Appendix E

Analytical Data Summaries

Table E-1. ARA-02 Summary Data (FY 2000).

Sample Number Location Media	5RA00101 Tank #1 Concrete		5RA00201 Tank #2 Concrete		5RA00202 Tank #2 Concrete		5RA00301 Tank #3 Concrete		5RA00401 Seepage Pit Pumice		5RA00501 Manhole #1 Concrete		5RA00601 Manhole #2 Concrete		5RA00701 Manhole #3 Concrete		5RA00801 Container Comp Piping		5RA00901 Container #2 Piping		5RA03801 Container #1 Piping		5RA0591 Rinsate Water	
Gross Alpha (pCi/g)	10.8 +/- 2.9		15.7 +/- 4.7		25.9 +/- 6.2		29.2 +/- 7.9		34.0 +/- 9.1		9.89 +/- 2.75		22.1 +/- 5.7		26.1 +/- 6.3		9.66 +/- 2.40		NA		NA		< 1.58	U
Gross Beta (pCi/g)	16.8 +/- 2.8		27.4 +/- 3.7		27.4 +/- 3.4		27.7 +/- 3.4		42.9 +/- 4.2		17.8 +/- 2.7		30.7 +/- 3.9		30.4 +/- 3.6		22.4 +/- 2.9		NA		NA		< 2.61	U
Gamma Spec. (pCi/g or pCi/L)																			NA		NA			
Co-60	< 0.0348	U	0.0222 +/- 0.0088	J	0.214 +/- 0.022		0.404 +/- 0.035		0.256 +/- 0.027		< 0.0348	U	0.217 +/- 0.022		0.209 +/- 0.020		< 0.0333	U					< 2.94	U
Cs-137	0.766 +/- 0.052		1.41 +/- 0.08		1.57 +/- 0.10		4.01 +/- 0.28		11.4 +/- 0.6		< 0.0347	U	6.31 +/- 0.34		2.14 +/- 0.12		0.320 +/- 0.025						< 2.74	U
Eu-152	< 0.0759	U	< 0.0581	UJ	< 0.0880	U	< 0.180	U	0.214 +/- 0.058		< 0.0799	U	< 0.0959	U	< 0.0722	U	< 0.0817	U					< 8.16	U
K-40	11.6 +/- 0.6		19.9 +/- 1.1		19.0 +/- 1.0		15.4 +/- 0.9		29.1 +/- 1.5		16.0 +/- 0.9		19.1 +- 1.1		17.4 +/- 0.9		18.2 +/- 1.1						N/A	
Ra-226	0.495 +/- 0.048		0.856 +/- 0.058		1.02 +/- 0.08		0.920 +/- 0.105		1.52 +/- 0.11		0.786 +/- 0.063		0.907 +/- 0.065		0.979 +/- 0.069		0.901 +/- 0.064						< 5.63	U
Ra-226 (via daughter)	0.568 +/- 0.074		1.00 +/- 0.10		0.879 +/- 0.098		0.912 +/- 0.100		1.64 +/- 0.16		0.944 +/- 0.100		0.798 +/- 0.086		1.02 +/- 0.09		0.831 +/- 0.088						< 0.863	U
U-235	< 0.157	U	< 0.141	U	< 0.183	U	0.370 +/- 0.139	J	0.497 +/- 0.122		< 0.172	U	0.437 +/- 0.090		0.163 +/- 0.066	J	< 0.170	U					< 17.7	UJ
SVOCs (ug/kg or ug/L)																			NA		NA			
Diethylphthalate	94.15	J	< 337.1	U	< 337.2	U	< 345.7	U	< 356.4	U	< 353.6	U	< 342.0	U	< 338.9	U	< 341.9						< 10	U
Di-n-butylphthalate	737.8		387.9		257.5	J	604.7		681.6		< 353.6	U	266.6	J	658.0		219.2	J					1.023	J
VOCs (ug/kg or ug/L)	NA								NA															
4-methyl-2-pentanone			< 20.28	U	< 20.28	U	< 21.39	U			< 20.77	UJ	< 20.41	R	< 20.45	UJ	33.11	J	26.20	J	8.925	J	< 20	U
Toluene			< 5.071	U	1.169	J	< 5.348	U			< 5.192	UJ	< 5.102	R	< 5.112	UJ	< 5.128	UJ	< 5.107	UJ	< 5.149	UJ	< 5	U
Dioxins (pg/g or pg/L)	NA		NA		NA		NA				NA		NA		NA		NA		NA		NA			
1,2,3,6,7,8-HxCDD									1.2	J													< 0.73	U
1,2,3,4,6,7,8-HpCDD									15	J													< 0.73	U
Total HpCDD									26	J													< 0.73	U
OCDD									150	J													< 2.2	U
Furans (pg/g or pg/L)	NA		NA		NA		NA				NA		NA		NA		NA		NA		NA			
OCDF									6.5	J													< 0.80	U
PCBs (ug/kg or ug/L)																			NA		NA			
Aroclor-1016	< 34	U	130	J	75	J	490	J	< 35	U	< 35	U	< 34	U	< 34	U	< 34	U					< 1.0	U
Aroclor-1260	< 34	U	< 33	U	230		< 35	U	< 35	U	120	J	< 34	U	46	J	< 34	U					1.0	
TCLP Metals (ug/L)																			NA		NA		NA	
Arsenic	< 5.0	U	8.0	B	8.8	B	< 5.0	U	5.7	B	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U						
Barium	187	B	645	B	612	B	777	B	332	B	629	B	629	B	962	B	703	B						
Cadmium	< 5.0	U	5.0	B	< 5.0	U	13.3	B	6.5	B	81.3		< 5.0	U	6.9	B	< 5.0	U						
Chromium	< 5.0	U	< 5.0	U	< 5.0	U	7.5	B	< 5.0	U	18.0	B	< 5.0	U	14.0	B	< 5.0	U						
Lead	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U						
Mercury	< 0.20	U	< 0.20	U	< 0.20	U	< 0.20	U	< 0.20	U	< 0.20	U	< 0.20	U	< 0.20	U	< 0.20	U						
Selenium	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U	6.9	B	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U						
Silver	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U						
Metals	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA			
Arsenic																							< 5.0	U
Barium																							< 5.0	U
Cadmium																							< 5.0	U
Chromium																							< 5.0	U
Lead																							< 3.0	U
Mercury																							< 0.20	U
Selenium																							< 5.0	U
Silver																							< 10.0	U

Table E-2. ARA-13 Summary Data.

