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(9)

Date: May 08, 2003
Refer to: ER2003-0323

Mr. John Young, Corrective Action Project Leader
Permits Management Program
NMED – Hazardous Waste Bureau
2905 Rodeo Park Drive East
Building 1
Santa Fe, NM 87505-6303

SUBJECT: SUBMITTAL OF SUPPLEMENTAL DOCUMENTATION IN SUPPORT OF THE RESPONSE TO REQUEST FOR SUPPLEMENTAL INFORMATION (RSI) FOR THE SAMPLING AND ANALYSIS PLAN (SAP) FOR THE MIDDLE MORTANDAD / TEN SITE AGGREGATE

Dear Mr. Young:

Enclosed are two copies of supplemental documentation in support of the Los Alamos National Laboratory (LANL) Environmental Remediation Program's Response to your RSI on the SAP for the Middle Mortandad /Ten Site Aggregate. Revised text pages incorporating revisions made by LANL in response to NMED comments 8, 22, 23 and 24 were requested by Neelam Dhawan in a phone conversation with Gabriela Lopez Escobedo on April 29, 2003. The revised text was not initially included in Appendix A of LANL's RSI Response. The enclosed pages (B-5, B-6, B-7, B-14, C-8, C-18 and C-24) containing the revised text are intended to be replacement pages to the SAP for the Middle Mortandad /Ten Site Aggregate.

If you have any questions, please call Gabriela Lopez Escobedo at (505) 665-7352.

Sincerely,

David McInroy, Acting Program Manager
Remediation Program
Los Alamos National Laboratory

Sincerely,

David Gregory, Project Manager
Department of Energy
Los Alamos Site Operations

DM/DG/GLE/nr/dv

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were removed in 1996. The ER Project performed verification sampling in concert with the D&D activities; the sample results are presented in Appendix C of this aggregate SAP. Actual volume of low-level solid waste removed from the north and south sides of TA-35-2, including soil below the phase separator pit and holding tanks, is approximately 2265 yd^3 of low-level radioactive waste and 20 ft^3 of mixed waste. The bottom of the excavations was 20 to 30 ft below ground surface (bgs) and backfilled with clean soil (LANL 1997, 58737).

PRS 35-003(f) is a former flocculator tank (structure TA-35-37). The flocculator tank was added as part of the wastewater treatment plant in 1956 and used until 1963 when the plant was abandoned. The tank was removed in 1980 to prepare for D&D of the treatment plant's underground liquid waste lines (Cox 1985, 780). ER Project RFI samples were collected from this site as part of consolidated PRS 35-003(a)-99. Results are presented in Appendix C of this aggregate SAP.

PRS 35-003(g) is the former site of an ion exchange column regenerant tank. This tank was added along with the flocculator tank [PRS 35-003(f)] in 1956 and used until 1963 when the plant was abandoned. The regenerant tank was removed in 1980 to prepare for the D&D of the WWTP's underground liquid waste lines (Cox 1985, 780). ER Project RFI samples were collected from this site as part of consolidated PRS 35-003(a)-99. Results are presented in Appendix C of this aggregate SAP.

PRS 35-003(h) is the site of a former concrete retention tank. The tank was constructed in 1961 and added as a component of the WWTP. The tank had dimensions of 8 ft x 12 ft x 10 ft deep and was connected to buildings TA-35-41 and TA-35-10 by 4-in diameter stainless steel underground pipes. The retention tank and associated piping were removed in February 1985 during the Laboratory's RLWLR project (Elder et al. 1986, 3089). The tank and excavated soil were screened for radioactive contamination during the removal. No detection of radionuclides was documented. ER Project RFI samples were collected from this site as part of consolidated PRS 35-003(a)-99. Results are presented in Appendix C of this aggregate SAP.

