444-462	Qbt 1v	Tritium	38409.00	pCi/mL	None
54-1023	0554-95-0290	564-582	Qbt 1v	Tritium	22450.00	pCi/mL	None
54-1023	0554-95-0292	684-702	Qbt 1v	Tritium	12005.00	pCi/mL	None
54-1023	0554-95-0294	804-822	Qbt 1v	Tritium	6644.00	pCi/mL	None
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Tritium	988.30	pCi/mL	None
54-1026	0554-95-0300	198-217.2	Qbt 2	Tritium	19.80	pCi/mL	U
54-1026	0554-95-0302	318-336	Qbt 2	Tritium	194.30	pCi/mL	U
54-1026	0554-95-0304	492-498	Qbt 1v	Tritium	428.60	pCi/mL	None
54-1026	0554-95-0306	558-576	Qbt 1v	Tritium	696.80	pCi/mL	None

*Field duplicate.

Table D-2.0-6 (continued)

Location	Sample ID	Depth (in.)	Media	Analyte	Result	Units	Qualifier
54-1026	0554-95-0308	696-720	Qbt 1v	Tritium	588.80	pCi/mL	None
54-1026	0554-95-0310	798-816	Qbt 1v	Tritium	440.40	pCi/mL	None
54-1026	0554-95-0312	918-936	Qbt 1v	Tritium	238.20	pCi/mL	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Tritium	32.00	pCi/mL	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Tritium	1.34	pCi/mL	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Tritium	319.70	pCi/mL	None
54-1024	0554-95-0323	222-240	Qbt 2	Tritium	3660.00	pCi/mL	None
54-1024	0554-95-0325	312-333.6	Qbt 2	Tritium	1260.00	pCi/mL	U
54-1024	0554-95-0327	432-453.6	Qbt 2	Tritium	27100	pCi/mL	U
54-1024	0554-95-0329	612-630	Qbt 1v	Tritium	103000	pCi/mL	U
54-1024	0554-95-0331	732-750	Qbt 1v	Tritium	197000	pCi/mL	U
54-1024	0554-95-0333	852-873.6	Qbt 1v	Tritium	34300	pCi/mL	U
54-1024	0554-95-0337	1032-1053.6	Qbt 1v	Tritium	620	pCi/mL	U
54-1025	0554-95-0339	108-110.4	Qbt 2	Tritium	276.00	pCi/mL	None
54-1025	0554-95-0341	204-225.6	Qbt 2	Tritium	16000.00	pCi/mL	None
54-1025	0554-95-0343	336-354	Qbt 2	Tritium	110000.02	pCi/mL	None
54-1025	0554-95-0345	492-510	Qbt 1v	Tritium	330999.95	pCi/mL	None
54-1025	0554-95-0347	612-632.4	Qbt 1v	Tritium	776999.89	pCi/mL	None
54-1025	0554-95-0349	732-753.6	Qbt 1v	Tritium	283999.99	pCi/mL	None
54-1025	0554-95-0351	852-861.6	Qbt 1v	Tritium	32200.00	pCi/mL	None
54-1025	0554-95-0355	1032-1080	Qbt 1v	Tritium	253.00	pCi/mL	None
54-1025*	0554-95-0356	1032-1080	Qbt 1v	Tritium	1350.00	pCi/mL	None
54-1023	0554-95-0284	186-204	Qbt 2	Uranium-235	0.13	pCi/g	U
54-1023	0554-95-0286	324-342	Qbt 2	Uranium-235	0.11	pCi/g	U
54-1023	0554-95-0288	444-462	Qbt 1v	Uranium-235	0.12	pCi/g	U
54-1023	0554-95-0290	564-582	Qbt 1v	Uranium-235	0.13	pCi/g	U
54-1023	0554-95-0292	684-702	Qbt 1v	Uranium-235	0.12	pCi/g	U
54-1023	0554-95-0294	804-822	Qbt 1v	Uranium-235	0.12	pCi/g	U
54-1023	0554-95-0298	990-1005.6	Qbt 1v	Uranium-235	0.11	pCi/g	U
54-1026	0554-95-0300	198-217.2	Qbt 2	Uranium-235	0.12	pCi/g	U
54-1026	0554-95-0302	318-336	Qbt 2	Uranium-235	0.11	pCi/g	U
54-1026	0554-95-0304	492-498	Qbt 1v	Uranium-235	0.11	pCi/g	U
54-1026	0554-95-0306	558-576	Qbt 1v	Uranium-235	0.11	pCi/g	U
54-1026	0554-95-0308	696-720	Qbt 1v	Uranium-235	0.12	pCi/g	U
54-1026	0554-95-0310	798-816	Qbt 1v	Uranium-235	0.12	pCi/g	U
54-1026	0554-95-0312	918-936	Qbt 1v	Uranium-235	0.12	pCi/g	U
54-1026	0554-95-0316	1068-1086	Qbt 1v	Uranium-235	0.13	pCi/g	U
54-1026	0554-95-0318	108-110.4	Qbt 2	Uranium-235	0.13	pCi/g	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Uranium-235	0.12	pCi/g	U
54-1024	0554-95-0321	108-110.4	Qbt 2	Uranium-235	0.12	pCi/g	U

*Field duplicate.

REFERENCES

The following list includes all references cited in this appendix. Parenthetical information following each reference provides the author, publication date, and the ER record identification (ID) number. This information also is included in the citations in the text. ER ID numbers are assigned by the Laboratory's ER Project to track records associated with the Project. These numbers can be used to locate copies of the actual documents at the ER Project's Records Processing Facility and, where applicable, with the ER Project reference library titles "Reference Set for Material Disposal Areas, Technical Area 54."

Copies of the reference library are maintained at the NMED Hazardous Waste Bureau; the DOE Los Alamos Area Office; United States EPA, Region VI; and the ER Project Material Disposal Areas Focus Area. This library is a living collection of documents that was developed to ensure that the administrative authority has all the necessary material to review the decisions and actions proposed in this document. However, documents previously submitted to the administrative authority are not included.

LANL (Los Alamos National Laboratory), July 1993. "Health and Environmental Chemistry: Analytical Techniques, Data Management, and Quality Assurance," Los Alamos National Laboratory report LA-10300-M, Volumes I through IV, Los Alamos, New Mexico. (LANL 1993, 31793, 31794, 31795, and 31796)

LANL (Los Alamos National Laboratory), July 1995. "Statement of Work—Analytical Support," Revision 2, RFP No. 9-XS1-Q4257, Los Alamos, New Mexico. (LANL 1995, 49738)

LANL (Los Alamos National Laboratory), December 1996. "Installation Work Plan for Environmental Restoration," Revision 6, Los Alamos National Laboratory report LA-UR-96-4629, Los Alamos, New Mexico. (LANL 1996, 55574)

Appendix E

*Statistical Results for Chemical Analytical Data
from Material Disposal Area H*

APPENDIX E STATISTICAL RESULTS FOR CHEMICAL ANALYTICAL DATA FROM MATERIAL DISPOSAL AREA H

E-1.0 INTRODUCTION

This appendix provides detailed statistical evaluations that support Section 2.3.4 (data review); Section 3.1 (nature and extent); and Section 4.0 (site assessments). To support the data review and nature and extent sections, the statistical analyses include summary statistics, exploratory data analyses, and background comparisons. Statistical methods are described below. The plots and evaluation results are presented in Section E-3.0. Separate sections are presented for media, which include channel sediments and subsurface tuff. Constituents include inorganic chemicals (metals and cyanide), radionuclides, and organic chemicals (volatile organic compounds [VOCs], semivolatile organic compounds [SVOCs], polychlorinated biphenyls [PCBs], and pesticides).

E-2.0 OVERVIEW OF STATISTICAL METHODS

A variety of statistical methods may be applied to each of the data sets. The use of any of these methods depends on how appropriate the method is for the available data.

E-2.1 Summary Statistics

Summary statistics are calculated and presented in tables. For values reported as detected, summary statistics include minimum and maximum reported concentrations to provide the range of the data. The median and arithmetic average concentrations are also provided to give some indication of the central tendency and skew of the concentration distribution. For data sets containing values reported as nondetects, the summary table includes the minimum and maximum reported detection limits (DLs) or estimated quantitation limits (EQLs).

E-2.2 Exploratory Data Analyses

Graphical analyses include box plots and borehole profile plots. These analyses provide a visual representation of the data and determine the presence of outliers or other anomalous data that might affect statistical results and interpretations. The plots allow a visual comparison among concentration distributions. The differences of interest may include an overall shift in concentration (shift of central location) or, when the centers are nearly equal, a difference between the upper tails of the two distributions (elevated concentrations in a small fraction of one distribution). The plots may be used in conjunction with the statistical tests (distributional comparisons) described below. Unless otherwise noted, the nondetects are included in plots at their reported DL or EQL.

Box Plots. A box plot consists of a box, a line across the box, whiskers (lines extended beyond the box and terminated with a short perpendicular line), and points outside the whiskers. The box area of the plot is the region between the 25th percentile and the 75th percentile of the data, the interquartile range or middle half of the data. The horizontal line within the box represents the median (50th percentile) of the data. The whiskers give an interval of 1.5 times the interquartile range, outside of which data may be evaluated for their potential to be outliers. When box plots are presented from more than two groups, the box representing the baseline or background set is the leftmost box, and the remaining boxes, unless otherwise noted, are arranged in ascending order by group medians. Often, the concentrations are plotted as points overlaying the box plot. When a data set contains both detected concentrations and nondetected results reported as DLs, the detected concentrations are plotted as x's, and the nondetected results are plotted as o's.

Borehole Profile Plots. Borehole profile plots depict the concentration results by depth in boreholes. They are used to evaluate evidence of release from the disposal structure associated with a given borehole and to determine if the extent of any contamination has been bounded (decreasing trend). The filled circles represent detects, the open circles represent nondetects, and the dotted line represents the background value (BV).

E-2.3 Distributional Comparisons

Comparisons between data sets that might represent different concentration distributions, such as site-specific data and Los Alamos National Laboratory (Laboratory) background data, are performed using a variety of statistical methods. For background comparisons, these methods begin with a simple comparison of site-specific data with an upper tolerance limit (UTL) estimated from the background data (UTL [95,95] or the 95% upper confidence bound on the 95th quantile). UTLs are used to represent the upper end of concentration distribution and are also referred to as BVs. UTL comparisons are followed, when appropriate, by statistical tests that evaluate potential differences between the distributions. These tests are used for testing hypotheses about data from two potentially different distributions, e.g., a test of the hypothesis that site concentrations are elevated above background levels. Nonparametric tests that are most commonly performed include the two-sample Wilcoxon Rank Sum test (Wilcoxon test), the Gehan test (modification of the Wilcoxon test), and the quantile test (Gehan 1965, 55611; Gilbert and Simpson 1990, 55612). The Gehan test is best suited for assessing complete shifts in distributions. This test accounts for nondetects at multiple DLs in a statistically robust manner. If there are no nondetects in the data, the Gehan test is equivalent to the Wilcoxon test. The quantile test is better suited for assessing shifts of a subset of the data¹. Between the two tests (Gehan and quantile), most types of differences between distributions can be identified. Occasionally, if the differences between two distributions appear to occur far into the tails, the slippage test might be performed. This test evaluates the potential for some of the site data to be greater than the maximum BV if, in fact, the site data and background data came from the same distribution. If the data reasonably satisfy normality assumptions, as demonstrated with the exploratory data analysis², and there are relatively few nondetects, then a parametric t-test can be used to compare two distributions. Observed significance levels (p-values) are obtained from the Gehan, quantile, slippage, and/or t-tests. If a p-value is much less than a specified probability, e.g., 0.05 (a nominal significance level), then there is some reason to suspect that there is a difference between the distributions. If the p-value is much greater than 0.05, no difference is indicated. If the p-value is close to 0.05, then the need for further evaluation is indicated. In particular, when many tests are performed on the same set of data, there is an increased possibility of observing a p-value of less than 0.05 by random chance alone. Adjustments to the nominal significance level can be considered using methods described in Box et al. (1978, 56653, pp.203–207) and Keppel (1982, 56652, pp. 145-165).

For analytes that are rarely detected in Laboratory background (e.g., mercury, antimony, and thallium in soil samples), an increased detection rate at the site may provide evidence of a release. The chi-square goodness-of-fit test can be used to check for differences in proportions from data sets that fall into given categories. Categorizing proportions from data sets on the basis of two attributes and testing for a difference is also referred to as a test for independence of attributes. For example, this test can be used to test whether the attribute of detection rate (proportion of detected results out of the total analyses

¹ The quantile test is performed at a specified quantile level, usually 80%. This threshold is established to determine if the relative proportion of the two populations being tested is different in the top 20% of the data than it is in the remainder of the data. If this difference is recognized, then there is reason to believe that the distributions are partially shifted because of different tail effects. However, this implies that this test cannot be performed if more than 80% (or the threshold percentage) of the combined data are nondetects.

² Formal tests for normality might also be performed, such as the Kolmogorov-Smirnov test (Gilbert 1987, 56179).

performed) is the same in the site data set and the background data set (attribute of membership in the category of site or background data sets). If these proportions are not significantly different, the detection rate attribute is independent of the categorization into background versus site sets (Box et al. 1978, 56653, pp. 145-150; Hollander and Wolfe 1999, 68418, pp. 473-475). This test on detection rates is inappropriate when the two data sets were not analyzed with similar methods or do not have similar DLs. When sample sizes or detection rates at a site are small (e.g., no detects were observed), the rate can be evaluated using binomial probability. Under the assumption that the detection rate (proportion of detects, p) in Laboratory background is the true population rate, the probability of the observed rate at the site can be calculated using a binomial probability as follows. The probability of observing x detects out of n samples given p is the true detection rate and is $(n!/x!(n-x)!)p^x(1-p)^{n-x}$, where $!$ is the notation for factorial, e.g., $n! = n*(n-1)*(n-2)*...*3*2*1$ and $0! = 1$.

The standard set of tests is run whenever the detection rate for both Material Disposal Area (MDA) H and Laboratory background is greater than 50%; if there are fewer than 50% in either set, then the Gehan test is not applicable.

E-3.0 STATISTICAL RESULTS

MDA H Resource Conservation and Recovery Act facility investigation (RFI) data include sediment samples and subsurface tuff samples from four borehole locations. The locations of the disposal shafts and the sampling locations are shown in Figure 2.2-1, Section 2.

E-3.1 Sediment Sample Results

MDA H has a single primary drainage channel that runs to the southeast. An on-site geomorphic analysis of the channel determined the locations of depositional areas (e.g., low areas, behind obstructions); eight sample locations were selected within these depositional areas. All samples were field screened for alpha, beta, and gamma radiation to determine sample selection for laboratory analysis. The sample with the highest gross gamma level and three other samples were shipped to a contract laboratory for analysis of target analyte list (TAL) metals, cyanide, PCBs, pesticides, and radionuclides. The four sample locations sent for contract laboratory analysis are indicated in Figure 2.2-1, Section 2. One sample location (54-5126) was in an area where water ponds near the southeast corner of MDA H, two sample locations (54-5130 and 54-5131) were at small depositional areas for coarse sediment (field notes describe the sample media as sand/gravel), and one sample location (54-5132) was along the sandy bed of a tributary into Pajarito Canyon.

E-3.1.1 Inorganic Chemicals

Inorganic chemical concentrations were compared with Laboratory-wide BVs for canyon sediments (Ryti et al. 1998, 59730). The inorganic chemicals are summarized in Table E-3.1-1.

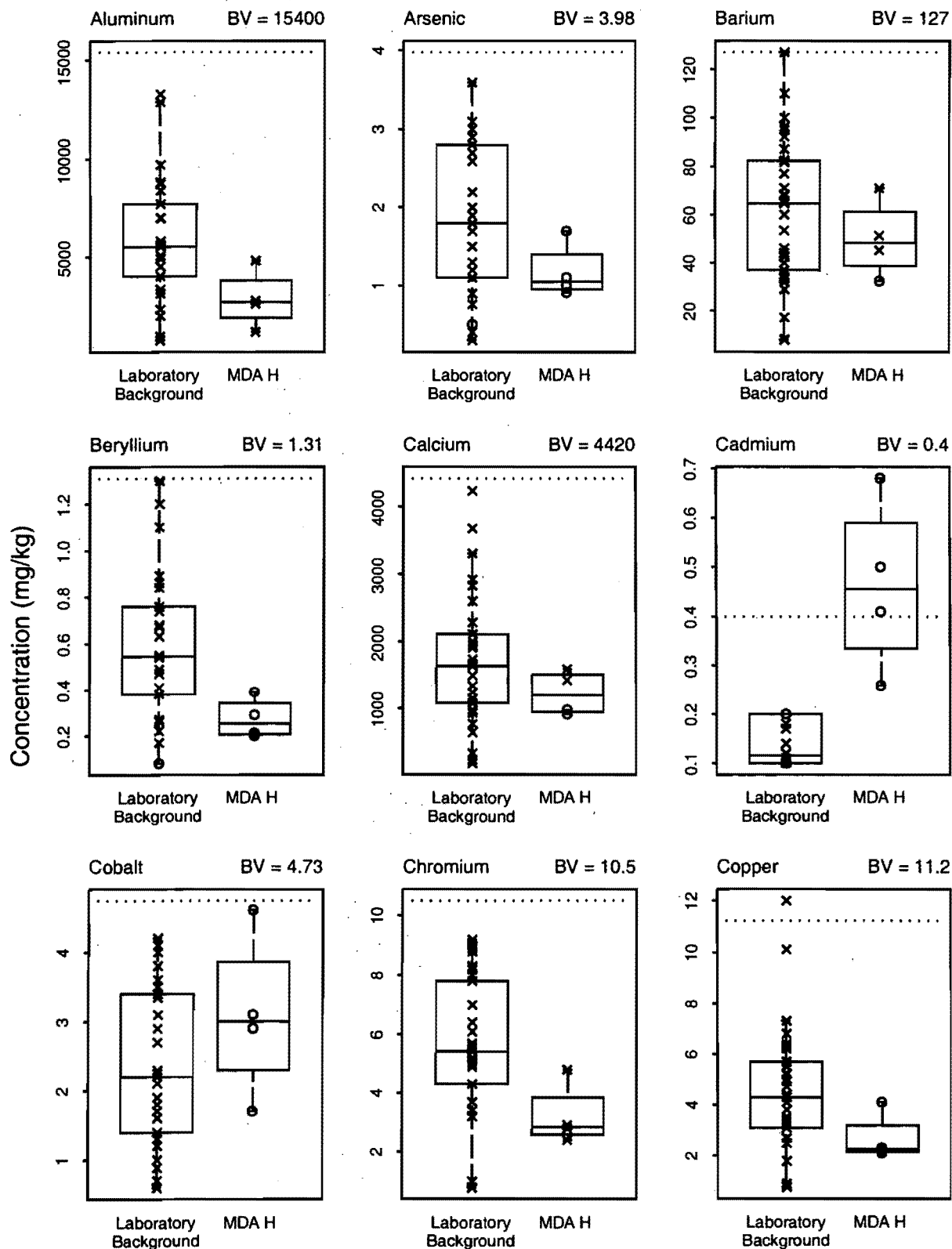
The distribution of concentrations (and DLs for nondetects) and the distribution of concentrations from the canyon sediments background data set are presented in Figure E-3.1-1. The figures show that the distributions of concentrations for most inorganic chemicals are no larger than the distribution of background concentrations. For most analytes, there are no results above the Laboratory-wide sediment BVs, and the distributions appear to be shifted lower than the Laboratory background distribution. The only exceptions, lead, selenium, and cadmium, are discussed below.