Sample Number:	5RA10101		5RA10201		5RA10301		5RA10401		5RA10501		5RA10502		5RA10601		5RA10701		5RA10801	
Location:	Tank #1		Tank #2		Tank #3		Tank #4		Box #1		Box #1		Box #2		Box #3		Manhole #1	
Media:	Sludge		Sludge		Sludge		Liquid		Sludge		Sludge		Sludge		Liquid		Sludge	
SVOCs (ug/kg) or (ug/L)																		
1,4-Dichlorobenzene	< 10,410	U	1,583	J	382.9	J	< 10.0	U	< 600.7	U	< 578.5	U	< 604.2	U	< 10.0	U	< 384.6	U
Naphthalene	7,487	J	6,686	J	3,258		1.901	J	91.1	J	< 578.5	U	79.74	J	< 10.0	U	< 384.6	U
4-Chloroaniline	4,640	J	6,075	J	2,954		< 10.0	U	386.9	J	164.7	J	279	J	< 10.0	U	< 384.6	U
2-Methylnaphthalene	2,121	J	5,083	J	2,933		< 10.0	U	66.73	J	< 578.5	U	69.23	J	< 10.0	U	< 384.6	U
Acenaphthene	1,834	J	7,507	J	15,380		< 10.0	U	1449		636.1		1,196		< 10.0	U	< 384.6	U
Dibenzofuran	1,506	J	4,577	J	11,230		< 10.0	U	871.7		365.6	J	831.4		< 10.0	U	< 384.6	U
Fluorene	2,955	J	8,975	J	20,760		< 10.0	U	2340		1,080		2053		< 10.0	U	< 384.6	U
Diethylphthalate	< 10,410	U	< 13,540	U	< 2,898	U	< 10.0	U	< 600.7	U	< 578.5	U	< 604.2	U	< 10.0	U	45.76	J
Phenanthrene	37,240		94,080	J	279,000	J	4.681	J	33510		13,390		31,230		< 10.0	U	< 384.6	U
Anthracene	12,680		27,040	J	83,230	J	1.142	J	16350		7,053		14,680	J	< 10.0	U	< 384.6	U
Fluoranthene	36,920		93,280	J	235,500	J	2.182	J	60910		25,510		49,280		< 10.0	U	< 384.6	U
Pyrene	20,480		54,640		185,600		1.676	J	60600		25,870		52,200		< 10.0	U	< 384.6	U
Benzo(a)anthracene	9,975	J	26,320		68,560	J	< 10.0	U	33540		15,690		29,040		< 10.0	U	< 384.6	U
Chrysene	9,614	J	20,460		60,860		< 10.0	U	31740		15,530		27,060	J	< 10.0	U	< 384.6	U
bis(2-ethylhexyl) phthalate	3,422	J	< 13,540	U	1,456	J	4.023	J	368.4	J	323.7	J	287	J	14.75		50.76	J
Benzo(b)fluoranthene	4,105	J	10,360	J	31,440	J	< 10.0	U	17540		10,660		15,770		< 10.0	U	< 384.6	U
Benzo(k)fluoranthene	4,233	J	11,290	J	22,090		< 10.0	U	4732		4,486		17,770		< 10.0	U	< 384.6	U
Benzo(a)pyrene	4,558	J	12,810	J	35,320	J	< 10.0	U	20200		11,250		18,340		< 10.0	U	< 384.6	U
Indeno(1,2,3-cd)pyrene	1,893	J	5,892	J	5,082		< 10.0	U	8138	J	4,486		7,919	J	< 10.0	U	< 384.6	U
Dibenzo(a,h)anthracene	< 10,410	U	1,574	J	3,300		< 10.0	U	4186		1,975		2,882		< 10.0	U	< 384.6	U
Benzo(g,h,I)perylene	< 10,410	U	< 13,540	U	7,022		< 10.0	U	6648	J	3,217		6,283	J	< 10.0	U	< 384.6	U
Carbazole	3,853	J	7,651	J	13,680	J	< 10.0	U	1838		713.9		1,352		< 10.0	U	< 384.6	U
Pesticides (ug/kg) or (ug/L)																		
alpha-BHC	< 210	U	< 280	U	< 300	U	< 0.050	U	< 310	U	< 59	U	< 62	U	< 0.050	U	< 2.0	U
beta-BHC	< 210	U	< 280	U	< 300	U	< 0.050	U	< 310	U	< 59	U	< 62	U	< 0.050	U	< 2.0	U
delta-BHC	< 210	U	< 280	U	< 300	U	< 0.050	U	< 310	U	< 59	U	< 62	U	< 0.050	U	< 2.0	U
gamma-BHC (Lindane)	< 210	U	< 280	U	< 300	U	< 0.050	U	< 310	U	< 59	U	< 62	U	< 0.050	U	< 2.0	U
Heptachlor	< 210	U	< 280	U	< 300	U	< 0.050	UJ	< 310	U	< 59	U	< 62	U	< 0.050	UJ	< 2.0	U
Aldrin	< 210	U	< 280	U	< 300	U	< 0.050	U	< 310	U	< 59	U	< 62	U	< 0.050	U	< 2.0	U
Heptachlor epoxide	< 210	U	< 280	U	< 300	U	< 0.050	U	< 310	U	< 59	U	< 62	U	< 0.050	U	< 2.0	U
Endosulfan I	< 210	U	< 280	U	< 300	U	< 0.050	U	< 310	U	< 59	U	< 62	U	< 0.050	U	< 2.0	U
Dieldrin	< 210	U	< 280	U	< 300	U	< 0.050	U	< 310	U	< 59	U	< 62	U	< 0.050	U	< 2.0	U
4,4'-DDE	< 210	U	< 280	U	< 300	U	< 0.050	U	< 310	U	< 59	U	< 62	U	< 0.050	U	< 2.0	U
Endrin	< 210	UJ	< 280	UJ	< 300	UJ	< 0.050	U	< 310	UJ	< 59	UJ	< 62	UJ	< 0.050	U	< 2.0	U
Endosulfan II	< 210	U	< 280	U	< 300	U	< 0.050	U	< 310	U	< 59	U	< 62	U	< 0.050	U	< 2.0	U
4,4'-DDD	< 210	UJ	< 280	UJ	< 300	UJ	< 0.050	UJ	< 310	UJ	< 59	UJ	< 62	UJ	< 0.050	UJ	< 2.0	U
Endosulfan sulfate	< 210	U	< 280	U	< 300	U	< 0.050	U	< 310	U	< 59	U	< 62	U	< 0.050	U	< 2.0	U
4,4'-DDT	< 210	UJ	< 280	UJ	< 300	UJ	< 0.050	UJ	< 310	UJ	< 59	UJ	< 62	UJ	< 0.050	UJ	< 2.0	UJ
Methoxychlor	< 410	U	< 540	U	< 570	U	< 0.10	UJ	< 590	U	< 110	U	< 120	U	< 0.10	UJ	< 3.8	UJ
Endrin ketone	< 210	U	< 280	U	< 300	U	< 0.050	U	< 310	U	< 59	U	< 62	U	< 0.050	U	< 2.0	U
Endrin aldehyde	< 210	U	< 280	U	< 300	U	< 0.050	U	< 310	U	< 59	U	< 62	U	< 0.050	U	< 2.0	U
alpha-Chlordane	< 210	U	< 280	U	< 300	U	< 0.050	U	< 310	U	< 59	U	< 62	U	< 0.050	U	< 2.0	U
gamma-Chlordane	< 210	U	< 280	U	< 300	U	< 0.050	U	< 310	U	< 59	U	< 62	U	< 0.050	U	< 2.0	U
Technical Chlordane	< 2100	U	< 2800	U	< 3000	U	< 0.50	U	< 3100	U	< 590	U	< 620	U	< 0.50	U	< 20	U
Toxaphene	< 210	U	< 280	U	< 300	U	< 1.0	U	< 310	U	< 59	U	< 62	U	< 1.0	U	< 2.0	U
Herbicides (ug/L or ug/kg)																		
Dalapon	< 250	U	< 320	U	< 350	U	< 2.0	U	< 72	U	< 69	U	< 72	U	< 2.0	U	< 46	R

Table E-2. (continued).

Sample Number:	5RA10101		5RA10201		5RA10301		5RA10401		5RA10501		5RA10502		5RA10601		5RA10701		5RA10801	
Location:	Tank #1		Tank #2		Tank #3		Tank #4		Box #1		Box #1		Box #2		Box #3		Manhole #1	
Media:	Sludge		Sludge		Sludge		Liquid		Sludge		Sludge		Sludge		Liquid		Sludge	
Dicamba	< 250	U	< 320	U	< 350	U	< 2.0	U	< 72	U	< 69	U	< 72	U	< 2.0	U	< 46	R
MCPP	< 50,000	U	< 65,000	U	< 70,000	U	< 400	U	< 14000	U	< 14,000	U	< 14,000	U	< 400	U	< 9,200	R
MCPA	< 50,000	U	< 65,000	U	< 70,000	U	< 400	U	< 14000	U	< 14,000	U	24,000	J	< 400	U	< 9,200	R
Dichloroprop	< 500	U	< 650	U	< 700	U	< 4.0	U	< 140	U	< 140	U	< 140	U	< 4.0	U	< 92	R
2,4-D	< 500	U	< 650	U	< 700	U	< 4.0	U	< 140	U	< 140	U	< 140	U	< 4.0	U	< 92	R
2,4,5-TP	< 120	U	< 160	U	< 170	U	< 1.0	U	< 36	U	< 35	U	< 36	U	< 1.0	U	< 23	R
2,4,5-T	< 120	U	< 160	U	< 170	U	< 1.0	U	< 36	U	< 35	U	< 36	U	< 1.0	U	< 23	R
2,4-DB	< 500	U	< 650	U	1,000		< 4.0	U	< 140	U	< 140	U	< 140	U	< 4.0	U	< 92	R
Dinoseb	< 75	U	110	J	310	J	< 0.60	U	< 22	U	75	J	< 22	U	< 0.60	U	< 14	R
Gross Alpha/Beta (pCi/g or pCi/L)																		
Gross Alpha	18.0 +/- 4.7		16.1 +/- 3.3		24.7 +/- 16.9	U	3.11 +/- 0.86		14.3 +/- 7.9	U	17.9 +/- 3.4		21.8 +/- 4.1		10.1 +/- 2.6		16.8 +/- 3.0	
Gross Beta	24.2 +/- 2.2		12.5 +/- 1.3		26.2 +/- 3.6		14.5 +/- 1.6		23.3 +/- 3.3		29.0 +/- 2.3		28.1 +/- 2.2		31.9 +/- 2.6		27.6 +/- 2.4	
TCLP VOCs																		
Vinyl Chloride	< 100	U	< 100	U	< 100	U	< 100	U	< 100	U	< 100	U	< 100	U	< 100	U	< 100	U
1,1-Dichloroethene	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U
Chloroform	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U
1,2-Dichloroethane	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U
2-Butanone	< 200	U	< 200	U	< 200	U	133.8	J	< 200	U	< 200	U	< 200	U	200	UJ	< 200	U
Carbon tetrachloride	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U
Trichloroethene	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U
Benzene	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U
Tetrachloroethene	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U
Chlorobenzene	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U
TCLP Metals (ug/L)							N/A								N/A			
Arsenic	12.4		7.7		< 5.0	U			< 5.0	U	< 5.0	U	< 5.0	U			9.0	
Barium	2,570		854		984				1,640		1,770		1,760				1,230	
Cadmium	< 5.0	U	< 5.0	U	< 5.0	U			< 5.0	U	< 5.0	U	< 5.0	U			< 5.0	U
Chromium	< 5.0	U	< 5.0	U	< 5.0	U			< 5.0	U	< 5.0	U	< 5.0	U			< 5.0	U
Lead	< 5.0	U	< 5.0	U	< 5.0	U			< 5.0	U	< 5.0	U	< 5.0	U			< 5.0	U
Mercury	< 0.20	U	< 0.20	U	< 0.20	U			< 0.20	U	< 0.20	U	< 0.20	U			< 0.20	U
Selenium	5.1	U	< 5.0	U	6.2	U			< 5.0	U	7.5	U	5.8	U			< 5.0	U
Silver	< 5.0	U	< 5.0	U	< 5.0	U			< 5.0	U	< 5.0	U	< 5.0	U			< 5.0	U
TCLP SVOCs (ug/L)																		
Pyridine	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U
1,4-Dichlorobenzene	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U
2-Methylphenol	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U
3- and 4-Methylphenol	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U
Hexachloroethane	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U
Nitrobenzene	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U
Hexachlorobutadiene	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U
2,4,6-Trichlorophenol	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U
2,4,5-Trichlorophenol	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U
2,4-Dinitrotoluene	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U
Hexachlorobenzene	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U	< 50	U
Pentachlorophenol	< 250	U	< 250	U	< 250	U	< 250	U	< 250	U	< 250	U	< 250	U	< 250	U	< 250	U
TCLP Pesticides																		
gamma-BHC (Lindane)	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U
Heptachlor	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U
Heptachlor epoxide	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U