PRS 35-003(m) is the former site of a 1000-gal. underground sludge tank (structure TA-35-22). The tank was part of a pilot plant scale unit meant to remove strontium-90 from waste sludge. The sludge tank was removed in August 1981. During the removal, the soil surrounding the tank had concentrations of stron-tium-90 and cesium-137 at levels up to 46,000 dpm/g (the method for this measurement was not documented). Soil from around the tank was excavated laterally until activity could not be detected above background, and below the tank to bedrock—a depth of 10 ft bgs. At this depth, fractures in the rock measured by radiation field-screening instruments had activity levels as high as 5000 pCi/g gross beta (McAtee 1981, 872). The decision was made to stop the excavation to avoid the large enterprise of further soil removal and because the risk of exposure was insignificant. This concrete tank was excavated and removed in one load to TA-54. Contaminated soil was left at 10-ft deep in solid tuff in this excavation. The excavation was backfilled with clean soil material and paved over with asphalt. ER Project RFI samples were collected from this site as part of consolidated PRS 35-003(a)-99. Results are presented in Appendix C of this aggregate SAP.

PRS 35-003(misc.) consists of the network of underground lines connecting the various structures of the TA-35 WWTP. Most of the piping of the waste disposal system was constructed from stainless, black, or galvanized steel with screwed or welded joints (LANL Eng. Drawing C14266). The majority of these lines were removed from 1981 through 1985, during the RLWLR project (see Table B-1.1-1) (Elder et al. 1986, 3089). Releases of radioactive contamination to the environment from these lines were documented (Cox 1985, 780; Cox 1985, 781; Cox 1985, 782; and Cox 1985, 785). The releases typically occurred at depths of 15 to 20 ft bgs in the trenches containing the lines. Extent of contaminant migration from these releases had not been determined (LANL 1996, 54422) until a D&D event occurred in 1996 at which time building TA-35-07 and associated piping were removed, including the lines designated as PRS 35-003(misc.)

(LANL 1997, 58737). The ER Project provided verification sampling during the 1996 D&D; the results are presented in Appendix C.

Table B-1.1-1
RLWLR Project's TA-35 Line Removal Summary

Line Number	Type[a]	Diameter (in.)	Length Removed (ft)	Length Left (ft)	Average Depth (ft)	Waste Volumes Removed (m3)		Average Activity[b] (dpm/100 cm2)
						Pipe	Soil	
68	SS	3	24		3	0.5		Background
69	BS	4	17		4	1		Background
70	SS/BS	4	268	35	3	7		Background
71	VCP	4	48	150	3	0.5		Background
72	BS	4	122		4	1.5		Background
73-89	SS	1-3	289		3	5		5mR/hr
90	SS	2	138	120	3	1.5	31	3mR/hr
90A	SS	3	50		6	1	66	5mR/hr
90B	BS	1	140		15	3	157	5mR/hr
90C	BS	1	22					
91	BS	3	139	71	15			20mR/hr
92	BS	2	137	73	15			20mR/hr
93	GS	1	100					
94	BS	2	35					
95	DI	2	82					
96	SS	2	12					
97	SS	3	144					
98	SS	2	150					
99	SS	2	150					
114	SS	3	17		3	0.5		50mR/hr

Source: Table derived from Radioactive Liquid Waste Line Removal Project report, LA-10821-MS

[a]Type symbols: SS = stainless steel, BS = black steel, VCP = vitrified clay pipe, GS = galvanized steel, DI = duriron.

[b]Alpha radiation from plutonium-238 or plutonium-239 unless otherwise noted; dose rates in mR/hr are at contact.

PRS 35-003(o) is the site of a former manhole, structure number TA-35-12. The manhole, subsurface Line 90A, and 86 yd^3 of contaminated soil adjacent to the east wall of the Air Filter Building (TA-35-7) were excavated and removed in January 1985 (Cox 1985, 782). Following the removal, 15 soil samples were collected. These samples contained up to 7145 pCi/g of beta activity. Because further excavation may have compromised the integrity of the excavation walls, the area was backfilled and paved over with asphalt (Cox 1985, 781). ER Project RFI samples were collected from this site as part of consolidated PRS 35-003(a)-99. Results are presented in Appendix C of this aggregate SAP.

