

4. GROUNDWATER

This section summarizes analytical results for routine groundwater monitoring at PORTS in 2009 at the following locations:

- X-749/X-120/Peter Kiewit (PK) Landfill
- Quadrant I Groundwater Investigative Area/X-749A Classified Materials Disposal Facility
- Quadrant II Groundwater Investigative Area
- X-701B Holding Pond
- X-633 Pumphouse/Cooling Towers Area
- X-616 Chromium Sludge Surface Impoundments
- X-740 Waste Oil Handling Facility
- X-611A Former Lime Sludge Lagoons
- X-735 Landfills
- X-734 Landfills
- X-533 Switchyard Area
- Surface water monitoring locations
- Exit pathway monitoring locations

Results for radiological parameters and VOCs are reported in this section. Only those VOCs that were detected in at least one sampling event are listed in this section. All results are included for radiological parameters, even if a specific constituent was not detected at a specific well or location during any sampling event in 2009. Samples collected in 2009 at the X-740 Waste Oil Handling Facility were not analyzed for radionuclides.

Results for chromium at the X-616 Chromium Sludge Surface Impoundments are also included in this section because chromium is a primary contaminant in this area. Results are provided for metals at the X-633 Pumphouse/Cooling Towers Area, X-611A Former Lime Sludge Lagoons, and X-533 Switchyard Area because these metals are the only analytical parameters for these areas.

Two VOCs, acetone and methylene chloride, were frequently detected in both environmental and blank samples (field and trip blanks) collected in 2009. Acetone and methylene chloride are common laboratory contaminants that are not typically detected in the PORTS groundwater plumes. Detections of acetone and methylene chloride are often qualified by the laboratory with a “B”, which indicates that the analyte was also detected in the laboratory blank associated with the environmental sample and may be present due to laboratory contamination.

Other VOCs, including trichloroethene, 2-butanone (methyl ethyl ketone), carbon disulfide, chloroform, and toluene were detected in trip and/or field blanks during 2009. These detections indicate that samples (both environmental samples and blank samples) may become contaminated with low concentrations of VOCs during other portions of the sampling process, although contamination can still occur in the laboratory. Other sources of contamination may include storage areas for sampling equipment (such as bottles and blank water), areas in which samples are collected or prepared, sample containers, and storage areas after samples are collected (such as refrigerators or sample shipping containers).

The primary purpose of the groundwater data, as stated in the *Quality Assurance Project Plan*, is to determine the nature and extent of contamination in groundwater and associated surface water at PORTS. Data collected in 2009 meet this purpose.

Complete groundwater monitoring results for sampling completed as required by the *Integrated Groundwater Monitoring Plan* are provided in the *2009 Groundwater Monitoring Report for the Portsmouth Gaseous Diffusion Plant*.

The following tables are included in this section:

- Table 4.1. Volatile organic compounds detected at the X-749/X-120/PK Landfill – 2009
- Table 4.2. Results for radionuclides at the X-749/X-120/PK Landfill – 2009
- Table 4.3. Volatile organic compounds detected at the Quadrant I Groundwater Investigative Area – 2009
- Table 4.4. Results for radionuclides at the Quadrant I Groundwater Investigative Area – 2009
- Table 4.5. Volatile organic compounds detected at the Quadrant II Groundwater Investigative Area – 2009
- Table 4.6. Results for radionuclides at the Quadrant II Groundwater Investigative Area – 2009
- Table 4.7. Volatile organic compounds detected at the X-701B Holding Pond – 2009
- Table 4.8. Results for radionuclides at the X-701B Holding Pond – 2009
- Table 4.9. Results for chromium at the X-633 Pumphouse/Cooling Towers Area – 2009
- Table 4.10. Volatile organic compounds detected at the X-616 Chromium Sludge Surface Impoundments – 2009
- Table 4.11. Results for chromium at the X-616 Chromium Sludge Surface Impoundments – 2009
- Table 4.12. Results for radionuclides at the X-616 Chromium Sludge Surface Impoundments – 2009
- Table 4.13. Volatile organic compounds detected at the X-740 Waste Oil Handling Facility – 2009
- Table 4.14. Results for beryllium and chromium at the X-611A Former Lime Sludge Lagoons – 2009
- Table 4.15. Volatile organic compounds detected at the X-735 Landfills – 2009
- Table 4.16. Results for radionuclides at the X-735 Landfills – 2009
- Table 4.17. Volatile organic compounds detected at the X-734 Landfills – 2009
- Table 4.18. Results for radionuclides at the X-734 Landfills – 2009

- Table 4.19. Results for cadmium, cobalt, and nickel at the X-533 Switchyard Area – 2009
- Table 4.20. Volatile organic compounds detected at surface water monitoring locations – 2009
- Table 4.21. Results for radionuclides at surface water monitoring locations – 2009
- Table 4.22. Results for radionuclides at exit pathway monitoring locations – 2009

The following laboratory data qualifiers are used in the tables in this section:

Data qualifier	Meaning
B	Inorganics (metals): the result was less than the practical quantitation limit but greater than or equal to the instrument detection limit. Organics (VOCs): the analyte was detected in the laboratory blank sample.
E	Organics (VOCs): the reported value is estimated because it exceeded the calibration range.
J	Organics (VOCs): the reported value is an estimated concentration greater than the method detection limit but less than the practical quantitation limit.
U	Undetected

Some results for radionuclides are reported in exponential notation. The number and sign (+ or -) to the right of the “E” indicate the number of places to the right or left of the decimal point. For example, 3.4E-04 is 0.00034 (the decimal point moves four places to the left); 2.1E+02 is 210 (the decimal point moves two places to the right). Data qualifiers, if any, are to the right of the result (for example, 5.66E-07 U, where U is the data qualifier that indicates the parameter was undetected).

Table 4.1. Volatile organic compounds detected at the X-749/X-120/PK Landfill – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
F-27G	1,1-Dichloroethane	µg/L		1.2 J		
	cis-1,2-Dichloroethene	µg/L		0.51 J		
	Trichloroethene	µg/L		0.23 J		
MH GW-4	1,1-Dichloroethane	µg/L		0.4 J		
	Chlorobenzene	µg/L		0.31 J		
	cis-1,2-Dichloroethene	µg/L		1.6 J		
MH GW-5	Vinyl chloride	µg/L		0.6 J		
	1,1-Dichloroethane	µg/L		0.71 J		
	Chlorobenzene	µg/L		0.18 J		
PK-09G	cis-1,2-Dichloroethene	µg/L		3		
	1,2-Dichlorobenzene	µg/L			0.16 J	
	Acetone	µg/L			1.9 J	
	Chloroform	µg/L			0.39 J	
	cis-1,2-Dichloroethene	µg/L			1.4 J	
PK-10G	Trichloroethene	µg/L			62	
	Acetone	µg/L		29		1.9 U
PK-11G	Acetone	µg/L		17		1.9 U
PK-14G	Acetone	µg/L	10 U	10 U	2 J	1.9 U
	Methylene chloride	µg/L	0.4 BJ	5 U	0.32 U	0.32 U
	Trichloroethene	µg/L	2 U	2 U	0.87 J	0.16 U
PK-15B	cis-1,2-Dichloroethene	µg/L		0.41 J		0.56 J
PK-16G	Acetone	µg/L	10 U	4.6 J	1.9 U	1.9 U
	cis-1,2-Dichloroethene	µg/L	2 U	2 U	1.4 J	0.3 J
	Methylene chloride	µg/L	0.39 BJ	0.4 BJ	0.32 U	0.32 U
	Trichloroethene	µg/L	2 U	2 U	0.16 J	0.16 U
PK-17B	1,1-Dichloroethane	µg/L	2.7	1.5 J	3.2	2.1
	1,1-Dichloroethane	µg/L	0.32 J	0.32 J	0.33 J	0.26 J
	Acetone	µg/L	10 U	10 U	2.8 J	3.5 J
	Benzene	µg/L	2 U	2 U	0.24 J	0.16 U
	Chlorobenzene	µg/L	1.5 J	1.2 J	1.3 J	1.4 J
	cis-1,2-Dichloroethene	µg/L	39	22	47	30
	trans-1,2-Dichloroethene	µg/L	1.3	0.72 J	1.5	1
	Trichloroethene	µg/L	1.2 J	0.4 J	1.4 J	1.3 J
PK-18B	Vinyl chloride	µg/L	16	10	18	8.9
	Acetone	µg/L		10 U		2.1 J
PK-19B	Trichloroethene	µg/L		2 U		0.37 J
	Acetone	µg/L		3.1 J		1.9 U
PK-21B	Chloroethane	µg/L		1.1 J		0.9 J
	1,1-Dichloroethane	µg/L	150	140	140	160
	1,1-Dichloroethane	µg/L	1.7 J	1.9 J	1.5 J	1.9 J
	1,2-Dichloroethane	µg/L	0.76 J	0.69 J	0.13 U	0.85 J
	Benzene	µg/L	2 U	0.63 J	0.67 J	0.75 J
	cis-1,2-Dichloroethene	µg/L	12	11	11	13
	Trichloroethene	µg/L	0.49 J	0.37 J	0.44 J	0.49 J
PK-PL6	Vinyl chloride	µg/L	17	17	17	18
	1,1,1-Trichloroethane	µg/L	3.6	6.5	3.4	3.2
	1,1-Dichloroethane	µg/L	6.9	6.2	8.8	6.8
	1,1-Dichloroethane	µg/L	2.7	4	3.2	2.7

Table 4.1. Volatile organic compounds detected at the X-749/X-120/PK Landfill – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
PK-PL6	cis-1,2-Dichloroethene	µg/L	1.6 J	1.9 J	2.3	1.9 J
	Trichloroethene	µg/L	1.9 J	2.8	3	2.3
	Vinyl chloride	µg/L	1 U	1 U	0.81 J	0.4 U
PK-PL6A	1,1,1-Trichloroethane	µg/L	4.3	14	6.8	4.3
	1,1-Dichloroethane	µg/L	8.2	11	17	8.6
	1,1-Dichloroethene	µg/L	3.3	8.5	6.5	3.7
	Chloroform	µg/L	2 U	2 U	0.2 J	0.16 U
	cis-1,2-Dichloroethene	µg/L	1.5 J	2	3.2	2.1
	Trichloroethene	µg/L	2.2	5.8	3.5	3.1
	Vinyl chloride	µg/L	1 U	1 U	1.8	0.65 J
STSW-101G	1,1,1-Trichloroethane	µg/L		34		32
	1,1,2-Trichloroethane	µg/L		1.7 J		0.32 U
	1,1-Dichloroethane	µg/L		53		54
	1,1-Dichloroethene	µg/L		100		52
	1,2-Dichloroethane	µg/L		12		12
	Acetone	µg/L		10 U		15
	Chloroethane	µg/L		2		1.5 J
	Chloroform	µg/L		4.3		4.3
	cis-1,2-Dichloroethene	µg/L		31		32
	Methylene chloride	µg/L		0.53 BJ		0.32 U
	Tetrachloroethene	µg/L		1.5 J		1.6 J
	Trichloroethene	µg/L		120		110
STSW-102G	1,1,1-Trichloroethane	µg/L		46		50
	1,1,2-Trichloroethane	µg/L		1.5 J		1 J
	1,1-Dichloroethane	µg/L		230		250
	1,1-Dichloroethene	µg/L		140		140
	1,2-Dichloroethane	µg/L		72		84
	Acetone	µg/L		22 J		11 J
	Benzene	µg/L		0.6 J		0.57 J
	Chloroethane	µg/L		1.5 J		4.1
	Chloroform	µg/L		7.7		8.4
	cis-1,2-Dichloroethene	µg/L		59		79
	Methylene chloride	µg/L		1.3 BJ		1.1 J
	Tetrachloroethene	µg/L		5.3 U		0.6 J
	trans-1,2-Dichloroethene	µg/L		0.51 J		0.56 J
Trichloroethene	µg/L		620		560	
WP-01G	1,2-Dichloroethane	µg/L	2 U	2 U	0.14 J	0.13 U
	Acetone	µg/L	10 U	1.9 BJ	3.1 J	4.2 BJ
	Methylene chloride	µg/L	5 U	5 U	0.93 BJ	0.93 BJ
WP-02G	Acetone	µg/L		2.2 BJ		1.9 U
	Methylene chloride	µg/L		1.2 BJ		0.32 U
WP-03G	1,1-Dichloroethane	µg/L	0.7 J	0.57 J	0.53 J	0.43 J
	1,1-Dichloroethene	µg/L	0.3 J	0.28 J	0.21 J	0.14 U
	Acetone	µg/L	10 U	10 U	1.9 U	3.2 BJ
	Methylene chloride	µg/L	5 U	5 U	0.32 U	1.2 BJ
	Trichloroethene	µg/L	1 J	0.77 J	0.74 J	0.56 J
WP-04G	Acetone	µg/L		10 U		3.4 BJ
	Methylene chloride	µg/L		5 U		1.1 BJ

Table 4.1. Volatile organic compounds detected at the X-749/X-120/PK Landfill – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
WP-05G	Acetone	µg/L	5.6 BJ	10 U		1.9 U
	Methylene chloride	µg/L	0.37 J	5 U		0.32 U
WP-06G	Acetone	µg/L	2.8 BJ	2.2 J		1.9 U
	Methylene chloride	µg/L	0.33 J	0.35 BJ		0.32 U
WP-07G	1,1-Dichloroethane	µg/L	0.23 J	2 U	0.16 U	0.16 U
	Acetone	µg/L	6.3 BJ	10 U	3.3 BJ	2.2 BJ
	Methylene chloride	µg/L	5 U	5 U	0.64 J	1.1 BJ
	Trichloroethene	µg/L	0.19 J	2 U	0.16 U	0.16 U
X120-03G	Chloroform	µg/L			0.55 J	
	Trichloroethene	µg/L			1 J	
X120-05G	Trichloroethene	µg/L			6.4	
X120-08G	1,1,1-Trichloroethane	µg/L		1.7 J		
	1,1-Dichloroethane	µg/L		1.5 J		
	1,1-Dichloroethene	µg/L		5.7		
	Chloroform	µg/L		0.25 J		
	Trichloroethene	µg/L		6.9		
X120-09G	1,1,1-Trichloroethane	µg/L		18		
	1,1,2-Trichloroethane	µg/L		1.1 J		
	1,1-Dichloroethane	µg/L		15		
	1,1-Dichloroethene	µg/L		54		
	1,2-Dichloroethane	µg/L		1.5 J		
	Chloroform	µg/L		1.7 J		
	cis-1,2-Dichloroethene	µg/L		0.81 J		
	Tetrachloroethene	µg/L		0.39 J		
	Trichloroethene	µg/L		35		
X120-10G	1,1,1-Trichloroethane	µg/L			8.2	
	1,1,2-Trichloroethane	µg/L			0.75 J	
	1,1-Dichloroethane	µg/L			8.2	
	1,1-Dichloroethene	µg/L			40	
	1,2-Dichloroethane	µg/L			0.77 J	
	Chloroform	µg/L			1.1 J	
	cis-1,2-Dichloroethene	µg/L			0.21 J	
	Methylene chloride	µg/L			0.35 BJ	
X120-11G	Trichloroethene	µg/L			6.7	
	1,1-Dichloroethene	µg/L		0.55 J		
	cis-1,2-Dichloroethene	µg/L		7.2		
	trans-1,2-Dichloroethene	µg/L		0.15 J		
X749-04G	Trichloroethene	µg/L		380		
	Carbon tetrachloride	µg/L			0.2 J	
	Chloroform	µg/L			0.69 J	
	cis-1,2-Dichloroethene	µg/L			0.71 J	
	Tetrachloroethene	µg/L			23	
X749-05G	Trichloroethene	µg/L			820	
	1,1-Dichloroethane	µg/L			0.37 J	
	1,1-Dichloroethene	µg/L			0.24 J	
	Carbon tetrachloride	µg/L			0.28 J	
	Chloroform	µg/L			1.5 J	
	cis-1,2-Dichloroethene	µg/L			0.99 J	