Table E-2. (continued).

Sample Number:	5RA10101		5RA10201		5RA10301		5RA10401		5RA10501		5RA10502		5RA10601		5RA10701		5RA10801	
Location:	Tank #1		Tank #2		Tank #3		Tank #4		Box #1		Box #1		Box #2		Box #3		Manhole #1	
Media:	Sludge		Sludge		Sludge		Liquid		Sludge		Sludge		Sludge		Liquid		Sludge	
Endrin	< 0.50	UJ	< 0.50	UJ	< 0.50	UJ	< 0.50	UJ	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	UJ	< 0.50	UJ
Methoxychlor	< 1.0	UJ	< 1.0	UJ	< 1.0	UJ	< 1.0	UJ	< 1.0	UJ	< 1.0	UJ	< 1.0	UJ	< 1.0	UJ	< 1.0	UJ
Technical Chlordane	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U
Toxaphene	< 20	U	< 20	U	< 20	U	< 20	U	< 20	U	< 20	U	< 20	U	< 20	U	< 20	U
TCLP Herbicides (ug/L)																		
2,4-D	< 40	U	< 40	U	< 40	U	< 40	U	< 40	U	< 40	U	< 40	U	< 40	U	< 40	U
2,4,5-TP	< 10	U	< 10	U	< 10	U	< 10	U	< 10	U	< 10	U	< 10	U	< 10	U	< 10	U
Metals (mg/kg or ug/L))																		
Aluminum	4,990		630		1,690		< 50.0	U	8,610		8,210		9,810		5,830		8,230	
Antimony	< 0.94	R	1.0	R	< 0.87	R	< 10.0	U	< 0.92	R	< 0.92	R	< 0.74	R	< 10.0	U	< 0.90	R
Arsenic	2.6		1.4		1.4		< 5.0	U	4.1		3.8		3.5		< 5.0	U	5.7	
Barium	178		60.4		62.6		38.8		138		142		151		137		152	
Beryllium	< 0.47	U	< 0.45	U	< 0.43	U	< 5.0	U	0.60		0.58		0.65		< 5.0	U	0.63	
Cadmium	1.1		1.5		0.95		< 5.0	U	0.87		1.1		1.6		< 5.0	U	0.46	
Calcium	22,100		2,930		6,140		68,700		14,100		10,900		11,500		160,000		29,000	
Chromium	11.6		13.2		6.0		< 5.0	U	16.5		19.1		20.2		8.5		16.9	
Cobalt	3.3		2.4		1.1		< 5.0	U	5.2		4.5		5.2		< 5.0	U	5.7	
Copper	32.4		30.5		19.3		< 5.0	U	27.9		32.1		34.2		13.2		17.7	
Iron	6,720		1,310		2,770		< 50.0	U	20,000		22,500		18,500		7,800		13,300	
Lead	11.8		11.2		6.6		< 3.0	U	13.9		14.2		16.5		6.8		11.5	
Magnesium	3,090	J	395	J	913	J	14,000		5,180	J	4,660	J	5,220	J	10,100		6,260	J
Manganese	152		21.2		44.1		66.1		186		164		156		226		272	
Mercury	0.30		0.77		0.59		< 0.20	U	0.53		0.52		0.33		< 0.20	U	< 0.09	U
Nickel	48.5		9.6		10.3		10.9		31.3		34.2		38.7		15.1		19.8	
Potassium	1,120		118		382		13,300		2,440		2,380		2,830		23,200		1,880	
Selenium	< 0.47	U	0.84		0.52		< 5.0	U	0.51		0.83		0.74		< 5.0	U	< 0.45	U
Silver	0.87		1.9		0.93		< 5.0	U	< 0.46	U	0.85		0.71		< 5.0	U	< 0.45	U
Sodium	74.4		53.1		44.2		22,500		105		93.3		106		16,800		152	
Thallium	< 0.94	U	< 0.89	U	< 0.87	U	< 10.0	U	< 0.92	U	< 0.92	U	< 0.74	U	< 10.0	U	< 0.90	U
Vanadium	9.9		9.1		5.7		< 5.0	U	19.4		18.0		20.5		8.5		24.2	
Zinc	133		228		188		12.7		136		179		176		35.2		63.3	
PCBs (ug/L or ug/kg)																		
Aroclor-1016	< 220	UJ	< 300	UJ	< 270	U	< 1.0	U	< 2800	U	< 2,900	U	< 2,900	U	< 1.0	U	< 38	U
Aroclor-1221	< 220	UJ	< 300	UJ	< 270	U	< 1.0	U	< 2800	U	< 2,900	U	< 2,900	U	< 1.0	U	< 38	U
Aroclor-1232	< 220	UJ	< 300	UJ	< 270	U	< 1.0	U	< 2800	U	< 2,900	U	< 2,900	U	< 1.0	U	< 38	U
Aroclor-1242	< 220	UJ	< 300	UJ	< 270	U	< 1.0	U	< 2800	U	< 2,900	U	< 2,900	U	< 1.0	U	< 38	U
Aroclor-1248	< 220	UJ	< 300	UJ	< 270	U	< 1.0	U	< 2800	U	< 2,900	U	< 2,900	U	< 1.0	U	< 38	U
Aroclor-1254	< 220	R	< 300	R	1,200		< 1.0	U	27,000		17,000		60,000		< 1.0	U	< 38	U
Aroclor-1260	430	JN	830	JN	< 270	U	< 1.0	U	< 2800	U	< 2,900	U	< 2,900	U	< 1.0	U	< 38	U
Aroclor-1262	< 220	UJ	< 300	UJ	< 270	U	< 1.0	U	< 2800	U	< 2,900	U	< 2,900	U	< 1.0	U	< 38	U
Aroclor-1268	< 220	UJ	< 300	UJ	< 270	U	< 1.0	U	< 2800	U	< 2,900	U	< 2,900	U	< 1.0	U	< 38	U
Gamma Spec. (pCi/g or pCi/L)																		
Ag-108m	< 0.0252	U	< 0.0391	U	< 0.0265	U	< 2.89	U	< 0.02467	U	< 0.0270	U	< 0.0328	U	< 2.50	U	< 0.0211	U
Ag-110m	< 0.0287	U	< 0.0459	U	< 0.0264	U	< 3.03	U	< 0.0242	U	< 0.0274	U	< 0.0349	U	< 2.68	U	< 0.0230	U
Am-241	< 0.0911	U	< 0.0533	U	< 0.114	U	< 15.3	U	< 0.152	U	< 0.178	U	< 0.0584	U	< 12.6	U	< 0.101	U
Ce-144	< 0.17	U	< 0.189	U	< 0.147	U	< 19.1	U	< 0.141	U	< 0.163	U	< 0.173	U	< 17.1	U	< 0.143	U
Co-58	< 0.0286	U	< 0.0547	U	< 0.0284	U	< 3.68	U	< 0.0274	U	< 0.0348	U	< 0.0386	U	< 3.27	U	< 0.0272	U
Co-60	< 0.0298	U	0.219 +/-0.038		0.031 +/- 0.015	J	< 3.23	U	< 0.0312	U	< 0.0362	U	< 0.0431	U	< 3.28	U	< 0.0265	U
Cs-134	< 0.030	UJ	< 0.0451	U	< 0.0275	U	< 3.06	U	< 0.0238	U	< 0.0280	U	< 0.0345	U	< 2.68	U	< 0.0223	U