Table E-3.1-1
Summary of Inorganic Chemical Analyses of MDA H Channel Sediment Samples

Analyte	Number of Samples	Nondetects			Detects					BV Comparison		
		Number of Samples	Minimum DL	Maximum DL	Number of Samples	Minimum	Median	Mean	Maximum	Sediment BV	DL Greater than BV	Detects Greater than BV
Aluminum	4	0	n/a*	n/a	4	1140	2675	2822	4800	15400	0	0
Antimony	4	4	0.2	0.2	0	n/a	n/a	n/a	n/a	0.83	0	0
Arsenic	4	4	0.91	1.7	0	n/a	n/a	n/a	n/a	3.98	0	0
Barium	4	1	32.4	32.4	3	45.2	51.3	55.83	71	127	0	0
Beryllium	4	4	0.2	0.39	0	n/a	n/a	n/a	n/a	1.31	0	0
Boron	4	4	1.6	1.6	0	n/a	n/a	n/a	n/a	None	n/a	n/a
Cadmium	4	4	0.26	0.68	0	n/a	n/a	n/a	n/a	0.4	3	0
Calcium	4	2	912	976	2	1430	1510	1510	1590	4420	0	0
Chromium	4	0	n/a	n/a	4	2.4	2.85	3.225	4.8	10.5	0	0
Cobalt	4	4	1.7	4.6	0	n/a	n/a	n/a	n/a	4.73	0	0
Copper	4	4	2.1	4.1	0	n/a	n/a	n/a	n/a	11.2	0	0
Cyanide	4	4	0.2	0.28	0	n/a	n/a	n/a	n/a	0.5	0	0
Iron	4	0	n/a	n/a	4	3690	3900	4345	5890	13800	0	0
Lead	4	0	n/a	n/a	4	13.1	17.6	17.4	21.3	19.7	0	2
Magnesium	4	4	513	948	0	n/a	n/a	n/a	n/a	2370	0	0
Manganese	4	0	n/a	n/a	4	116	206.5	207.2	300	543	0	0
Mercury	4	4	0.02	0.02	0	n/a	n/a	n/a	n/a	0.1	0	0
Molybdenum	4	4	5.2	5.3	0	n/a	n/a	n/a	n/a	None	n/a	n/a
Nickel	4	4	1.2	2.9	0	n/a	n/a	n/a	n/a	9.38	0	0
Potassium	4	4	195	723	0	n/a	n/a	n/a	n/a	2690	0	0
Selenium	4	4	0.6	0.61	0	n/a	n/a	n/a	n/a	0.3	4	0
Silver	4	4	0.6	0.61	0	n/a	n/a	n/a	n/a	1	0	0
Sodium	4	4	28.7	67.5	0	n/a	n/a	n/a	n/a	1470	0	0
Thallium	4	4	0.2	0.2	0	n/a	n/a	n/a	n/a	0.73	0	0
Vanadium	4	3	6.7	7.1	1	11.2	11.2	11.2	11.2	19.7	0	0
Zinc	4	0	n/a	n/a	4	0.2	17.4	17.57	35.3	60.2	0	0

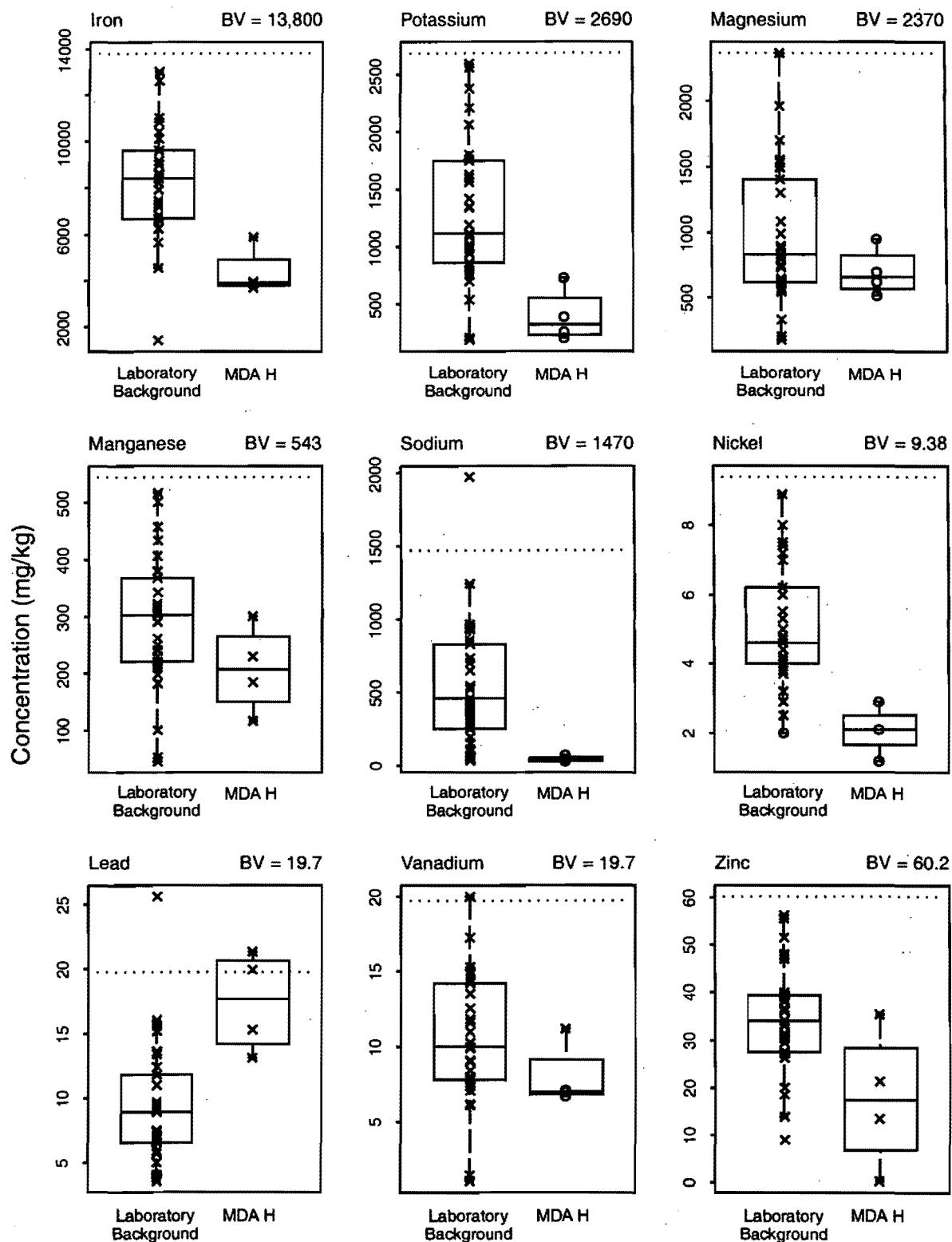
Note: All concentrations are in mg/kg.

- n/a = not applicable.



FE-3.1-1a/TA-54 RFI RPT/052301/RLM

Figure E-3.1-1. Box plots of inorganic chemical concentrations from channel sediments at MDA H and from canyons sediments in Laboratory background



FE-3.1-1b/TA-54 RFI RPT/052301/RLM

Figure E-3.1-1 (continued).

Box plots of inorganic chemical concentrations from channel sediments at MDA H and from canyons sediments in Laboratory background

Lead was detected above the Laboratory-wide sediment BV in the two coarse sediment (sand/gravel) samples (sample locations 54-5130 and 54-5131). Background comparison tests were not conducted because too few samples were collected. However, a box plot (Figure E-3.1-1) illustrates that the range of values in the two data sets are similar. Therefore, lead is not a chemical of potential concern (COPC) at MDA H. Cadmium was reported below the DL (i.e., not detected) in all channel sediment samples. However, the analytical DLs for three of the four samples exceed the cadmium sediment BV. Therefore, cadmium is retained as a COPC. Selenium was reported below the DL (i.e., not detected) in all channel sediment samples. The DLs were larger than the BV. Therefore, selenium is retained as a COPC.

E-3.1.2 Radionuclides

The channel sediment samples were analyzed for radionuclides. The detected radioactivity concentrations for americium-241, cesium-137, tritium, plutonium-238, plutonium-239, and strontium-90 were compared with sediment fallout values (FVs) (Table E-3.1-2). The isotopes in the uranium and thorium decay chains were compared with sediment and soil BVs for these naturally occurring radiochemicals. The fallout concentrations and BVs are listed in the Laboratory background document (Ryti et al. 1998, 59730).

Table E-3.1-2
Summary of Radionuclide Analyses of MDA H Channel Sediment Samples

Analyte	Number of Samples	Nondetects			Detects					BV Comparison	
		Number of Samples	Minimum DL	Maximum DL	Number of Samples	Minimum	Median	Mean	Maximum	Sediment FV/BV	Detects Greater Than FV/BV
Fallout Radionuclides											
Americium-241	4	0	n/a*	n/a	4	0.003	0.0045	0.005	0.008	0.04	0
Cesium-137	4	2	0.08	0.11	2	0.3	0.39	0.39	0.48	0.9	0
Tritium	4	0	n/a	n/a	4	0.004	0.009	0.03325	0.111	0.093	1
Plutonium-238	4	0	n/a	n/a	4	0.001	0.0015	0.00175	0.003	0.006	0
Plutonium-239	4	0	n/a	n/a	4	0.001	0.0025	0.00575	0.017	0.068	0
Strontium-90	4	0	n/a	n/a	4	-0.02	0.005	0.0325	0.14	1.04	0
Natural Radionuclides											
Radium-226	4	3	0.25	0.41	1	1.23	1.23	1.23	1.23	2.59	0
Thorium-228	4	0	n/a	n/a	4	0.84	1.055	1.042	1.22	2.28	0
Thorium-230	4	0	n/a	n/a	4	0.76	0.925	0.955	1.21	2.29	0
Thorium-232	4	0	n/a	n/a	4	0.87	1.105	1.095	1.3	2.33	0
Uranium-234	4	0	n/a	n/a	4	0.71	0.88	0.9525	1.34	2.59	0
Uranium-235	4	0	n/a	n/a	4	0.05	0.06	0.0625	0.08	0.2	0
Uranium-238	4	0	n/a	n/a	4	0.77	1.025	1.045	1.36	2.29	0

Note: All concentrations are in pCi/g.

* n/a = not applicable.

Only tritium was reported as detected above its sediment FV. The detected activity concentration for tritium (0.111 pCi/g) in one channel sediment sample marginally exceeded the associated sediment FV (0.093 pCi/g). Statistical background comparison tests were not conducted because too few samples were collected. Tritium was retained as a COPC.

E-3.1.3 Organic Chemicals

The four channel sediment samples were analyzed for pesticides and PCBs. Only one organic chemical (methoxychlor) was reported at trace concentrations. Methoxychlor was detected in two of four samples at concentrations of 0.036 mg/kg (sample location 54-5130) and 0.04 mg/kg (sample location 54-5132); the reported concentrations are approximately double the sample EQL (0.017 mg/kg). Methoxychlor is retained as a COPC. A summary of the organic chemical suite is listed in Table E-3.1-3.

Table E-3.1-3
Summary of Organic Chemical Analyses of MDA H Channel Sediment Samples

Pesticide/PCB	Number of Samples	Nondetects			Detects				
		Number of Samples	Minimum DL	Maximum DL	Number of Samples	Minimum	Median	Mean	Maximum
Aroclor-1016	4	4	0.033	0.033	0	n/a*	n/a	n/a	n/a
Aroclor-1221	4	4	0.067	0.068	0	n/a	n/a	n/a	n/a
Aroclor-1232	4	4	0.033	0.033	0	n/a	n/a	n/a	n/a
Aroclor-1242	4	4	0.033	0.033	0	n/a	n/a	n/a	n/a
Aroclor-1248	4	4	0.033	0.033	0	n/a	n/a	n/a	n/a
Aroclor-1254	4	4	0.033	0.033	0	n/a	n/a	n/a	n/a
Aroclor-1260	4	4	0.033	0.033	0	n/a	n/a	n/a	n/a
Aldrin	4	4	0.0017	0.0017	0	n/a	n/a	n/a	n/a
BHC [alpha-]	4	4	0.0017	0.0017	0	n/a	n/a	n/a	n/a
BHC [beta-]	4	4	0.0017	0.0017	0	n/a	n/a	n/a	n/a
BHC [delta-]	4	4	0.0017	0.0017	0	n/a	n/a	n/a	n/a
Chlordane [alpha-]	4	4	0.0017	0.0017	0	n/a	n/a	n/a	n/a
Chlordane [gamma-]	4	4	0.0017	0.0017	0	n/a	n/a	n/a	n/a
DDD [p,p']	4	4	0.0033	0.0033	0	n/a	n/a	n/a	n/a
DDE [p,p']	4	4	0.0033	0.0033	0	n/a	n/a	n/a	n/a
DDT [p,p']	4	4	0.0033	0.0033	0	n/a	n/a	n/a	n/a
Dieldrin	4	4	0.0033	0.0033	0	n/a	n/a	n/a	n/a
Endosulfan I	4	4	0.0017	0.0017	0	n/a	n/a	n/a	n/a
Endosulfan II	4	4	0.0033	0.0033	0	n/a	n/a	n/a	n/a
Endosulfan sulfate	4	4	0.0033	0.0033	0	n/a	n/a	n/a	n/a
Endrin	4	4	0.0033	0.0033	0	n/a	n/a	n/a	n/a
Endrin aldehyde	4	4	0.0033	0.0033	0	n/a	n/a	n/a	n/a
Endrin ketone	4	4	0.0033	0.0033	0	n/a	n/a	n/a	n/a
Heptachlor	4	4	0.0017	0.0017	0	n/a	n/a	n/a	n/a
Heptachlor epoxide	4	4	0.0017	0.0017	0	n/a	n/a	n/a	n/a
Lindane	4	4	0.0017	0.0017	0	n/a	n/a	n/a	n/a
Methoxychlor	4	2	0.017	0.017	2	0.036	0.038	0.038	0.04
Toxaphene	4	4	0.171	0.172	0	n/a	n/a	n/a	n/a

Note: All concentrations are in mg/kg.

* n/a = not applicable.

E-3.2 Subsurface Tuff

Four vertical boreholes were drilled in the immediate vicinity of the nine inactive disposal shafts (Figure 2.2-1, Section 2). From these boreholes, 33 core tuff samples were collected for fixed laboratory analyses, 13 from unit 2 Tshirege Member (Qbt 2) and 20 from the unit 1v Tshirege Member (Qbt 1v). One field duplicate from Qbt 1v was collected for quality assurance/quality control purposes to evaluate the variability of the analytical chemistry results. The samples were analyzed for TAL metals and cyanide, pesticides/PCBs, SVOCs, VOCs, tritium, and gamma-emitting radionuclides.

E-3.2.1 Inorganic Chemicals

Inorganic chemical results for samples collected from the Qbt 2 unit were compared with the BVs for upper Qbt units (Qbt 2, Qbt 3, Qbt 4), and samples collected from the Qbt 1v unit were compared with Qbt 1v BVs (Ryti et al. 1998, 59730). The data are summarized in Table E-3.2-1.

Table E-3.2-1
Summary of Inorganic Chemical Analyses from MDA H Subsurface Tuff Units

Analyte	Unit	Number of Samples	Nondetects			Detects					BV Comparison		
			Number of Samples	Minimum DL	Maximum DL	Number of Samples	Minimum	Median	Mean	Maximum	Unit BV	DL Greater than BV	Detects Greater than BV
Aluminum	Qbt 2	13	0	n/a*	n/a	13	187	756	1093	3140	7340	0	0
	Qbt 1v	20	0	n/a	n/a	20	167	240	454.9	2570	8170	0	0
Antimony	Qbt 2	13	11	0.1	4.93	2	0.39	0.48	0.48	0.57	0.5	3	1
	Qbt 1v	20	20	0.1	5.04	0	n/a	n/a	n/a	n/a	0.5	4	0
Arsenic	Qbt 2	13	9	0.198	0.93	4	1	1.15	1.35	2.1	2.79	0	0
	Qbt 1v	20	12	0.192	0.31	8	0.309	1.05	0.9436	1.8	1.81	0	0
Barium	Qbt 2	13	0	n/a	n/a	13	2.8	6.4	7.306	18	46	0	0
	Qbt 1v	20	0	n/a	n/a	20	1.7	4.4	4.755	10.7	26.5	0	0
Beryllium	Qbt 2	13	4	0.08	0.493	9	0.13	0.22	0.2556	0.44	1.21	0	0
	Qbt 1v	20	4	0.49	0.504	16	0.1	0.185	0.2038	0.49	1.7	0	0
Cadmium	Qbt 2	13	12	0.02	0.493	1	0.25	0.25	0.25	0.25	1.63	0	0
	Qbt 1v	20	18	0.02	0.504	2	0.25	0.385	0.385	0.52	0.4	4	1
Calcium	Qbt 2	13	0	n/a	n/a	13	155	470	487.2	776	2200	0	0
	Qbt 1v	20	0	n/a	n/a	20	202	509.5	496.6	754	3700	0	0
Chromium	Qbt 2	13	4	0.3	0.987	9	0.57	1.9	3.027	7	7.14	0	0
	Qbt 1v	20	8	0.3	1.01	12	0.32	0.775	0.9517	3	2.24	0	1
Cobalt	Qbt 2	13	5	0.4	0.987	8	0.14	0.605	0.7462	1.8	3.14	0	0
	Qbt 1v	20	15	0.4	1.01	5	0.14	0.26	0.284	0.43	1.78	0	0
Copper	Qbt 2	13	4	0.5	1.35	9	0.82	1.1	12.09	35.4	4.66	0	4
	Qbt 1v	20	5	0.5	1.33	15	0.37	0.78	0.8547	1.7	3.26	0	0
Cyanide	Qbt 2	12	12	0.15	1.01	0	n/a	n/a	n/a	n/a	0.5	2	0
	Qbt 1v	20	20	0.15	1.02	0	n/a	n/a	n/a	n/a	0.5	4	0

Table E-3.2-1 (continued)

Analyte	Unit	Number of Samples	Nondetects			Detects					BV Comparison		
			Number of Samples	Minimum DL	Maximum DL	Number of Samples	Minimum	Median	Mean	Maximum	Unit BV	DL Greater than BV	Detects Greater than BV
Iron	Qbt 2	13	0	n/a	n/a	13	685	1570	2125	4650	14500	0	0
	Qbt 1v	20	0	n/a	n/a	20	250	1450	1960	5330	9900	0	0
Lead	Qbt 2	13	0	n/a	n/a	13	1.3	2.4	3.918	16.2	11.2	0	1
	Qbt 1v	20	0	n/a	n/a	20	1.02	1.75	3.413	27.2	18.4	0	1
Magnesium	Qbt 2	13	0	n/a	n/a	13	27.8	97.6	134.1	400	1690	0	0
	Qbt 1v	20	0	n/a	n/a	20	26.7	56.2	79.92	321	780	0	0
Manganese	Qbt 2	13	0	n/a	n/a	13	49.6	93.9	106.7	212	482	0	0
	Qbt 1v	20	0	n/a	n/a	20	44.8	97.75	110.4	238	408	0	0
Mercury	Qbt 2	13	13	0.02	0.1	0	n/a	n/a	n/a	n/a	0.1	0	0
	Qbt 1v	20	17	0.02	0.07	3	0.06	0.06	0.0633	0.07	0.1	0	0
Nickel	Qbt 2	13	5	0.6	1.48	8	0.96	2.55	3.083	6	6.58	0	0
	Qbt 1v	20	15	0.6	1.51	5	0.62	1	1.052	1.9	2	0	0
Potassium	Qbt 2	13	1	90	90	12	92.1	190.5	364	871	3500	0	0
	Qbt 1v	20	5	89.9	92.1	15	98.4	153	159.4	271	6670	0	0
Selenium	Qbt 2	13	12	0.2	0.95	3	0.27	0.27	0.27	0.27	0.3	5	0
	Qbt 1v	20	19	0.2	0.46	1	0.31	0.31	0.31	0.31	0.3	5	1
Silver	Qbt 2	13	13	0.1	1.3	0	n/a	n/a	n/a	n/a	1	1	0
	Qbt 1v	20	19	0.1	0.504	1	0.712	0.712	0.712	0.712	1	0	0
Sodium	Qbt 2	13	0	n/a	n/a	13	64.9	272	323.5	776	2770	0	0
	Qbt 1v	20	0	n/a	n/a	20	78.9	136	171.1	382	6330	0	0
Thallium	Qbt 2	13	12	0.1	0.48	1	1.7	1.7	1.7	1.7	1.1	0	1
	Qbt 1v	20	20	0.1	0.5	0	n/a	n/a	n/a	n/a	1.24	0	0
Vanadium	Qbt 2	13	1	0.987	0.987	12	0.94	1.4	1.777	3.8	17	0	0
	Qbt 1v	20	4	0.98	1.01	16	0.7	1.55	1.586	3.3	4.48	0	0
Zinc	Qbt 2	13	0	n/a	n/a	13	8.39	15.5	19.54	32.5	63.5	0	0
	Qbt 1v	20	0	n/a	n/a	20	6.98	18.85	22.73	45	84.6	0	0

Note: All concentrations are in mg/kg.