Table 4.1. Volatile organic compounds detected at the X-749/X-120/PK Landfill – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter	
X749-05G	Tetrachloroethene	µg/L			4.9		
	Toluene	µg/L			0.19 J		
	Trichloroethene	µg/L			70		
X749-06G	1,1,1-Trichloroethane	µg/L		240		140	
	1,1,2-Trichloroethane	µg/L		15		11	
	1,1-Dichloroethane	µg/L		700		530	
	1,1-Dichloroethene	µg/L		780		510	
	1,2-Dichloroethane	µg/L		16		10	
	Carbon tetrachloride	µg/L		13 U		18	
	Chloroform	µg/L		49		32	
	cis-1,2-Dichloroethene	µg/L		120		94	
	Methylene chloride	µg/L		4.1 J		9.4 J	
	Tetrachloroethene	µg/L		43		42	
	trans-1,2-Dichloroethene	µg/L		6.7 U		0.64 J	
	Trichloroethene	µg/L		1900		1400	
	Vinyl chloride	µg/L		5.9 J		1.6 U	
	X749-07G	1,1,1,2-Tetrachloroethane	µg/L		1.5		
1,1,1-Trichloroethane		µg/L		54		45	
1,1,2-Trichloroethane		µg/L		1.1		0.69 J	
1,1-Dichloroethane		µg/L		230		86	
1,1-Dichloroethene		µg/L		98		58	
1,2-Dichlorobenzene		µg/L		0.52 BJ		0.13 U	
1,2-Dichloroethane		µg/L		94		32	
Carbon disulfide		µg/L		2 U		0.88 BJ	
Chloroethane		µg/L		1.2 J		0.88 J	
Chloroform		µg/L		6.4		3.9	
cis-1,2-Dichloroethene		µg/L		31		14	
Dichlorodifluoromethane		µg/L		0.83 J			
Methylene chloride		µg/L		5 U		0.65 J	
Tetrachloroethene		µg/L		1.8		1.8 J	
trans-1,2-Dichloroethene		µg/L		0.15 J		0.15 U	
trans-1,4-Dichloro-2-butene		µg/L		2.7 J			
Trichloroethene		µg/L		300		180	
Vinyl chloride		µg/L		1.4		0.7 J	
X749-08G		1,1,1-Trichloroethane	µg/L		48		38
		1,1,2-Trichloroethane	µg/L		0.57 J		0.32 U
	1,1-Dichloroethane	µg/L		26		18	
	1,1-Dichloroethene	µg/L		77		62	
	1,2-Dichlorobenzene	µg/L		0.59 BJ		0.13 U	
	1,2-Dichloroethane	µg/L		5.8		3.6	
	Carbon disulfide	µg/L		2 U		0.82 BJ	
	Chloroethane	µg/L		0.84 J		0.43 J	
	Chloroform	µg/L		1.5		1.1 J	
	cis-1,2-Dichloroethene	µg/L		26		17	
	Methylene chloride	µg/L		5 U		0.65 J	
	trans-1,2-Dichloroethene	µg/L		0.21 J		0.18 J	
	Trichloroethene	µg/L		110		86	
	Vinyl chloride	µg/L		1.3		0.75 J	

Table 4.1. Volatile organic compounds detected at the X-749/X-120/PK Landfill – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X749-09GA	1,1,1-Trichloroethane	µg/L		20		39
	1,1-Dichloroethane	µg/L		6.8		17
	1,1-Dichloroethene	µg/L		18		50
	1,2-Dichloroethane	µg/L		1.1 J		2.8
	Acetone	µg/L		2.9 BJ		1.9 U
	Chloroform	µg/L		0.47 J		1.1 J
	cis-1,2-Dichloroethene	µg/L		5.2		12
	trans-1,2-Dichloroethene	µg/L		1 U		0.3 J
	Trichloroethene	µg/L		22		32
X749-10GA	1,1-Dichloroethane	µg/L		7.4		7.8
	1,1-Dichloroethene	µg/L		17		19
	1,2-Dichlorobenzene	µg/L		0.59 BJ		0.13 U
	1,2-Dichloroethane	µg/L		0.18 J		0.13 U
	Chloroethane	µg/L		1.1 J		0.83 J
	cis-1,2-Dichloroethene	µg/L		4.1		4.2
	Toluene	µg/L		0.38 J		0.17 U
	Trichloroethene	µg/L		0.67 J		0.56 J
X749-13G	Vinyl chloride	µg/L		1.1		0.74 J
	1,1,1-Trichloroethane	µg/L			36	
	1,1,2-Trichloroethane	µg/L			0.38 J	
	1,1-Dichloroethane	µg/L			10	
	1,1-Dichloroethene	µg/L			72	
	1,2-Dichloroethane	µg/L			1.7 J	
	Chloroethane	µg/L			0.43 J	
	Chloroform	µg/L			1.5 J	
	cis-1,2-Dichloroethene	µg/L			10	
	Methylene chloride	µg/L			0.51 BJ	
	Trichloroethene	µg/L			64	
	Vinyl chloride	µg/L			0.49 J	
X749-14B	Acetone	µg/L		28 B		
X749-20G	1,1,1-Trichloroethane	µg/L			5.9	
	1,1-Dichloroethane	µg/L			8.7	
	1,1-Dichloroethene	µg/L			11	
	1,2-Dichloroethane	µg/L			2.3	
	Acetone	µg/L			3.6 J	
	Chloroform	µg/L			0.83 J	
	cis-1,2-Dichloroethene	µg/L			5	
	Methylene chloride	µg/L			0.45 BJ	
	Trichloroethene	µg/L			65	
X749-21G	Vinyl chloride	µg/L			0.44 J	
	1,1,1-Trichloroethane	µg/L		0.98 J		1.4 J
	1,1-Dichloroethane	µg/L		0.24 J		0.4 J
	1,1-Dichloroethene	µg/L		0.6 J		0.8 J
	Carbon disulfide	µg/L		2 U		0.73 BJ
	cis-1,2-Dichloroethene	µg/L		2 U		0.19 J
	Methylene chloride	µg/L		5 U		0.54 J
	Trichloroethene	µg/L		6.2		2.2
X749-22G	1,1-Dichloroethane	µg/L				0.54 J

Table 4.1. Volatile organic compounds detected at the X-749/X-120/PK Landfill – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X749-22G	1,1-Dichloroethene	µg/L				0.47 J
X749-26G	1,1,1-Trichloroethane	µg/L				10
	1,1-Dichloroethane	µg/L				21
	1,1-Dichloroethene	µg/L				27
	1,2-Dichloroethane	µg/L				9.6
	Chloroform	µg/L				1.3 J
	cis-1,2-Dichloroethene	µg/L				3.2
	Tetrachloroethene	µg/L				0.22 J
	Trichloroethene	µg/L				39
X749-27G	1,1,1-Trichloroethane	µg/L		52		22
	1,1,2-Trichloroethane	µg/L		1.7 J		0.89 J
	1,1-Dichloroethane	µg/L		66		22
	1,1-Dichloroethene	µg/L		160		60
	1,2-Dichloroethane	µg/L		26		4.2
	Chloroethane	µg/L		3.6		0.41 U
	Chloroform	µg/L		8.1		2.7
	cis-1,2-Dichloroethene	µg/L		39		6.8
	Methylene chloride	µg/L		0.73 J		0.32 U
	Tetrachloroethene	µg/L		2.7		1.8 J
	trans-1,2-Dichloroethene	µg/L		0.21 J		0.15 U
	Trichloroethene	µg/L		220 E		85
	Vinyl chloride	µg/L		0.54 J		0.4 U
X749-28G	1,1,1-Trichloroethane	µg/L			4.2	
	1,1-Dichloroethane	µg/L			1.8 J	
	1,1-Dichloroethene	µg/L			6.4	
	1,2-Dichloroethane	µg/L			0.16 J	
	Chloroform	µg/L			0.66 J	
	cis-1,2-Dichloroethene	µg/L			0.43 J	
	Tetrachloroethene	µg/L			0.39 J	
	Trichloroethene	µg/L			44	
X749-29G	Chloroform	µg/L			0.2 J	
	Methylene chloride	µg/L			0.35 BJ	
	Trichloroethene	µg/L			6.9	
X749-30G	1,1-Dichloroethene	µg/L			1 J	
	Chloroform	µg/L			0.29 J	
	cis-1,2-Dichloroethene	µg/L			0.42 J	
	Methylene chloride	µg/L			0.4 BJ	
	Trichloroethene	µg/L			21	
X749-35G	1,1,1-Trichloroethane	µg/L			94	
	1,1,2-Trichloroethane	µg/L			0.55 J	
	1,1-Dichloroethane	µg/L			9.2	
	1,1-Dichloroethene	µg/L			54	
	1,2-Dichloroethane	µg/L			0.25 J	
	Chloroform	µg/L			0.56 J	
	cis-1,2-Dichloroethene	µg/L			7.5	
	Methylene chloride	µg/L			0.38 BJ	
	Tetrachloroethene	µg/L			0.36 J	
	Trichloroethene	µg/L			110	

Table 4.1. Volatile organic compounds detected at the X-749/X-120/PK Landfill – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X749-35G	Vinyl chloride	µg/L			0.86 J	
X749-36G	1,1,1-Trichloroethane	µg/L			3	
	1,1-Dichloroethane	µg/L			2.6	
	1,1-Dichloroethene	µg/L			9.7	
	1,2-Dichloroethane	µg/L			0.31 J	
	Chloroform	µg/L			0.31 J	
	cis-1,2-Dichloroethene	µg/L			0.23 J	
	Trichloroethene	µg/L			6	
X749-37G	1,1,1-Trichloroethane	µg/L		31		27
	1,1,2-Trichloroethane	µg/L		1.2 J		1.3 J
	1,1-Dichloroethane	µg/L		30		27
	1,1-Dichloroethene	µg/L		73		80
	1,2-Dichloroethane	µg/L		2.6		2.1
	Chloroethane	µg/L		0.6 J		0.41 U
	Chloroform	µg/L		2.9		2.4
	cis-1,2-Dichloroethene	µg/L		9		7.4
	Tetrachloroethene	µg/L		1.5 J		2
	trans-1,2-Dichloroethene	µg/L		1 U		0.17 J
	Trichloroethene	µg/L		64		77
X749-38G	1,1,1-Trichloroethane	µg/L		41		48
	1,1,2-Trichloroethane	µg/L		2.3		2.8
	1,1-Dichloroethane	µg/L		57		60
	1,1-Dichloroethene	µg/L		170		170
	1,2-Dichloroethane	µg/L		8.6		7.8
	Acetone	µg/L		23		1.9 U
	Chloroethane	µg/L		1.5 J		1.2 J
	Chloroform	µg/L		5.6		6.2
	cis-1,2-Dichloroethene	µg/L		40		37
	Methylene chloride	µg/L		0.67 J		0.35 J
	Tetrachloroethene	µg/L		2.1		3.6
	trans-1,2-Dichloroethene	µg/L		1.2		0.15 U
	Trichloroethene	µg/L		150		170
X749-40G	Chloroform	µg/L			0.31 J	
	Trichloroethene	µg/L			0.16 J	
X749-41G	1,1-Dichloroethene	µg/L		0.18 J		
	Chloroform	µg/L		0.21 J		
	cis-1,2-Dichloroethene	µg/L		1.5 J		
	trans-1,2-Dichloroethene	µg/L		0.43 J		
	Trichloroethene	µg/L		240		
X749-42G	Trichloroethene	µg/L				12
X749-43G	1,1,1-Trichloroethane	µg/L			0.19 J	
	1,1-Dichloroethene	µg/L			0.23 J	
X749-44G	1,1,1-Trichloroethane	µg/L	1.2 J	0.82 J	0.57 J	0.58 J
	1,1-Dichloroethane	µg/L	6.9	5.3	3.7	3.5
	1,1-Dichloroethene	µg/L	3.9	2.9	1.7 J	1.8 J
	1,2-Dichloroethane	µg/L	2	1.5 J	1.1 J	0.84 J
	Carbon disulfide	µg/L	2 U	2 U	2 U	0.78 BJ
	Chloroform	µg/L	0.41 J	0.26 J	0.17 J	0.21 J

Table 4.1. Volatile organic compounds detected at the X-749/X-120/PK Landfill – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter	
X749-44G	cis-1,2-Dichloroethene	µg/L	0.88 J	0.63 J	0.41 J	0.36 J	
	Methylene chloride	µg/L	5 U	5 U	5 U	0.58 J	
	Trichloroethene	µg/L	12	8.4	5.8	5.4	
X749-45G	1,1-Dichloroethane	µg/L	1.3 J	1.1 J	0.7 J	0.59 J	
	1,1-Dichloroethene	µg/L	0.78 J	0.55 J	0.36 J	0.28 J	
	1,2-Dichloroethane	µg/L	0.32 J	0.26 J	0.19 J	0.18 J	
	cis-1,2-Dichloroethene	µg/L	0.77 J	0.64 J	0.38 J	0.32 J	
	Trichloroethene	µg/L	2.7	2.2	1.7 J	1.4 J	
X749-50B	1,1-Dichloroethane	µg/L			5.5		
	1,1-Dichloroethene	µg/L			0.17 J		
	1,2-Dichloroethane	µg/L			3.2		
	Chloroethane	µg/L			0.78 J		
	cis-1,2-Dichloroethene	µg/L			1.1 J		
	Methylene chloride	µg/L			0.4 BJ		
	Trichloroethene	µg/L			0.38 J		
X749-51B	Methylene chloride	µg/L			0.43 BJ		
X749-54B	1,1-Dichloroethane	µg/L		1.8 J		1.3 J	
	Trichloroethene	µg/L		2.4		25	
	Vinyl chloride	µg/L		0.5 J		0.4 U	
X749-64B	Trichloroethene	µg/L			1.1 J		
X749-67G	1,1,1-Trichloroethane	µg/L	34	28	29	28	
	1,1,2-Trichloroethane	µg/L	1 J	1.1 J	1.3 J	1 J	
	1,1-Dichloroethane	µg/L	250	180	190	180	
	1,1-Dichloroethene	µg/L	190	150	130	140	
	1,2-Dichloroethane	µg/L	74	56	69	56	
	Acetone	µg/L	9.4 J	10 U	10 U	1.9 U	
	Benzene	µg/L	0.58 J	0.67 J	2 U	0.16 U	
	Chloroethane	µg/L	3.9 J	5.4	3.9	2.7	
	Chloroform	µg/L	9	8.2	9.2	7.8	
	cis-1,2-Dichloroethene	µg/L	94	100	110		
	Methylene chloride	µg/L	1.3 J	0.54 J	5 U	0.71 J	
	Tetrachloroethene	µg/L	4 U	0.55 J	0.48 J	0.5 J	
	trans-1,2-Dichloroethene	µg/L	0.97 J	0.75 J	0.65 J	0.57 J	
	Trichloroethene	µg/L	540	520	530	510	
	Vinyl chloride	µg/L	1 J	1.4	0.99 J	0.4 U	
	X749-68G	Trichloroethene	µg/L			0.24 J	
	X749-96G	Acetone	µg/L	2.4 J	10 U	10 U	1.9 U
	X749-97G	1,1-Dichloroethane	µg/L	0.44 J	0.3 J	0.18 J	0.16 U
		1,1-Dichloroethene	µg/L	0.2 J	2 U	0.14 U	0.14 U
		Trichloroethene	µg/L	1.1 J	0.75 J	0.62 J	0.42 J
X749-100M	Acetone	µg/L			3.1 J		
X749-102G	1,1-Dichloroethane	µg/L	1 J	1 J	0.54 J	0.43 J	
	1,1-Dichloroethene	µg/L	0.48 J	0.52 J	0.24 J	0.17 J	
	1,2-Dichloroethane	µg/L	2 U	0.22 J	2 U	0.13 U	
	Trichloroethene	µg/L	1.5 J	1.6 J	0.81 J	0.73 J	
X749-103G	Acetone	µg/L	10 U	3.2 BJ	10 U	1.9 U	
X749-106G	1,1,1-Trichloroethane	µg/L		54		54	
	1,1,2-Trichloroethane	µg/L		3.4		3.3	