Table E-2. (continued).

Sample Number: Location: Media:	5RA10101 Tank #1 Sludge		5RA10201 Tank #2 Sludge		5RA10301 Tank #3 Sludge		5RA10401 Tank #4 Liquid		5RA10501 Box #1 Sludge		5RA10502 Box #1 Sludge		5RA10601 Box #2 Sludge		5RA10701 Box #3 Liquid		5RA10801 Manhole #1 Sludge	
Cs-137	0.182 +/- 0.022		0.135 +/-0.026		0.064 +/- 0.016		< 3.13	U	0.236 +/- 0.019		0.258 +/- 0.022		0.256 +/- 0.026		< 2.78	U	0.032 +/- 0.011	
Eu-152	< 0.0741	U	< 0.109	U	< 0.0748	U	< 9.05	U	< 0.0695	U	< 0.0808	U	< 0.0865	U	< 7.57	U	< 0.0640	U
Eu-154	< 0.0944	U	< 0.151	U	< 0.100	U	< 8.56	U	< 0.0965	U	< 0.102	U	< 0.109	U	< 8.78	U	< 0.0858	U
Eu-155	< 0.0834	U	< 0.0902	U	< 0.0711	U	< 10.0	UJ	< 0.0738	U	< 0.0893	UJ	< 0.0819	U	< 8.62	U	< 0.0727	U
K-40	18.0 +/- 1.0		6.65 +/- 0.53		14.1 +/- 0.8		< 36.2	U	21.0 +/- 1.2		21.0 +/- 1.2		19.1 +/- 1.0		< 26.8	U	18.6 +/- 0.9	
Mn-54	< 0.0299	U	< 0.0511	U	< 0.032	U	< 3.19	U	< 0.0269	U	< 0.0294	U	0.037 +/- 0.011		< 2.65	U	< 0.0220	U
Nb-95	< 0.0438	U	< 0.0700	U	< 0.0417	U	< 4.06	U	< 0.0378	U	< 0.0458	U	< 0.0530	U	< 3.77	U	< 0.0376	U
Ra-226	0.913 +/- 0.076		0.447 +/- 0.076		0.718 +/- 0.058		< 6.29	U	0.859 +/- 0.062		0.973 +/- 0.071		0.876 +/- 0.080		< 6.46	U	0.858 +/- 0.059	
Ru-103	< 0.0326	U	< 0.0561	U	< 0.0319	U	< 3.98	U	< 0.0289	U	< 0.0346	U	< 0.0402	U	< 3.74	U	< 0.0262	U
Ru-106	< 0.249	U	< 0.427	U	< 0.266	U	< 29.2	U	< 0.226	U	< 0.291	U	< 0.309	U	< 25.8	U	< 0.214	U
Sb-125	< 0.0670	U	< 0.110	U	< 0.0730	U	< 7.95	U	< 0.0685	UJ	< 0.0752	U	< 0.0864	U	< 7.21	U	< 0.0615	U
U-235	< 0.179	U	0.267 +/-0.104	J	0.214 +/- 0.085	J	< 19.9	U	< 0.152	UJ	< 0.182	UJ	< 0.819	U	< 17.1	U	< 0.148	UJ
Zn-65	< 0.0734	U	< 0.120	U	< 0.0706	U	< 7.15	U	< 0.0637	U	< 0.074	U	< 0.0915	U	< 6.59	U	< 0.0619	U
Zr-95	< 0.0564	UJ	< 0.100	U	< 0.0538	U	< 7.10	U	< 0.0537	U	< 0.0622	U	< 0.0792	U	< 5.19	U	< 0.0518	UJ
VOCs (ug/kg) or (ug/L)																		
Acetone	792.7	J	535.8	J	244.6	J	33.33	J	63.77	J	36.23	J	57.83	J	21.62	J	< 22.99	U
Carbon Disulfide	118.1	J	94.8	J	77.76	J	< 5.00	U	< 9.259	UJ	< 9.091	U	< 9.615	U	< 5.0	U	< 5.747	U
1,1-Dichloroethane	24.28	J	< 35.71	UJ	< 23.81	UJ	< 5.00	U	< 9.259	UJ	< 9.091	U	< 9.615	U	< 5.0	U	< 5.747	U
1,2-Dichloroethene (total)	< 31.25	UJ	10.62	J	< 23.81	UJ	< 5.00	U	< 9.259	UJ	< 9.091	U	< 9.615	U	< 5.0	U	< 5.747	U
2-Butanone	173.6	J	< 142.8	R	72.00	J	< 20.0	U	< 37.04	R	< 36.36	R	24.42	J	< 20.0	U	< 22.99	U
Benzene	18.62	J	17.2	J	< 23.81	UJ	< 5.00	U	< 9.259	UJ	< 9.091	U	< 9.615	U	< 5.0	U	< 5.747	U
2-Hexanone	1,886	J	< 142.8	UJ	< 95.24	UJ	< 20.0	U	< 37.04	UJ	< 36.36	U	< 38.46	U	< 20.0	U	< 22.99	U
Toluene	14,660	J	2,606	J	30.97	U	1.18	J	< 9.259	UJ	< 9.091	U	< 9.615	U	< 5.0	U	< 5.747	U
Chlorobenzene	< 31.25	UJ	58.15	J	< 23.81	UJ	< 5.0	U	< 9.259	UJ	< 9.091	U	< 9.615	UJ	< 5.0	U	< 5.747	U
Ethylbenzene	466.7	J	495.2	J	53.5	J	< 5.0	U	< 9.259	UJ	< 9.091	U	< 9.615	UJ	< 5.0	U	< 5.747	U
Xylenes (total)	7,413	J	5,866	J	890.0	J	< 5.0	U	< 9.259	UJ	< 9.091	U	< 9.615	UJ	< 5.0	U	< 5.747	U
VOC Tentatively Identified Compounds																		
Butanol							12.29	JN										
1,3,5-Trimethyl benzene	22,950	JN	1,912	JN	8,927	JN												
1,2,4-Trimethyl benzene	41,275	JN	14,057	JN	10,576	JN												
1-Methyl-4-(1-methylethyl) benzene	9,956	JN			3,677	JN												
N-Butylbenzene	5,134	JN			2,068	JN												
Undecane			126.3	JN														
Naphthalene																	4.368	JN
Methyl naphthalene																	3.693	JN
Reactive cyanide (mg/kg)	< 0.05	R	< 0.05	R	< 0.05	R	< 0.05	R	< 0.05	R	< 0.05	R	< 0.05	R	< 0.05	R	< 0.05	R
Reactive sulfide (mg/kg)	< 30	R	50	R	< 29	R	< 30	UJ	< 29	R	< 29	R	< 29	R	< 30	UJ	< 30	R
Total strontium (pCi/L)	N/A		N/A		N/A		< 4.17	U	N/A		N/A		N/A		N/A		N/A	

Table E-3. ARA-16 Analytical Summary (FY 1997).