PRS 35-003(p) is the former site of the Air Filter Building, TA-35-7. Radioactive air was filtered in this building and the cleaning filters were washed by tap water and/or long-decayed wastewater from the tank farms. This long-decayed wastewater was contaminated with strontium-89 and strontium-90. Build up of strontium in the air filters became a problem and required numerous washings, which produced more radioactive wastewater. The large volumes of water overwhelmed the storage capacity of the system which led to spills, overflows, and unplanned releases to Pratt Canyon (Emelity 1958, 793). The Air Filter Building was first the subject of D&D in 1980. A second D&D event occurred in 1996 at which time the

building and associated piping was removed (LANL 1997, 58737).The ER Project provided verification sampling during the 1996 D&D; the results are presented in Appendix C.

Additional information regarding the TA-35 WWTP operation and releases is presented in the Pratt Canyon Subarea operational history discussion in this appendix and in the work plan for Mortandad Canyon (LANL 1997, 56835).

PRS 35-003(j) is the site of a former aboveground storage tank located east of the north wing of building TA-35-2. This area is a former waste-oil treatment facility. The storage tank was removed in 1988 or 1989 (the actual removal date is not documented). The treatment facility was reported to be leaking dielectric oil in 1988. Subsequently, the leaking equipment was removed, the site backfilled with clean soil material and covered with asphalt to create a parking area (LANL 1996, 54402). ER Project RFI samples were collected from this site as part of consolidated PRS 35-003(j)-99. Results are presented in Appendix C of this aggregate SAP.

PRS 35-003(k) is the site of a former 12-ft-by-33-ft aboveground storage tank (TA-35-97) located 23 ft west of the northwest corner of TA-35-29. The storage tank was installed in 1974 and removed in 1976. This area is a former waste-oil treatment facility [PRS 35-003(j)] which was reported to be leaking dielectric oil in 1988. Subsequently, the leaking equipment was removed and the site was backfilled with clean soil material and covered with asphalt to create a parking area (LANL 1996, 54402). ER Project RFI samples were collected from this site as part of consolidated PRS 35-003(j)-99. Results are presented in Appendix C of this aggregate SAP.

PRS 35-004(a) is made up of outdoor storage areas previously used to store drums of oil and drums containing organic chemicals. The areas are located east and south of TA-35-25, the Sodium Building. Stained soil was observed at the site during a 1988 reconnaissance. ~~Ten~~ ER Phase I RFI samples were collected [for both PRSs 35-004(a) and 35-009(e)] in 1994. No risk-based COPCs were identified from this site. In 1995, contaminated soil was removed from the storage area (to an approximate 8-ft depth) concurrent with the D&D of TA-35-7, the Air Filter Building (LANL 1997, 58737).

PRS 35-004(h) consists of an area, near the northeast corner of building TA-35-7, which was formerly used to store containers of oils, capacitors, and organic chemicals like freon. The area is no longer used as a storage area and the date of closure is not documented. The disposition of the containers is not documented. Stained soil was observed at the site during a 1988 reconnaissance. Building TA-35-7 was first the subject of D&D in 1980. A second D&D event occurred in 1996 at which time the building and associated piping were removed (LANL 1997, 58737) along with this PRS area. Four ER Project RFI samples were collected from 1 borehole to a 30 ft depth in 1998 from this site. Results are presented in Appendix C of this aggregate SAP.