Table 4.1. Volatile organic compounds detected at the X-749/X-120/PK Landfill – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X749-106G	1,1-Dichloroethane	µg/L		51		50
	1,1-Dichloroethene	µg/L		2 U		200
	1,2-Dichloroethane	µg/L		5.2		4.6
	Acetone	µg/L		10 U		5.9 J
	Chloroform	µg/L		5.5		5.3
	cis-1,2-Dichloroethene	µg/L		3.8		3.6
	Methylene chloride	µg/L		5 U		0.37 J
	Tetrachloroethene	µg/L		1.5 J		1.4 J
	Trichloroethene	µg/L		100		110
X749-107G	1,1,1-Trichloroethane	µg/L		60		64
	1,1,2-Trichloroethane	µg/L		4.1		4.3
	1,1-Dichloroethane	µg/L		58		63
	1,1-Dichloroethene	µg/L		280		250
	1,2-Dichloroethane	µg/L		5.6		6
	Acetone	µg/L		10 U		5.9 J
	Chloroform	µg/L		6.7		7.1
	cis-1,2-Dichloroethene	µg/L		4.9		5.3
	Methylene chloride	µg/L		0.46 J		0.41 J
X749-108G	Tetrachloroethene	µg/L		1.4 J		1.5 J
	Trichloroethene	µg/L		140		140
	1,1,1-Trichloroethane	µg/L		76		75
	1,1,2-Trichloroethane	µg/L		4		4.1
	1,1-Dichloroethane	µg/L		63		66
	1,1-Dichloroethene	µg/L		270		220
	1,2-Dichloroethane	µg/L		5.5		6.1
	Acetone	µg/L		10 U		5.3 J
	Chloroform	µg/L		8		8.1
X749-109G	cis-1,2-Dichloroethene	µg/L		4.7		5.1
	Methylene chloride	µg/L		0.73 J		0.72 J
	Tetrachloroethene	µg/L		1.6 J		1.6 J
	Trichloroethene	µg/L		180		170
	Vinyl chloride	µg/L		0.41 J		0.4 U
	1,1,1-Trichloroethane	µg/L		13		2.5
	1,1,2-Trichloroethane	µg/L		0.59 J		0.32 U
	1,1-Dichloroethane	µg/L		21		6.5
	1,1-Dichloroethene	µg/L		45		7.5
X749-110G	1,2-Dichloroethane	µg/L		4.8		1.5 J
	Acetone	µg/L		10 U		2.7 J
	Chloroform	µg/L		2.1		0.47 J
	cis-1,2-Dichloroethene	µg/L		3.3		0.66 J
	Trichloroethene	µg/L		36		11
	1,1,1-Trichloroethane	µg/L		26		30
	1,1,2-Trichloroethane	µg/L		0.87 J		0.64 U
	1,1-Dichloroethane	µg/L		100		88
	1,1-Dichloroethene	µg/L		130		110
1,2-Dichloroethane	µg/L		30		26	
	Acetone	µg/L		10 U		16 J
	Benzene	µg/L		0.48 J		0.32 U

Table 4.1. Volatile organic compounds detected at the X-749/X-120/PK Landfill – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X749-110G	Chloroethane	µg/L		4.8		5.7
	Chloroform	µg/L		5.6		4.6
	cis-1,2-Dichloroethene	µg/L		100		81
	Methylene chloride	µg/L		0.37 J		0.64 U
	Tetrachloroethene	µg/L		0.22 J		0.4 U
	trans-1,2-Dichloroethene	µg/L		0.77 J		0.38 J
	Trichloroethene	µg/L		280		240
	Vinyl chloride	µg/L		3.8		2.8
X749-112G	Acetone	µg/L		17 B		
X749-113G	1,1,1-Trichloroethane	µg/L		36		34
	1,1,2-Trichloroethane	µg/L		0.65 J		0.71 J
	1,1-Dichloroethane	µg/L		40		39
	1,1-Dichloroethene	µg/L		29		64
	1,2-Dichloroethane	µg/L		20		17
	Chloroform	µg/L		3.6		3.4
	cis-1,2-Dichloroethene	µg/L		4.3		4.8
	Tetrachloroethene	µg/L		1 J		1.3 J
X749-114G	Trichloroethene	µg/L		63		94
	1,1,1-Trichloroethane	µg/L			0.38 J	
	1,1-Dichloroethane	µg/L			0.59 J	
	1,1-Dichloroethene	µg/L			0.2 J	
	Acetone	µg/L			2.6 BJ	
	Benzene	µg/L			0.4 J	
	cis-1,2-Dichloroethene	µg/L			0.52 J	
X749-115G	Trichloroethene	µg/L			0.17 J	
	Chloroform	µg/L		0.62 J		1.1 J
	cis-1,2-Dichloroethene	µg/L		2.3		3.4
X749-117G	Trichloroethene	µg/L		120		190
	1,1-Dichloroethane	µg/L		2 U		0.22 J
	Chloroform	µg/L		1.5 J		1.1 J
	cis-1,2-Dichloroethene	µg/L		2 U		0.29 J
	Tetrachloroethene	µg/L		0.32 J		3.1
X749-118G	Trichloroethene	µg/L		15		39
	1,1-Dichloroethane	µg/L		1 J		1.4 J
	1,1-Dichloroethene	µg/L		2 U		0.23 J
	Carbon tetrachloride	µg/L		2 U		0.32 J
	Chloroform	µg/L		2 U		1.2 J
	cis-1,2-Dichloroethene	µg/L		0.62 J		1.2 J
	Tetrachloroethene	µg/L		8.2		5.2
X749-119G	Trichloroethene	µg/L		88		100
	1,1-Dichloroethane	µg/L		2 U		0.18 J
	Chloroform	µg/L		0.78 J		0.98 J
	cis-1,2-Dichloroethene	µg/L		0.53 J		0.72 J
	Tetrachloroethene	µg/L		2 U		0.22 J
X749-120G	Trichloroethene	µg/L		7.3		8.4
	1,1,1-Trichloroethane	µg/L		730		1200
	1,1,2-Trichloroethane	µg/L		46 J		83 J
	1,1-Dichloroethane	µg/L		4100		5200

Table 4.1. Volatile organic compounds detected at the X-749/X-120/PK Landfill – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X749-120G	1,1-Dichloroethene	µg/L		1600		2900
	1,2-Dichloroethane	µg/L		21 J		70 J
	Acetone	µg/L		320 J		190 U
	Chloroform	µg/L		440		280
	cis-1,2-Dichloroethene	µg/L		1500		2000
	Methylene chloride	µg/L		64 J		120 J
	Tetrachloroethene	µg/L		260		620
	Trichloroethene	µg/L		21000		22000
X749-121G	1,1,1-Trichloroethane	µg/L		100		110
	1,1,2-Trichloroethane	µg/L		0.83 J		1.4 J
	1,1-Dichloroethane	µg/L		59		53
	1,1-Dichloroethene	µg/L		320		410
	1,2-Dichloroethane	µg/L		0.87 J		1.6 J
	Acetone	µg/L		4.4 J		1.9 U
	Carbon tetrachloride	µg/L		4 U		0.23 J
	Chloroethane	µg/L		15		18
	Chloroform	µg/L		0.65 J		1.3 J
	cis-1,2-Dichloroethene	µg/L		17		19
	Methylene chloride	µg/L		10 U		0.51 J
	Tetrachloroethene	µg/L		4 U		0.76 J
	Trichloroethene	µg/L		92		110
	Vinyl chloride	µg/L		1.8 J		2
X749-122G	1,1,1-Trichloroethane	µg/L		250		400
	1,1,2-Trichloroethane	µg/L		1.7 J		3.3 J
	1,1-Dichloroethane	µg/L		55		89
	1,1-Dichloroethene	µg/L		270		370
	1,2-Dichloroethane	µg/L		3.5 J		5.5
	Acetone	µg/L		20 U		12 BJ
	Benzene	µg/L		4 U		0.79 J
	Chloroethane	µg/L		1.1 J		2.2 J
	Chloroform	µg/L		2.6 J		4.4
	cis-1,2-Dichloroethene	µg/L		38		61
	Methylene chloride	µg/L		10 U		2.1 J
	trans-1,2-Dichloroethene	µg/L		0.39 J		0.86 J
	Trichloroethene	µg/L		450		680
	Vinyl chloride	µg/L		2.2		4
X749-BG9G	1,1,1-Trichloroethane	µg/L		2 U		0.18 J
	1,1-Dichloroethane	µg/L		0.39 J		0.46 J
	1,1-Dichloroethene	µg/L		2 U		0.21 J
	Trichloroethene	µg/L		0.39 J		0.59 J
X749-PZ02G	1,1,1-Trichloroethane	µg/L		0.23 J		0.26 J
	1,1-Dichloroethane	µg/L		0.28 J		0.31 J
	1,1-Dichloroethene	µg/L		0.69 J		0.81 J
	cis-1,2-Dichloroethene	µg/L		0.18 J		0.18 J
	Trichloroethene	µg/L		1.5 J		1.6 J
X749-PZ03G	Methylene chloride	µg/L	5 U	5 U	0.38 J	0.32 U
X749-PZ04G	1,1,1-Trichloroethane	µg/L	0.65 J	0.54 J	0.27 J	0.23 J
	1,1-Dichloroethane	µg/L	7	5.2	2.8	2.5

Table 4.1. Volatile organic compounds detected at the X-749/X-120/PK Landfill – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X749-PZ04G	1,1-Dichloroethene	µg/L	3.5	2.5	0.88 J	1.2 J
	1,2-Dichloroethane	µg/L	2	1.5 J	0.88 J	0.7 J
	Acetone	µg/L	10 U	2.1 J	10 U	1.9 U
	Chloroform	µg/L	0.2 J	0.17 J	2 U	0.16 U
	cis-1,2-Dichloroethene	µg/L	3.3	2.5	1.4 J	1.1 J
	Trichloroethene	µg/L	16	12	6.4	5.9
X749-PZ06G	1,1,1-Trichloroethane	µg/L				17
	1,1,2-Trichloroethane	µg/L				1.2 J
	1,1-Dichloroethane	µg/L				22
	1,1-Dichloroethene	µg/L				75
	1,2-Dichloroethane	µg/L				2
	Chloroform	µg/L				2.5
	cis-1,2-Dichloroethene	µg/L				1.3 J
	Methylene chloride	µg/L				0.34 BJ
X749-PZ07G	Trichloroethene	µg/L				31
	1,1,1-Trichloroethane	µg/L		1.3 J		
	1,1-Dichloroethane	µg/L		1.1 J		
	1,1-Dichloroethene	µg/L		3.7		
	Chloroform	µg/L		0.2 J		
	cis-1,2-Dichloroethene	µg/L		0.27 J		
X749-PZ08G	Trichloroethene	µg/L		8		
	1,1-Dichloroethane	µg/L		0.28 J		
	cis-1,2-Dichloroethene	µg/L		0.47 J		
X749-PZ09G	Trichloroethene	µg/L		1.1 J		
	1,1,1-Trichloroethane	µg/L			1.7 J	
	1,1-Dichloroethane	µg/L			2.4	
	1,1-Dichloroethene	µg/L			6.1	
	Chloroform	µg/L			0.69 J	
	cis-1,2-Dichloroethene	µg/L			11	
	Methylene chloride	µg/L			0.75 J	
	Tetrachloroethene	µg/L			0.25 J	
X749-PZ10G	Trichloroethene	µg/L			120	
	Vinyl chloride	µg/L			1.6	
	1,1,1-Trichloroethane	µg/L		22		24
	1,1,2-Trichloroethane	µg/L		0.59 J		0.64 U
	1,1-Dichloroethane	µg/L		0.81 J		0.85 J
	1,1-Dichloroethene	µg/L		130		150
	1,2-Dichloroethane	µg/L		2 U		0.62 J
	Acetone	µg/L		10 U		85
	Carbon disulfide	µg/L		2 U		1.6 BJ
	Chloroform	µg/L		33		36
	cis-1,2-Dichloroethene	µg/L		0.67 J		0.7 J
X749-PZ11G	Methylene chloride	µg/L		5 U		1.6 J
	Toluene	µg/L		0.66 J		0.34 U
	Trichloroethene	µg/L		660		790
	1,1,1-Trichloroethane	µg/L			47	
	1,1-Dichloroethane	µg/L			16	
	1,1-Dichloroethene	µg/L			20	