	Liquid Phase		Sludge Phase	
Analyte	Minimum Concentration	Maximum Concentration	Minimum Concentration	Maximum Concentration
Anions	mg/L	mg/L	mg/kg	mg/kg
Fluoride	0.826	1.91		34.3
Chloride	200	236		1660
Bromide	0.348	0.385		
Nitrate				11.7
Phosphate	110	112		1050
Sulfate	93.9	105		581
Total Cyanide	0.011	0.012		15.8
			Dry/Wet	Dry/Wet
Metals	ug/L	ug/L	mg/kg	mg/kg
Aluminum	275	340.1	11,300/2,360	17,100/3,570
Antimony			11.8/2.48	12.1/2.52
Arsenic	13.4	14.1	1.18/<0.716	2.65/<0.766
Barium	1.6	4.6	215/44.9	329/68.8
Beryllium	0.3	0.3	5.58/1.17	9.58/2.00
Cadmium			28.5/5.97	16.7/3.50
Calcium	9100	9760	7,800/1,630	11,500/2,390
Chromium	5.9	22.6	878/184	1,370/287
Cobalt			6.66/1.39	17.9/3.74
Copper	169	179.8	393/82.1	660/138
Iron	152	193	22,500/4,700	47,000/9,820
Lead	14.9	36.2	2,600/543	3,970/830
Magnesium	25700	27300	3,650/762	5,560/1,160
Manganese	7.4	7.4	103/21.4	216/45.1
Mercury	0.42	0.6	2.07/0.434	3.35/0.700
Nickel	139	147	1990/39.8	407/85.0
Potassium	13800	14800	1,450/304	2,280/477
Selenium			4.40/0.91	5,270/1.10
Silver	18.3	31.1	527/110	720/151
Sodium	243000	253000	3,000/628	4,390/917
Sulfur			2,040/427	3,960/827
Thallium			279/0.058	308/0.064
Vanadium	9.9	11.2	84.4/17.6	159/33.3
Zinc	46.9	56.9	586/123	890/186
PCBs	ug/L	ug/L	ug/kg	ug/kg
Aroclor-1260			52000	98000
Radionuclides	pCi/L	pCi/L	pCi/g	pCi/g
Ag-108m			2,480	6,800
Co-60	16,700	18,700	105,000	320,000
Cs-134	199,000	213,000	24,700	38,300
Cs-137	58,500,000	60,900,000	9,190,000	13,300,000
Eu-152			16,100	24,900
Eu-154			4,160	9,080
Zn-65			4,910	6,560
Pu-238	874	1,290	14,800	28,700
Pu-239/240	1,230	2,150	15,900	28,000
U-234	698	798	31,400	38,900
U-235		5		
U-238	15	16		464
Am-241	1,450	1,900	25,900	36,400
Sr-90	162,000	172,000	455,000	638,000
H-3	290,000	301,000		
TCLP VOCs (ug/L)				
1,1-Dichloroethene				550
Trichloroethene				40,000
VOCs	ug/L	ug/L	ug/kg	ug/kg
1,1-Dichloroethene		190		46,000
trans-1,2-Dichloroethene		7		
1,1-Dichloroethane		360		8,300
cis-1,2-Dichloroethene		53		1,300
1,1,1-Trichloroethane	60,000	63,000	19,000,000	22,000,000
Trichloroethene	13,000	13,000	3,600,000	4,500,000
Toluene		28	160,000	210,000
1,1,2-Trichloroethane		110		2,800
Tetrachloroethene		5		7,800
Ethylbenzene				4,600
m- and p-Xylenes				19,000
o-Xylene				6,100
1,1,2,2-Tetrachloroethane		43		3,900

Table E-4. ARA-16 FY 2001 Liquid Data.

Analysis	Result	
VOCs (ug/L)		
Acetone	6300	J
1,1,1-Trichloroethane	2200	J
PCB Congeners (ug/L)		
3,3',4,4'-TeCB	0.14254	
2',3,4,4',5-PeCB	0.01645	
2,3',4,4',5-PeCB	0.47552	
2,3,4,5',5-PeCB	0.00586	J
2,3,3',4,4'-PeCB	0.13340	
3,3',4,4',5-PeCB	0.04262	
2,3',4,4',5,5'-HxCB	0.14719	
2,3,3',4,4',5-HxCB	0.09931	
2,3,3',4,4',5'-HxCB	0.03222	
3,3',4,4',5,5'-HxCB	0.00726	J
2,2',3,4,4',5,5'-HpCB	1.52400	
2,2',3,3',4,4',5'-HpCB	0.45276	
2,3,3',4,4',5,5'-HpCB	0.04337	
PCB Totals Class (ug/L)		
Total Mono-CB	0.03976	U
Total Di-CB	0.19384	U
Total Tri-CB	0.90182	
Total Tetra-CB	2.91724	
Total Penta-CB	3.77485	
Total Hexa-CB	5.85922	
Total Hepta-CB	4.34381	
Total Octa-CB	1.31978	
Total Nona-CB	0.14282	
Deca-CB	0.00493	U
Gamma Spec. (pCi/L)		
Ag-108m	< 38,600	U
Ag-110m	< 30,100	U
Am-241	< 132,000	U

Table E-4. (Continued).

Analysis	Result	
Ce-144	< 144,000	U
Co-58	< 5,040	U
Co-60	50,300 +/- 3,630	
Cs-134	164,000 +/- 12,300	
Cs-137	158,000,000 +/- 7,910,000	
Eu-152	< 88,300	U
Eu-154	< 8,090	U
Eu-155	< 71,200	U
K-40	26,100 +/- 11,800	J
Mn-54	< 4,070	U
Nb-95	< 6,810	U
Ra-226	< 3,939	U
Ru-103	< 49,500	U
Ru-106	< 194,000	U
Sb-125	< 107,000	U
U-235	< 139,000	U
Zn-65	< 6,530	U
Zr-95	< 9,250	U
Alpha Emitters (pCi/L)		
Am-241	636 +/- 64	
U-233/234	2360 +/- 389	
U-235/236	14.8 +/- 3.0	
U-238	54.9 +/- 9.6	
Pu-238	158 +/- 21	
Pu-239/240	394 +/- 43	
Beta Emitters (pCi/L)		
Sr-90	830,000 +/- 106,000	
Tc-99	392 +/- 88	
H-3	15,100,000 +/- 828,000	

Table E-5. ARA-16 Drum VOC Data (August 2001).

Sample Number: Sample Date:	5RA22401VA 8/15/2001	5RA22501VE 8/15/2001	5RA22601VA 8/16/2001	5RA22701VA 8/16/2001	5RA22801VA 8/21/2001	5RA22901VA 8/21/2001	5RA22902VA 8/21/2001
VOCs (ug/L)							
Acetone	4	< 10	3	3	20	< 10	< 10
2-Butanone	< 10	< 10	10	< 10	710	< 10	< 10
1,1,1-Trichloroethene	< 10	< 10	< 10	< 10	10	< 10	< 10
Toluene	1	< 10	2	< 10	11	2	1

Table E-6. ARA-16 Contaminated Soil (July 2001).

Analysis	Result
Radionuclides (pCi/g)	
Gross alpha	6.39 +/- 1.04
Gross beta	3.45 +/- 0.66
Cs-137	1.17 +/- 0.11
Metals (mg/kg)	
Aluminum	6,920
Antimony	0.53
Arsenic	< 7.1
Barium	137
Beryllium	< 0.63
Cadmium	0.32
Calcium	47,600
Chromium	16.4
Cobalt	4.5
Copper	12.8
Iron	11,100
Lead	9.3
Magnesium	6,610
Manganese	216
Mercury	0.02
Nickel	16.7
Potassium	1,200
Selenium	0.62
Silver	< 0.09
Sodium	680
Thallium	0.65
Vanadium	24.2
Zinc	55.9
VOCs (ug/kg)	
Xylenes (total)	1.7
Toluene	16
Methylene chloride	3.3
Acetone	16
Carbon disulfide	2.5
Chloroform	3.6
PCBs (ug/kg)	ND
SVOCs (ug/kg)	ND

Table E-7. ARA-16 Activated Carbon Data Summary.

Analysis	Result
VOCs (ug/L)	ND
PCBs (ug/L)	ND
METALS (mg/kg)	
Aluminum	2,440
Antimony	0.88
Arsenic	0.69
Barium	73.9
Beryllium	0.15
Cadmium	0.13
Calcium	1,500
Chromium	5.1
Cobalt	2.5
Copper	7.7
Iron	2,980
Lead	7.3
Magnesium	419
Manganese	26.4
Mercury	0.43
Nickel	6.4
Potassium	186
Selenium	1.0
Silver	8.6
Sodium	663
Thallium	< 0.48
Vanadium	4.0
Zinc	41.6
Gamma Spec. (pCi/g)	
Co-60	1,260 +/- 100
Cs-134	2,450 +/- 180
Cs-137	2,615,000 +/- 10,000
Gross Alpha/Beta (pCi/g)	
Gross alpha	1,060 +/- 121
Gross beta	2,560,000 +/- 102,000

Table E-8. ARA-21 Data Summary (FY 2000).