* n/a = not applicable.

All inorganic chemical analytes identified in the BV comparison as having one or more detected concentrations (or DLs for nondetected chemicals) above BVs are presented in Figures E-3.2-1 and E-3.2-2. These figures show the profile or pattern of analytical concentrations by depth (below ground surface) within the individual boreholes. Detected concentrations (filled circles) and DLs for nondetects (open circles) are plotted, and unit-specific BVs are shown as dotted lines. These profiles are used to identify patterns that might be associated with a release. Evidence for such a release would be the detection of concentrations greater than BVs at two or more consecutive depths rather than at sporadic depths across boreholes.

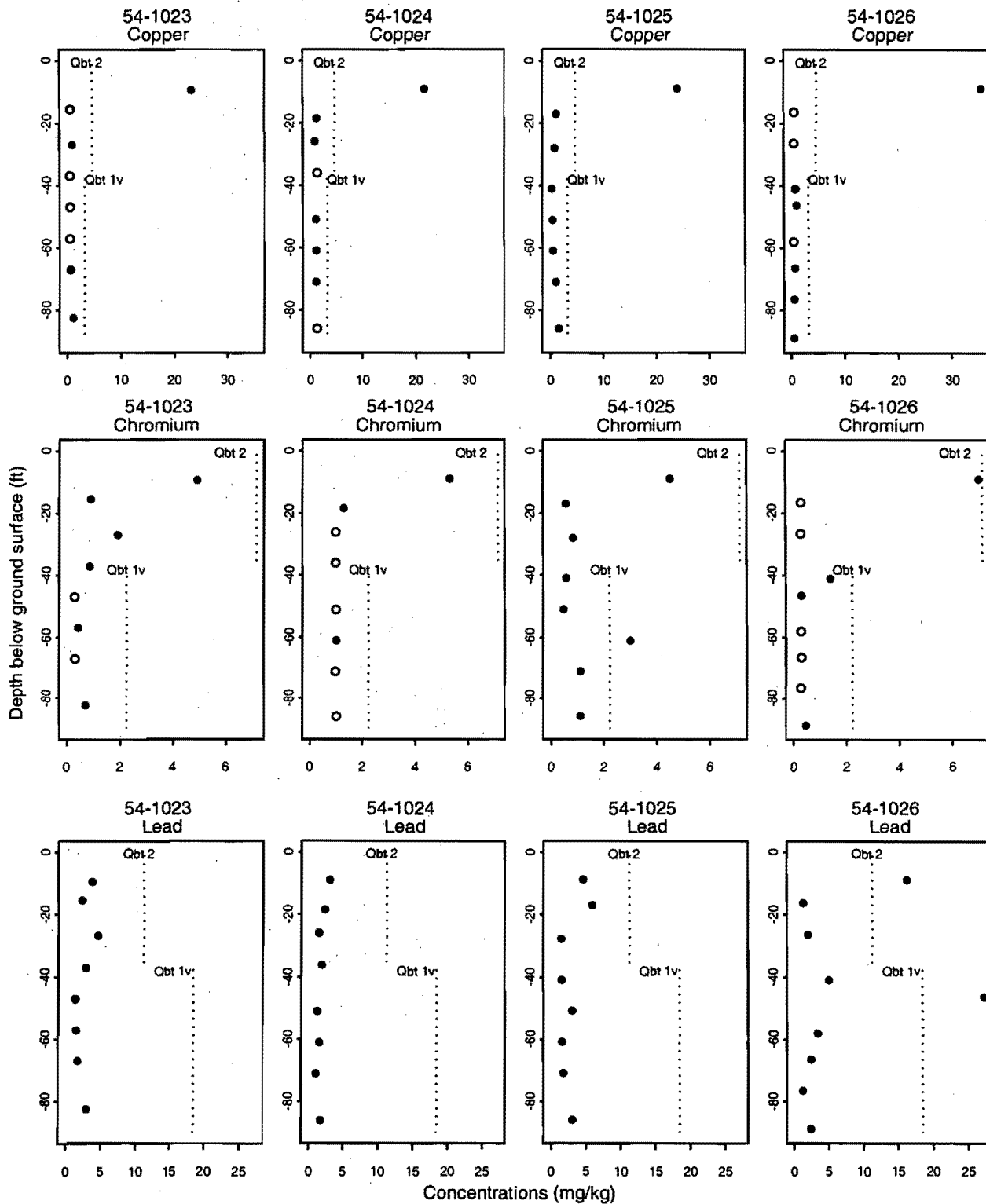


Figure E-3.2-1. Borehole profile plot for detected inorganic chemicals

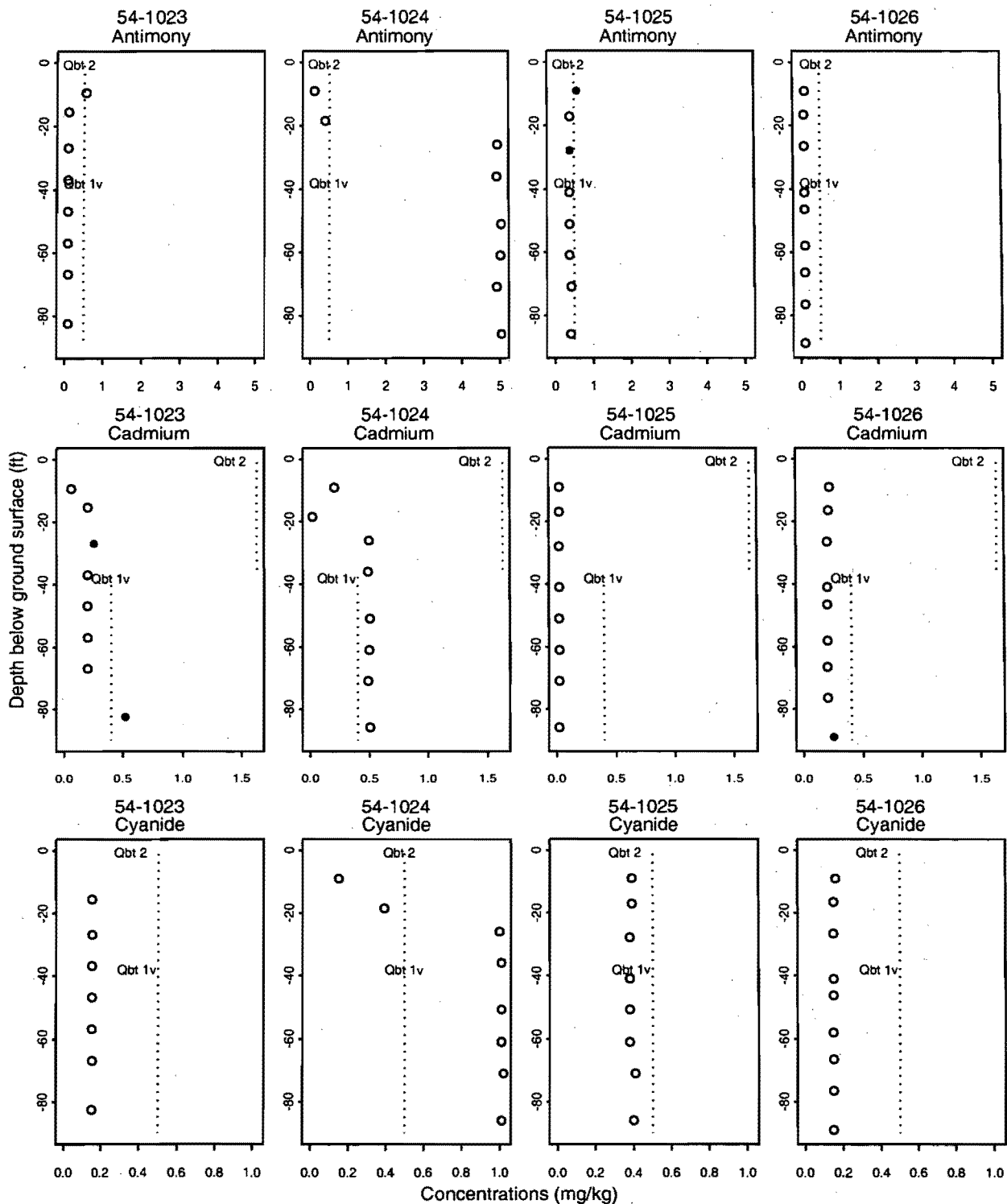


Figure E-3.2-2. Borehole profile plot for undetected inorganic chemicals

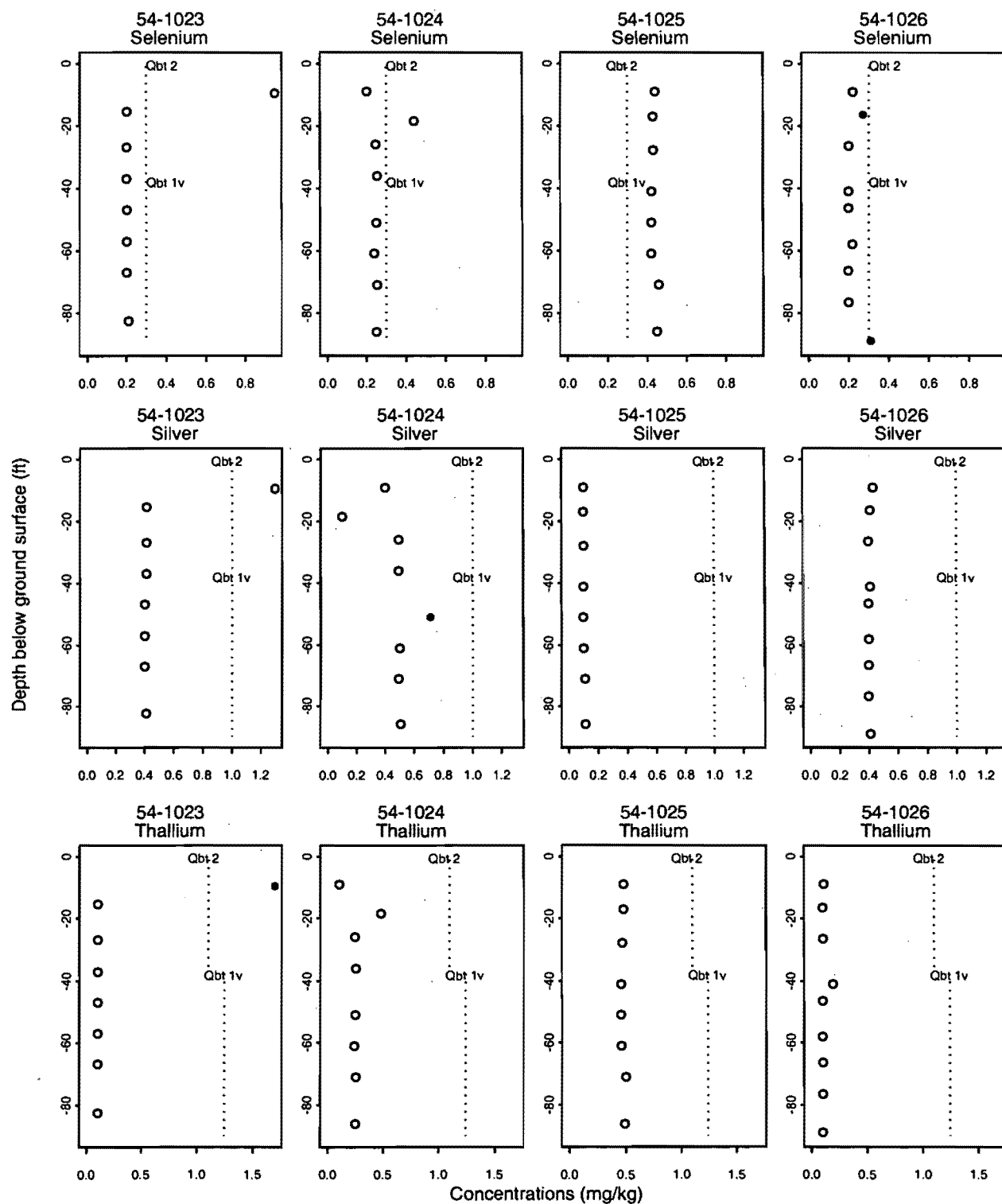


Figure E-3.2-2 (continued). Borehole profile plot for undetected inorganic chemicals

Copper (Qbt 2), chromium (Qbt 1v), and lead (Qbt 2 and Qbt 1v) were detected above their BVs (Figure E-3.2-1). Concentrations of copper were three to four times greater than the BV in all four boreholes at the uppermost sampling depth (approximately 10 ft below ground surface), but concentrations dropped below BVs in all deeper core samples. Chromium and lead concentrations above BVs were fewer, at concentrations less than 1.5 times the BV, and bounded below by concentrations below BVs. Only borehole 54-1026 had two lead concentrations above BVs, but these were separated by more than 30 ft and that interval included three samples with concentrations below BVs. No single depth within a borehole contained multiple analytes above BVs. The sporadic spatial pattern of exceedances does not provide evidence of a release of inorganic chemicals from the disposal structures. Therefore, the distribution of site concentrations was compared with the distribution of concentrations from Laboratory background samples for the same tuff unit group. For all inorganic chemicals that are frequently detected and well characterized in tuff for both Laboratory background and at MDA H, the standard set of background comparison tests (Gehan, quantile, and slippage) were performed. In general, the results indicate that concentrations at MDA H are not greater than those in the Laboratory background data sets (p -values >0.05 for all analytes for all tests, Table E-3.2-2). For analytes that are infrequently detected, the rates of detection for MDA H and Laboratory background were compared, and the ranges of detected concentrations and DLs for both sets were evaluated. In some cases, there were enough detected concentrations in both data sets so that quantile and/or slippage tests could be run. For data sets with any DLs larger than BVs, the background comparison tests were modified in the following way. All site nondetects with DLs larger than BVs were considered as detected at their reported DL when running the background comparison tests. The test results based on treating the large DLs as detects are listed in Table E-3.2-2 as DL-mod. Some of the analytes were not analyzed in the Laboratory background study and are discussed below.

The background comparison tests concluded that chromium and lead are not significantly different from background concentrations (all p -values >0.05 , Table E-3.2-2), but the distribution of copper concentrations is significantly different from background concentrations (slippage test is significant, p -value = 0.0005, Table E-3.2-2).

The four large copper concentrations were collected from within an interval of less than 4 ft beginning at about 10 ft bgs and at distances of 5 ft to 30 ft between the individual boreholes and the nearest disposal shaft. Transport of copper from the surface or by way of near lateral movement through tuff from the disposal shafts are possible explanations of elevated concentrations. No large copper concentrations were recorded in surface sediment samples to support the explanation of surface contamination. The shafts received minimal liquid to drive transport; they were covered when not in use and capped upon closure, and inventory lists include no liquid disposal. Another possible explanation is natural variability similar to other documented heterogeneities (enrichments) of particular inorganic chemicals in the Bandelier Tuff because of remobilization by vapor-phase processes during welding/devitrification (Stimac et al. 1996, 59362). Copper is one of the inorganic chemicals identified as affected by these processes. A tuff core sample within this same elevation interval and in close proximity (from a borehole at MDA J and approximately 200 ft away) reported a copper concentration of 24 mg/kg (the range of concentrations at MDA H for the interval was 21.6 mg/kg to 35.4 mg/kg); all other sampling depths at MDA J were at least 5 ft lower in elevation and produced concentrations below BVs.

The remaining inorganic chemicals, antimony, cadmium, cyanide, selenium, silver, and thallium, had some detected concentrations and/or nondetects reported at DLs just above BVs (Figure E-3.2-2). The Laboratory background samples for these analytes include few detected concentrations, and the BVs are nominal analytical DLs (except for thallium). The DLs at MDA H reported above BVs occurred in blocks of samples within the same laboratory request number, indicating that these DLs are associated with a laboratory batch rather than a borehole location. The rates of detection for these analytes were compared

with the rates observed in the Laboratory background data sets; the tests concluded that the detection rates were not significantly different (Table E-3.2-2). The range of DLs at MDA H was compared with that in the background data sets. In general, the DLs are at reasonable concentrations, indicating that the analytes were not present above background levels.

The detection rate for antimony in MDA H cores was not significantly different from the detection rate in Laboratory background (Table E-3.2-2). Six MDA H samples were analyzed by inductively coupled plasma emission spectroscopy (ICPES), resulting in high DLs (approximately 5.0 mg/kg) that are above the BV (0.5 mg/kg, a nominal DL). The remainder of the samples were analyzed by inductively coupled plasma mass spectroscopy, the method used for the Laboratory background samples. If the ICPES results are removed as inadequate, all DLs in Qbt 1v are below the BVs, and in Qbt 2, only one DL (0.55 mg/kg) and one detected concentration (0.57 mg/kg) remain above the BVs. Background comparisons for the Qbt 2 samples modified by excluding the ICPES results and treating the DL larger than BV as a detect (DL-mod) indicated that MDA H concentrations are not significantly different from background (quantile test and slippage test p-value >0.05).