Table 4.1. Volatile organic compounds detected at the X-749/X-120/PK Landfill – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X749-PZ11G	Benzene	µg/L			0.46 J	
	Chloroform	µg/L			0.41 J	
	cis-1,2-Dichloroethene	µg/L			19	
	trans-1,2-Dichloroethene	µg/L			0.68 J	
	Trichloroethene	µg/L			120	
	Vinyl chloride	µg/L			4.3	
X749-PZ12G	1,1,1-Trichloroethane	µg/L			11	
	1,1-Dichloroethane	µg/L			55	
	1,1-Dichloroethene	µg/L			51	
	Benzene	µg/L			3.5	
	Chloroethane	µg/L			3.2	
	cis-1,2-Dichloroethene	µg/L			12	
	trans-1,2-Dichloroethene	µg/L			0.57 J	
	Trichloroethene	µg/L			14	
X749-PZ13G	Vinyl chloride	µg/L			3.8	
	1,1,1-Trichloroethane	µg/L			70	
	1,1,2-Trichloroethane	µg/L			0.72 J	
	1,1-Dichloroethane	µg/L			64	
	1,1-Dichloroethene	µg/L			130	
	Benzene	µg/L			1.8 J	
	Chloroethane	µg/L			3.9	
	Chloroform	µg/L			1.5 J	
	cis-1,2-Dichloroethene	µg/L			30	
	Methylene chloride	µg/L			0.4 J	
	trans-1,2-Dichloroethene	µg/L			0.66 J	
	Trichloroethene	µg/L			120	
	Vinyl chloride	µg/L			2.8	
X749-WPW	1,1,1-Trichloroethane	µg/L		140		120
	1,1,2-Trichloroethane	µg/L		2.3 J		1.8 J
	1,1-Dichloroethane	µg/L		130		110
	1,1-Dichloroethene	µg/L		260		260
	1,2-Dichloroethane	µg/L		51		26
	Benzene	µg/L		1.6 J		0.64 U
	Chloroethane	µg/L		2 J		1.6 U
	Chloroform	µg/L		21		23
	cis-1,2-Dichloroethene	µg/L		42		40
	Tetrachloroethene	µg/L		4.3		3.8 J
	trans-1,2-Dichloroethene	µg/L		0.6 J		0.6 U
	Trichloroethene	µg/L		840		810
	Vinyl chloride	µg/L		13		12

Table 4.2. Results for radionuclides at the X-749/X-120/PK Landfill – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
STSW-101G	Americium-241	pCi/L		2.4E-05 U		
	Neptunium-237	pCi/L		0.01419 U		
	Plutonium-238	pCi/L		0.02826 U		
	Plutonium-239/240	pCi/L		7.1E-06 U		
	Technetium-99	pCi/L		16.4		
	Uranium	µg/L		0.1399		
	Uranium-233/234	pCi/L		0.06729		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.04701		
STSW-102G	Americium-241	pCi/L		0 U		
	Neptunium-237	pCi/L		-0.0499 U		
	Plutonium-238	pCi/L		-0.0071 U		
	Plutonium-239/240	pCi/L		7.1E-06 U		
	Technetium-99	pCi/L		113		
	Uranium	µg/L		0.1823 U		
	Uranium-233/234	pCi/L		0.06218 U		
	Uranium-235	pCi/L		-0.0085 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.06203		
WP-01G	Americium-241	pCi/L		0.036 U		
	Neptunium-237	pCi/L		-0.0080 U		
	Plutonium-238	pCi/L		0.02408 U		
	Plutonium-239/240	pCi/L		0 U		
	Technetium-99	pCi/L		-3.06 U		
	Uranium	µg/L		0.1595 U		
	Uranium-233/234	pCi/L		0.06143		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		-0.0085 U		
	Uranium-238	pCi/L		0.05365 U		
WP-02G	Americium-241	pCi/L		9.2E-06 U		
	Neptunium-237	pCi/L		0.00841 U		
	Plutonium-238	pCi/L		0.02515 U		
	Plutonium-239/240	pCi/L		0.00838 U		
	Technetium-99	pCi/L		2.04 U		
	Uranium	µg/L		0.04989 U		
	Uranium-233/234	pCi/L		0.07558		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.01676 U		
WP-03G	Americium-241	pCi/L		0.03207 U		
	Neptunium-237	pCi/L		0.00858 U		
	Plutonium-238	pCi/L		0.01712 U		
	Plutonium-239/240	pCi/L		0.02567 U		
	Technetium-99	pCi/L		-3.38 U		
	Uranium	µg/L		0.1044 U		
	Uranium-233/234	pCi/L		0.0341 U		
	Uranium-235	pCi/L		0.01052 U		

Table 4.2. Results for radionuclides at the X-749/X-120/PK Landfill – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
WP-03G	Uranium-236	pCi/L		0.01889 U		
	Uranium-238	pCi/L		0.03403 U		
WP-04G	Americium-241	pCi/L		0.00932 U		
	Neptunium-237	pCi/L		0 U		
	Plutonium-238	pCi/L		7.4E-06 U		
	Plutonium-239/240	pCi/L		-0.0074 U		
	Technetium-99	pCi/L		-4.52 U		
	Uranium	µg/L		0.06508 U		
	Uranium-233/234	pCi/L		0.04375 U		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		0.00808 U		
	Uranium-238	pCi/L		0.02183 U		
	WP-05G	Americium-241	pCi/L			
Neptunium-237		pCi/L				0 U
Plutonium-238		pCi/L				-0.0086 U
Plutonium-239/240		pCi/L				0.02585 U
Technetium-99		pCi/L				-3.55 U
Uranium		µg/L				0.575
Uranium-233/234		pCi/L				0.3306
Uranium-235		pCi/L				0.008496 U
Uranium-236		pCi/L				0 U
WP-06G	Uranium-238	pCi/L				0.1925
	Americium-241	pCi/L				-0.0103 U
	Neptunium-237	pCi/L				0.01716 U
	Plutonium-238	pCi/L				-0.00854 U
	Plutonium-239/240	pCi/L				0.01712 U
	Technetium-99	pCi/L				-4.22 U
	Uranium	µg/L				3.31
	Uranium-233/234	pCi/L				1.072
	Uranium-235	pCi/L				0.08151
WP-07G	Uranium-236	pCi/L				-0.00812 U
	Uranium-238	pCi/L				1.106
	Americium-241	pCi/L			-0.01648 U	
	Neptunium-237	pCi/L			-0.06396 U	
	Plutonium-238	pCi/L			0.01825 U	
	Plutonium-239/240	pCi/L			-0.009094 U	
	Technetium-99	pCi/L			-4.66 U	
	Uranium	µg/L			0.04216 U	
	Uranium-233/234	pCi/L			0.07797	
X120-08G	Uranium-235	pCi/L			0 U	
	Uranium-236	pCi/L			0 U	
	Uranium-238	pCi/L			0.01416 U	
	Americium-241	pCi/L		0.00728 U		
	Neptunium-237	pCi/L		0 U		
	Plutonium-238	pCi/L		0.00664 U		
	Plutonium-239/240	pCi/L		0.00663 U		
	Technetium-99	pCi/L		-0.999 U		
	Uranium	µg/L		0.1285		

Table 4.2. Results for radionuclides at the X-749/X-120/PK Landfill – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X120-08G	Uranium-233/234	pCi/L		0.1588		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		-0.008 U		
	Uranium-238	pCi/L		0.04321		
X749-06G	Americium-241	pCi/L		0.01447 U		
	Neptunium-237	pCi/L		0.0076 U		
	Plutonium-238	pCi/L		0.01516 U		
	Plutonium-239/240	pCi/L		0.00758 U		
	Technetium-99	pCi/L		35.4		
	Uranium	µg/L		0.1813		
	Uranium-233/234	pCi/L		0.09038		
	Uranium-235	pCi/L		0.00929 U		
	Uranium-236	pCi/L		-0.0083 U		
	Uranium-238	pCi/L		0.06013		
	X749-07G	Americium-241	pCi/L		0 U	
Neptunium-237		pCi/L		0.00759 U		
Plutonium-238		pCi/L		0.02268 U		
Plutonium-239/240		pCi/L		0.00757 U		
Technetium-99		pCi/L		128		
Uranium		µg/L		0.2392		
Uranium-233/234		pCi/L		0.1538		
Uranium-235		pCi/L		0 U		
Uranium-236		pCi/L		0 U		
Uranium-238		pCi/L		0.08038		
X749-08G		Americium-241	pCi/L		-0.0111 U	
	Neptunium-237	pCi/L		0.00728 U		
	Plutonium-238	pCi/L		0.01449 U		
	Plutonium-239/240	pCi/L		1.4E-05 U		
	Technetium-99	pCi/L		11.6		
	Uranium	µg/L		0.1505		
	Uranium-233/234	pCi/L		0.08687		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.05057		
	X749-14B	Americium-241	pCi/L		0.01019 U	
Neptunium-237		pCi/L		-0.0143 U		
Plutonium-238		pCi/L		-0.0142 U		
Plutonium-239/240		pCi/L		0.01424 U		
Technetium-99		pCi/L		1.27 U		
Uranium		µg/L		0.1577		
Uranium-233/234		pCi/L		0.08216		
Uranium-235		pCi/L		0.00921 U		
Uranium-236		pCi/L		0 U		
Uranium-238		pCi/L		0.05218		
X749-20G		Americium-241	pCi/L			1.821E-05 U
	Neptunium-237	pCi/L			0 U	
	Plutonium-238	pCi/L			0 U	
	Plutonium-239/240	pCi/L			0 U	

Table 4.2. Results for radionuclides at the X-749/X-120/PK Landfill – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X749-20G	Technetium-99	pCi/L			294	
	Uranium	µg/L			0.5742	
	Uranium-233/234	pCi/L			0.2543	
	Uranium-235	pCi/L			0.02941 U	
	Uranium-236	pCi/L			1.759E-05 U	
	Uranium-238	pCi/L			0.1903	
X749-26G	Americium-241	pCi/L				0.02783 U
	Neptunium-237	pCi/L				-0.01577 U
	Plutonium-238	pCi/L				0.02363 U
	Plutonium-239/240	pCi/L				-0.01573 U
	Technetium-99	pCi/L				4.52 U
	Uranium	µg/L				0.0415 U
	Uranium-233/234	pCi/L				0.0622
	Uranium-235	pCi/L				0 U
	Uranium-236	pCi/L				0.03062 U
	Uranium-238	pCi/L				0.0138 U
X749-27G	Americium-241	pCi/L	0.00894 U			
	Neptunium-237	pCi/L	0 U			
	Plutonium-238	pCi/L	-0.0365 U			
	Plutonium-239/240	pCi/L	0.00733 U			
	Technetium-99	pCi/L	37.7			
	Uranium	µg/L	0.2126			
	Uranium-233/234	pCi/L	0.1002			
	Uranium-235	pCi/L	0 U			
	Uranium-236	pCi/L	0.00792 U			
	Uranium-238	pCi/L	0.0714			
X749-44G	Americium-241	pCi/L	-0.0107 U			
	Neptunium-237	pCi/L	-0.0221 U			
	Plutonium-238	pCi/L	0.02206 U			
	Plutonium-239/240	pCi/L	-0.0073 U			
	Technetium-99	pCi/L	-2.82 U			
	Uranium	µg/L	0.2406			
	Uranium-233/234	pCi/L	0.1229			
	Uranium-235	pCi/L	-0.0101 U			
	Uranium-236	pCi/L	0 U			
	Uranium-238	pCi/L	0.08173			
X749-45G	Americium-241	pCi/L	0.02463 U			
	Neptunium-237	pCi/L	-0.0718 U			
	Plutonium-238	pCi/L	0.00718 U			
	Plutonium-239/240	pCi/L	7.2E-06 U			
	Technetium-99	pCi/L	-1.57 U			
	Uranium	µg/L	0.06873 U			
	Uranium-233/234	pCi/L	0.06264			
	Uranium-235	pCi/L	0.02575 U			
	Uranium-236	pCi/L	-0.0077 U			
	Uranium-238	pCi/L	0.02083 U			
X749-54B	Americium-241	pCi/L	0.00808 U			
	Neptunium-237	pCi/L	6.3E-06 U			

Table 4.2. Results for radionuclides at the X-749/X-120/PK Landfill – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X749-54B	Plutonium-238	pCi/L		0.00628 U		
	Plutonium-239/240	pCi/L		0.01255 U		
	Technetium-99	pCi/L		-0.675 U		
	Uranium	µg/L		0.06925 U		
	Uranium-233/234	pCi/L		0.04499 U		
	Uranium-235	pCi/L		0.00925 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.02244 U		
X749-64B	Americium-241	pCi/L			0.02158 U	
	Neptunium-237	pCi/L			-0.01718 U	
	Plutonium-238	pCi/L			0 U	
	Plutonium-239/240	pCi/L			-0.02574 U	
	Technetium-99	pCi/L			-3.97 U	
	Uranium	µg/L			1.699	
	Uranium-233/234	pCi/L			2.747	
	Uranium-235	pCi/L			0.01024 U	
	Uranium-236	pCi/L			0.009164 U	
	Uranium-238	pCi/L			0.5697	
X749-68G	Americium-241	pCi/L			0.007977 U	
	Neptunium-237	pCi/L			0.00751 U	
	Plutonium-238	pCi/L			0.02244 U	
	Plutonium-239/240	pCi/L			7.475E-06 U	
	Technetium-99	pCi/L			-1.61 U	
	Uranium	µg/L			-0.02092 U	
	Uranium-233/234	pCi/L			0.02126 U	
	Uranium-235	pCi/L			0 U	
	Uranium-236	pCi/L			0 U	
	Uranium-238	pCi/L			-0.007031 U	
X749-96G	Americium-241	pCi/L	0.04273 U			
	Neptunium-237	pCi/L	-0.0172 U			
	Plutonium-238	pCi/L	0.01718 U			
	Plutonium-239/240	pCi/L	1.7E-05 U			
	Technetium-99	pCi/L	-2.88 U			
	Uranium	µg/L	0.2099			
	Uranium-233/234	pCi/L	0.1838			
	Uranium-235	pCi/L	0.0189 U			
	Uranium-236	pCi/L	0.00848 U			
	Uranium-238	pCi/L	0.0688			
X749-97G	Americium-241	pCi/L	4.6E-05 U			
	Neptunium-237	pCi/L	2.4E-05 U			
	Plutonium-238	pCi/L	-0.0081 U			
	Plutonium-239/240	pCi/L	0.00811 U			
	Technetium-99	pCi/L	-1.4 U			
	Uranium	µg/L	0.1927			
	Uranium-233/234	pCi/L	0.1069			
	Uranium-235	pCi/L	-0.0101 U			
	Uranium-236	pCi/L	0 U			
	Uranium-238	pCi/L	0.06566			

Table 4.2. Results for radionuclides at the X-749/X-120/PK Landfill – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X749-98G	Americium-241	pCi/L		-0.0087 U		
	Neptunium-237	pCi/L		-0.0263 U		
	Plutonium-238	pCi/L		0.01968 U		
	Plutonium-239/240	pCi/L		-0.0262 U		
	Technetium-99	pCi/L		-1.98 U		
	Uranium	µg/L		0.1618		
	Uranium-233/234	pCi/L		0.02727 U		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.05437		
X749-106G	Americium-241	pCi/L		0.01944 U		
	Neptunium-237	pCi/L		0 U		
	Plutonium-238	pCi/L		7.5E-06 U		
	Plutonium-239/240	pCi/L		0.01496 U		
	Technetium-99	pCi/L		5.22 U		
	Uranium	µg/L		0.1733 U		
	Uranium-233/234	pCi/L		0.07194		
	Uranium-235	pCi/L		0.00887 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.05745 U		
X749-108G	Americium-241	pCi/L		0.00815 U		
	Neptunium-237	pCi/L		-0.0075 U		
	Plutonium-238	pCi/L		0.0226 U		
	Plutonium-239/240	pCi/L		0.00753 U		
	Technetium-99	pCi/L		7.89 U		
	Uranium	µg/L		0.08737 U		
	Uranium-233/234	pCi/L		0.06618		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.02936 U		
X749-109G	Americium-241	pCi/L		0.00768 U		
	Neptunium-237	pCi/L		0.01477 U		
	Plutonium-238	pCi/L		7.3E-06 U		
	Plutonium-239/240	pCi/L		0.01471 U		
	Technetium-99	pCi/L		4.09 U		
	Uranium	µg/L		0.09116 U		
	Uranium-233/234	pCi/L		0.05694 U		
	Uranium-235	pCi/L		-0.0200 U		
	Uranium-236	pCi/L		-0.009 U		
	Uranium-238	pCi/L		0.03246 U		
X749-110G	Americium-241	pCi/L		9E-06 U		
	Neptunium-237	pCi/L		3.3E-05 U		
	Plutonium-238	pCi/L		0.02666 U		
	Plutonium-239/240	pCi/L		-0.0333 U		
	Technetium-99	pCi/L		10.3		
	Uranium	µg/L		0.313		
	Uranium-233/234	pCi/L		0.1302		
	Uranium-235	pCi/L		7.6E-06 U		