Sample Number Location Media	5RA30101 Septic Tank Waste		5RA30102 Septic Tank Waste		5RA30201 Chlorine Waste	
SVOCs (ug/L)						
Acenaphthene	< 10.0	U	1.564	J	< 10.0	U
Fluorene	< 10.0	U	1.042	J	< 10.0	U
Phenanthrene	< 10.0	U	5.958	J	3.773	J
Anthracene	< 10.0	U	< 10.0	U	1.300	J
Fluoranthene	< 10.0	U	2.121	J	12.61	
Pyrene	< 10.0	U	2.005	J	12.69	
Benzo (a) anthracene	< 10.0	U	< 10.0	U	6.362	J
Chrysene	< 10.0	U	< 10.0	U	7.656	J
bis (2-ethylhexyl) phthalate	4.692	J	3.152	J	38.20	
Benzo (b) fluoranthene	< 10.0	U	< 10.0	U	3.212	J
Benzo (k) fluoranthene	< 10.0	U	< 10.0	U	5.936	J
Benzo (a) pyrene	< 10.0	U	< 10.0	U	4.508	J
Indeno (1,2,3-cd) pyrene	< 10.0	U	< 10.0	U	2.429	J
Benzo (g,h,i) perylene	< 10.0	U	< 10.0	U	1.673	J
TCLP SVOCs (ug/L)						
Pyridine	< 100	U	< 100	U	< 100	U
1,4-Dichlorobenzene	< 50	U	< 50	U	< 50	U
2-Methylphenol	< 50	U	< 50	U	< 50	U
3 and 4-Methylphenol	< 50	U	< 50	U	< 50	U
Hexachloroethane	< 50	U	< 50	U	< 50	U
Nitrobenzene	< 50	U	< 50	U	< 50	U
Hexachlorobutadiene	< 50	U	< 50	U	< 50	U
2,4,6-Trichlorophenol	< 50	U	< 50	U	< 50	U
2,4,5-Trichlorophenol	< 50	U	< 50	U	< 50	U
2,4-Dinitrotoluene	< 50	U	< 50	U	< 50	U
Hexachlorobenzene	< 50	U	< 50	U	< 50	U
Pentachlorophenol	< 250	U	< 250	U	< 250	U
VOCs (ug/L)	ND	U	ND	U	ND	U
TCLP VOCs (ug/L)						
Vinyl chloride	< 100	U	< 100	U	< 100	U
1,1-Dichloroethene	< 50	U	< 50	U	< 50	U
Chloroform	< 50	U	< 50	U	< 50	U
1,2-Dichloroethane	< 50	U	< 50	U	< 50	U
2-Butanone	< 200	UJ	< 200	UJ	206	UJ
Carbon tetrachloride	< 50	U	< 50	U	< 50	U
Trichloroethene	< 50	U	< 50	U	< 50	U
Benzene	< 50	U	< 50	U	< 50	U
Tetrachloroethene	< 50	U	< 50	U	< 50	U
Chlorobenzene	< 50	U	< 50	U	< 50	U
Reactive cyanide (mg/kg)	< 0.05	R	< 0.05	R	< 0.05	R
Reactive sulfide (mg/kg)	< 30	U	< 30	U	< 30	U
Pesticides (ug/L)						
alpha-BHC	< 0.050	R	< 0.050	UJ	< 0.050	UJ
beta-BHC	< 0.050	R	< 0.050	U	< 0.050	U
delta-BHC	< 0.050	R	< 0.050	UJ	< 0.050	UJ
gamma-BHC (Lindane)	< 0.050	R	< 0.050	U	< 0.050	U
Heptachlor	< 0.050	R	< 0.050	U	< 0.050	U
Aldrin	< 0.050	R	< 0.050	U	< 0.050	U

Table E-8. (Continued).

Sample Number Location Media	5RA30101 Septic Tank Waste		5RA30102 Septic Tank Waste		5RA30201 Chlorine Waste	
Heptachlor epoxide	< 0.050	R	< 0.050	U	< 0.050	U
Endosulfan I	< 0.050	R	< 0.050	U	< 0.050	U
Dieldrin	< 0.050	R	< 0.050	U	< 0.050	U
4,4'-DDE	< 0.050	R	< 0.050	U	< 0.050	U
Endrin	< 0.050	R	< 0.050	U	< 0.050	U
Endosulfan II	< 0.050	R	< 0.050	U	< 0.050	U
4,4'-DDD	< 0.050	R	< 0.050	UJ	< 0.050	UJ
Endosulfan sulfate	< 0.050	R	< 0.050	U	< 0.050	U
4,4'-DDT	< 0.050	R	< 0.050	UJ	< 0.050	UJ
Methoxychlor	< 0.10	R	< 0.10	UJ	< 0.10	UJ
Endrin ketone	< 0.050	R	< 0.050	UJ	< 0.050	UJ
Endrin aldehyde	< 0.050	R	< 0.050	U	< 0.050	U
alpha-Chlordane	< 0.050	R	< 0.050	U	< 0.050	U
gamma-Chlordane	< 0.050	R	< 0.050	U	< 0.050	U
Technical chlordane	< 0.00	R	< 0.00	U	< 0.00	U
Toxaphene	< 0.050	R	< 0.050	U	< 0.050	U
TCLP Pesticides (ug/L)						
gamma-BHC (Lindane)	< 0.50	U	< 0.50	U	< 0.50	U
Heptachlor	< 0.50	U	< 0.50	U	< 0.50	U
Heptachlor epoxide	< 0.50	U	< 0.50	U	< 0.50	U
Endrin	< 0.50	U	< 0.50	U	< 0.50	U
Methoxychlor	< 1.0	U	< 1.0	U	< 1.0	U
Technical chlordane	< 5.0	U	< 5.0	U	< 5.0	U
Toxaphene	< 20	U	< 20	U	< 20	U
Herbicides (ug/L)						
Dalapon	< 2.0	U	< 2.0	U	3.0	
Dicamba	< 2.0	U	< 2.0	U	< 2.0	U
MCPP	< 400	U	< 400	U	< 400	U
MCPA	< 400	U	< 400	U	< 400	U
Dichloroprop	< 4.0	U	< 4.0	U	< 4.0	U
2,4-D	< 4.0	U	< 4.0	U	< 4.0	U
2,4,5-TP	< 1.0	U	< 1.0	U	< 1.0	U
2,4,5-T	< 1.0	U	< 1.0	U	< 1.0	U
2,4-DB	< 4.0	U	< 4.0	U	< 4.0	U
Dinoseb	2.0		< 0.60	U	< 0.60	U
TCLP Herbicides (ug/L)						
2,4-D	< 40	U	< 40	U	< 40	U
2,4,5-TP	< 10	U	< 10	U	< 10	U
Gross Alpha/Beta (pCi/L)						
Gross alpha	< 1.61	U	3.22 +/- 0.80		2.33 +/- 0.89	J
Gross beta	42.4 +/- 3.1		51.4 +/- 3.67		62.8 +/- 4.4	
Gamma Spec. (pCi/L)						
Ag-108m	< 2.82	U	< 2.65	U	< 2.83	U
Ag-110m	< 2.67	U	< 2.83	U	< 2.84	U
Am-241	< 15.9	U	< 13.3	U	< 14.4	U
Ce-144	< 19.4	U	< 18.1	U	< 18.0	U
Co-58	< 3.34	U	< 3.47	U	< 3.03	UJ
Co-60	< 3.36	U	< 3.18	U	< 3.33	U
Cs-134	< 2.69	U	< 2.75	U	< 2.72	U
Cs-137	< 2.94	U	< 3.06	U	< 2.83	U

Table E-8. (Continued).