Table E-3.2-2.
Background Comparison Test Results (p-values) for Inorganic Chemicals in Tuff at MDA H

Analyte	Unit	Gehan Test	Quantile Test	Slippage Test	Quantile DL-mod	Chi-Square Test (Detection Rate)
Copper	Qbt2	0.15	0.22	0.0005	—*	—
Lead	Qbt2	0.99	0.96	0.17	—	—
Chromium	Qbt1v	0.77	0.83	0.47	—	—
Lead	Qbt1v	1.00	1.00	0.47	—	—
Antimony	Qbt2	—	—	0.14 (DL-mod)	0.12 (q = 0.88)	0.12
Selenium	Qbt2	—	—	—	—	0.46
Silver	Qbt2	—	—	—	—	1.00
Thallium	Qbt2	—	—	1.00 (DL-mod)	0.083(q = .85)	0.44
Cadmium (vs Qbt 2)	Qbt1v	—	1.00	1.00	—	<0.0001
Selenium (vs Qbt 2)	Qbt1v	—	—	—	—	1.00

* A dash indicates that the test was not performed.

Cadmium was detected twice in Qbt 1v core samples with one concentration (0.52 mg/kg) above the BV (0.4 mg/kg, a nominal DL), and there were four DLs marginally above the BV (0.49 mg/kg to 0.5 mg/kg). There were no Qbt 1v Laboratory background samples analyzed for cadmium, so no comparison could be made. If the MDA H sample concentrations are compared with the Laboratory background concentrations from the upper Qbt units (Qbt 2, Qbt 3, and Qbt 4), all MDA H results are below the BV (1.63 mg/kg). If the four MDA H nondetects with DLs above the DL observed in Laboratory background (0.2 mg/kg) are treated as detects (DL-mod), the modified background comparisons tests indicate that MDA H concentrations are less than those in background (quantile and slippage test p-values are >0.05).

Cyanide was never detected in tuff core samples. The majority of the DLs were below the BV of 0.5 mg/kg (a nominal DL). There were six DLs from one request number that were approximately double the BV (1 mg/kg to 1.02 mg/kg). Cyanide was not analyzed in Laboratory background tuff samples, so there are no results for comparison.

Selenium was detected once in Qbt 2 core samples and once in Qbt 1v core samples at concentrations (0.27 mg/kg and 0.31 mg/kg) that are approximately equal to the BV (0.3 mg/kg, a nominal DL). In addition, there were 10 samples with elevated DLs (nine DLs between 0.42 mg/kg and 0.46 mg/kg and a

DL of 0.95 mg/kg). Only 15 Laboratory background tuff samples were analyzed for selenium, and none produced detected concentrations. There are insufficient Laboratory background tuff results for further comparisons.

Silver was not detected above the BV in tuff core samples at MDA H. In Qbt 2, one sample has a DL (1.3 mg/kg) above the BV (1.0 mg/kg) but smaller than the maximum detected concentration (1.9 mg/kg) in the Laboratory background data set for this tuff unit. The detection rate at MDA H is lower than for Laboratory background, and the DLs are within the range of the Laboratory results (DLs plus detected concentrations). Silver is not considered elevated above background.

Thallium was detected once in Qbt 2 core samples at a concentration (1.7 mg/kg) larger than the BV (1.1 mg/kg) but within the range of detected concentrations in Laboratory background tuff upper units. All the DLs at MDA H were below the BVs, but four of them were larger than the DLs observed in the Laboratory background samples. When treating these four larger DLs as detects, the modified background comparisons indicate that concentrations at MDA H are not significantly different from background ($p > 0.05$).

E-3.2.2 Radionuclides

Core samples were analyzed for tritium by liquid scintillation and for a suite of radionuclides by gamma spectroscopy. The Environmental Restoration (ER) Project did not evaluate all the radionuclides in the gamma spectroscopy suite. The full-suite analyte list, which is given in the ER Project analytical services statement of work (LANL 1995, 49738), includes the decay series of the naturally occurring radionuclides, uranium-235, uranium-238, and thorium-232, as well as fission and activation products and their progeny. Measurements of naturally occurring radionuclides known to be present in Laboratory soils provide an indication of the quality of the gamma spectroscopy analysis.

Actinium-228, barium-140, bismuth-212, neptunium-237, protactinium-231, protactinium-234m, lead-210, lead-211, radium-223, radium-224, radium-226, and radon-219 are not reliably measured by gamma spectroscopy and will not be evaluated as potential contaminants. Of the radionuclides that are reliably analyzed by gamma spectroscopy, 10 have half-lives of less than 365 days and are not considered to be COPCs. Data for many of these short-lived radionuclides can be useful when evaluating parent radionuclide data because the relative activity concentration of parent and daughter isotopes is a known quantity. These data are used by the analytical laboratory as well as by the ER Project during baseline data validation. The naturally occurring radionuclide potassium-40 is present in Laboratory soils at concentrations ranging between 25 pCi/g and 40 pCi/g and is always present in the gamma spectrum of Laboratory soil samples. The potassium-40 gamma emission peak provides a qualitative indicator of the accuracy of the gamma spectroscopy measurement. Potassium-40 is not considered to be a potential historical contaminant at MDA H and will not be further evaluated. The radionuclides that are evaluated in this report are those considered to be potential historical contaminants at ER Project sites. They include naturally occurring uranium-235 and seven fission and activation products (americium-241, cesium-134, cesium-137, cobalt-60, europium-152, ruthenium-106, and sodium-22). Uranium-235 is compared with Laboratory-wide BVs for the appropriate tuff unit group (Ryti et al. 1998, 59730), and the other radionuclides are evaluated on the basis of detection status. The summary and evaluation are presented in Table E-3.2-3.

Tritium is the only radionuclide detected in tuff samples at MDA H and is considered a COPC. The likely source is waste disposed of in shaft 4, although tritium-contaminated waste could potentially have been disposed of in any of the shafts. Tritium measured in core samples is associated with residual moisture (pore water and water vapor) within the tuff. Transport of tritium through the subsurface occurs as water

vapor. Tritium concentrations maximized at depths between 30 ft and 50 ft below ground surface and subsequently decreased by two to three orders of magnitude in the lower depths (Figures 2.3-6 and 3.1-1).

Table E-3.2-3
Summary of Radionuclide Analyses in Tuff Samples at MDA H

Analyte	Media	Number of Samples	Nondetects			Detects					BV Comparison	
			Number of Samples	Minimum DL	Maximum DL	Number of Samples	Minimum	Median	Mean	Maximum	Detect or Above BVs	Frequency of Detects
Fallout Radionuclides												
Americium-241	Tuff	33	33	-0.108	0.37	0	n/a*	n/a	n/a	n/a	Detect	0/33
Cesium-134	Tuff	17	17	0.05	0.14	0	n/a	n/a	n/a	n/a	Detect	0/17
Cesium-137	Tuff	33	33	-0.032	0.1	0	n/a	n/a	n/a	n/a	Detect	0/33
Cobalt-60	Tuff	33	33	-0.03	0.09	0	n/a	n/a	n/a	n/a	Detect	0/33
Europium-152	Tuff	16	16	-0.07	0.232	0	n/a	n/a	n/a	n/a	Detect	0/16
Ruthenium-106	Tuff	33	33	-0.439	0.67	0	n/a	n/a	n/a	n/a	Detect	0/33
Sodium-22	Tuff	33	33	-0.0518	0.08	0	n/a	n/a	n/a	n/a	Detect	0/33
Tritium (pCi/mL)	Tuff	33	11	1.34	197000	23	253	6644	75090	777,000	Detect	23/33
Natural Radionuclides												
Uranium-235	Qbt 2	6	6	0.11	0.13	0	n/a	n/a	n/a	n/a	0.09	0/0
Uranium-235	Qbt 1v	11	11	0.11	0.13	0	n/a	n/a	n/a	n/a	0.14	0/0

Note: All concentrations are in pCi/g, unless otherwise noted.

* n/a = not applicable.

The maximum reported concentration of tritium at MDA H of approximately 777,000 pCi/mL is associated with a reported moisture content of 0.2%. Tritium concentrations for samples that report very low moisture content are very unreliable. Tritium concentrations stabilize and, hence, are more consistent when the moisture content is 3% or greater. Consequently, although a tritium plume exists at MDA H, the potential magnitude of the plume is not necessarily well described by this data point. The analytical laboratory total propagated uncertainty results for all measurements with low reported moisture content (request number 651, all results for location 54-1024) are larger than the reported concentrations, supporting the assumption that these measurements are more variable and less reliable.

E-3.2.3 Organic Chemicals

Tuff samples were analyzed for PCBs, pesticides, SVOCs, and VOCs. Only 18 organic chemicals (5 SVOCs, 1 pesticide, and 12 VOCs) were detected in one or more of the 33 core samples. Of these detected organic chemicals, 16 were reported at trace concentrations below the EQL. Trichlorofluoromethane was reported marginally above the EQL, and bis-2-ethylhexylphthalate exceeded the EQL. The organic chemical analytes with one or more detected concentrations are summarized in Table E-3.2-4.

Table E-3.2-4
Summary of Organic Chemicals in Tuff Samples at MDA H

Suite/Analyte	Number of Analyses	Number of Detects	Concentration Range (mg/kg)*	Frequency of Detects	EQL	Detected Concentration Range (mg/kg)
SVOCs						
Benzoic acid	33	1	0.49–[3.5]	1/33	3.5	0.49
Bis(2-ethylhexyl) phthalate	33	5	[0.038]–3.8	5/33	0.95	0.083–3.8
Di-n-butyl phthalate	33	6	0.043–[0.35]	6/33	0.35	0.043–0.057
Diethyl phthalate	33	1	0.28–[0.35]	1/33	0.35	0.28
Dimethyl Phthalate	33	1	0.042–[0.35]	1/33	0.35	0.042
Pesticide/PCB						
Endosulfan sulfate	33	1	[0.000671]–[0.00351]	1/33	0.034	0.000674
VOCs						
Acetone	33	2	[0.002]–[0.025]	2/33	0.025	0.011–0.016
Benzene	33	1	0.003–[0.0052]	1/33	0.005	0.003
Butanone [2-]	33	2	0.002–[0.021]	2/33	0.020	0.002–0.007
Butylbenzene [n-]	33	1	0.0013–[0.0052]	1/33	0.005	0.0113
Butylbenzene [sec-]	33	2	0.0011–[0.0052]	2/33	0.005	0.0011–0.0012
Hexachlorobutadiene	9	1	0.002–[0.005]	1/9	0.005	0.002
Methylene chloride	33	3	0.002–[0.011]	3/33	0.011	0.002
Naphthalene	9	1	0.001–[0.005]	1/9	0.005	0.001
Toluene	33	3	0.001–[0.0052]	3/33	0.005	0.001–0.002
Trichlorobenzene[1,2,3-]	9	2	0.001–[0.005]	2/9	0.005	0.001–0.002
Trichlorobenzene[1,2,4-]	9	1	0.001–[0.005]	1/9	0.005	0.001
Trichlorofluoromethane	33	6	0.002–0.007	6/33	0.005	0.002–0.007

* Square brackets indicate a nondetected result.

REFERENCES

The following list includes all references cited in this appendix. Parenthetical information following each reference provides the author, publication date, and the ER record identification (ER ID) number. This information also is included in the citations in the text. ER ID numbers are assigned by the Laboratory's ER Project to track records associated with the Project. These numbers can be used to locate copies of the actual documents at the ER Project's Records Processing Facility and, where applicable, with the ER Project reference library titled "Reference Set for Material Disposal Areas, Technical Area 54."

Copies of the reference library are maintained at the NMED Hazardous and Radioactive Materials Bureau; the DOE Los Alamos Area Office; United States EPA, Region VI; and the ER Project Material Disposal Areas Focus Area. This library is a living collection of documents that was developed to ensure that the administrative authority has all the necessary material to review the decisions and actions proposed in this document. However, documents previously submitted to the administrative authority are not included.

Box, G., W. Hunter, and J. Hunter, 1978. *Statistics for Experimenters. An Introduction to Design, Data Analysis, and Model Building*. John Wiley & Sons, Inc., New York, NY. (Box et al. 1978, 56653)

Gehan, E. A., 1965. "A Generalized Wilcoxon Test for Comparing Arbitrarily Singly-Sensored Samples," *Biometrika*, Vol. 52, Nos. 1 and 2, pp. 203–223. (Gehan 1965, 55611)

Gilbert, R. O. and J. C. Simpson, 1990. "Statistical Sampling and Analysis Issues and Needs for Testing Attainment of Background-Based Cleanup Standards at Superfund Sites," in "Proceedings of The Workshop on Superfund Hazardous Waste: Statistical Issues in Characterizing a Site: Protocols, Tools, and Research Needs," Environmental Protection Agency, Arlington, Virginia. (Gilbert and Simpson 1990, 55612)

Hollander, M., and D. Wolfe, 1999. *Nonparametric Statistical Methods*, John Wiley and Sons, New York, New York. (Hollander and Wolfe 1999, 68418)

Keppel, G., 1982. *Design and Analysis. A Researcher's Handbook*, Prentice-Hall, Inc., Englewood Cliffs, New Jersey. (Keppel 1982, 56652)

LANL (Los Alamos National Laboratory), July 1995. "Statement of Work--Analytical Support," Revision 2, RFP No. 9-XS1-Q4257, Los Alamos, New Mexico. (LANL 1995, 49738)

Ryti, R., P. Longmire, D. Broxton, S. Reneau, and E. McDonald, September 1998. "Inorganic and Radionuclide Background Data for Soils, Canyon Sediments, and Bandelier Tuff at Los Alamos National Laboratory" Los Alamos National Laboratory report LA-UR-98-4847 (draft), Los Alamos, New Mexico. (Ryti et al. 1998, 59730)

Stimac, J., D. Hickmott, and R. Abell, A. Larocque, D. Broxton, J. Gardner, S. Chipera, J. Wolff, and E. Gauerke, 1996. "Redistribution of PB and Other Volatile Trace Metals During Eruption, Devitrification, and Vapor-Phase Crystallization of the Bandelier Tuff, New Mexico," *Journal of Volcanology and Geothermal Research*, No. 73, pp. 245–266. (Stimac et al. 1996, 59362)

Appendix F

Risk Assessment Calculations and Ecological Scoping Checklist

APPENDIX F RISK ASSESSMENT CALCULATIONS AND ECOLOGICAL SCOPING CHECKLIST

F-1.0 EQUATION AND PARAMETERS FOR ESTIMATING TRITIUM INHALATION DOSE FROM AMBIENT AIR

The effective annual dose equivalent for inhalation of tritium in ambient air was calculated according to the following equation:

$$\text{Dose} = C_a \cdot \text{InhR} \cdot \text{ET} \cdot \text{EF} \cdot \text{DCF}_{\text{inh}}$$

where

C_a = concentration of tritium in ambient air (1070 pCi/m³ [Environmental Surveillance Report 1998, 59904]),

InhR = inhalation rate (1.3 m³/hour [EPA 1997, 66596]),

ET = exposure time (8 hour/day [EPA 1991, 56140]),

EF = exposure frequency (250 day/year [EPA 1991, 56140]), and

DCF_{inh} = dose conversion factor for inhalation (6.4E-08 mrem/pCi [EPA 1988, 50123]).

F-2.0 ECOLOGICAL SCOPING CHECKLIST

Part A—Scoping Meeting Documentation

Site ID	Technical Area 54	
Form of Site Releases (solid, liquid, vapor) Describe all relevant known or suspected <i>mechanisms</i> of release (spills, dumping, material disposal, outfall, explosive testing) and describe potential <i>areas</i> of release. Reference locations on a map, as appropriate.	Solid, liquid, and vapor-phase contaminants have come from the release of chemicals to the waste disposal areas at Technical Area 54 (TA-54). Since 1957, various types of waste have been placed in pits and shafts underground and covered with 1 m to 3 m of clean dirt. Liquids and solids have been placed in direct contact with subsurface and surface media without the protection of containers or liners. A number of vapor-phase organics and tritium are known to diffuse from the surface and hillsides of Mesita del Buey.	
List of Primary Impacted Media Indicate all that apply.	Surface soil Surface water/sediment Subsurface Groundwater Other	Yes Not applicable Yes Not applicable Air (Part C)
Facility for Information Management, Analysis, and Display (FIMAD) Vegetation Class Based on Arcview Vegetation Coverage Indicate all that apply.	Water Bare ground/unvegetated Spruce/fir/aspens/mixed conifer Ponderosa pine Piñon juniper/juniper savannah Grassland/shrubland Developed	Not applicable Not applicable Not applicable Yes (mix on hillsides) Yes (mix on hillsides) Yes (limited on mesa top) Yes (mesa top)

Site ID	Technical Area 54
<p>Is threatened and endangered (T&E) species habitat present?</p> <p>If applicable, list species known or suspected that use the site for breeding or foraging.</p>	<p>Potential T&E habitat is found on the mesa top or hillsides of Mesita del Buey for a number of species (for a detailed list and rationale, see Banar [1996, 58192, Chapter 6]). However, habitats for only two species are found with high frequency in the area; these include the peregrine falcon (<i>Falco peregrinus</i>) and the spotted bat (<i>Euderma maculatum</i>). These species have not been observed to roost or nest in the area. Nevertheless, Banar (1996, 58192) cautions that future disturbances to cliff tops and faces could have negative impacts on these species. Additionally, disturbances (physical, chemical) to the areas surrounding TA-54 may have negative impacts on the habitat for other species of potential concern. Consult Banar (1996, 58192) for details and mitigation recommendations.</p>
<p>Provide a list of neighboring/ contiguous/ upgradient sites; include a brief summary of chemicals of potential concern (COPCs) and the form of releases for relevant sites and reference a map, as appropriate.</p> <p>Use this information to evaluate the need to aggregate sites for screening.</p>	<p>Material disposal areas (MDAs) on Mesita del Buey share a geographic proximity. These areas share the same biotic character. No other potential release sites (PRs) are present.</p>
<p>Surface Water Erosion Potential Information</p> <p>Summarize information from Standard Operating Procedure (SOP) 2.01, Rev. 0, "Surface Water Site Assessments," including the runoff subscore (maximum of 46), terminal point of surface water transport, slope, and surface water run-on sources.</p>	<p>There is a limited number of PRs that have undergone SOP 2.01 (R0, "Surface Water Site Assessments") evaluation of TA-54. Many of the PRs that have been evaluated have had either inconsequential erosion matrix scores (3.6) or very low scores (27). These scores, however, are for mesa-top PRs and are not reflective of contaminant transport potential on the hillsides of Mesita del Buey. MDA H (PR 54-004) has an erosion matrix score of 45.6, which indicates a moderate erosion potential. In general, from scoping investigations of the areas of concern, the factors contributing the most to the erosion potential are the percentage of ground cover and the slope of the exposed area. Additionally, structures and operations can increase erosion potential particularly if the area is not vegetated. Terminal points of surface water transport are Cañada del Buey on the northern side and Pajarito Canyon (MDA H) on the southern side. In most areas, there are no direct discharge pathways to the bottoms of these canyons, as there are often intervening benches, rocks, roads, and vegetation. This is particularly true for the southern side of Mesita del Buey. On the northern side of MDA G, there are a few direct discharge pathways to the bottom of Cañada del Buey from the mesa top.</p>
<p>Other Scoping Meeting Notes</p>	<p>The mesa top is fenced off from the surrounding hillsides and is managed intensively to limit access to the area by large ground-dwelling animals (e.g., deer, elk, mountain lions); some limitations may apply to foxes, coyotes, raccoons, bobcat, or other medium-size mammals. The hillsides represent an intact biotic community. The mesa top is occupied by a limited number of species and is characterized by a relatively diverse biotic community.</p>

Part B—Site Visit Documentation

Site ID	TA-54
Date of Site Visit	Mesa top: April 13, 1999. Hillsides: June 10, 1999
Site Visit Conducted by	Mark Hooten and Randy Ryti