Table 4.2. Results for radionuclides at the X-749/X-120/PK Landfill – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X749-110G	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.1052		
X749-113G	Americium-241	pCi/L		-0.0321 U		
	Neptunium-237	pCi/L		-0.0143 U		
	Plutonium-238	pCi/L		1.4E-05 U		
	Plutonium-239/240	pCi/L		1.4E-05 U		
	Technetium-99	pCi/L		85.4		
	Uranium	µg/L		0.1878		
	Uranium-233/234	pCi/L		0.06325 U		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		8.7E-06 U		
	Uranium-238	pCi/L		0.06311		
	X749-115G	Technetium-99	pCi/L		1.37 U	
X749-117G	Technetium-99	pCi/L		-0.524 U		-3.19 U
X749-118G	Technetium-99	pCi/L		-0.443 U		-1.71 U
X749-119G	Technetium-99	pCi/L		13.1		1.59 U
X749-120G	Technetium-99	pCi/L		1150		1160
X749-121G	Technetium-99	pCi/L		915		847
X749-122G	Technetium-99	pCi/L		6.09 U		-2.69 U
X749-PZ02G	Americium-241	pCi/L		0.02329 U		
	Neptunium-237	pCi/L		-0.0212 U		
	Plutonium-238	pCi/L		0.00707 U		
	Plutonium-239/240	pCi/L		7.1E-06 U		
	Technetium-99	pCi/L		0.219 U		
	Uranium	µg/L		0.08242 U		
	Uranium-233/234	pCi/L		0.09019		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.02769 U		
	X749-PZ04G	Americium-241	pCi/L			0.007779 U
Neptunium-237		pCi/L			-0.04171 U	
Plutonium-238		pCi/L			0.02498 U	
Plutonium-239/240		pCi/L			-0.03327 U	
Technetium-99		pCi/L			-6.66 U	
Uranium		µg/L			-0.02522 U	
Uranium-233/234		pCi/L			0.02315 U	
Uranium-235		pCi/L			-0.009493 U	
Uranium-236		pCi/L			0.008532 U	
Uranium-238		pCi/L			-0.007672 U	
X749-PZ09G		Americium-241	pCi/L			-0.03382 U
	Neptunium-237	pCi/L			-0.01607 U	
	Plutonium-238	pCi/L			0.008033 U	
	Plutonium-239/240	pCi/L			0.008041 U	
	Technetium-99	pCi/L			2540	
	Uranium	µg/L			0.8174	
	Uranium-233/234	pCi/L			0.1981	
	Uranium-235	pCi/L			0.00941 U	
	Uranium-236	pCi/L			0.008441 U	

Table 4.2. Results for radionuclides at the X-749/X-120/PK Landfill – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X749-PZ09G	Uranium-238	pCi/L			0.2738	
X749-PZ11G	Americium-241	pCi/L			-0.01639 U	
	Neptunium-237	pCi/L			-0.007426 U	
	Plutonium-238	pCi/L			-0.01481 U	
	Plutonium-239/240	pCi/L			0.00742 U	
	Technetium-99	pCi/L			-2.64 U	
	Uranium	µg/L			0.9116	
	Uranium-233/234	pCi/L			0.2354	
	Uranium-235	pCi/L			0.009681 U	
	Uranium-236	pCi/L			0 U	
	Uranium-238	pCi/L			0.3055	
X749-PZ12G	Americium-241	pCi/L			0.03755 U	
	Neptunium-237	pCi/L			0.03585 U	
	Plutonium-238	pCi/L			0.0000357 U	
	Plutonium-239/240	pCi/L			0.008943 U	
	Technetium-99	pCi/L			-4.19 U	
	Uranium	µg/L			0.7687	
	Uranium-233/234	pCi/L			0.2641	
	Uranium-235	pCi/L			0.02874 U	
	Uranium-236	pCi/L			-0.008594 U	
	Uranium-238	pCi/L			0.2558	
X749-PZ13G	Americium-241	pCi/L			0.01036 U	
	Neptunium-237	pCi/L			0.02601 U	
	Plutonium-238	pCi/L			-0.00862 U	
	Plutonium-239/240	pCi/L			0.008654 U	
	Technetium-99	pCi/L			0.274 U	
	Uranium	µg/L			2.191	
	Uranium-233/234	pCi/L			0.7664	
	Uranium-235	pCi/L			0.05083 U	
	Uranium-236	pCi/L			-0.0547 U	
	Uranium-238	pCi/L			0.7318	
X749-WPW	Americium-241	pCi/L				0.01421 U
	Neptunium-237	pCi/L				-0.04821 U
	Plutonium-238	pCi/L				-0.01601 U
	Plutonium-239/240	pCi/L				-0.08817 U
	Technetium-99	pCi/L				4250
	Uranium	µg/L				0.592
	Uranium-233/234	pCi/L				0.2458
	Uranium-235	pCi/L				0 U
	Uranium-236	pCi/L				0.01472 U
	Uranium-238	pCi/L				0.1989

Table 4.3. Volatile organic compounds detected at the Quadrant I Groundwater Investigative Area – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X230K-14G	Chloromethane	µg/L			1 BJ	
	cis-1,2-Dichloroethene	µg/L			0.23 J	
	Trichloroethene	µg/L			4.4	
X230K-15G	cis-1,2-Dichloroethene	µg/L			0.2 J	
	Trichloroethene	µg/L			2.6	
X231A-01G	1,1-Dichloroethane	µg/L		15		
	1,1-Dichloroethene	µg/L		0.86 J		
	1,2-Dimethylbenzene	µg/L		0.39 J		
	Acetone	µg/L		3.8 J		
	Benzene	µg/L		0.47 J		
	Chloroethane	µg/L		2		
	Chloroform	µg/L		0.17 J		
	cis-1,2-Dichloroethene	µg/L		1.1 J		
	Trichloroethene	µg/L		11		
X231A-04G	1,1,1-Trichloroethane	µg/L			0.21 J	
	1,1-Dichloroethene	µg/L			1.2 J	
	Chloroform	µg/L			0.39 J	
	cis-1,2-Dichloroethene	µg/L			0.97 J	
	Methylene chloride	µg/L			0.72 J	
	Trichloroethene	µg/L			16	
X231B-02G	1,1-Dichloroethene	µg/L			0.33 J	
	Chloroform	µg/L			9.7	
	cis-1,2-Dichloroethene	µg/L			44	
	Methylene chloride	µg/L			1.2 BJ	
	Tetrachloroethene	µg/L			0.4 J	
	trans-1,2-Dichloroethene	µg/L			1.4 J	
X231B-03G	Trichloroethene	µg/L			760	
	1,1,1-Trichloroethane	µg/L			2.3	
	1,1-Dichloroethane	µg/L			2.1	
	1,1-Dichloroethene	µg/L			26	
	1,2-Dichlorobenzene	µg/L			0.45 J	
	Chloroform	µg/L			0.67 J	
	cis-1,2-Dichloroethene	µg/L			22	
	Methylene chloride	µg/L			0.59 J	
	Tetrachloroethene	µg/L			0.32 J	
X231B-06G	trans-1,2-Dichloroethene	µg/L			0.4 J	
	Trichloroethene	µg/L			230	
	1,1,1-Trichloroethane	µg/L			53	
	1,1,2-Trichloroethane	µg/L			2.2	
	1,1-Dichloroethane	µg/L			60	
	1,1-Dichloroethene	µg/L			170	
	1,2-Dichloroethane	µg/L			2.1	
	Benzene	µg/L			0.31 J	
	Chloroform	µg/L			0.83 J	
cis-1,2-Dichloroethene	µg/L			8.1		
	Methylene chloride	µg/L			0.56 BJ	
	Tetrachloroethene	µg/L			3	
	trans-1,2-Dichloroethene	µg/L			0.28 J	

**Table 4.3. Volatile organic compounds detected at the Quadrant I Groundwater Investigative Area – 2009
(continued)**

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X231B-06G	Trichloroethene	µg/L			290	
	Vinyl chloride	µg/L			0.92 J	
X231B-07G	1,1-Dichloroethene	µg/L			0.18 J	
	Bromodichloromethane	µg/L			0.47 J	
	Carbon tetrachloride	µg/L			0.94 J	
	Chloroform	µg/L			60	
	cis-1,2-Dichloroethene	µg/L			8.8	
	Methylene chloride	µg/L			0.59 BJ	
	Tetrachloroethene	µg/L			0.49 J	
	trans-1,2-Dichloroethene	µg/L			0.22 J	
	Trichloroethene	µg/L			90	
	X231B-11G	1,1-Dichloroethane	µg/L			0.2 J
1,1-Dichloroethene		µg/L			6	
cis-1,2-Dichloroethene		µg/L			0.28 J	
Methylene chloride		µg/L			0.34 J	
Trichloroethene		µg/L			2	
X231B-12G	1,1,1-Trichloroethane	µg/L			1.4 J	
	1,1-Dichloroethane	µg/L			0.18 J	
	1,1-Dichloroethene	µg/L			5	
	cis-1,2-Dichloroethene	µg/L			0.26 J	
	Methylene chloride	µg/L			0.39 BJ	
	Trichloroethene	µg/L			4.4	
X231B-14G	1,1,1-Trichloroethane	µg/L			4.1	
	1,1-Dichloroethane	µg/L			1.7 J	
	1,1-Dichloroethene	µg/L			43	
	Chloroform	µg/L			1.5 J	
	cis-1,2-Dichloroethene	µg/L			9.6	
	Methylene chloride	µg/L			0.51 BJ	
	Trichloroethene	µg/L			180	
X231B-15G	cis-1,2-Dichloroethene	µg/L	0.82 J		0.75 J	
	Methylene chloride	µg/L	5 U		0.39 BJ	
	trans-1,2-Dichloroethene	µg/L	0.17 J		0.18 J	
	Trichloroethene	µg/L	1.4 J		2	
X231B-16G	1,1-Dichloroethane	µg/L			0.24 J	
	1,1-Dichloroethene	µg/L			4.6	
	Chloroform	µg/L			1.1 J	
	Methylene chloride	µg/L			0.36 J	
	Trichloroethene	µg/L			0.41 J	
X231B-20G	1,1-Dichloroethene	µg/L			6.8	
	Chloroform	µg/L			0.93 J	
	cis-1,2-Dichloroethene	µg/L			0.58 J	
	Methylene chloride	µg/L			0.45 BJ	
	Trichloroethene	µg/L			64	
X231B-23G	1,1,1-Trichloroethane	µg/L			0.66 J	
	1,1-Dichloroethane	µg/L			0.23 J	
	1,1-Dichloroethene	µg/L			3.4	
	Chloroform	µg/L			0.43 J	
	cis-1,2-Dichloroethene	µg/L			0.18 J	

**Table 4.3. Volatile organic compounds detected at the Quadrant I Groundwater Investigative Area – 2009
(continued)**

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X231B-23G	Trichloroethene	µg/L			1.3 J	
X231B-24B	Methylene chloride	µg/L			0.36 J	
	Trichloroethene	µg/L			0.39 J	
X231B-29G	Chloroform	µg/L			0.27 J	
	cis-1,2-Dichloroethene	µg/L			0.8 J	
	Tetrachloroethene	µg/L			0.5 J	
	Trichloroethene	µg/L			19	
X231B-32B	Trichloroethene	µg/L			0.27 J	
X231B-36G	1,1-Dichloroethene	µg/L			0.24 J	
	Chloroform	µg/L			0.68 J	
	cis-1,2-Dichloroethene	µg/L			1.5 J	
	Methylene chloride	µg/L			0.44 BJ	
	Trichloroethene	µg/L			79	
X231B-37G	1,1-Dichloroethane	µg/L			2.7	
	1,1-Dichloroethene	µg/L			2.8	
	cis-1,2-Dichloroethene	µg/L			4.9	
	trans-1,2-Dichloroethene	µg/L			0.91 J	
	Trichloroethene	µg/L			19	
X326-09G	1,1,1-Trichloroethane	µg/L	3.1		8 U	
	1,1,2-Trichloroethane	µg/L	3.6		16 U	
	1,1-Dichloroethane	µg/L	0.81 J		8 U	
	1,1-Dichloroethene	µg/L	160 J		93 J	
	1,2-Dimethylbenzene	µg/L	0.39 J		9.5 U	
	Benzene	µg/L	0.68 J		8 U	
	Bromodichloromethane	µg/L	15		15 J	
	Bromoform	µg/L	0.72 J		9.5 U	
	Carbon tetrachloride	µg/L	3.2		9.5 U	
	Chloroform	µg/L	470 J		400	
	cis-1,2-Dichloroethene	µg/L	58		62 J	
	Dibromochloromethane	µg/L	2.8		8.5 U	
	Methylene chloride	µg/L	1.5 J		16 U	
	Tetrachloroethene	µg/L	1 J		10 U	
	trans-1,2-Dichloroethene	µg/L	0.82 J		7.5 U	
	Trichloroethene	µg/L	11000		15000	
	Vinyl chloride	µg/L	2.1		20 U	
X326-10G	cis-1,2-Dichloroethene	µg/L	1.5 J		1.4 J	
	Methylene chloride	µg/L	5 U		0.41 BJ	
	Trichloroethene	µg/L	8.8		12	
X626-07G	1,1,1-Trichloroethane	µg/L			6	
	1,1,2-Trichloroethane	µg/L			1.7 J	
	1,1-Dichloroethane	µg/L			1.3 J	
	1,1-Dichloroethene	µg/L			240	
	1,2-Dichloroethane	µg/L			0.71 J	
	1,4-Dichlorobenzene	µg/L			0.17 J	
	Benzene	µg/L			0.85 J	
	Chloroform	µg/L			1.3 J	
	cis-1,2-Dichloroethene	µg/L			0.45 J	
	Trichloroethene	µg/L			190	