Sample Number Location Media	5RA30101 Septic Tank Waste		5RA30102 Septic Tank Waste		5RA30201 Chlorine Waste	
Eu-152	< 8.10	U	< 8.25	UJ	< 8.08	U
Eu-154	< 8.99	U	< 8.80	U	< 8.69	U
Eu-155	< 9.78	U	< 9.20	U	< 9.37	UJ
K-40	89.6 +/- 21.1		85.8 +/- 22.1		97.0 +/- 26.0	
Mn-54	< 2.82	U	< 2.77	U	< 2.35	U
Nb-95	< 4.21	U	< 4.33	U	< 4.34	U
Ra-226	< 7.14	U	10.6 +/- 3.1		< 5.45	U
Ru-103	< 4.08	U	< 3.91	U	< 4.15	U
Ru-106	< 27.3	U	< 25.6	U	< 25.1	U
Sb-125	< 7.96	U	< 7.45	U	< 7.61	U
U-235	< 20.3	U	< 18.6	U	< 18.6	U
Zn-65	< 7.73	U	< 6.72	U	< 6.27	U
Zr-95	< 5.12	U	< 6.01	U	< 5.95	U
Metals (ug/L)						
Aluminum	16,400		2,530		259	
Antimony	17.7		< 10.0	U	< 10.0	U
Arsenic	51.6	J	10.7	J	19.3	J
Barium	1,230	J	292	J	57.3	J
Beryllium	< 5.0	U	< 5.0	U	< 5.0	U
Cadmium	130	J	11.8	J	9.8	J
Calcium	288,000		113,000		33,400	
Chromium	379	J	102	J	< 5.0	U
Cobalt	19.5	J	14	J	< 5.0	U
Copper	1220	J	224	J	14.4	J
Iron	44,500		17,200		459	
Lead	3,330		190		< 3.0	U
Magnesium	22,200		14,900		10,700	
Manganese	853	J	286	J	24.4	J
Mercury	7.3		2.2		< 0.20	U
Nickel	104	J	116	J	< 5.0	U
Potassium	73,100		66,400		101,000	
Selenium	10.5		< 5.0	U	< 5.0	U
Silver	20.2		< 5.0	U	< 5.0	U
Sodium	85,500		79,300		141,000	
Thallium	< 10.0	U	< 10.0	U	< 10.0	U
Vanadium	92.4	J	41.3	J	14.9	J
Zinc	14,300		1,650		43.8	
TCLP Metals (ug/L)						
Arsenic	< 5.0	U	< 5.0	U	19.2	
Barium	179		251		102	
Cadmium	< 5.0	U	< 5.0	U	< 5.0	U
Chromium	< 5.0	U	< 5.0	U	< 5.0	U
Lead	< 5.0	U	< 5.0	U	< 5.0	U
Mercury	< 0.20	U	< 0.20	U	< 0.20	U
Selenium	< 5.0	U	< 5.0	U	< 5.0	U
Silver	< 5.0	UJ	< 5.0	UJ	< 5.0	UJ
PCBs (ug/L)						
Aroclor-1016	< 1.0	U	2.2	J	< 1.0	U
Aroclor-1221	< 1.0	U	< 1.0	UJ	< 1.0	U
Aroclor-1232	< 1.0	U	< 1.0	UJ	< 1.0	U

Table E-8. (Continued).

Sample Number Location Media	5RA30101 Septic Tank Waste		5RA30102 Septic Tank Waste		5RA30201 Chlorine Waste	
Aroclor-1242	< 1.0	U	< 1.0	UJ	< 1.0	U
Aroclor-1248	< 1.0	U	< 1.0	UJ	< 1.0	U
Aroclor-1254	< 1.0	U	< 1.0	UJ	< 1.0	U
Aroclor-1260	1.7		< 1.0	UJ	< 1.0	U
Aroclor-1262	< 1.0	U	< 1.0	UJ	< 1.0	U
Aroclor-1268	< 1.0	U	< 1.0	UJ	< 1.0	U

Table E-9. ARA-25 Data Summary.

Sample Number:	ARA50001	ARA50101	ARA50201
Location:	Hot Cell #1	Hot Cell #1	Hot Cell #2
Media:	Soil	Soil	Soil
SVOCs (ug/kg)			
Phenol		120	20
Nitrobenzene		24	< 340
Diethylphthalate	32	31	17
Phenanthrene	100	100	64
Carbazol		63	< 340
Di-n-butylphthalate	3,400	4,500	1,800
Fluoranthene		130	59
Benzidine	1,700	1,700	1,700
Pyrene	69	110	36
Butylbenzylphthalate	270	280	49
Benzo [a] anthracene		32	< 340
Chrysene		44	< 340
bis (2-Ethylhexyl) phthalate	190	1,000	250
Di-n-octylphthalate	27	44	< 340
PCBs (ug/kg)			
Aroclor-1254	35	44	13
TCLP VOCs (ug/L)	ND	ND	ND
TCLP Metals (ug/L)			
Arsenic	< 12.0	< 12.0	< 12.0
Barium	827	892	706
Cadmium	6.3	5	9.8
Chromium	< 6.6	< 6.6	< 6.6
Lead	< 41.6	< 41.6	< 41.6
Mercury	< 0.20	< 0.20	0.26
Selenium	< 17.7	< 17.7	< 17.7
Silver	< 5.3	< 5.3	< 5.3
TCLP SVOCs (ug/L)	ND	ND	ND
Metals (mg/kg)			
Aluminum	3,310	2,900	2,410
Antimony	< 5.3	< 5.3	< 5.0
Arsenic	10.9	40.6	9.0
Barium	51.1	42	42.9
Beryllium	< 0.15	< 0.19	< 0.11
Cadmium	< 0.71	< 0.70	< 0.67
Calcium	30,200	30,000	65,300
Chromium	71.7	98.4	69.3
Cobalt	44.7	104	45.6
Copper	156	227	115
Iron	16,200	33,700	11,000
Lead	36.5	1,430	3.5
Magnesium	5,510	30,400	4,820
Manganese	300	1,400	231
Mercury	< 0.09	< 0.06	< 0.05
Nickel	25.4	38.8	22.2
Potassium	904	724	657
Selenium	< 0.32	< 0.65	< 0.51
Silver	4.2	7.2	1.9

Table E-9. (Continued).

Sample Number:	ARA50001	ARA50101	ARA50201
Location:	Hot Cell #1	Hot Cell #1	Hot Cell #2
Media:	Soil	Soil	Soil
Sodium	180	191	174
Thallium	< 0.79	< 0.78	< 0.74
Vanadium	79.8	104	77.1
Zinc	584	855	404
Radionuclides (pCi/g)			
Gross alpha	11.1 +/- 2.4	12.6 +/- 2.7	11.8 +/- 2.9
Sr-90	72.8 +/- 25.4	71.0 +/- 29.4	9.6 +/- 6.5
Gamma Spec. (pCi/g)			
Cs-134	1.04 +/- 0.79	0.96 +/- 0.07	0.58 +/- 0.06
Cs-137	449 +/- 31	435 +/- 33	226 +/- 16
Co-60	1.95 +/- 0.11	0.659 +/- 0.004	0.31 +/- 0.04
Eu-152		1.31 +/- 0.21	4.9 +/- 0.5
Eu-154			0.29 +/- 0.10
Nb-95	0.090 +/- 0.039	0.047 +/- 0.003	0.086 +/- 0.005
Ra-226		29.7 +/- 3.7	14.3 +/- 2.2
VOCs (ug/kg)			
4-Methyl-2-pentanone	14	< 11	< 10
Toluene	22	5	6
Ethylbenzene	4	< 5	< 5
m- and p-Xylenes	7	< 5	< 5
o-Xylene	5	< 5	< 5

Table E-10. ARA-01 Data Summary.

Sample ID	Arsenic (mg/kg)	C	Q	V	Selenium (mg/kg)	C	Q	V	Thallium (mg/kg)	C	Q	V
RA510001XM	6.23				0.18	U	UJ		1.12	U		
RA510101XM	7.72				0.18	U	UJ		1.12	U		
RA510201XM	7.39				0.177	U	UJ		1.09	U		
RA510301XM	8.01				0.174	U	UJ		1.39	B		
RA510401XM	6.97				0.176	U	UJ		1.08	U		
RA510501XM	7.48				0.18	U	UJ		1.35	B		
RA510502XM	7.74				0.18	U	UJ		1.19	B		
RA510601XM	6.66				0.171	U	UJ		1.32	B		
RA510701XM	6.12				0.31	B	J		1.25	B		
RA510801XM	5.60				0.185	U	UJ		1.14	U		
RA510901XM	6.83				0.2	B	J		2.22			

Table E-11. ARA-12 Data Summary.