Receptor Information

Estimate Cover	<p>Relative vegetative cover (high, medium, low, none) Mesa top: low (<20%); hillsides: medium (10–40%)</p> <p>Relative wetland cover (high, medium, low, none) Mesa top and hillsides: none (0%)</p> <p>Relative structures/asphalt cover (high, medium, low, none) Mesa top: medium (~20–30%); hillsides: none (0%)</p>
Field Notes on the FIMAD Vegetation Class to Assist in Ground-Truthing the Arcview Information	<p>The mesa top is developed but has some grasses (e.g., <i>Bouteloua</i> spp.) and sage (<i>Artemisia</i> spp.); the hillsides are piñon-juniper and ponderosa pine woodlands. Predominant tree and shrub species include ponderosa pine (<i>Pinus ponderosa</i>), piñon (<i>Pinus edulis</i>), one-seed juniper (<i>Juniperus monosperma</i>), Rocky Mountain juniper (<i>Juniperus scopulorum</i>), Gambel oak (<i>Quercus gambelii</i>), wavyleaf oak (<i>Quercus undulata</i>), mockorange (<i>Philadelphus microphyllus</i>), mountain mahogany (<i>Cercocarpus montanus</i>), New Mexico hops (<i>Ptelae trifoliata</i>), sumac (<i>Rhus</i> spp.), and sage. Predominant ground cover includes various grasses (e.g., <i>Bouteloua</i> spp.) and some forbs, as well as mosses and lichens in rocky areas.</p>
<p>Field Notes on T&E Habitat (if applicable)</p> <p>Consider the need for a site visit by a T&E subject matter expert to support the use of the site by T&E receptors.</p>	<p>The site visit confirmed that cliff-side areas are largely intact. However, these areas are close to the TA-54 operations, and T&E species may be impacted by noise, vibration, exhausts or fumes, erosion, and accelerated runoff from barren mesa-top areas. In general, the area is not ideal for T&E habitat because of site operations.</p>
<p>Are ecological receptors present at the site? (yes/no/uncertain)</p> <p>Describe the general types of receptors present at the site (terrestrial and aquatic) and make notes on the quality of habitat present at the site.</p>	<p>Yes. The mesa-top areas are managed in a way that limits ecological receptors to invasive plants, small mammals, birds, and invertebrates but may retain trophic integrity. The hillside areas appear to have intact biotic communities and therefore include a full suite of potential biotic receptors. Scoping activities revealed abundant invertebrates, reptiles, mammals, birds, and plant life on the hillsides.</p>

Contaminant Transport Information

<p>Surface Water Transport</p> <p>Field notes should summarize the erosion potential, including a discussion of the terminal point of surface water transport, if applicable.</p>	<p>Erosion potential of the mesa top is generally low to moderate because of the low gradient of most surfaces. However, sheet flow from rainstorm events has a high potential for runoff from the mesa top to the hillsides, thus fostering erosion of the hillsides. (There appear to be few best management practices (BMPs) on the mesa edge that limit the potential for water to organize into small rill-conduits that can further organize into larger flows [i.e., rivulets] on the hillside areas). The mesa top and edge and especially areas of the MDAs bordering the fence line are generally barren and have had much of the vegetation cut for fire control. This practice increases the potential for erosion from the mesa top and edge and the hillside. In the downslope areas, runoff clearly organizes itself into deeper and wider channels, until water reaches the canyon bottoms where potential energy is dissipated and water spreads across the canyon bottoms. Thicker deposits of erosive sediments typify downslope areas toward the surrounding canyon bottoms, where these sediments are widely distributed.</p>
<p>Are there any off-site transport pathways (surface water, air, or groundwater)?</p> <p>(yes/no/uncertain)</p>	<p>Yes. Surface water and air provide ample opportunity for transport of soil-borne contaminants off the mesa top and into the neighboring canyons.</p>
<p>Is an interim action (IA) needed to limit off-site transport?</p> <p>(yes/no/uncertain)</p> <p>Provide explanation/ recommendation for IA to project lead.</p>	<p>No IA is required to limit off-site transport. BMPs are in place to minimize erosion, and a new stormwater collection system was constructed at MDA G in 2000.</p>

Ecological Effects Information

<p>Physical Disturbance</p> <p>Provide list of major types of disturbances, including erosion and construction activities; review historical aerial photos where appropriate.</p>	<p>Much of the woodland areas that are typical of the hillsides show signs of erosion disturbance. In particular, the wooded areas bordering TA-54 on the northeastern and eastern edges of Mesita del Buey show signs of accelerated erosion from past conditions. In these areas, surface water movement accelerated by clearing the mesa-top vegetation and a fire break around MDA G has destroyed the biotic crust (cryptogamic crust) that is typical of wooded area soils of the Pajarito Plateau. Also, increasingly thicker deposits of erosive sediments typify downslope areas toward the surrounding canyon bottoms. In the canyon bottoms, erosional sediments are widely distributed. Such sediments (as well as the channelization of water) have negative effects on the understory flora and ground-dwelling fauna.</p>
<p>Are there obvious ecological effects?</p> <p>(yes/no/uncertain)</p> <p>Provide an explanation and apparent cause (e.g., contamination, physical disturbance, other).</p>	<p>The only obvious ecological effects from TA-54 operations are from physical disturbance of the area. There are no overt signs of contamination having ecological effects. Contaminants are known to have reached biotic populations, e.g., vegetation (Fresquez et al 1997, 62346), small mammals (Bennett et al. 1997, 62342), and invertebrates (Haarmann and Fresquez 1998, 62351); however, there have been no demonstrated population-wide or individual toxicological effects.</p>

<p>IA needed to limit apparent ecological effects? (yes/no/uncertain)</p> <p>Provide explanation and recommendations for IA to mitigate apparent exposure pathways to project lead.</p>	<p>No. Some contaminants may be entering the biota and are possibly being carried through the food chain (although there is no indication of effects from biomagnification). However, because there have been no measurable or observable effects on the biota, either to individuals or populations, an IA to ameliorate the current rate of transfer into the biota would be premature. Still, any actions that may decelerate the acquisition of contaminants by biotic organisms (e.g., the control of erosion) would be prudent for limiting exposure, thus limiting potential adverse effects associated with contaminant uptake or exposure.</p>
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No Exposure/Transport Pathways

If there are no complete exposure pathways to ecological receptors on site and no transport pathways to off-site receptors, the remainder of the checklist should not be completed. Stop here and provide additional explanation/justification for proposing an ecological no further action recommendation (if needed). At a minimum, the potential for future transport should include likelihood that future construction activities could make contamination more available for exposure or transport.

There is the potential for some ground-dwelling organisms (e.g., fossorial rodents and deeply rooted plants) to intrude into buried waste. Additionally, future construction, grading, or digging activities pose the potential for mobilizing contaminants buried at depth, thus making them accessible to ecological receptors. At this time, soil-based contamination and volatile organic compound (VOC) vapors in rodent burrows pose the most significant threats to biota.

Adequacy of Site Characterization

<p>Do existing or proposed data provide information on the nature, rate, and extent of contamination? (yes/no/uncertain)</p> <p>Provide explanation (consider if the maximum value was captured by existing sample data).</p>	<p>Existing data characterize the current conditions of contamination, including nature and distribution, at TA-54. However, current waste-handling operations are conducted in such a way that wastes added to the TA-54 inventory are projected to have zero availability to current ecological receptors; this includes new protocols for depth of burial (3 m) and containment as well as institutional controls.</p>
<p>Do existing or proposed data for the site address potential transport pathways of site contamination? (yes/no/uncertain)</p> <p>Provide explanation (consider if other sites should be aggregated to characterize potential ecological risk).</p>	<p>Yes. Existing data are adequate for characterizing models that describe the transport of soils and contaminants from the area of TA-54 to the far reaches of Cañada del Buey and Pajarito Canyon. Additional sampling is proposed to better define off-site transport and assist in modeling the site.</p>

Additional Field Notes

Provide additional field notes on the site setting and potential ecological receptors.

In summary, the area of TA-54 is a controlled waste-handling operation that largely contains the waste inventory, thus limiting accessibility to ecological receptors. Legacy contamination that was released to the surface or near subsurface, however, may be reaching biotic receptors, primarily because of erosive forces exposing and mobilizing contaminants. To date, however, there are no apparent negative effects on the biota because of exposure to contamination. This state, however, may reflect a limitation of knowledge with regard to the reproductive, demographic, and genetic dynamics of receptor populations. Future potential for contaminant exposure (e.g., by mass-wasting events, biotic activity on the site) is only obviated by the large inventory of buried waste at TA-54. The availability of such wastes to biotic receptors will be dependent on the mechanism of exposure, rate of exposure, and the natural geochemical processes that preclude or foster biotic uptake.

Part C—Ecological Pathways Conceptual Exposure Model

Question A

Could soil contaminants reach receptors by way of vapors?

- *Volatility of the hazardous substance (volatile chemicals generally have Henry's Law constant >10⁻⁵ atm-me/mol and molecular weight <200 g/mol)*

Answer (likely/unlikely/uncertain): Likely

Provide explanation: VOCs at TA-54 are being measured for their flux off of the mesa.

MDA G. The primary VOC being emitted to the atmosphere is 1,1,1-trichloroethane (TCA). Next are perchloroethylene (PCE, tetrachloroethene), trichloroethylene (TCE, trichloroethene), and toluene.

MDA L. The primary VOCs being emitted to the atmosphere include TCA, TCE, and PCE. Secondary VOCs are Freon 113, acetone, and 1,1-dichloroethylene.

MDA H. There is no measurable VOC plume at this site. Tritium, although not a VOC, is known to be in flux from the ground to the atmosphere.

General. The effects of the VOCs and tritium on ecological receptors are poorly understood. Furthermore, the natural environmental processes that may cause exposure of VOCs to organisms are not well understood. For example, the amount of such vapors reaching receptors is dependent on atmospheric dispersion processes such as temperature, airborne moisture, wind speed and direction, convective dynamics, and atmospheric dilution. Confounding factors in the biota, such as anatomical and physiological characteristics and behavioral and reproductive phenologies, require direct experimental field observations in order to evaluate the degree of exposure to VOCs under natural conditions. Among all potential receptors, ground-dwelling organisms are probably the most vulnerable. In particular, ground-burrowing rodents will likely encounter vapors in the soil at higher concentrations than most other receptors. It is likely that the period of time when these animals are most vulnerable is when they are in burrows rearing young.

Question B

Could the soil contaminants reach receptors through fugitive dust carried in air?

- *Soil contamination would have to be on the actual surface of the soil to become available for dust.*
- *In the case of dust exposures to burrowing animals, the contamination would have to occur in the depth interval where these burrows occur.*

Answer (likely/unlikely/uncertain): Likely

Provide explanation: Given current operations at TA-54 and erosional characteristics of the periphery of Mesita del Buey, there is a strong likelihood that fugitive dust will reach receptors in the area. The quantity of this exposure is not known and is a large uncertainty for evaluating ecological risk.

Question C

Can contaminated soil be transported to aquatic ecological communities? (use SOP 2.01, Rev. 0, "Surface Water Site Assessments," run-off score and terminal point of surface water runoff to help answer this question)?

- *If the SOP 2.01 runoff score* for each PRS included in the site is equal to zero, this suggests that erosion at the site is not a transport pathway.
(* Note that the runoff score is not the entire erosion potential score, rather it is a subtotal of this score with a maximum value of 46 points).*
- *If erosion is a transport pathway, evaluate the terminal point to see if aquatic receptors could be affected by contamination from this site.*

Answer (likely/unlikely/uncertain): Unlikely

Provide explanation: There is some probability that water-borne constituents may reach aquatic communities at some time in the distant future. However, given the relatively flat terrain that surrounds the cliffs of Mesita del Buey, this does not appear to be a current exposure pathway to biota.

Question D

Is contaminated groundwater potentially available to biological receptors through seeps or springs or shallow groundwater?

- *Known or suspected presence of contaminants in groundwater*
- *The potential for contaminants to migrate by way of groundwater and discharge into habitats and/or surface waters*
- *Contaminants may be taken up by terrestrial and rooted aquatic plants whose roots are in contact with groundwater present within the root zone (~1 m depth).*
- *Terrestrial wildlife receptors generally will not contact groundwater unless it is discharged to the surface.*

Answer (likely/unlikely/uncertain): Unlikely

Provide explanation: Depth to groundwater from the top of Mesita del Buey is over 700 vertical feet. It is not probable that biota will ever be receptive of contaminants by way of a groundwater pathway.

Question E

Is infiltration/percolation from contaminated subsurface material a viable transport and exposure pathway?

- *Suspected ability of contaminants to migrate to groundwater*
- *The potential for contaminants to migrate by way of groundwater and discharge into habitats and/or surface waters*
- *Contaminants may be taken up by terrestrial and rooted aquatic plants whose roots are in contact with groundwater present within the root zone (~1 m depth).*
- *Terrestrial wildlife receptors generally will not contact groundwater unless it is discharged to the surface.*

Answer (likely/unlikely/uncertain): Unlikely

Provide explanation: See response to Question D.

Question F

Might erosion or mass-wasting events be a potential release mechanism for contaminants from subsurface materials or perched aquifers to the surface?

- *This question is only applicable to release sites located on or near the mesa edge.*
- *Consider the erodability of surficial material and the geologic processes of canyon/mesa edges.*

Answer (likely/unlikely/uncertain): Unlikely

Provide explanation: Mass-wasting events are rare on an ecological time scale. (Many of the Anasazi Indian cliff dwellings in the area, each 800–1200 yr old, are still intact despite being in soft tuffaceous material at the edge of cliffs. Ecological time scales are measured by generation [a species-specific measure] and biogeographic changes in populations. The former are relatively short, 10–15 yr for a long-lived organism like an elk, while the latter are often multigenerational but often less than 1000 yr for even the longest-lived organisms, e.g., ponderosa pine. Thus, mass-wasting events of significant proportion occur on a frequency of less than what is observed for biogeographic changes in some of the longest-lived organisms.) There are no direct pathways for mass wasting into a surface water body.

Question G

Could airborne contaminants interact with receptors through respiration of vapors?

- *Contaminants must be present as volatiles in the air.*
- *Consider the importance of inhalation of vapors for burrowing animals.*
- *Foliar uptake of organic vapors is typically not a significant exposure pathway.*

Provide quantification of exposure pathway (0 = no pathway, 1 = unlikely pathway, 2 = minor pathway, 3 = major pathway).

Terrestrial Plants: 2

Terrestrial Animals: 2

Provide explanation: See answer to Question A.

Question H

Could airborne contaminants interact with plants through deposition of particulates or with animals through inhalation of fugitive dust?

- *Contaminants must be present as particulates in the air or as dust for this exposure pathway to be complete.*
- *Exposure by way of inhalation of fugitive dust is particularly applicable to ground-dwelling species that would be exposed to dust disturbed by their foraging or burrowing activities or by wind movement.*

Provide quantification of exposure pathway (0 = no pathway, 1 = unlikely pathway, 2 = minor pathway, 3 = major pathway).

Terrestrial Plants: 2

Terrestrial Animals: 2

Provide explanation: See answer to Question B.

Question I

Could contaminants interact with plants through root uptake or rain splash from surficial soils?

- *Contaminants in bulk soil may partition into soil solution, making them available to roots.*
- *Exposure of terrestrial plants to contaminants present in particulates deposited on leaf and stem surfaces by rain striking contaminated soils (i.e., rain splash)*

Provide quantification of exposure pathway (0 = no pathway, 1 = unlikely pathway, 2 = minor pathway, 3 = major pathway).

Terrestrial Plants: 3

Provide explanation: Root uptake is likely to have a large influence on the load of contaminants that are acquired by plants. Deeply rooted plants, such as junipers, may penetrate waste cells where capping soils are less than 3 m deep. Such deep rooted plants are not present within the fenced area of MDA H. Any contamination on the surface may reach plants by way of root uptake and/or rain splash.

Question J

Could contaminants interact with receptors through food web transport from surficial soils?

- *The chemicals may bioaccumulate in animals.*
- *Animals may ingest contaminated food items.*

Provide quantification of exposure pathway (0 = no pathway, 1 = unlikely pathway, 2 = minor pathway, 3 = major pathway).

Terrestrial Animals: 2

Provide explanation: Uranium and TCE (known COPCs) are considered persistent bioaccumulators. No known bioaccumulators are COPCs at MDA H.

Question K

Could contaminants interact with receptors by way of incidental ingestion of surficial soils?

- *Incidental ingestion of contaminated soil could occur while animals grub for food resident in the soil, feed on plant matter covered with contaminated soil, or while grooming themselves clean of soil.*

Provide quantification of exposure pathway (0 = no pathway, 1 = unlikely pathway, 2 = minor pathway, 3 = major pathway).

Terrestrial Animals: 3

Provide explanation: The dietary fraction of surface soil in a receptor's diet is species specific. At TA-54, surface soil contamination is present, and fossorial animals will come into contact with subsurface contaminants that may then be transported to the surface during burrowing activities.

Question L

Could contaminants interact with receptors through dermal contact with surficial soils?

- *Significant exposure by way of dermal contact would generally be limited to organic contaminants that are lipophilic and can cross epidermal barriers.*

Provide quantification of exposure pathway (0 = no pathway, 1 = unlikely pathway, 2 = minor pathway, 3 = major pathway):

Terrestrial Animals: 2

Provide explanation: Because there are contaminants in the surface soils at TA-54, terrestrial animals will make some dermal contact. However, this is a far less important pathway than dietary uptake, as the pelage of mammals, the scales of reptiles, the exoskeletons/exoderms of invertebrates, and the feathers of birds offer substantial protection from dust and water penetration to the skin.

Question M

Could contaminants interact with plants or animals through external irradiation?

- *External irradiation effects are most relevant for gamma-emitting radionuclides.*
- *Burial of contamination attenuates radiological exposure.*

Provide quantification of exposure pathway (0 = no pathway, 1 = unlikely pathway, 2 = minor pathway, 3 = major pathway).

Terrestrial Plants: 3

Terrestrial Animals: 3

Provide explanation: Depending on the level of radiological contamination, this pathway may be a major. At TA-54, known radiological COPCs include plutonium-239, americium-241, and tritium. Tritium is the only radionuclide contaminant at MDA H and is confined to the subsurface.

Question N

Could contaminants interact with plants through direct uptake from water and sediment or sediment rain splash?

- *Contaminants may be taken up by terrestrial plants whose roots are in contact with surface waters.*
- *Terrestrial plants may be exposed to particulates deposited on leaf and stem surfaces by rain striking contaminated sediments (i.e., rain splash) in an area that is only periodically inundated with water.*
- *Contaminants in sediment may partition into soil solution, making them available to roots.*

Provide quantification of exposure pathway (0 = no pathway, 1 = unlikely pathway, 2 = minor pathway, 3 = major pathway).

Terrestrial Plants: 0

Provide explanation: There are no aquatic environs on TA-54.

Question O

Could contaminants interact with receptors through food web transport from water and sediment?

- *The chemicals may bioconcentrate in food items.*
- *Animals may ingest contaminated food items.*

Provide quantification of exposure pathway (0 = no pathway, 1 = unlikely pathway, 2 = minor pathway, 3 = major pathway):

Terrestrial Animals: 0

Provide explanation: There are no aquatic environs on TA-54.

Question P

Could contaminants interact with receptors by way of ingestion of water and suspended sediments?