**Table 4.3. Volatile organic compounds detected at the Quadrant I Groundwater Investigative Area – 2009
(continued)**

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X710-01G	cis-1,2-Dichloroethene	µg/L			1 J	
	Trichloroethene	µg/L			41	
X749A-01G	Trichloroethene	µg/L		0.32 J		
X749A-02G	Acetone	µg/L		3.9 J		
	Methylene chloride	µg/L		0.43 BJ		
X749A-03G	Methylene chloride	µg/L		0.37 BJ		
X749A-04G	Methylene chloride	µg/L		1.4 J		
X749A-05G	Acetone	µg/L		4.5 BJ		
X749A-07G	Acetone	µg/L		19		
	Methylene chloride	µg/L		0.34 J		
X749A-11G	cis-1,2-Dichloroethene	µg/L		0.2 J		
	Trichloroethene	µg/L		9.8		
X749A-12G	cis-1,2-Dichloroethene	µg/L		1.4		
	Dichlorodifluoromethane	µg/L		0.45 J		
	Trichloroethene	µg/L		0.44 J		
X749A-13GA	Acetone	µg/L		2.6 J		
X749A-14G	Methylene chloride	µg/L		0.64 J		
X749A-15G	Acetone	µg/L		2.1 J		
	Methylene chloride	µg/L		0.41 BJ		
X749A-17G	Methylene chloride	µg/L		0.57 J		
X749A-18G	cis-1,2-Dichloroethene	µg/L		0.16 J		
	Methylene chloride	µg/L		0.69 J		
	Trichloroethene	µg/L		2.9		
X749A-19G	cis-1,2-Dichloroethene	µg/L		5.8		
	Dichlorodifluoromethane	µg/L		2.6		
	Methylene chloride	µg/L		0.57 J		
	Trichloroethene	µg/L		24		
X760-02G	Acetone	µg/L			17	
	Trichloroethene	µg/L			0.6 J	
X760-03G	1,1-Dichloroethene	µg/L			0.54 J	
	Acetone	µg/L			4.7 J	
	Chloroform	µg/L			0.22 J	
	cis-1,2-Dichloroethene	µg/L			6.8	
	Trichloroethene	µg/L			410	
X760-07G	1,1-Dichloroethene	µg/L			0.71 J	
	Acetone	µg/L			12 J	
	Chloroform	µg/L			0.76 J	
	cis-1,2-Dichloroethene	µg/L			7.9	
	Trichloroethene	µg/L			580	
X770-MW17G	Acetone	µg/L			160 J	
	cis-1,2-Dichloroethene	µg/L			350	
	Trichloroethene	µg/L			5600	

Table 4.4. Results for radionuclides at the Quadrant I Groundwater Investigative Area – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X231A-01G	Americium-241	pCi/L		0.06318 U		
	Neptunium-237	pCi/L		0.01496 U		
	Plutonium-238	pCi/L		0.04478 U		
	Plutonium-239/240	pCi/L		0 U		
	Technetium-99	pCi/L		36.8		
	Uranium	µg/L		20.15		
	Uranium-233/234	pCi/L		6.811		
	Uranium-235	pCi/L		0.4277		
	Uranium-236	pCi/L		0.024 U		
	Uranium-238	pCi/L		6.732		
X231B-06G	Americium-241	pCi/L			0.02908 U	
	Neptunium-237	pCi/L			0.006958 U	
	Plutonium-238	pCi/L			0.006932 U	
	Plutonium-239/240	pCi/L			6.926E-06 U	
	Technetium-99	pCi/L			24.1	
	Uranium	µg/L			1.2	
	Uranium-233/234	pCi/L			1.066	
	Uranium-235	pCi/L			0.03603 U	
	Uranium-236	pCi/L			0.008088 U	
	Uranium-238	pCi/L			0.4008	
X231B-36G	Americium-241	pCi/L			0.01975 U	
	Neptunium-237	pCi/L			0 U	
	Plutonium-238	pCi/L			0.03421 U	
	Plutonium-239/240	pCi/L			8.545E-06 U	
	Technetium-99	pCi/L			0.221 U	
	Uranium	µg/L			0.954	
	Uranium-233/234	pCi/L			0.3211	
	Uranium-235	pCi/L			0 U	
	Uranium-236	pCi/L			0.007568 U	
	Uranium-238	pCi/L			0.3205	
X231B-37G	Americium-241	pCi/L			0.007741 U	
	Neptunium-237	pCi/L			0.01447 U	
	Plutonium-238	pCi/L			0.01444 U	
	Plutonium-239/240	pCi/L			-0.00721 U	
	Technetium-99	pCi/L			-1.08 U	
	Uranium	µg/L			0.257	
	Uranium-233/234	pCi/L			0.1216	
	Uranium-235	pCi/L			0.00882 U	
	Uranium-236	pCi/L			0 U	
	Uranium-238	pCi/L			0.08563	
X326-09G	Americium-241	pCi/L			1.188E-05 U	
	Neptunium-237	pCi/L			7.172E-06 U	
	Plutonium-238	pCi/L			0.02147 U	
	Plutonium-239/240	pCi/L			0.02147 U	
	Technetium-99	pCi/L			-0.132 U	
	Uranium	µg/L			0.0213 U	
	Uranium-233/234	pCi/L			0.006447 U	
	Uranium-235	pCi/L			0.007954 U	

Table 4.4. Results for radionuclides at the Quadrant I Groundwater Investigative Area – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X326-09G	Uranium-236	pCi/L			0 U	
	Uranium-238	pCi/L			0.006434 U	
X626-07G	Americium-241	pCi/L			0.02037 U	
	Neptunium-237	pCi/L			0.007709 U	
	Plutonium-238	pCi/L			1.535E-05 U	
	Plutonium-239/240	pCi/L			1.535E-05 U	
	Technetium-99	pCi/L			0.946 U	
	Uranium	µg/L			0.25	
	Uranium-233/234	pCi/L			0.09639	
	Uranium-235	pCi/L			0.01699 U	
	Uranium-236	pCi/L			0 U	
	Uranium-238	pCi/L			0.08246	
	X749A-01G	Americium-241	pCi/L	0.02039 U		
Neptunium-237		pCi/L	0 U			
Plutonium-238		pCi/L	-0.0076 U			
Plutonium-239/240		pCi/L	0 U			
Technetium-99		pCi/L	-1.25 U			
Uranium		µg/L	0.6676			
Uranium-233/234		pCi/L	0.1846			
Uranium-235		pCi/L	0.01897 U			
Uranium-236		pCi/L	0.00852 U			
Uranium-238		pCi/L	0.2226			
X749A-02G		Americium-241	pCi/L	0.02684 U		
	Neptunium-237	pCi/L	0.03081 U			
	Plutonium-238	pCi/L	0.03073 U			
	Plutonium-239/240	pCi/L	-0.0077 U			
	Technetium-99	pCi/L	-0.465 U			
	Uranium	µg/L	0.6991			
	Uranium-233/234	pCi/L	0.3663			
	Uranium-235	pCi/L	0.04912			
	Uranium-236	pCi/L	0.00882 U			
	Uranium-238	pCi/L	0.2305			
	X749A-03G	Americium-241	pCi/L	0.03349 U		
Neptunium-237		pCi/L	-0.0074 U			
Plutonium-238		pCi/L	0.00737 U			
Plutonium-239/240		pCi/L	-0.0074 U			
Technetium-99		pCi/L	0.387 U			
Uranium		µg/L	1.059			
Uranium-233/234		pCi/L	0.409			
Uranium-235		pCi/L	0.01905 U			
Uranium-236		pCi/L	0 U			
Uranium-238		pCi/L	0.3543			
X749A-04G		Americium-241	pCi/L	-0.0119 U		
	Neptunium-237	pCi/L	2.4E-05 U			
	Plutonium-238	pCi/L	0.00799 U			
	Plutonium-239/240	pCi/L	0 U			
	Technetium-99	pCi/L	-2.64 U			
	Uranium	µg/L	0.1082			

Table 4.4. Results for radionuclides at the Quadrant I Groundwater Investigative Area – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X749A-04G	Uranium-233/234	pCi/L		0.06413		
	Uranium-235	pCi/L		0.00879 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.03556		
X749A-05G	Americium-241	pCi/L		0.01109 U		
	Neptunium-237	pCi/L		0.01645 U		
	Plutonium-238	pCi/L		-0.0164 U		
	Plutonium-239/240	pCi/L		0.02461 U		
	Technetium-99	pCi/L		-6.39 U		
	Uranium	µg/L		0.06375 U		
	Uranium-233/234	pCi/L		0.1001		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.02142 U		
	X749A-07G	Americium-241	pCi/L		0.0118 U	
Neptunium-237		pCi/L		0 U		
Plutonium-238		pCi/L		0.02429 U		
Plutonium-239/240		pCi/L		0.0081 U		
Technetium-99		pCi/L		-4.3 U		
Uranium		µg/L		10.49		
Uranium-233/234		pCi/L		3.795		
Uranium-235		pCi/L		0.2171		
Uranium-236		pCi/L		0.05085		
Uranium-238		pCi/L		3.505		
X749A-11G		Americium-241	pCi/L		0.02914 U	
	Neptunium-237	pCi/L		0 U		
	Plutonium-238	pCi/L		0.03114 U		
	Plutonium-239/240	pCi/L		0.01557 U		
	Technetium-99	pCi/L		-3.98 U		
	Uranium	µg/L		3.166		
	Uranium-233/234	pCi/L		1.261		
	Uranium-235	pCi/L		0.03052 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		1.061		
	X749A-12G	Americium-241	pCi/L		1.1E-05 U	
Neptunium-237		pCi/L		0.00838 U		
Plutonium-238		pCi/L		0.00837 U		
Plutonium-239/240		pCi/L		8.3E-06 U		
Technetium-99		pCi/L		0.853 U		
Uranium		µg/L		0.06072 U		
Uranium-233/234		pCi/L		0.04942		
Uranium-235		pCi/L		-0.0087 U		
Uranium-236		pCi/L		0.00782 U		
Uranium-238		pCi/L		0.02114 U		
X749A-14G		Americium-241	pCi/L		-0.0086 U	
	Neptunium-237	pCi/L		0.00749 U		
	Plutonium-238	pCi/L		0.01492 U		
	Plutonium-239/240	pCi/L		1.5E-05 U		

Table 4.4. Results for radionuclides at the Quadrant I Groundwater Investigative Area – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X749A-14G	Technetium-99	pCi/L		-1.43 U		
	Uranium	µg/L		0.2183		
	Uranium-233/234	pCi/L		0.05692		
	Uranium-235	pCi/L		0.02633 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.071		
X749A-15G	Americium-241	pCi/L		0.00997 U		
	Neptunium-237	pCi/L		-0.0082 U		
	Plutonium-238	pCi/L		0 U		
	Plutonium-239/240	pCi/L		0 U		
	Technetium-99	pCi/L		-2.68 U		
	Uranium	µg/L		0.1812		
	Uranium-233/234	pCi/L		0.01527 U		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		8.4E-06 U		
	Uranium-238	pCi/L		0.06088		
	X749A-16G	Americium-241	pCi/L		0.00919 U	
Neptunium-237		pCi/L		0 U		
Plutonium-238		pCi/L		0.00928 U		
Plutonium-239/240		pCi/L		0.01856 U		
Technetium-99		pCi/L		4.32 U		
Uranium		µg/L		0.1372		
Uranium-233/234		pCi/L		0.07235		
Uranium-235		pCi/L		0.01115 U		
Uranium-236		pCi/L		0 U		
Uranium-238		pCi/L		0.04512		
X749A-17G		Americium-241	pCi/L		9.8E-06 U	
	Neptunium-237	pCi/L		-0.0213 U		
	Plutonium-238	pCi/L		0.02834 U		
	Plutonium-239/240	pCi/L		0.0071 U		
	Technetium-99	pCi/L		-1.81 U		
	Uranium	µg/L		0.1795		
	Uranium-233/234	pCi/L		0.04476 U		
	Uranium-235	pCi/L		0.00920 U		
	Uranium-236	pCi/L		-0.0083 U		
	Uranium-238	pCi/L		0.05955		
	X749A-18G	Americium-241	pCi/L		0.02904 U	
Neptunium-237		pCi/L		-0.0081 U		
Plutonium-238		pCi/L		0 U		
Plutonium-239/240		pCi/L		-0.0242 U		
Technetium-99		pCi/L		-4.53 U		
Uranium		µg/L		0.355		
Uranium-233/234		pCi/L		0.1502		
Uranium-235		pCi/L		0.00975 U		
Uranium-236		pCi/L		0.00877 U		
Uranium-238		pCi/L		0.1184		
X749A-19G		Americium-241	pCi/L		2.9E-05 U	
	Neptunium-237	pCi/L		0.00695 U		

Table 4.4. Results for radionuclides at the Quadrant I Groundwater Investigative Area – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X749A-19G	Plutonium-238	pCi/L		0 U		
	Plutonium-239/240	pCi/L		0.00693 U		
	Technetium-99	pCi/L		-2.81 U		
	Uranium	µg/L		0.1682		
	Uranium-233/234	pCi/L		0.04856 U		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.05653		

Table 4.5. Volatile organic compounds detected at the Quadrant II Groundwater Investigative Area – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X700-02G	1,1,1-Trichloroethane	µg/L	19 J			
	1,1-Dichloroethane	µg/L	16 J			
	1,1-Dichloroethene	µg/L	160			
	Acetone	µg/L	300 J			
	cis-1,2-Dichloroethene	µg/L	63 J			
	Trichloroethene	µg/L	8400			
X701-26G	1,1-Dichloroethene	µg/L	8.8			
	Chloroform	µg/L	0.82 J			
	Tetrachloroethene	µg/L	8.9			
	Trichloroethene	µg/L	1 J			
	Trichlorofluoromethane	µg/L	5.8			
X701-28GA	cis-1,2-Dichloroethene	µg/L	0.24 J			
	Trichloroethene	µg/L	0.48 J			
X701-45G	1,1-Dichloroethane	µg/L	0.21 J			
	1,1-Dichloroethene	µg/L	0.47 J			
	Trichloroethene	µg/L	1.2 J			
X701-68G	1,1,1-Trichloroethane	µg/L	0.28 J			
	1,1-Dichloroethane	µg/L	0.35 J			
	1,1-Dichloroethene	µg/L	2.8			
	Chloroform	µg/L	0.24 J			
	cis-1,2-Dichloroethene	µg/L	1.6 J			
	Trichloroethene	µg/L	71			
X701-69G	1,1-Dichloroethene	µg/L	2.4 J			
	Acetone	µg/L	28 J			
	cis-1,2-Dichloroethene	µg/L	470			
	trans-1,2-Dichloroethene	µg/L	19			
	Trichloroethene	µg/L	2500			
X701-70G	1,1,1-Trichloroethane	µg/L	0.2 J			
	1,1-Dichloroethene	µg/L	0.98 J			
	cis-1,2-Dichloroethene	µg/L	0.49 J			
	Tetrachloroethene	µg/L	0.4 J			
	Trichloroethene	µg/L	450			
X701-117GA	1,1,1-Trichloroethane	µg/L	0.26 J			
	1,1-Dichloroethane	µg/L	0.18 J			
	1,1-Dichloroethene	µg/L	1.7			
	1,2-Dichlorobenzene	µg/L	0.57 BJ			
	Chloroform	µg/L	0.26 J			
	Trichloroethene	µg/L	260			
X705-01GA	1,1-Dichloroethene	µg/L	0.89 J			
	Bromodichloromethane	µg/L	0.23 J			
	Carbon tetrachloride	µg/L	0.98 J			
	Chloroform	µg/L	19			
	cis-1,2-Dichloroethene	µg/L	0.46 J			
	Tetrachloroethene	µg/L	0.47 J			
	Trichloroethene	µg/L	160			
X705-02G	1,1-Dichloroethane	µg/L	0.17 J			
	1,1-Dichloroethene	µg/L	1.8 J			
	cis-1,2-Dichloroethene	µg/L	0.97 J			