Sample ID	Copper				Mercury				Selenium				Ag-108m	
	(mg/kg)	C	Q	V	(mg/kg)	C	Q	V	(mg/kg)	C	Q	V	(pCi/g)	V
RA511001	27.4				0.086		N	J	1.2			U	4.48E-01 ± 2.39E-02	
RA511101	35.3				0.029		N	J	1.1			U	1.93E-01 ± 1.63E-02	
RA511201	36				0.034		N	J	1.5				1.31E-01 ± 2.37E-02	
RA511301	15.1				0.022		N	J	0.45	B		U	3.86E-02 ± 1.70E-02	UJ
RA511401	24				0.025		N	J	1.1			U	3.16E-01 ± 1.81E-02	
RA511501	24.5				0.013		N	UJ	1.3			U	8.47E-02 ± 1.10E-02	
RA511601	19.8				0.015		N	J	1			U	4.87E-02 ± 1.57E-02	
RA511701	46.7				0.039		N	J	1.2			U	1.89E-01 ± 1.22E-02	
RA511801	23.4				0.022		N	J	0.88			U	2.78E-01 ± 2.54E-02	
RA511901	18.4				0.014		N	UJ	1.2			U	5.34E-02 ± 1.75E-02	
RA511902 (field duplicate)	18.5				0.013		N	UJ	0.64			U	5.07E-02 ± 9.41E-03	
RA517701	24.8				0.041				1.1			J	7.14E-01 ± 2.11E-02	
RA517801	26.3				0.021				0.67			J	3.62E-01 ± 2.18E-02	
RA517901	18				0.016				0.71			J	1.32E-01 ± 1.78E-02	
RA518001	20.9				0.013				0.73			J	3.27E-01 ± 2.53E-02	
RA518101	25				0.022				0.4	B		U	2.72E-01 ± 3.17E-02	
RA518201	20.6				0.044				0.77			U	3.90E-01 ± 2.58E-02	
RA518301	20.3				0.023				0.49	B		U	4.19E-01 ± 2.47E-02	
RA518401	20				0.017				0.5	B		U	4.84E-01 ± 2.94E-02	
RA518501	22.8				0.016				1.1			U	2.15E-01 ± 2.23E-02	
RA518601	22.5				0.029				0.88			U	1.47E-01 ± 1.87E-02	
RA518701	33.8				1.1				0.54			U	8.45E-01 ± 2.45E-02	
RA518801	19.7				0.022				0.43	B		U	4.32E-02 ± 1.39E-02	UJ
RA518802 (field duplicate)	18.9				0.024				0.31	B		U	9.38E-02 5.70E-02	U

Table E-12. ARA-23 Data Summary (ARA-I).

Sample Location	Sample ID	Sample Date	Cs-137 (pCi/g)
ARA-23-I-01-C	RA512001R4	9/9/2004	1.59
ARA-23-I-06-C	RA512101R4	9/9/2004	2.39
ARA-23-I-07-C	RA512201R4	9/15/2004	1.42
ARA-23-I-16-C	RA512301R4	9/9/2004	0.343
ARA-23-I-19A-C	RA512401R4	9/9/2004	0.359
ARA-23-I-21-C	RA512501R4	9/9/2004	0.527
ARA-23-I-22-C	RA512601R4	9/9/2004	0.989
ARA-23-I-25-C	RA512701R4	9/9/2004	0.341
ARA-23-I-29-C	RA512801R4	9/9/2004	0.873
ARA-23-I-30-C	RA512901R4	9/15/2004	34.0
ARA-23-I-30-C	RA512902R4 (field duplicate)	9/15/2004	47.6

Table E-13. ARA-23 Data Summary (Haul Road).

Sample Location	Sample ID	Sample Date	Cs-137 (pCi/g)
ARA-23H-01-C	RA514001R4	9/1/2004	6.08
ARA-23H-02-C	RA514101R4	9/1/2004	7.57
ARA-23H-08-C	RA514201R4	9/1/2004	0.569
ARA-23H-11-C	RA514301R4	9/9/2004	5.86
ARA-23H-13-C	RA514401R4	9/9/2004	1.31
ARA-23H-18-C	RA514501R4	9/1/2004	13.2
ARA-23H-19-C	RA514601R4	8/25/2004	11.3
ARA-23H-20-C	RA514701R4	8/25/2004	7.91
ARA-23H-21-C	RA514801R4	8/25/2004	56.3
ARA-23H-27-C	RA514901R4	8/25/2004	6.64
ARA-23H-27-C	RA514902R4 (field duplicate)	8/25/2004	10.20

Table E-14. ARA-23 Data summary (ARA-II).

Sample Location	Sample ID	Sample Date	Cs-137 (pCi/g)
ARA-23-II-01	RA513001R4	9/15/2004	7.95
ARA-23-II-02-C	RA513101R4	9/15/2004	39.6
ARA-23-II-03	RA513201R4	9/27/2004	12.7
ARA-23-II-04-C	RA513301R4	9/15/2004	11.9
ARA-23-II-05-C	RA513401R4	9/15/2004	4.92
ARA-23-II-06-C	RA513501R4	9/15/2004	48.2
ARA-23-II-07	RA513601R4	9/27/2004	12.1

Table E.14. Continued).

Sample Location	Sample ID	Sample Date	Cs-137 (pCi/g)
ARA-23-II-08-C	RA513701R4	9/27/2004	0.458
ARA-23-II-09	RA513801R4	9/23/2004	19.8
ARA-23-II-10	RA513901R4	9/15/2004	14.7
ARA-23-II-10	RA513902R4 (field duplicate)	9/15/2004	10.6
ARA-23-II-11	RA518901R4	9/23/2004	26.8
ARA-23-II-12	RA519001R4	9/15/2004	5.85
ARA-23-II-12-A	RA521101R4	9/23/2004	4.23
ARA-23-II-13-C	RA519101R4	9/15/2004	12.5
ARA-23-II-14	RA519201R4	9/23/2004	168
ARA-23-II-15-C	RA519301R4	9/23/2004	65.4
ARA-23-II-16	RA519401R4	9/23/2004	15.2
ARA-23-II-17	RA519501R4	9/15/2004	10.2
ARA-23-II-18	RA519601R4	9/15/2004	8.45
ARA-23-II-19	RA519701R4	9/23/2004	12.0
ARA-23-II-20-C	RA519801R4	9/23/2004	90.5
ARA-23-II-21	RA519901R4	9/23/2004	28.4
ARA-23-II-22	RA520001R4	9/23/2004	5.96
ARA-23-II-23	RA520101R4	9/15/2004	7.18
ARA-23-II-24	RA520201R4	9/15/2004	7.30
ARA-23-II-25-C	RA520301R4	9/15/2004	3.96
ARA-23-II-26	RA520401R4	9/23/2004	7.79
ARA-23-II-27	RA520501R4	9/23/2004	16.5
ARA-23-II-28	RA520601R4	9/23/2004	15.6
ARA-23-II-29	RA520701R4	9/15/2004	11.8
ARA-23-II-30-C	RA520801R4	9/23/2004	11.5

Table E-15. ARA-23 Data Summary (Washdown Area).

Sample Location	Sample ID	Sample Date	Cs-137 (pCi/g)
ARA-23E-03-C	RA515001R4	9/15/2004	12.1
ARA-23E-04-C	RA515101R4	9/15/2004	11.7
ARA-23E-13-C	RA515201R4	9/7/2004	6.65
ARA-23E-15-C	RA515301R4	9/7/2004	570
ARA-23E-15-C	RA521001R4	9/23/2004	15.1
ARA-23E-18-C	RA515401R4	9/7/2004	6.39
ARA-23E-19-C	RA515501R4	9/7/2004	1.32
ARA-23E-22-C	RA515601R4	9/15/2004	14.9

Table E-15. (Continued).

Sample Location	Sample ID	Sample Date	Cs-137 (pCi/g)
ARA-23E-22-C	RA520901R4	9/23/2004	16.2
ARA-23E-26-C	RA515701R4	9/7/2004	2.55
ARA-23E-29-C	RA515801R4	9/7/2004	17.0
ARA-23E-30-C	RA515901R4	9/7/2004	7.33
ARA-23E-30-C	RA515902R4 (field duplicate)	9/7/2004	6.89

Table E-16. ARA-23 Data Summary (Windblown Area).

Sample Location	Sample ID	Sample Date	Cs-137 (pCi/g)
ARA-23W-03-C	RA516001R4	8/25/2004	1.21
ARA-23W-06-C	RA516101R4	8/18/2004	1.77
ARA-23W-10-C	RA516201R4	8/18/2004	3.31
ARA-23W-11-C	RA516301R4	8/18/2004	0.0906
ARA-23W-12-C	RA516401R4	8/18/2004	2.72
ARA-23W-14-C	RA516501R4	8/18/2004	3.08
ARA-23W-19-C	RA516601R4	9/15/2004	5.37
ARA-23W-21-C	RA516701R4	8/18/2004	0.736
ARA-23W-24-C	RA516801R4	8/18/2004	8.19
ARA-23W-25-C	RA516901R4	8/25/2004	11.8
ARA-23W-25-C	RA516902R4 (field duplicate)	8/25/2004	12.9