- *If sediments are present in an area that is only periodically inundated with water, terrestrial receptors may incidentally ingest sediments.*
- *Terrestrial receptors may ingest water-borne contaminants if contaminated surface waters are used as a drinking water source.*

Provide quantification of exposure pathway (0 = no pathway, 1 = unlikely pathway, 2 = minor pathway, 3 = major pathway):

Terrestrial Animals: 0

Provide explanation: There are no aquatic environs on TA-54.

Question Q

Could contaminants interact with receptors through dermal contact with water and sediment?

- *If sediments are present in an area that is only periodically inundated with water, terrestrial species may be dermally exposed during dry periods.*
- *Terrestrial organisms may be dermally exposed to water-borne contaminants as a result of wading or swimming in contaminated waters.*

Provide quantification of exposure pathway (0 = no pathway, 1 = unlikely pathway, 2 = minor pathway, 3 = major pathway):

Terrestrial Animals: 0

Provide explanation: There are no aquatic environs on TA-54.

Question R

Could contaminants interact with plants or animals through external irradiation?

- *External irradiation effects are most relevant for gamma-emitting radionuclides.*
- *Burial of contamination attenuates radiological exposure.*

Provide quantification of exposure pathway (0 = no pathway, 1 = unlikely pathway, 2 = minor pathway, 3 = major pathway):

Terrestrial Plants: 0

Terrestrial Animals: 0

Provide explanation: There are no aquatic environs on TA-54.

Question S

Could contaminants bioconcentrate in free-floating aquatic plants, attached aquatic plants, or emergent vegetation?

- Aquatic plants are in direct contact with water.
- Contaminants in sediment may partition into pore water, making them available to submerged roots.

Provide quantification of exposure pathway (0 = no pathway, 1 = unlikely pathway, 2 = minor pathway, 3 = major pathway).

Aquatic Plants/Emergent Vegetation: 0

Provide explanation: There are no aquatic environs on TA-54.

Question T

Could contaminants bioconcentrate in sedimentary or water column organisms?

- Aquatic receptors may actively or incidentally ingest sediment while foraging.
- Aquatic receptors may be directly exposed to contaminated sediments or may be exposed to contaminants through osmotic exchange, respiration, or ventilation of sediment pore waters.
- Aquatic receptors may be exposed through osmotic exchange, respiration, or ventilation of surface waters.

Provide quantification of exposure pathway (0 = no pathway, 1 = unlikely pathway, 2 = minor pathway, 3 = major pathway):

Aquatic Animals: 0

Provide explanation: There are no aquatic environs on TA-54.

Question U

Could contaminants bioaccumulate in sedimentary or water column organisms?

- Lipophilic organic contaminants and some metals may concentrate in an organism's tissues.
- Ingestion of contaminated food items may result in contaminant bioaccumulation through the food web.

Provide quantification of exposure pathway (0 = no pathway, 1 = unlikely pathway, 2 = minor pathway, 3 = major pathway).

Aquatic Animals: 0

Provide explanation: There are no aquatic environs on TA-54.

Question V

Could contaminants interact with aquatic plants or animals through external irradiation?

- External irradiation effects are most relevant for gamma-emitting radionuclides.
- The water column acts to absorb radiation, thus external irradiation is typically more important for sediment-dwelling organisms.

Provide quantification of exposure pathway (0 = no pathway, 1 = unlikely pathway, 2 = minor pathway, 3 = major pathway):

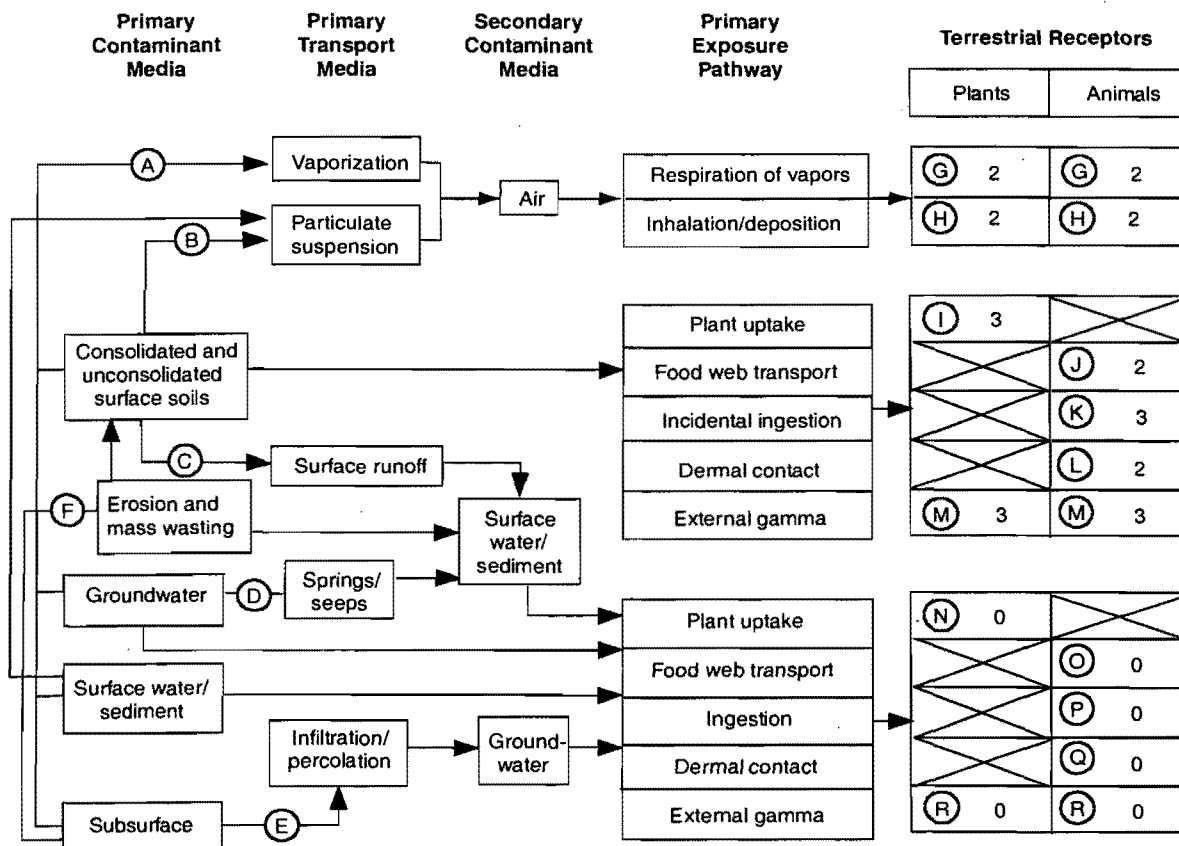
Aquatic Plants: 0

Aquatic Animals: 0

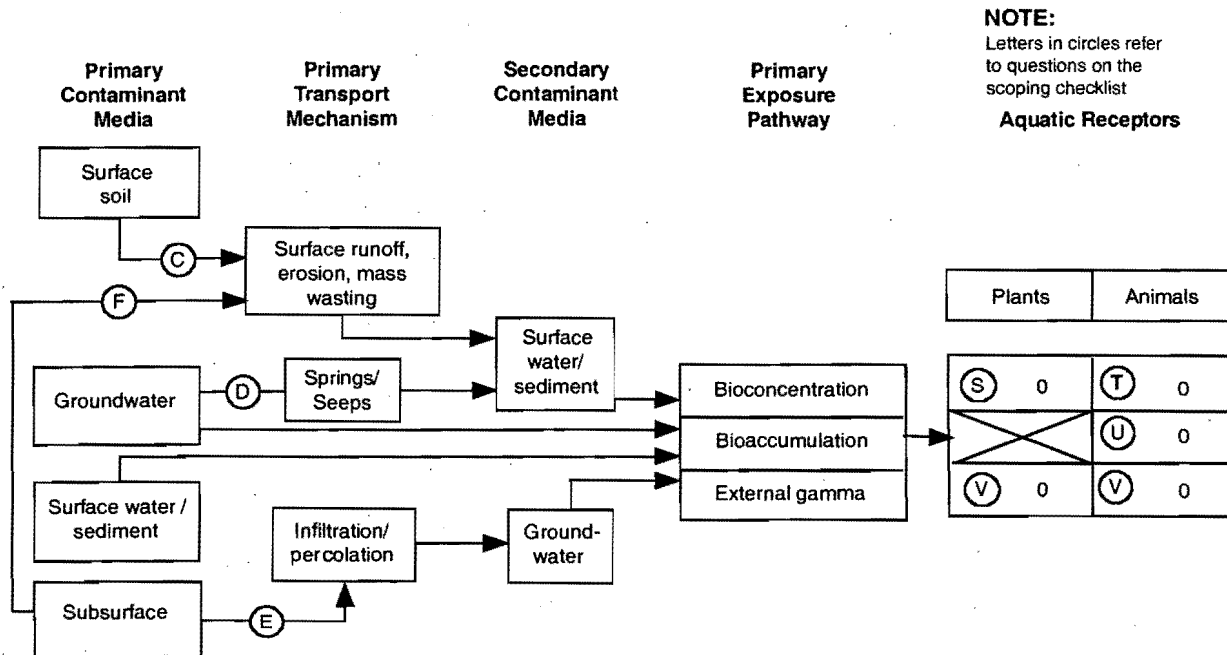
Provide explanation: There are no aquatic environs on TA-54.

**Ecological Scoping Checklist
Terrestrial Receptors
Ecological Pathways Conceptual Exposure Model**

NOTE:
Letters in circles
refer to questions
on the scoping
checklist.



Ecological Scoping Checklist
Aquatic Receptors
Ecological Pathways Conceptual Exposure Model



Signatures and certifications

Checklist completed by

Name (printed): Mark M. Hooten

Name (signature):

Organization: Neptune and Co., Inc.

Phone number: (505) 662-2121

Date completed: Final draft: July 1, 1999.

Verification:

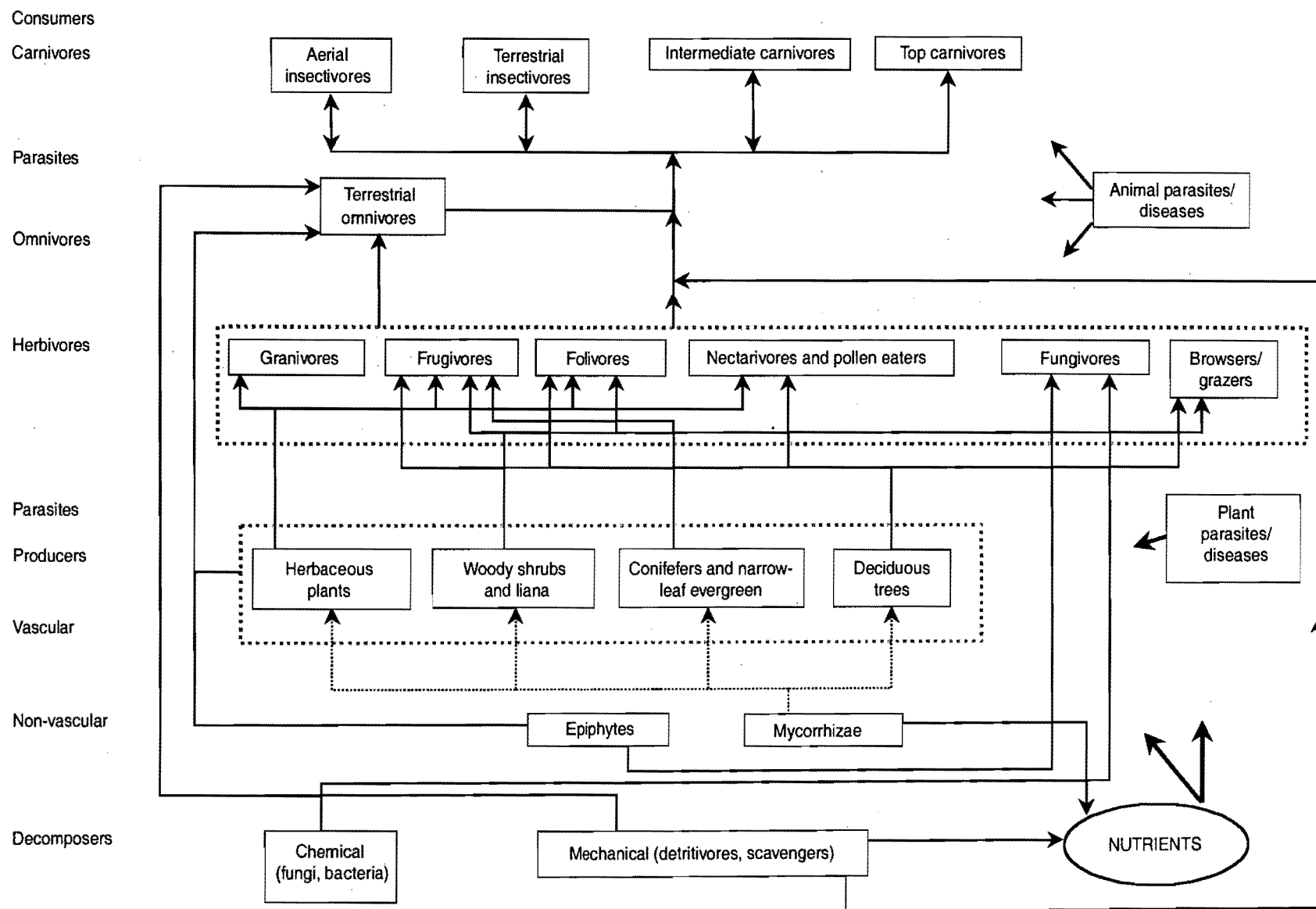
Name (printed): Richard Mirenda

Name (signature):

Organization: EES-13, Environmental Restoration (ER) Project

Phone number: (505) 665-6953

One of the most important products of the TA-54 scoping checklist is the narrowed focus on terrestrial receptors. Receptors for the ecological screening assessment were chosen to be broadly representative of organisms found in a functional food chain in the greater Los Alamos area. Associations of the functional trophic structure of terrestrial flora and fauna are presented in Figure F-2.0-1. This functional structure forms the basis for the choice of screening-level ecological receptors for the screening assessment. Eight terrestrial receptors cover eleven trophic categories. These include a generic plant; a soil-dwelling invertebrate (an earthworm); an American robin (avian invertebrate eater, avian omnivore, and avian herbivore); an American kestrel (avian invertebrate/flesh eater, avian flesh eater); a deer mouse (mammalian omnivore); a vagrant shrew (mammalian invertebrate eater); a desert cottontail (mammalian herbivore); and a gray fox (mammalian flesh eater).



FF-2.0-1/MDA H RFI RPT/050101/RLM

Figure F-2.0-1. Terrestrial functional food chain for TA-54 and Los Alamos at large

F-3.0 REFERENCES

The following list includes all references cited in this appendix. Parenthetical information following each reference provides the author, publication date, and the ER record identification (ER ID) number. This information also is included in the citations in the text. ER ID numbers are assigned by the Laboratory's ER Project to track records associated with the Project. These numbers can be used to locate copies of the actual documents at the ER Project's Records Processing Facility and, where applicable, with the ER Project reference library titled "Reference Set for Material Disposal Areas, Technical Area 54."

Copies of the reference library are maintained at the NMED Hazardous Waste Bureau; the Department of Energy Los Alamos Area Office; United States Environmental Protection Agency, Region 6; and the ER Project MDAs Focus Area. This library is a living collection of documents that was developed to ensure that the administrative authority has all the necessary material to review the decisions and actions proposed in this document. However, documents previously submitted to the administrative authority are not included.

Banar, A., February 1996. "Biological Assessment for Environmental Restoration Program, Operable Unit 1148, TA-54 and TA-51," Los Alamos National Laboratory report LA-UR-93-1054, Los Alamos, New Mexico. (Banar 1996, 58192)

Bennett, K., J. Biggs, and P. Fresquez, January 1997. "Radionuclide Contaminant Analysis of Small Mammals at Area G, TA-54, Los Alamos National Laboratory, 199," Los Alamos National Laboratory report LA-13242-MS, Los Alamos, New Mexico. (Bennett et al. 1997, 62342)

EPA (US Environmental Protection Agency), September 1988. "Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion, and Ingestion," Federal Guidance Report No. 11, EPA-520/1-88-020, Washington, DC. (EPA 1988, 50123)

EPA (U.S. Environmental Protection Agency), March 25, 1991. "Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual Supplemental Guidance 'Standard Default Factors,'" OSWER Directive 9285.6-02, Washington, DC. (EPA 1991, 56140).

EPA (U.S. Environmental Protection Agency), August 1997. "Exposure Factors Handbook," Volume I: General Factors, National Center for Environmental Assessment, Office of Research and Development, (EPA/600/P-95/002Fa), Washington D.C. (EPA 1997, 66596)

Environmental Surveillance Program, September 1998. "Environmental Surveillance at Los Alamos During 1994," Los Alamos National Laboratory Report LA-13487-ENV, Los Alamos, New Mexico. (Environmental Surveillance Program 1998, 59904)

Fresquez, P., E. Vold, and L. Naranjo, Jr., July 1997. "Radionuclide Concentrations in Soils and Vegetation at Radioactive-Waste Disposal Area G during the 1996 Growing Season," Los Alamos National Laboratory report LA-13332-PR, Los Alamos, New Mexico. (Fresquez et al. 1997, 62346)

Haarman, T., and P. Fresquez, July 1998. "Radionuclide Concentrations in Honey Bees from Area G at TA-54 during 1997," Los Alamos National Laboratory report LA-13480-PR, Los Alamos, New Mexico. (Haarmann and Fresquez 1998, 62351)

Appendix G

Relevant Documents

APPENDIX G RELEVANT DOCUMENTS

G-1.0 DOCUMENTATION OF REGULATORY HISTORY

G-1.1 Corrective Action History

The following is a summary of the corrective action history for Potential Release Site (PRS) 54-004, Material Disposal Area (MDA) H, at Technical Area (TA) 54. It includes notices of deficiencies (NODs) and/or determination, responses to NODs, modifications to Resource Conservation and Recovery Act (RCRA) facility investigation (RFI) documents, other administrative authority actions, and each Los Alamos National Laboratory (the Laboratory) response. Table G-1 includes a description, regulatory status, and corrective action summary.

Table G-1
Documentation of Regulatory Status/Corrective Action History for MDA H

Unit Type and Description	PRS Number	HSWA ^a PRSs (Y/N)	Permitted Waste Management Areas (Y/N)	Regulatory Status	Corrective Action History	Other Regulatory Documents
MDA H (except shaft 9) shafts 1–8 active before 11/19/88	54-004	Y	Shaft 9 only	Approved RFI work plan for OU ^b 1148 implemented, results reported herein	<ul style="list-style-type: none"> Submitted OU 1148 RFI work plan to EPA^c, May 1992. Received NOD from EPA, 11/30/92. Submitted NOD response to EPA, 11/12/93. EPA approved OU 1148 work plan, 12/14/93. EM/ER^d notifies DOE^e Los Alamos Area Office of subsurface sampling schedule, 4/18/95. RFI of MDA H begins June 1995. 	n/a ^f

^a HSWA = Hazardous and Solid Waste Amendment.

^b OU = operable unit.

^c EPA = Environmental Protection Agency.

^d EM = environmental management, ER = environmental restoration.

^e DOE = Department of Energy.

^f n/a = not applicable.