**Table 4.5. Volatile organic compounds detected at the Quadrant II Groundwater Investigative Area – 2009
(continued)**

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X705-02G	Trichloroethene	µg/L	69			
X705-03G	1,1-Dichloroethane	µg/L	1.2 J			
	1,1-Dichloroethene	µg/L	1.5 J			
	cis-1,2-Dichloroethene	µg/L	6			
	Tetrachloroethene	µg/L	0.33 J			
	trans-1,2-Dichloroethene	µg/L	0.37 J			
	Trichloroethene	µg/L	45			
X705-04G	1,1-Dichloroethane	µg/L	0.2 J			
	1,1-Dichloroethene	µg/L	1.5 J			
	Bromodichloromethane	µg/L	0.98 J			
	Carbon tetrachloride	µg/L	13			
	Chloroform	µg/L	300			
	Tetrachloroethene	µg/L	1.4 J			
	Trichloroethene	µg/L	74			
X705-06G	1,1-Dichloroethane	µg/L	0.33 J			
	1,1-Dichloroethene	µg/L	3.5			
	Chloroform	µg/L	1.9 J			
	cis-1,2-Dichloroethene	µg/L	3.2			
	Tetrachloroethene	µg/L	4.5			
	Trichloroethene	µg/L	53			
X705-07G	1,1-Dichloroethane	µg/L	0.17 J			
	Chloroform	µg/L	0.59 J			
	cis-1,2-Dichloroethene	µg/L	0.96 J			
	Trichloroethene	µg/L	11			
X705-08G	1,1-Dichloroethane	µg/L	26			
X720-01G	1,1,1-Trichloroethane	µg/L	410			
	1,1-Dichloroethene	µg/L	420			
	cis-1,2-Dichloroethene	µg/L	28 J			
	Trichloroethene	µg/L	40000			
X720-08G	1,1-Dichloroethane	µg/L	100			
	Chloroform	µg/L	4.6 J			
	cis-1,2-Dichloroethene	µg/L	8.7 J			
	Trichloroethene	µg/L	6000			

Table 4.6. Results for radionuclides at the Quadrant II Groundwater Investigative Area – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X701-26G	Americium-241	pCi/L	0.0466 U			
	Neptunium-237	pCi/L	7E-06 U			
	Plutonium-238	pCi/L	-0.014 U			
	Plutonium-239/240	pCi/L	0.0143 U			
	Technetium-99	pCi/L	21.3			
	Uranium	µg/L	5.245			
	Uranium-233/234	pCi/L	2.981			
	Uranium-235	pCi/L	0.0606			
	Uranium-236	pCi/L	0.0155 U			
X701-28GA	Uranium-238	pCi/L	1.757			
	Americium-241	pCi/L	0.0093 U			
	Neptunium-237	pCi/L	7E-06 U			
	Plutonium-238	pCi/L	0 U			
	Plutonium-239/240	pCi/L	0.0146 U			
	Technetium-99	pCi/L	0.397 U			
	Uranium	µg/L	0.9045			
	Uranium-233/234	pCi/L	0.6349			
	Uranium-235	pCi/L	0.0310 U			
X705-01GA	Uranium-236	pCi/L	0 U			
	Uranium-238	pCi/L	0.3011			
	Americium-241	pCi/L	0.0082 U			
	Neptunium-237	pCi/L	-0.008 U			
	Plutonium-238	pCi/L	0.0160 U			
	Plutonium-239/240	pCi/L	0.0240 U			
	Technetium-99	pCi/L	508			
	Uranium	µg/L	1.143			
	Uranium-233/234	pCi/L	0.362			
X705-02G	Uranium-235	pCi/L	0.0325 U			
	Uranium-236	pCi/L	0.0146 U			
	Uranium-238	pCi/L	0.3809			
	Americium-241	pCi/L	0.0390 U			
	Neptunium-237	pCi/L	0 U			
	Plutonium-238	pCi/L	0.0341 U			
	Plutonium-239/240	pCi/L	7E-06 U			
	Technetium-99	pCi/L	0.971 U			
	Uranium	µg/L	4.882			
X705-07G	Uranium-233/234	pCi/L	1.884			
	Uranium-235	pCi/L	0.0833			
	Uranium-236	pCi/L	0.0166 U			
	Uranium-238	pCi/L	1.633			
	Americium-241	pCi/L	0.0301 U			
	Neptunium-237	pCi/L	0.0084 U			
	Plutonium-238	pCi/L	-0.05 U			
	Plutonium-239/240	pCi/L	0.0083 U			
	Technetium-99	pCi/L	203			
X705-07G	Uranium	µg/L	1.647			
	Uranium-233/234	pCi/L	0.5906			
	Uranium-235	pCi/L	0.0091 U			

Table 4.6. Results for radionuclides at the Quadrant II Groundwater Investigative Area – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X705-07G	Uranium-236	pCi/L	0.0164 U			
	Uranium-238	pCi/L	0.5525			
X720-01G	Americium-241	pCi/L	0 U			
	Neptunium-237	pCi/L	0.0082 U			
	Plutonium-238	pCi/L	-0.008 U			
	Plutonium-239/240	pCi/L	-0.016 U			
	Technetium-99	pCi/L	15.6			
	Uranium	µg/L	17.7			
	Uranium-233/234	pCi/L	5.477			
	Uranium-235	pCi/L	0.3669			
	Uranium-236	pCi/L	0.0077 U			
	Uranium-238	pCi/L	5.915			
X720-08G	Americium-241	pCi/L	-0.012 U			
	Neptunium-237	pCi/L	2E-05 U			
	Plutonium-238	pCi/L	-0.015 U			
	Plutonium-239/240	pCi/L	-0.008 U			
	Technetium-99	pCi/L	213			
	Uranium	µg/L	2.571			
	Uranium-233/234	pCi/L	1.316			
	Uranium-235	pCi/L	0.0266 U			
	Uranium-236	pCi/L	0 U			
Uranium-238	pCi/L	0.8614				

Table 4.7. Volatile organic compounds detected at the X-701B Holding Pond – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X230J7-01GA	1,1-Dichloroethene	µg/L	0.23 J		0.31 J	
	cis-1,2-Dichloroethene	µg/L	0.78 J		0.87 J	
	Trichloroethene	µg/L	270		290	
X230J7-02GA	1,2-Dichlorobenzene	µg/L	5 U		0.4 J	
	Acetone	µg/L	7.4 BJ		3.8 U	
	Chloroform	µg/L	5 U		0.32 J	
	cis-1,2-Dichloroethene	µg/L	2.2 J		2 J	
	Methylene chloride	µg/L	1.2 J		0.77 J	
	Tetrachloroethene	µg/L	0.59 J		0.49 J	
	Trichloroethene	µg/L	630		680	
	Acetone	µg/L	26 BJ		30 J	
X230J7-03GA	cis-1,2-Dichloroethene	µg/L	450		380	
	Methylene chloride	µg/L	3.8 J		4.2 J	
	Tetrachloroethene	µg/L	13 U		2.4 J	
	trans-1,2-Dichloroethene	µg/L	15		14	
	Trichloroethene	µg/L	1600		2800	
	Vinyl chloride	µg/L	14		13	
	Acetone	µg/L	10 U		8.9 BJ	
X700-03G	cis-1,2-Dichloroethene	µg/L	0.23 J		0.15 U	
	Methylene chloride	µg/L	5 U		0.59 J	
	Acetone	µg/L	10 U		9.8 BJ	
X701-01G	1,1-Dichloroethene	µg/L	0.24 J		0.61 J	
	Acetone	µg/L	10 U		9.8 BJ	
	cis-1,2-Dichloroethene	µg/L	2.4		9.8	
	Methylene chloride	µg/L	5 U		0.46 J	
	trans-1,2-Dichloroethene	µg/L	1 U		0.26 J	
	Trichloroethene	µg/L	21		56	
X701-02G	cis-1,2-Dichloroethene	µg/L	3.5			
	Trichloroethene	µg/L	7.4			
X701-05G	1,1-Dichloroethane	µg/L	0.31 J			
	1,1-Dichloroethene	µg/L	3.2			
	cis-1,2-Dichloroethene	µg/L	7.5			
	Trichloroethene	µg/L	84			
X701-06G	1,1-Dichloroethane	µg/L	0.16 J			
	1,1-Dichloroethene	µg/L	0.77 J			
	Acetone	µg/L	3.7 BJ			
	Chloroform	µg/L	0.2 J			
	cis-1,2-Dichloroethene	µg/L	52			
	trans-1,2-Dichloroethene	µg/L	1.3			
	Trichloroethene	µg/L	47			
X701-09G	Acetone	µg/L	1600 J			
	cis-1,2-Dichloroethene	µg/L	2700			
	Tetrachloroethene	µg/L	300 J			
	Trichloroethene	µg/L	170000			
X701-10G	1,1,2-Trichloroethane	µg/L	1.8 J			
	1,1-Dichloroethene	µg/L	0.81 J			
	cis-1,2-Dichloroethene	µg/L	14			
	Methylene chloride	µg/L	1.7 BJ			
	Trichloroethene	µg/L	1200			

Table 4.7. Volatile organic compounds detected at the X-701B Holding Pond – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X701-12G	1,1-Dichloroethene	µg/L	0.26 J			
	1,2-Dichlorobenzene	µg/L	0.17 J			
	Chloroform	µg/L	0.27 J			
	cis-1,2-Dichloroethene	µg/L	49			
	Tetrachloroethene	µg/L	0.39 J			
	Trichloroethene	µg/L	40			
	Vinyl chloride	µg/L	3			
X701-13G	1,1-Dichloroethene	µg/L	1.7 J			
	Chloroform	µg/L	5 J			
	cis-1,2-Dichloroethene	µg/L	79			
	Tetrachloroethene	µg/L	5.4 J			
	Trichloroethene	µg/L	2500			
X701-14G	1,1,1-Trichloroethane	µg/L	9.9 J			
	1,1-Dichloroethene	µg/L	9.2 J			
	Acetone	µg/L	150 BJ			
	cis-1,2-Dichloroethene	µg/L	310			
	Methylene chloride	µg/L	14 J			
	Tetrachloroethene	µg/L	19 J			
	trans-1,2-Dichloroethene	µg/L	6.1 J			
X701-15G	Trichloroethene	µg/L	10000			
	cis-1,2-Dichloroethene	µg/L	1.3 J		130	
	trans-1,2-Dichloroethene	µg/L	1 U		1.6	
X701-19G	Trichloroethene	µg/L	2.7		6	
	Acetone	µg/L	2.8 BJ		1.9 U	
X701-20G	1,1,2-Trichloroethane	µg/L	1000 U		120 J	
	1,1-Dichloroethene	µg/L	1000 U		39 J	
	cis-1,2-Dichloroethene	µg/L	2500		2700	
	Tetrachloroethene	µg/L	1000 U		85 J	
	Trichloroethene	µg/L	120000		100000	
X701-21G	1,2-Dichlorobenzene	µg/L	0.2 J		0.32 J	
	Chloroform	µg/L	0.3 J		0.26 J	
	cis-1,2-Dichloroethene	µg/L	1.1 J		1.7 J	
	Trichloroethene	µg/L	13		16	
X701-23G	Trichloroethene	µg/L			0.7 J	
X701-24G	1,1,2-Trichloroethane	µg/L	19 J		13 U	
	1,1-Dichloroethene	µg/L	7.8 J		5.6 U	
	cis-1,2-Dichloroethene	µg/L	990		750	
	trans-1,2-Dichloroethene	µg/L	24 J		13 J	
	Trichloroethene	µg/L	14000		9300	
	Vinyl chloride	µg/L	58		36 J	
X701-30G	Acetone	µg/L	5.1 J		1.9 U	
	cis-1,2-Dichloroethene	µg/L	0.31 J		0.19 J	
	Methylene chloride	µg/L	5 U		0.62 J	
	Trichloroethene	µg/L	5.4		5	
	Trichlorofluoromethane	µg/L	2 U		1.2 J	
X701-31G	Methylene chloride	µg/L			0.43 BJ	
	Trichloroethene	µg/L			0.27 J	
X701-48G	Methylene chloride	µg/L			0.34 J	

Table 4.7. Volatile organic compounds detected at the X-701B Holding Pond – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X701-58B	Trichloroethene	µg/L			1.2 J	
X701-61B	1,2-Dimethylbenzene	µg/L			0.3 J	
	Ethylbenzene	µg/L			0.17 J	
	M + P Xylene	µg/L			3.3	
	Trichloroethene	µg/L			0.26 J	
X701-127G	1,1,2-Trichloroethane	µg/L	68 J		80 J	
	Acetone	µg/L	410 J		380 U	
	cis-1,2-Dichloroethene	µg/L	1100		1200	
	Trichloroethene	µg/L	65000		48000	
X701-128G	1,1-Dichloroethene	µg/L	200 U		9.3 J	
	Acetone	µg/L	570 J		95 U	
	cis-1,2-Dichloroethene	µg/L	130 J		150	
	Tetrachloroethene	µg/L	200 U		15 J	
	Trichloroethene	µg/L	26000		21000	
X701-BW2G	1,1-Dichloroethane	µg/L	1.1 J			
	1,1-Dichloroethene	µg/L	9.8			
	Acetone	µg/L	15 BJ			
	cis-1,2-Dichloroethene	µg/L	9.6			
	Methylene chloride	µg/L	1.4 J			
	trans-1,2-Dichloroethene	µg/L	2.7 J			
	Trichloroethene	µg/L	1100			
X701-BW4G	cis-1,2-Dichloroethene	µg/L	2.3			
	Trichloroethene	µg/L	1.4 J			
X744G-01G	Acetone	µg/L	11		1.9 U	
	Methylene chloride	µg/L	5 U		0.42 BJ	
X744G-02G	cis-1,2-Dichloroethene	µg/L	1.3 J		1.4 J	
	Trichloroethene	µg/L	18		23	
	Trichlorofluoromethane	µg/L	2 U		3.5	
X744G-03G	Acetone	µg/L	2.7 J		5 BJ	
	cis-1,2-Dichloroethene	µg/L	0.32 J		0.36 J	
	Methylene chloride	µg/L	5 U		0.61 J	
	Trichloroethene	µg/L	3.8		4.7	