PRS 35-009(a) is a septic system that operated from 1951 to 1975. The structures that make up PRS 35-009(a) are TA-35-14, a 1500-gal septic tank (approximately 10 ft long by 4 ft wide by 5 ft deep) buried about 4 ft bgs; TA-35-15, a dosing chamber; and, TA-35-16, a distribution box. These structures were abandoned in place when new sanitary sewer lines were routed to the sewage lagoons [PRSs 35-010(a-c)] located east of TA-35 in Ten Site Canyon. The septic system discharged to drain fields on the south-facing slope of Ten Site Canyon. The septic system received sanitary wastes and possibly received industrial and radiological wastes from building TA-35-2. Specific waste stream information is not available (LANL 1992, 07666). Historical operations at TA-35-2 involved the use of lanthanum-140. Two nuclear reactors were housed in TA-35-2, as well as plutonium laboratories and lithium tritide operations (LANL 1992, 07666). The site was cleaned up during a VCA reported in September 1996 (LANL 1996, 55071). The VCA included removal and disposal of the tank contents and filling the tank with concrete. PRS 35-009(a) is located near the southwest corner of building TA-35-34 in the Mesa Top Subarea; releases from the septic system and

forklift punctured an aboveground oil storage tank. The storage tank was removed in 1992 (LANL 1997, 55687). ER Project RFI sample results are presented in Appendix C of this aggregate SAP.

PRS 35-014(e_2) is the site of a former oil spill that originated from overflows of a waste-oil impoundment. The PRS is located about 150 ft northeast of TA-35-85. The impoundment was decommissioned in 1989. Documented releases from this PRS consist of oil spills from the impoundment. Soil samples from oil-stained areas showed detectable PCB concentrations (LANL 1990, 7511). ER Project RFI sample results are presented in Appendix C of this aggregate SAP.

PRS 35-016(e) is an inactive outfall established in 1977 to discharge noncontact cooling water from the Chemical Laser Facility, TA-35-85. This outfall was deleted from NPDES Permit No. 04A090 in April 1987. This PRS is located north of TA-35-85 on the rim of Mortandad Canyon and discharged to the steep slope found there. The volume of water released is not documented, but the erosion that has taken place below the outfall indicates significant amounts of water were released. ER Project RFI sample results are presented in Appendix C of this aggregate SAP.

PRS 35-016(f) is an active storm drain located north of TA-35-85, the Chemical Laser Facility. The outfall consists of a CMP 18 in. in diameter that discharges into a small channel cut into backfill material on the south slope of Mortandad Canyon. Documented releases, consisting of oil spills, have occurred near the source areas for the storm drain. The volume of the spill is not documented. The SWMU report states that soil samples collected prior to 1990 from the stained areas had detectable concentrations of PCBs (LANL 1990, 7511). However, because the data was not included in the SWMU report and is unavailable for verification, the ER Project collected soil samples in 1995 for PCB analysis, no PCBs were detected. ER Project RFI sample results are presented in Appendix C of this aggregate SAP.

PRS 35-016(i) is an active surface discharge channel that handles stormwater runoff from the area between the east end of TA-35-85 and the main parking lot for TA-35. The outfall is a CMP 18 in. in diameter. Discharge from the outfall has eroded a small channel in the mesa slope to about 3 ft below the outfall and into the tuff bedrock. One ER Project RFI PCB sample result is presented in Appendix C of this aggregate SAP.

PRS 35-016(o) consists of four distinct and active storm drains established in 1951 to handle stormwater runoff from TA-35-02. This PRS also possibly handled TA-35-02 floor drain effluents from the following rooms:

- A10, in which floor drains received leaks and overflow from two 2000-gal. tanks containing low-level radioactive/acid liquid wastes;
- A13, which contained floor drains and four 55-gal. drums of PCB-contaminated waste oil;
- A22, the high-velocity projectile testing room; this room is next to room A23, which is sealed due to high background radiation from the LAPRE-I and LAMPRE reactors that formerly resided in room A23 (LANL 1991, 12451).

The four outfalls comprising PRS 35-016(o) are located on the eastern side of the mesa, on the south slope of Mortandad Canyon, approximately 20 ft. below the mesa edge. The outfalls consist of cast-iron drainpipes (the diameter is not documented). No documented releases of hazardous materials have occurred at these outfalls. ER Project RFI sample results are presented in Appendix C of this aggregate SAP.