The "RFI Work Plan for Operable Unit 1148" (LANL 1992, 7669) was submitted to EPA in May 1992. The work plan addressed the RFI investigation of 38 PRSs at TA-54. The PRSs are organized within four MDAs: G, H, J, and L. The preliminary or initial administrative authority actions and the Laboratory responses relate to all four MDAs at TA-54. Administrative authority actions and Laboratory responses that were directed at specific MDAs are identified below.

1. *November 30, 1992.* EPA issued an NOD for the RFI work plan OU 1148 (Driscoll 1992, 3849.3).
2. *August 25, 1993.* Revised Appendix A, the pilot extraction study plan, for the RFI work plan for OU 1148 was approved by EPA (Honker 1993, 30522).
3. *November 12, 1993.* The Laboratory responds to the NOD for the OU 1148 RFI work plan (Glatzmaier 1993, 30987).

4. *November 15, 1993.* Technical comment memorandum from the New Mexico Environment Department (NMED) for RFI work plan OU 1148 was forwarded to the Laboratory (Swanton 1993, 63981).
5. *December 14, 1993.* The RFI work plan for OU 1148 was approved by the EPA (Davis 1993, 38812).
6. *March 28, 1995.* A request for permit modification units proposed for no further action (NFA) was submitted to NMED and EPA (LANL 1995, 45365).
7. *October 11, 1995.* The DOE concurs with the determination of NFA for non-HSWA units included in the March 1995 permit modification request (Taylor 1995, 50023).
8. *December 10, 1996.* NMED forwards the notice of determination on request for permit modification units proposed for NFA (Dinwiddie 1996, 55815).
9. *February 27, 1996.* The report, "RFI Report for Channels Sediment Pathways from MDAs G, H, J, and L, TA-54," was submitted to EPA (Jansen and Taylor 1996, 54462.1).
10. *September 23, 1997.* The report, "RFI Report for Channel Sediment Pathways from MDAs G, H, J, and L, TA-54" was approved by NMED (Dinwiddie 1997, 63982).
11. *October 21, 1998.* NMED proposes to approve NFA for 99 solid waste management units at the Laboratory (Kelley 1998, 62357).
12. *December 23, 1998.* NMED approves the Class III permit modification to remove 99 solid waste management units from the DOE/Laboratory RCRA permit (Kelley 1998, 63042).

G-1.2 Other Regulatory Documents

The following is a summary of other applicable administrative authority documents that are not covered in Section G-1.1 above. This primarily includes, but is not limited to, correspondence regarding modifications to sampling plans. Proposed Laboratory modifications initially relate to all four MDAs at TA-54. Subsequent administrative authority responses and Laboratory proposals/responses that were directed at specific MDAs are identified below.

1. *October 19, 1993.* Proposed modifications to the RFI work plan for OU 1148 were discussed during a conference call between Laboratory OU 1148 personnel and EPA (Barbara Driscoll). This conference call is referred to in the June 8, 1994, memorandum (Item 3).
2. *April 8, 1994.* A conference call took place between Laboratory OU 1148 personnel and EPA. The notes of the call documented proposed modifications to the RFI work plan for OU 1148 (MDA H not affected). The call was documented in notes (April 21, 1994) by Glatzmaier (1994, 35207).
3. *June 8, 1994.* A letter was sent from T. Glatzmaier (EM/ER) to T. Taylor (DOE). The letter included the proposed modifications to the RFI work plan for OU 1148 and a draft cover letter for Mr. Taylor to submit to Barbara Driscoll (MDA H not affected) (Glatzmaier 1994, 52015).
4. *July 15, 1994.* Proposed modifications to the RFI work plan for OU 1148 and cover letter from Tracy Glatzmaier were retransmitted to Mr. Taylor.

REFERENCES

The following list includes all references cited in this appendix. Parenthetical information following each reference provides the author, publication date, and the ER record identification (ER ID) number. This information also is included in the citations in the text. ER ID numbers are assigned by the Laboratory's ER Project to track records associated with the Project. These numbers can be used to locate copies of

the actual documents at the ER Project's Records Processing Facility and, where applicable, with the ER Project reference library titled "Reference Set for Material Disposal Areas, Technical Area 54."

Copies of the reference library are maintained at the NMED Hazardous Waste Bureau; the DOE Los Alamos Area Office; United States EPA, Region VI; and the ER Project Material Disposal Areas Focus Area. This library is a living collection of documents that was developed to ensure that the administrative authority has all the necessary material to review the decisions and actions proposed in this document. However, documents previously submitted to the administrative authority are not included.

Davis, A., December 14, 1993. "RFI Work Plan for OU 1148, Approval Los Alamos National Laboratory NM0890010515," Environmental Protection Agency memorandum to J. Vozella, Dallas, Texas. (Davis 1993, 38812)

Dinwiddie, R., December 10, 1996. "Notice of Determination Requests for Permit Modification Units Proposed for No Further Action March and September 1995," New Mexico Environment Department memorandum to T. Taylor and J. Jansen, Santa Fe, New Mexico. (Dinwiddie 1996, 55815)

Dinwiddie, R., September 23, 1997. "Approval of RCRA Facility Investigation (RFI) Report for Channel Sediment Pathways from Material Disposal Areas (MDAs) G, H, J, and L at Technical Area (TA) 54, Los Alamos National Laboratory NM0890010515," New Mexico Environment Department memorandum to G. Todd and S. Hecker, Santa Fe, New Mexico. (Dinwiddie 1997, 63982)

Driscoll, B., November 30, 1992. "Overall Comments," Environmental Protection Agency informal memorandum to C. Rofer. (Driscoll 1992, 3849.3)

Glatzmaier, T., November 12, 1993. "Final Notice of Deficiency (NOD) Response for Operable Unit (OU) 1148," Los Alamos National Laboratory memorandum EM-13:93-A232, Los Alamos, New Mexico. (Glatzmaier 1993, 30987)

Glatzmaier, T., April 21, 1994. "Summary of Conference Call with Barbara Driscoll, Environmental Protection Agency (EPA), Region 6," Los Alamos National Laboratory memorandum EM/ER:94-A153, Los Alamos, New Mexico. (Glatzmaier 1994, 35207)

Glatzmaier, T., June 8, 1994. "Proposed Modification to the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Work Plan for Operable Unit (OU) 1148," Los Alamos National Laboratory memorandum EM/ER:94-A199, Los Alamos, New Mexico. (Glatzmaier 1994, 52015)

Honker, W., August 25, 1993. "Pilot Extraction Study Plan for the Organic Vapor Plume Los Alamos National Laboratory NM0890010515," Environmental Protection Agency memorandum to J. Vozella, Dallas, Texas. (Honker 1993, 30522)

Jansen, J., and T. Taylor, February 27, 1996. "Submittal of the Resource Conservation and Recovery Act Facility Investigation (RFI) Report for Channels from Material Disposal Areas (MDAs) G, H, J, and L in Technical Area (TA) 54," Los Alamos National Laboratory memorandum EM/ER:96-077 to D. Neleigh, Los Alamos, New Mexico. (Jansen and Taylor 1996, 54462.1)

Kelley, E., October 21, 1998. "Proposal to Approve: No Further Action for 99 Solid Waste Management Units (SWMUs) at Los Alamos National Laboratory (LANL)," New Mexico Environment Department memorandum to D. Gurule and J. Browne, Santa Fe, New Mexico. (Kelley 1998, 62357)

Kelley, E., December 23, 1998. "Approval: Class III Permit Modification to Remove Ninety-Nine (99) Solid Waste Management Units from the Department of Energy/Los Alamos National Laboratory RCRA permit NM 0890010515," New Mexico Environment Department memorandum to T. Taylor and J. Browne, Santa Fe, New Mexico. (Kelley 1998, 63042)

LANL (Los Alamos National Laboratory), May 1992. "RFI Work Plan for Operable Unit 1148," Los Alamos National Laboratory report LA-UR-92-855, Los Alamos, New Mexico. (LANL 1992, 7669)

LANL (Los Alamos National Laboratory), March 1995. "Request for Permit Modification, Units Proposed for NFA," Los Alamos National Laboratory report LA-UR-95-767, Los Alamos, New Mexico. (LANL 1995, 45365)

Swanton, B., November 15, 1993. "Review of LANL's May 1992 RCRA Facility Investigation (RFI) Work Plan for Operable Unit (OU) 1148," New Mexico Environment Department memorandum to D. Webb, Santa Fe, New Mexico. (Swanton 1993, 63981)

Taylor, T., October 11, 1995. "NFA Permit Modification," Department of Energy memorandum to H. Jansen, Los Alamos, New Mexico. (Taylor 1995, 50023)

Appendix H

Borehole Logs

APPENDIX H BOREHOLE LOGS

This attachment presents profiles and logs of the boreholes drilled at Material Disposal Area H. The profiles depict the subsurface trajectories of the boreholes relative to adjacent subsurface disposal units, the stratigraphic units that were encountered during drilling, the location of samples taken from the core, and the pore-gas sample and monitoring-port locations, where applicable. Footages on the logs are length along each borehole.

**LOS ALAMOS NATIONAL LABORATORY
ENVIRONMENTAL RESTORATION PROJECT
PRS 54-004
BOREHOLE LOG**

BOREHOLE ID: 54-1023	TA/OU: 54/1148	MDA: H	Page: 1 of 5
Drilling Co.: Tonto Environmental Drilling Inc.	Core Box #(s): 10 cuttings 29 core	Start Date: 6/23/95 Time: 13:50	End Date: 6/28/95 Time: 13:30
Drilling Equip./Method: Ingersoll-Rand track-mounted air core with total dust suppression		Sampling Method: Continuous 5.0-ft core barrel	
Driller: Larry Thoren	Geologist: Jon Marin, Rene Evans ERM/Golder	Declination: 90°	Bearing: n/a* TD: 259.7 ft

Depth (ft)	Core Run # Core Recovery %	Analytical Sample Number 0550-	MRAL Screening Tritium (pCi/g)	Core Box # From - To (ft)	Lithology	Graphic Log	Lithologic Unit	Monitor Well Construction	Notes
0					At 2.5 ft TUFF, light brown, weathered		Qal	n/a	
5			2.89	0-9.0 ft surface cuttings in 10 boxes.	At 5.0 ft TUFF, pinkish gray 5YR 8/1 churned-up material		Unit 2, Tshirege Member, Bandelier Tuff	n/a	
10	10/92%	95-0282	167.94	1/9.0- 13.2 ft	9.0-10.0 ft TUFF, pinkish gray 5YR 8/1, lithics 10-15%, up to 4 cm				
15	11/100%		650.62	2/13.2- 24.4 ft					
20	12/100%	95-0284	746.86		18.0-19.2 ft PUMICE lapilli, devitrified, nonwelded, equant, light gray sugary texture				At 17.0 ft, well-oxidized core fracture
25	13/100%		803.07						
30				3/24.4- 33.6 ft	At 25.0 ft TUFF, material is slightly welded, dark red brown, pumice up to 5 cm		Unit 2, Tshirege Member, Bandelier Tuff	n/a	
35	14/100%	95-0286	897.38						
40	15/96%		756.22						
45	16/100%	95-0288	188.65	4/36.6- 43.0 ft	At 34.7 ft TUFF, contact with unit Iv, grayish pink 5R 8/2, larger pumice up to 2 cm, devitrified, oxidized interval sampled in unit 2a at contact. 2-3 cm- thick phenocryst-rich deposit in a fine ash matrix. Phenocrysts comprise 40-50% of the ash layers which alternate gray and light brown, N8 and 5YR 5/6, respectively.				At 34.7 ft, unit 1u(u3), a slight elevation in beta/gamma readings
50	17/100%		198.24						
55	18/100%	95-0290	120.15	5/43.0- 52.5 ft			Unit Iv	n/a	
60	19/100%		225.02	6/52.5- 61.5 ft					
	20/100%	95-0292	101.35		At 60.0 ft Same as above (SAA)				At 60 ft, ending depth of shafts

* n/a = not applicable.

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BOREHOLE ID: 54-1023	TA/OU: 54/1148	MDA: H	Page: 2 of 5
Drilling Co.: Tonto Environmental Drilling Inc.	Core Box #(s): 10 cuttings 29 core	Start Date: 6/23/95 Time: 13:50	End Date: 6/28/95 Time: 13:30
Drilling Equip./Method: Ingersoll-Rand track-mounted air core with total dust suppression		Sampling Method: Continuous 5.0-ft core barrel	
Driller: Larry Thoren	Geologist: Jon Marin, Rene Evans ERM/Golder	Declination: 90°	Bearing: n/a TD: 259.7 ft

Depth (ft)	Core Run # Core Recovery %	Analytical Sample Number 0550-	MRAL Screening Tritium (pCi/g)	Core Box # From - To (ft)	Lithology	Graphic Log	Lithologic Unit	Monitor Well Construction	Notes
60	20/Cont.		119.13	8/Cont.				n/a	
65	21/100%			7/61.5- 65.3 ft					
		95-0294	103.89	8/65.3- 67.0 ft					
70	22/100%			9/67.0- 76.5 ft					
75	23/100%		68.17						
	24/100%		43.91	10/76.5- 90.0 ft	At 77.5 ft				At 77.5 ft, possible colonnade no unit 1u(u2).
80	25/100%	95-0298	16.02						
85	26/7%								
90	27/100%			11/90.0- 98.5 ft	91.0-96.0 ft				
95	28/100%								
	29/100%			12/98.5- 107.1 ft	At 101.0 ft				
100	30/100%								
105	31/100%			13/107.1- 116.0 ft	At 108.0 ft				At 108.0 ft, also fine-grained light gray devitrified pumice 5%, 0.5-2.0 cm, average is 1.0 cm
110	32/100%				At 111.0 ft				
115	33/100%			14/116.0- 125.2 ft					
120									

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BOREHOLE LOG

BOREHOLE ID: 54-1023 TA/OU: 54/1148 MDA: H Page: 3 of 5

Drilling Co.: Tonto Environmental Core Box #(s) 10 cuttings Start Date: 6/23/95 End Date: 6/28/95
Drilling Inc. 29 core Time: 13:50 Time: 13:30

Drilling Equip./Method: Ingersoll-Rand track-mounted air Sampling Method: Continuous 5.0-ft core barrel
core with total dust suppression

Driller: Larry Thoren Geologist: Jon Marin, Rene Evans Declination: 90° Bearing: n/a TD: 259.7 ft
ERM/Golder

Depth (ft)	Core Run # Core Recovery %	Analytical Sample Number 0550-	MRAL Screening Tritium (pCi/g)	Core Box # From - To (ft)	Lithology	Graphic Log	Lithologic Unit	Construction	Notes
120	34/100%			14/Cont.					
125	35/100%			15/125.2- 135.4 ft	At 126.0 ft TUFF, 0.5 cm dacite, lithics in core matrix are redder, grayish pink to grayish orange pink 10R 8/2		Qbt 1v	n/a	At 126.0 ft, colonnade subunit
130	36/100%				At 130.0 ft At 131.0 ft Dacite lithics 5% of core, pumices are very iron rich, at 131.0 ft lithics up to 10% locally				
135	37/100%				At 135.0 ft At 135.0 ft TUFF, moderately indurated core, pumices are light yellowish brown iron oxides in matrix pits, probably after phenocrysts falling out		Qbt 1v(c)		
140	38/100%			16/135.4- 145.9 ft					
145	39/100%				At 146.0 ft TUFF, matrix color change to light brown 5YR 6/4, matrix is moderate orange reddish orange 10R 6/6, well- indurated, slightly welded. Pumice lapilli are 15%, 1:2 elongate grayish pink 5R 8/2 silky luster on fully inflated tube structures. Lithics are 5%, 0.5-1.0 mm dacite with local oxidation pits. Local dark gray vitric pumice, up to 4 mm, also 2% matrix patches after magnetite (?), silicate mineral.				At 146.0 ft, first appearance of vitric pumice
150	40/100%			17/145.9- 154.2 ft					
155	41/100%								
160	42/100%			18/154.2- 164.5 ft					
165	43/100%								
170	44/100%			19/164.5- 174.1 ft					
175	45/100%								
180	46/100%			20/174.1- 184.6 ft			Qbt 1g		
	47/100%								

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PRS 54-004
BOREHOLE LOG**

BOREHOLE ID: 54-1023 TA/OU: 54/1148 MDA: H Page: 4 of 5

Drilling Co.: Tonto Environmental Core Box #(s) 10 cuttings Start Date: 6/23/95 End Date: 6/28/95
Drilling Inc. 29 core Time: 13:50 Time: 13:30

Drilling Equip./Method: Ingersoll-Rand track-mounted air Sampling Method: Continuous 5.0-ft core barrel
core with total dust suppression

Driller: Larry Thoren Geologist: Jon Marin, Rene Evans Declination: 90° Bearing: n/a TD: 259.7 ft
ERM/Golder

Depth (ft)	Core Run # Core Recovery %	Analytical Sample Number 0550-	MRAL Screening Tritium (pCi/g)	Core Box # From - To (ft)	Lithology	Graphic Log	Lithologic Unit	Monitor Well Construction	Notes
180	47/Cont.			20/Cont.	183.0–189.0 ft TUFF, moderate orange pink 10R 7/4 nonindurated, nonwelded ash, 10–20% rounded clasts 10–18% are intermediate red, dark gray volcanics. Pumice is silky white/pale gray with quartz phenocrysts. At 189.0 ft begins a gradual transition of color to a paler orange, gray pink 5R 8/2.		Unit 1g	n/a	
	48/100%		0.00						
185	49/100%		0.00	21/184.6–193.5 ft					
	50/100%		0.00						
190			0.16						
	51/100%		0.00						
195			0.00	22/193.5–202.0 ft					
	52/100%		0.03						
200			0.00						
	53/100%		0.00	23/202.0–211.0 ft					
205			0.39		At 207.0 ft Appearance of silky golden pumice, 1–2 cm				
	54/100%		0.03		216.0–221.0 ft PUMICE, golden color common up to 15%, with 3–5 cm length, a decrease in appearance of later intermediate volcanic lithics to 1%		Unit 1g	n/a	
210			0.00						
	55/100%		0.00	24/211.0–220.5 ft					
215			0.00						
	56/100%		0.98						
220			0.08						
	57/100%		0.00	25/220.5–229.3 ft					
225			0.00						
	58/100%		0.13						
230			0.00	26/229.3–238.3 ft			Unit 1g	n/a	
	59/100%		0.00						
235			0.00						
	60/100%		0.00				Unit 1g	n/a	
240			0.00	27/238.3–247.0 ft					

H-7

May 2001

[illegible]

**LOS ALAMOS NATIONAL LABORATORY
ENVIRONMENTAL RESTORATION PROJECT
PRS 54-004
BOREHOLE LOG**

BOREHOLE ID: 54-1024 TA/OU: 54/1148 MDA: H Page: 1 of 2

Drilling Co.: Tonto Environmental Drilling Inc. Core Box #(s) 9 cuttings
10 core Start Date: 6/29/95 End Date: 7/5/95
Time: 15:30 Time: 15:00

Drilling Equip./Method: Ingersoll-Rand track-mounted air core with total dust suppression Sampling Method: Continuous 5.0-ft core barrel

Driller: Larry Thoren Geologist: Jon Marin, Rene Evans Declination: 90° Bearing: n/a* TD: 60.0 ft
ERM/Golder

Depth (ft)	Core Run # Core Recovery %	Analytical Sample Number 0550-	MRAL Screening Tritium (pCi/g)	Core Box # From - To (ft)	Lithology	Graphic Log	Lithologic Unit	Monitor Well Construction	Notes
0				0-8.0 ft surface cuttings in 9 boxes.			Qal	n/a	
5		95-0321	2.57	7.49					
10			7.49	1/8.0- 16.0 ft	10.0-15.0 ft		Unit 2, Tshirege Member, Bandelier Tuff		
15	12/100%		57.40	2/16.0- 25.0 ft					
20	13/100%	95-0323	81.47	3/25.0- 31.0 ft	At 25.0 ft				
25			86.55	4/33.0- 41.0 ft	Same as above (SAA) grayish pink 5R 8/2 slightly welded				
30	14/100%	95-0325	104.33						
35	15/100%		297.93						
40	16/100%	95-0327	233.88		At 37.0 ft				
45	17/100%		380.02	5/41.0- 53.5 ft	SAA, contact with unit Iv, grayish pink 5R 8/2 pumice are smaller and fewer, up to 0.5 cm and 10%				
50	18/100%		578.65						
55	19/100%	95-0329	773.70		At 50.0 ft				
60	20/100%		2044.79	6/53.5- 61.0 ft	Similar to unit 2b, slightly welded, pumice up to 25%, elongate, lithics, 5%, dacite				
					At 60.0 ft				At 60 ft, ending depth of shafts
					TUFF, SAA, grayish pink 5R 8/2, nonwelded, pulverized		Obt Iv		

* n/a = not applicable.