PRS 35-016(p) is an unpermitted and active outfall established in 1968 to discharge noncontact cooling water condensate from TA-35-27, the Nuclear Safeguards Research Building (LANL 1990, 7511). A separate reference (Sontag and Jacobson 1996, 54766) states that this outfall discharges only stormwater runoff from the roof of TA-35-27. The outfall is located north and slightly east of TA-35-27 on the south slope of

Table C-1.1-1
Samples Taken in Mesa Top Subarea (continued)

Sample ID	Location ID	Depth (ft)	Media	Limited- List TAL Metals	Non-TAL Metals	TAL Metals	PCBs	Pesticides/PCBs	SVOCs	TPH DRO	TPH LRO	VOCs	Gamma Spectroscopy	Isotopic Plutonium	Isotopic Uranium	Strontium- 90	Tritium	XRF
0435-97-0426	35-02565	1–2	Soil	—	—	—	—	—	—	—	—	—	3531R	—	—	3531R	—	—
0435-97-0427	35-02565	2–3	Soil	—	—	—	—	—	—	—	—	—	3531R	—	—	3531R	—	—
PRS 35-004(a)																		
AAC1153	35-02097	0–0.5	Soil	—	—	—	—	—	—	—	—	—	—	21468	21468	—	—	—
AAC1154	35-02098	0–0.5	Soil	—	—	—	—	—	—	—	—	—	—	21468	21468	—	—	—
PRS 35-009(a)																		
AAA6417	35-02033	7–8	Soil	—	—	—	—	—	16641	—	—	—	—	16635	16635	—	—	16636
AAA6418	35-02033	12–13	Soil	—	—	—	—	—	16641	—	—	—	—	16635	16635	—	—	16636
AAA6419	35-02033	16–17	Soil	—	—	—	—	—	16641	—	—	—	—	16635	16635	—	—	16636
AAA6420	35-02034	5.5–6.5	Soil	—	—	—	—	—	16641	—	—	—	—	16635	16635	—	—	16636
AAA6421	35-02034	13.5–14.5	Soil	16637	16637	—	—	—	16645	—	—	—	—	16635	16635	—	—	16636
AAA6422	35-02034	19–20	Soil	—	—	—	—	—	16641	—	—	—	—	16635	16635	—	—	16636
0435-96-0051	35-02301	8–8.5	Soil	—	—	1962	—	—	1961	—	—	—	—	—	—	—	—	—
0435-96-0052	35-02302	8–8.5	Soil	1962	—	—	—	—	1961	—	—	—	—	—	—	—	—	—
PRS 35-014(b)																		
AAA3819	35-02072	0–1	Soil	—	—	—	16301	—	16301	—	—	—	—	16386	16386	—	16386	—
AAA3820	35-02072	1–2	Soil	—	—	—	16301	—	16301	—	—	—	—	16386	16386	—	16386	—
AAA3821	35-02072	2–3	Soil	—	—	—	16301	—	16301	—	—	—	—	16386	16386	—	16386	—
0435-97-0434	35-02568	0.5–1.5	Soil	—	—	—	3508R	—	3508R	3508R	3508R	—	—	—	—	—	—	—
0435-97-0435	35-02568	1.5–2.5	Soil	—	—	—	3508R	—	3508R	3508R	3508R	—	—	—	—	—	—	—
0435-97-0436	35-02568	2.5–3.5	Soil	—	—	—	3508R	—	3508R	3508R	3508R	—	—	—	—	—	—	—
0435-97-0437	35-02568	2.5–3.5	Soil	—	—	—	—	—	—	3508R	3508R	—	—	—	—	—	—	—
0435-97-0438	35-02569	0.5–1.5	Soil	—	—	—	3508R	—	3508R	3508R	3508R	—	—	—	—	—	—	—
0435-97-0439	35-02569	1.5–2.5	Soil	—	—	—	3508R	—	3508R	3508R	3508R	—	—	—	—	—	—	—

Table C-1.1-2

Inorganic Chemicals with Concentrations (mg/kg) or Detection Limits at or Exceeding Background Values in Mesa Top Subarea