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BOREHOLE ID: 54-1024	TA/OU: 54/1148	MDA: H	Page: 2 of 2
Drilling Co.: Tonto Environmental Drilling Inc.	Core Box #(s) 9 cuttings 8 core	Start Date: 6/29/95 Time: 15:30	End Date: 7/5/95 Time: 15:00
Drilling Equip./Method: Ingersoll-Rand track-mounted air core with total dust suppression		Sampling Method: Continuous 5.0-ft core barrel	
Driller: Larry Thoren	Geologist: Jon Marin, Rene Evans ERM/Golder	Declination: 90°	Bearing: n/a* TD: 90.0 ft

Depth (ft)	Core Run # Core Recovery %	Analytical Sample Number 0550-	MRAL Screening Tritium (pCi/g)	Core Box # From - To (ft)	Lithology	Graphic Log	Lithologic Unit	Monitor Well Construction	Notes
60	21/100%	95-0331	1395.17	7/60.1- 68.0 ft	At 85.0 ft TUFF with gray lithics of andesite		Unit Iv, Tshirege Member, Bandelier Tuff	n/a	
65	22/100%		832.63	8/68.0- 79.0 ft					
70	23/100%	95-0333	609.66						
75	24/100%		226.61						
80	25/100%		49.89	9/79.0- 85.7 ft					
85	26/100%	95-0337	5.93	10/85.7- 90.0 ft					
90					TD = 90.0 ft				
95									
100									
105									
110									
115									
120									

LOS ALAMOS NATIONAL LABORATORY
ENVIRONMENTAL RESTORATION PROJECT
PRS 54-004
BOREHOLE LOG

BOREHOLE ID: 54-1025	TA/OU: 54/1148	MDA: H	Page: 2 of 2
Drilling Co.: Tonto Environmental Drilling Inc.	Core Box #(s) 9 cuttings 8 core	Start Date: 7/6/95 Time: 08:00	End Date: 7/6/95 Time: 14:30
Drilling Equip./Method: Ingersoll-Rand track-mounted air core with total dust suppression		Sampling Method: Continuous 5.0-ft core barrel	
Driller: Larry Thoren	Geologist: Jon Marin, Rene Evans ERM/Golder	Declination: 90°	Bearing: n/a TD: 90.0 ft

Depth (ft)	Core Run # Core Recovery %	Analytical Sample Number 0550-	MRAL Screening Tritium (pCi/g)	Core Box # From - To (ft)	Lithology	Graphic Log	Lithologic Unit	Monitor Well Construction	Notes
60		95-0349	2056.21					n/a	
65	13/84%		1115.67	6/Cont.					
70	14/96%	95-0351	343.48						
75	15/74%		205.20	7/68.4- 79.5 ft			Qbt IV		
80	16/70%		64.32						
85	17/80%			8/79.5- 90.0 ft					
90	18/75%	95-0355 95-0356	231.81		TD = 90.0 ft				
95									
100									
105									
110									
115									
120									

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BOREHOLE ID: 54-1026	TA/OU: 54/1148	MDA: H	Page: 1 of 2
Drilling Co.: Tonto Environmental Drilling Inc.	Core Box #(s): NA cuttings NA core	Start Date: 6/27/95 Time: 16:00	End Date: 6/29/95 Time: 10:00
Drilling Equip./Method: Ingersoll-Rand track-mounted air core with total dust suppression		Sampling Method: Continuous 5.0-ft core barrel	
Driller: Larry Thoren	Geologist: Jon Marin, Rene Evans ERM/Golder	Declination: 90°	Bearing: n/a* TD: 90.0 ft

Depth (ft)	Core Run # Core Recovery %	Analytical Sample Number 0550-	MRAL Screening Tritium (pCi/g)	Core Box # From - To (ft)	Lithology	Graphic Log	Lithologic Unit	Monitor Well Construction	Notes
0	1/100%				0-0.7 ft TOPSOIL, light brown 5YR 6/4.		Qal	n/a	
	2/100%								
	3/100%								
5	4/100%		0.59		2.5-3.0 ft TUFF, grayish pink 5YR 8/2, weathered and pulverized				
	5/100%								
	6/100%	95-0318	0.46						
10			1.36		At 10.3 ft PUMICE, grayish orange pink 5YR 7/2, slightly welded elongate up to 0.5 cm to 3.0 cm, 20% phenocrysts, quartz and sanidine 15% each, lithics 50%, up to 3 cm, dark gray dacite		Unit 2, Tshirege Member, Bandelier Tuff		At 10.3 ft, strongly oxidized fracture at 30° to the core axis, CaCO ₃ , dark brown clat and trace roots.
	7/100%								
15	8/100%	95-0300	1.49						At 13.5 ft, regouted borehole
20	9/100%								
			11.40						
25	10/100%	95-0302	3.21						At 16.7 ft, iron oxide coated fracture. Fracture is 35° to the core axis.
30	11/100%								
	12/100%		6.13		At 34.4 ft				At 34.4 ft, fracture present and the contact with unit 2b/2a, core loss
35									
40	13/100%	95-0304	3.79		PUMICE, pinkish gray 5YR 8/1, nonwelded, devitrified, up to 3 cm, equant				
45	14/100%	95-0306	1.55						
			2.87						At 46.5 ft, fracture at 30° to the core axis
50	15/100%		2.43				Qbt Iv		
55	16/100%								
60	17/100%	95-0308	3.20		At 56.5 ft PUMICE, high phenocryst content, up to 30%, slightly welded				At 60 ft, ending depth of shafts

* n/a = not applicable.

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BOREHOLE LOG

BOREHOLE ID: 54-1026	TA/OU: 54/1148	MDA: H	Page: 2 of 2
Drilling Co.: Tonto Environmental Drilling Inc.	Core Box #(s): NA cuttings NA core	Start Date: 6/27/95 Time: 16:00	End Date: 6/29/95 Time: 10:00
Drilling Equip./Method: Ingersoll-Rand track-mounted air core with total dust suppression		Sampling Method: Continuous 5.0-ft core barrel	
Driller: Larry Thoren	Geologist: Jon Marin, Rene Evans ERM/Golder	Declination: 90°	Bearing: n/a TD: 90.0 ft

Depth (ft)	Core Run # Core Recovery %	Analytical Sample Number 0550-	MRAL Screening Tritium (pCi/g)	Core Box # From - To (ft)	Lithology	Graphic Log	Lithologic Unit	Monitor Well Construction	Notes
60	17/Cont.				At 60.0 ft			n/a	At 60.0 ft, lost air and core recovery
65	18/100%		6.28						
		95-0310	5.42						
70	19/100%		3.55						
75	20/100%								
		95-0312	2.90						
80	21/100%		2.18						
85	22/100%				At 85.0 ft				
					TUFF, very light gray and powdery. Pumices are devitrified, up to 3 cm, equant, light gray.				
90	23/100%	95-0316	2.24						
95					TD = 90.0 ft				
100									
105									
110									
115									
120									

Appendix I

Stratigraphic Cross Sections Beneath MDA H

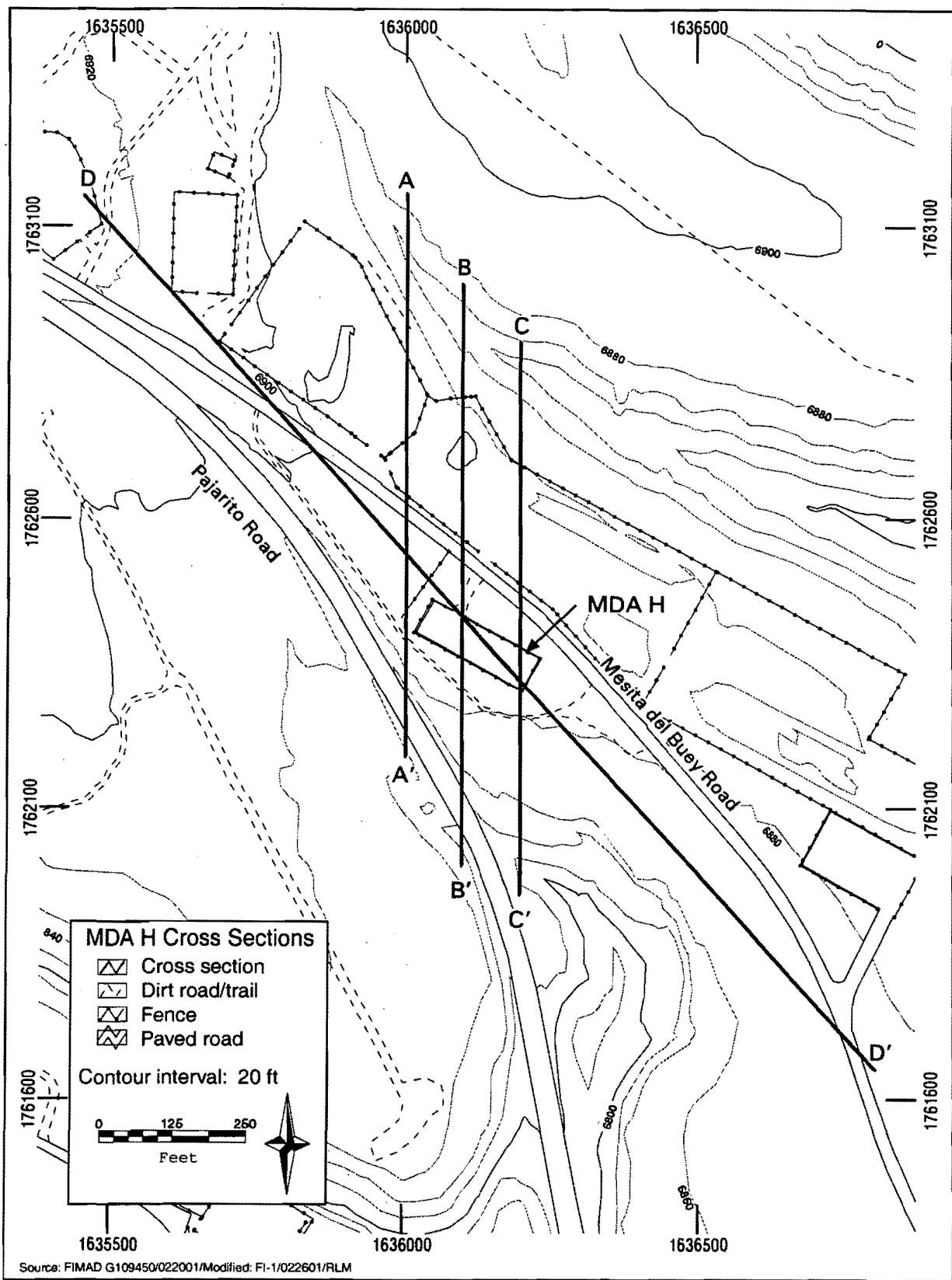


Figure I-1. Locations of stratigraphic cross sections at MDA H

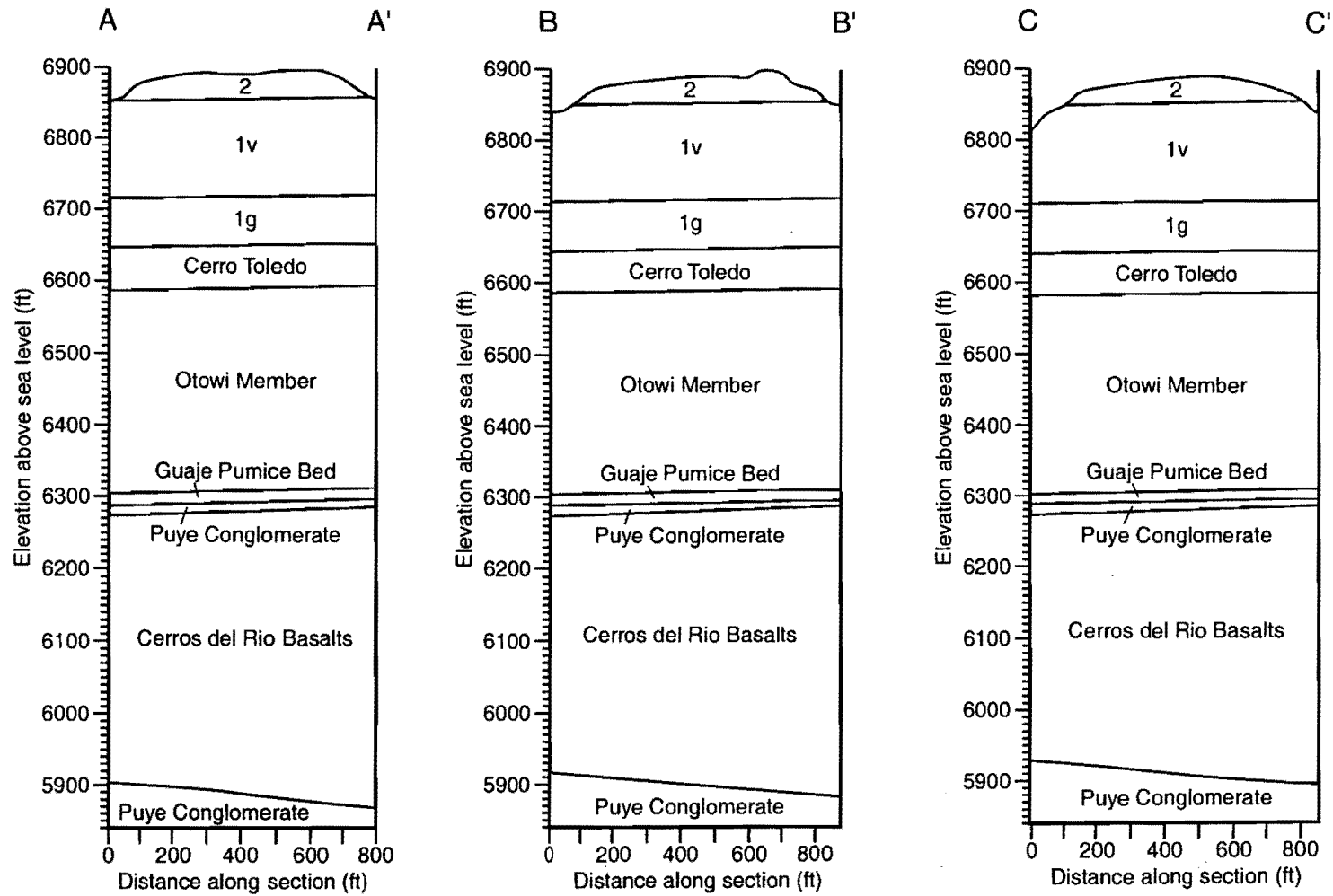


Figure I-2. Stratigraphic cross sections at MDA H

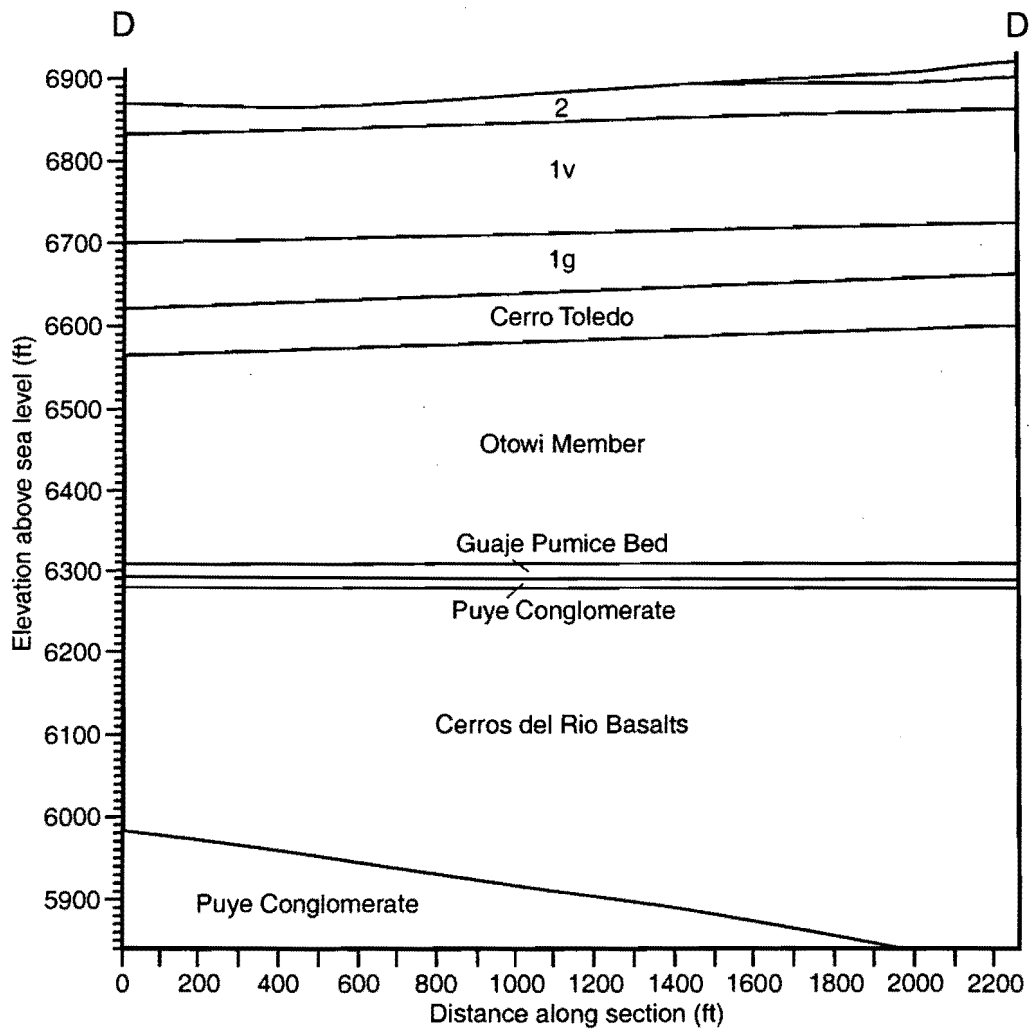


Figure I-3. Stratigraphic cross section D-D' at MDA H