Sample ID	Location ID	Depth (ft)	Media	Antimony	Barium	Beryllium	Cadmium	Calcium	Chromium (total)	Copper	Lead	Mercury	Nickel	Silver	Thallium	Zinc
Soil Background Value (mg/kg)				**0.83**	**295**	**1.83**	**0.4**	**6120**	**19.3**	**14.7**	**22.3**	**0.1**	**15.4**	**1**	**0.73**	**48.8**
PRS 35-015(a)																
AAC3346	35-02182	2.00–3.00	Soil	—	—	—	—	—	—	—	—	—	—	—	1.1(U)[a]	—
0435-95-0199	35-02286	1.00–2.00	Soil	9.7(U)	—	—	0.76(U)	—	—	—	—	—	—	—	—	—
0435-97-0104	35-02496	0.00–1.00	Soil	6.2(UJ)[b]	—	—	0.52(U)	6220	—	—	—	—	—	1.8(U)	—	—
0435-97-0105	35-02496	1.00–2.00	Soil	6.8(UJ)	—	—	0.56(U)	—	—	—	—	—	—	2(U)	—	—
0435-97-0107	35-02497	0.00–1.00	Soil	5.9(UJ)	—	—	0.49(U)	6990	—	—	—	—	—	1.7(U)	—	—
0435-97-0108	35-02497	1.00–2.00	Soil	6.8(UJ)	—	—	0.56(U)	—	—	—	—	—	—	2(U)	—	—
0435-97-0112	35-02498	0.00–1.00	Soil	6.3(UJ)	—	—	0.52(U)	—	—	—	—	—	—	1.8(U)	—	—
0435-97-0113	35-02498	1.00–2.00	Soil	6.2(UJ)	—	—	0.51(U)	14700	193	—	—	—	98.7	1.8(U)	—	—
0435-97-0115	35-02499	0.00–1.00	Soil	6.3(UJ)	—	—	0.52(U)	6280	—	—	—	—	—	1.8(U)	—	—
0435-97-0116	35-02499	1.00–2.00	Soil	6.2(UJ)	—	—	0.52(U)	—	—	—	—	—	—	1.8(U)	—	—
0435-97-0117	35-02499	2.00–3.00	Soil	6.7(UJ)	—	—	0.56(U)	—	36.3	—	—	—	20.8	2(U)	—	—
0435-97-0119	35-02500	0.00–0.83	Soil	7(UJ)	—	—	0.64(J)[c]	—	—	—	—	—	—	2(U)	—	—
0435-97-0121	35-02500	0.83–2.00	Soil	6.5(UJ)	—	—	0.54(U)	—	30.8	—	—	—	17.7	1.9(U)	—	—
0435-97-0122	35-02501	0.00–1.00	Soil	6.2(UJ)	—	—	0.51(U)	—	—	—	—	—	—	1.8(U)	—	—
0435-97-0123	35-02501	1.00–2.00	Soil	6.3(UJ)	—	—	0.52(U)	—	—	—	—	—	—	1.8(U)	—	—
0435-97-0277	35-02594	2.00–3.00	Soil	—	—	—	—	—	22	—	—	—	19.3	—	—	—
PRS 35-009(a)																
AAA6421	35-02034	13.50–14.50	Soil	—	—	—	1(U)	—	—	—	—	—	—	—	—	—
0435-96-0051	35-02301	8.00–8.50	Soil	—	—	—	—	—	—	15.1	—	0.68	—	—	0.88(UJ)	94.6
0435-96-0052	35-02302	8.00–8.50	Soil	—	—	—	—	—	—	24.3	—	—	—	—	0.79(UJ)	—
PRSs 35-003(j,k), 35-014(d), 35-015(b)																
0435-95-0211	35-02288	1.00–2.00	Soil	10.2(U)	—	—	0.63(U)	—	—	—	—	—	—	2(U)	—	—
0435-95-0212	35-02288	3.00–4.00	Soil	10.6(U)	—	—	0.66(U)	—	—	—	—	—	—	2.1(U)	—	—
0435-95-0213	35-02288	6.00–7.00	Soil	9.9(U)	—	—	0.61(U)	—	—	—	—	—	—	2(U)	—	—
0435-95-0214	35-02288	9.00–10.00	Soil	9.6(U)	—	—	0.6(U)	—	—	—	—	—	—	1.9(U)	—	—
0435-95-0219	35-02291	1.00–2.00	Soil	10(U)	—	—	0.62(U)	9440	—	15.5	42.3	0.55	—	2(U)	—	—

Table C-1.1-3
Detected Organic Chemicals in Mesa Top Subarea (continued)

Analyte	Location ID	Sample ID	Sample Value (mg/kg)	Media	Depth (ft)
PRS 35-014(f)					
DRO	35-02393	0435-96-0080	6500	Soil	0–1
	35-02405	0435-96-0096	81	Soil	0–0.5
	35-02428	0435-96-0143	5900(J+)	Soil	0–0.5
	35-02429	0435-96-0144	2500(J+)	Soil	0–0.5
	35-02430	0435-96-0145	45	Soil	0–0.5
	35-02431	0435-96-0146	56	Soil	0–0.5
PRS 35-014(a)					
Bis(2-ethylhexyl)phthalate	35-02210	AAB1042	2.8	Soil	0–0.5
	35-02211	AAB1043	2.5	Soil	0–0.5
Di-n-octylphthalate	35-02211	AAB1043	1	Soil	0–0.5
PRS 35-009(a)					
Benzo(a)pyrene	35-02301	0435-96-0051	0.38	Soil	8–8.5
Chrysene	35-02301	0435-96-0051	0.38	Soil	8–8.5
PRS 35-014(b)					
Acenaphthene	35-02568	0435-97-0434	8.9	Soil	0.5–1.5
	35-02568	0435-97-0435	0.074(J)	Soil	1.5–2.5
	35-02569	0435-97-0438	0.038(J)	Soil	0.5–1.5
Anthracene	35-02568	0435-97-0434	19	Soil	0.5–1.5
	35-02568	0435-97-0435	0.1(J)	Soil	1.5–2.5
	35-02569	0435-97-0438	0.06(J)	Soil	0.5–1.5
Aroclor-1254	35-02072	AAA3819	0.05	Soil	0–1
	35-02072	AAA3820	0.054	Soil	1–2
	35-02568	0435-97-0434	1.3	Soil	0.5–1.5
Benzo(a)anthracene	35-02568	0435-97-0434	28	Soil	0.5–1.5
	35-02568	0435-97-0435	0.21(J)	Soil	1.5–2.5
	35-02569	0435-97-0438	0.14(J)	Soil	0.5–1.5
Benzo(a)pyrene	35-02568	0435-97-0434	22	Soil	0.5–1.5
	35-02568	0435-97-0435	0.2(J)	Soil	1.5–2.5
	35-02569	0435-97-0438	0.13(J)	Soil	0.5–1.5
Benzo(b)fluoranthene	35-02568	0435-97-0434	18	Soil	0.5–1.5
	35-02568	0435-97-0435	0.16(J)	Soil	1.5–2.5
	35-02569	0435-97-0438	0.097(J)	Soil	0.5–1.5
Benzo(g,h,i)perylene	35-02568	0435-97-0434	13	Soil	0.5–1.5
	35-02568	0435-97-0435	0.13(J)	Soil	1.5–2.5
Benzo(k)fluoranthene	35-02568	0435-97-0434	19	Soil	0.5–1.5
	35-02568	0435-97-0435	0.16(J)	Soil	1.5–2.5
	35-02569	0435-97-0438	0.11(J)	Soil	0.5–1.5
Bis(2-ethylhexyl)phthalate	35-02072	AAA3819	14	Soil	0–1
Chrysene	35-02568	0435-97-0434	27	Soil	0.5–1.5
	35-02568	0435-97-0435	0.2(J)	Soil	1.5–2.5
	35-02569	0435-97-0438	0.16(J)	Soil	0.5–1.5