Table 4.8. Results for radionuclides at the X-701B Holding Pond – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X230J7-01GA	Americium-241	pCi/L	0.0078 U			
	Neptunium-237	pCi/L	0.0159 U			
	Plutonium-238	pCi/L	0.0237 U			
	Plutonium-239/240	pCi/L	0.0158 U			
	Technetium-99	pCi/L	-2.46 U			
	Uranium	µg/L	0.1336			
	Uranium-233/234	pCi/L	0.0795			
	Uranium-235	pCi/L	0.0178 U			
	Uranium-236	pCi/L	0 U			
X230J7-02GA	Americium-241	pCi/L	0 U			
	Neptunium-237	pCi/L	0 U			
	Plutonium-238	pCi/L	0.0160 U			
	Plutonium-239/240	pCi/L	0.0080 U			
	Technetium-99	pCi/L	35.3			
	Uranium	µg/L	0.1021 U			
	Uranium-233/234	pCi/L	0.0724			
	Uranium-235	pCi/L	0.0162 U			
	Uranium-236	pCi/L	0 U			
X230J7-03GA	Americium-241	pCi/L	0 U			
	Neptunium-237	pCi/L	0 U			
	Plutonium-238	pCi/L	0.0157 U			
	Plutonium-239/240	pCi/L	0.0235 U			
	Technetium-99	pCi/L	18.2			
	Uranium	µg/L	0.2672			
	Uranium-233/234	pCi/L	0.0692			
	Uranium-235	pCi/L	0 U			
	Uranium-236	pCi/L	0.0077 U			
X230J7-04GA	Americium-241	pCi/L	0.0898			
	Technetium-99	pCi/L			-2.69 U	
	Uranium	µg/L			0.04579 U	
	Uranium-233/234	pCi/L			0.02594 U	
	Uranium-235	pCi/L			-0.02128 U	
	Uranium-236	pCi/L			0.009564 U	
X700-03G	Americium-241	pCi/L	4E-05 U			
	Neptunium-237	pCi/L	3E-05 U			
	Plutonium-238	pCi/L	0.028 U			
	Plutonium-239/240	pCi/L	0 U			
	Technetium-99	pCi/L	-2.48 U		3.74 U	
	Uranium	µg/L	0.372		0.375	
	Uranium-233/234	pCi/L	0.2372		0.1646	
	Uranium-235	pCi/L	0 U		0.009672 U	
	Uranium-236	pCi/L	0.0073 U		0 U	
X701-01G	Americium-241	pCi/L	0.125		0.1252	
	Neptunium-237	pCi/L	0.0204 U			
	Neptunium-237	pCi/L	-0.011 U			

Table 4.8. Results for radionuclides at the X-701B Holding Pond – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X701-01G	Plutonium-238	pCi/L	0.0107 U			
	Plutonium-239/240	pCi/L	-0.011 U			
	Technetium-99	pCi/L	-4.62 U			
	Uranium	µg/L	1.185			
	Uranium-233/234	pCi/L	0.5839			
	Uranium-235	pCi/L	0 U			
	Uranium-236	pCi/L	0 U			
	Uranium-238	pCi/L	0.3983			
X701-02G	Americium-241	pCi/L	0.016 U			
	Neptunium-237	pCi/L	0.0237 U			
	Plutonium-238	pCi/L	0.0158 U			
	Plutonium-239/240	pCi/L	0.0237 U			
	Technetium-99	pCi/L	5.84 U			
	Uranium	µg/L	0.553			
	Uranium-233/234	pCi/L	0.4221			
	Uranium-235	pCi/L	0.0079 U			
X701-05G	Uranium-236	pCi/L	0 U			
	Uranium-238	pCi/L	0.1851			
	Americium-241	pCi/L	0.0303 U			
	Neptunium-237	pCi/L	0.0314 U			
	Plutonium-238	pCi/L	0 U			
	Plutonium-239/240	pCi/L	-0.008 U			
	Technetium-99	pCi/L	456			
	Uranium	µg/L	40.52			
X701-06G	Uranium-233/234	pCi/L	77.74			
	Uranium-235	pCi/L	3.745			
	Uranium-236	pCi/L	0.4793			
	Uranium-238	pCi/L	13.27			
	Americium-241	pCi/L	0.0223 U			
	Neptunium-237	pCi/L	0.0083 U			
	Plutonium-238	pCi/L	0.0083 U			
	Plutonium-239/240	pCi/L	0 U			
X701-09G	Technetium-99	pCi/L	28.4			
	Uranium	µg/L	0.6983			
	Uranium-233/234	pCi/L	0.5076			
	Uranium-235	pCi/L	-0.009 U			
	Uranium-236	pCi/L	-0.008 U			
	Uranium-238	pCi/L	0.2355			
	Americium-241	pCi/L	0.0075 U			
	Neptunium-237	pCi/L	0.0076 U			
	Plutonium-238	pCi/L	8E-06 U			
	Plutonium-239/240	pCi/L	0 U			
	Technetium-99	pCi/L	174			
	Uranium	µg/L	1.617			
	Uranium-233/234	pCi/L	0.6454			
	Uranium-235	pCi/L	0.0342 U			
	Uranium-236	pCi/L	0 U			
	Uranium-238	pCi/L	0.5402			

Table 4.8. Results for radionuclides at the X-701B Holding Pond – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X701-10G	Americium-241	pCi/L	0.0171 U			
	Neptunium-237	pCi/L	0.0074 U			
	Plutonium-238	pCi/L	0.0074 U			
	Plutonium-239/240	pCi/L	7E-06 U			
	Technetium-99	pCi/L	7.59 U			
	Uranium	µg/L	0.062 U			
	Uranium-233/234	pCi/L	0.007 U			
	Uranium-235	pCi/L	0 U			
	Uranium-236	pCi/L	0.0077 U			
	Uranium-238	pCi/L	0.0208 U			
X701-12G	Americium-241	pCi/L	0.0374 U			
	Neptunium-237	pCi/L	-0.007 U			
	Plutonium-238	pCi/L	0.0140 U			
	Plutonium-239/240	pCi/L	0 U			
	Technetium-99	pCi/L	225			
	Uranium	µg/L	0.1729			
	Uranium-233/234	pCi/L	0.0383			
	Uranium-235	pCi/L	0.0079 U			
	Uranium-236	pCi/L	0.0071 U			
	Uranium-238	pCi/L	0.0573			
X701-13G	Americium-241	pCi/L	0.0277 U			
	Neptunium-237	pCi/L	-0.007 U			
	Plutonium-238	pCi/L	-0.014 U			
	Plutonium-239/240	pCi/L	0.0138 U			
	Technetium-99	pCi/L	206			
	Uranium	µg/L	0.2744			
	Uranium-233/234	pCi/L	0.0763			
	Uranium-235	pCi/L	0.0257 U			
	Uranium-236	pCi/L	-0.015 U			
	Uranium-238	pCi/L	0.09			
X701-14G	Americium-241	pCi/L	0.016 U			
	Neptunium-237	pCi/L	8E-06 U			
	Plutonium-238	pCi/L	2E-05 U			
	Plutonium-239/240	pCi/L	0.0316 U			
	Technetium-99	pCi/L	628			
	Uranium	µg/L	0.099			
	Uranium-233/234	pCi/L	0.0067 U			
	Uranium-235	pCi/L	0 U			
	Uranium-236	pCi/L	-0.007 U			
	Uranium-238	pCi/L	0.0333			
X701-15G	Americium-241	pCi/L	0.018 U			
	Neptunium-237	pCi/L	7E-05 U			
	Plutonium-238	pCi/L	0.0292 U			
	Plutonium-239/240	pCi/L	-0.007 U			
	Technetium-99	pCi/L	-3.78 U			
	Uranium	µg/L	1.32			
	Uranium-233/234	pCi/L	0.3285			
	Uranium-235	pCi/L	0.0176 U			

Table 4.8. Results for radionuclides at the X-701B Holding Pond – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X701-15G	Uranium-236	pCi/L	0 U			
	Uranium-238	pCi/L	0.4419			
X701-16G	Americium-241	pCi/L	0 U			
	Neptunium-237	pCi/L	-0.014 U			
	Plutonium-238	pCi/L	0.0352 U			
	Plutonium-239/240	pCi/L	0.0282 U			
	Technetium-99	pCi/L	1.05 U			
	Uranium	µg/L	0.1239 U			
	Uranium-233/234	pCi/L	0.0487 U			
	Uranium-235	pCi/L	0 U			
	Uranium-236	pCi/L	-0.008 U			
	Uranium-238	pCi/L	0.0417 U			
	X701-18G	Technetium-99	pCi/L			3.12 U
Uranium		µg/L			0.06619 U	
Uranium-233/234		pCi/L			4.302E-05 U	
Uranium-235		pCi/L			0.008854 U	
Uranium-236		pCi/L			-0.007942 U	
Uranium-238		pCi/L			0.0215 U	
X701-19G	Americium-241	pCi/L	1E-05 U			
	Neptunium-237	pCi/L	-0.035 U			
	Plutonium-238	pCi/L	-0.007 U			
	Plutonium-239/240	pCi/L	0.0213 U			
	Technetium-99	pCi/L	-0.093 U			
	Uranium	µg/L	0.0232 U			
	Uranium-233/234	pCi/L	0.0491 U			
	Uranium-235	pCi/L	0.0086 U			
	Uranium-236	pCi/L	0 U			
	Uranium-238	pCi/L	0.0070 U			
X701-20G	Americium-241	pCi/L	-0.007 U		0.009567 U	
	Neptunium-237	pCi/L	0.007 U		3.344E-05 U	
	Plutonium-238	pCi/L	1E-05 U		0 U	
	Plutonium-239/240	pCi/L	-0.007 U		-0.01663 U	
	Technetium-99	pCi/L	103		100	
	Uranium	µg/L	0.0687 U		0.3041	
	Uranium-233/234	pCi/L	0.0615		0.09581 U	
	Uranium-235	pCi/L	0 U		-0.00908 U	
	Uranium-236	pCi/L	0.0085 U		0.008161 U	
	Uranium-238	pCi/L	0.0230 U		0.1029	
X701-21G	Americium-241	pCi/L	0 U			
	Neptunium-237	pCi/L	0 U			
	Plutonium-238	pCi/L	0.0221 U			
	Plutonium-239/240	pCi/L	0 U			
	Technetium-99	pCi/L	153		285	
	Uranium	µg/L	0.1999		0.1669 U	
	Uranium-233/234	pCi/L	0.0734		0.05373 U	
	Uranium-235	pCi/L	0 U		0.02839 U	
	Uranium-236	pCi/L	0 U		-0.008488 U	
	Uranium-238	pCi/L	0.0672		0.05361 U	

Table 4.8. Results for radionuclides at the X-701B Holding Pond – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X701-23G	Technetium-99	pCi/L			6.61 U	
	Uranium	µg/L			0.07353 U	
	Uranium-233/234	pCi/L			0.01648 U	
	Uranium-235	pCi/L			2.027E-05 U	
	Uranium-236	pCi/L			0.01822 U	
	Uranium-238	pCi/L			0.02461 U	
X701-24G	Americium-241	pCi/L	0.0315 U			
	Neptunium-237	pCi/L	0.0148 U			
	Plutonium-238	pCi/L	1E-05 U			
	Plutonium-239/240	pCi/L	0 U			
	Technetium-99	pCi/L	6.14 U			
	Uranium	µg/L	0.4217			
	Uranium-233/234	pCi/L	0.1868			
	Uranium-235	pCi/L	0 U			
	Uranium-236	pCi/L	0.0083 U			
	Uranium-238	pCi/L	0.1417			
X701-25G	Americium-241	pCi/L	0.0191 U			
	Neptunium-237	pCi/L	-0.056 U			
	Plutonium-238	pCi/L	-0.008 U			
	Plutonium-239/240	pCi/L	-0.016 U			
	Technetium-99	pCi/L	-4.73 U			
	Uranium	µg/L	-0.1 U			
	Uranium-233/234	pCi/L	0.0202 U			
	Uranium-235	pCi/L	0 U			
	Uranium-236	pCi/L	0 U			
	Uranium-238	pCi/L	-0.033 U			
X701-30G	Americium-241	pCi/L	2E-05 U			
	Neptunium-237	pCi/L	8E-06 U			
	Plutonium-238	pCi/L	0.0238 U			
	Plutonium-239/240	pCi/L	8E-06 U			
	Technetium-99	pCi/L	0.0613 U			
	Uranium	µg/L	0.2052			
	Uranium-233/234	pCi/L	0.1312			
	Uranium-235	pCi/L	0 U			
	Uranium-236	pCi/L	0 U			
	Uranium-238	pCi/L	0.0689			
X701-31G	Technetium-99	pCi/L			-2.56 U	
	Uranium	µg/L			0.000131 U	
	Uranium-233/234	pCi/L			0.0222 U	
	Uranium-235	pCi/L			0 U	
	Uranium-236	pCi/L			0.008195 U	
	Uranium-238	pCi/L			0 U	
X701-48G	Americium-241	pCi/L			4.696E-05 U	
	Neptunium-237	pCi/L			-0.039 U	
	Plutonium-238	pCi/L			7.779E-06 U	
	Plutonium-239/240	pCi/L			0.007786 U	
	Technetium-99	pCi/L			-5.56 U	
	Uranium	µg/L			0.03943 U	

Table 4.8. Results for radionuclides at the X-701B Holding Pond – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X701-48G	Uranium-233/234	pCi/L			0.006651 U	
	Uranium-235	pCi/L			0 U	
	Uranium-236	pCi/L			0 U	
	Uranium-238	pCi/L			0.01325 U	
X701-58B	Technetium-99	pCi/L			1.08 U	
	Uranium	µg/L			0.1884	
	Uranium-233/234	pCi/L			0.2116	
	Uranium-235	pCi/L			0 U	
	Uranium-236	pCi/L			-0.007804 U	
X701-61B	Uranium-238	pCi/L			0.06335	
	Technetium-99	pCi/L			-1.64 U	
	Uranium	µg/L			0.3775	
	Uranium-233/234	pCi/L			0.2051	
	Uranium-235	pCi/L			0.00973 U	
X701-127G	Uranium-236	pCi/L			0.008736 U	
	Uranium-238	pCi/L			0.1259	
	Americium-241	pCi/L	0.016 U		0.02339 U	
	Neptunium-237	pCi/L	7E-06 U		-0.008025 U	
	Plutonium-238	pCi/L	0.0144 U		0.008019 U	
	Plutonium-239/240	pCi/L	0.0072 U		0.008035 U	
	Technetium-99	pCi/L	14.4		25.8	
	Uranium	µg/L	0.1484		0.4335	
X701-128G	Uranium-233/234	pCi/L	0.0571		0.1289	
	Uranium-235	pCi/L	0 U		0.009942 U	
	Uranium-236	pCi/L	0 U		0 U	
	Uranium-238	pCi/L	0.0499		0.1448	
	Americium-241	pCi/L	-0.008 U			
	Neptunium-237	pCi/L	0.0073 U			
	Plutonium-238	pCi/L	0.0073 U			
	Plutonium-239/240	pCi/L	0.0073 U			
X701-BW2G	Technetium-99	pCi/L	6.14 U			
	Uranium	µg/L	0.6906			
	Uranium-233/234	pCi/L	0.2375			
	Uranium-235	pCi/L	0.0275 U			
	Uranium-236	pCi/L	0 U			
	Uranium-238	pCi/L	0.2296			
	Americium-241	pCi/L	0.0243 U			
	Neptunium-237	pCi/L	0.0079 U			
X701-BW4G	Plutonium-238	pCi/L	2E-05 U			
	Plutonium-239/240	pCi/L	0.0157 U			
	Technetium-99	pCi/L	24.3			
	Uranium	µg/L	0.0837			
	Uranium-233/234	pCi/L	0.0411			
	Uranium-235	pCi/L	0.0084 U			
	Uranium-236	pCi/L	0.0076 U			
	Uranium-238	pCi/L	0.0273 U			
X701-BW4G	Americium-241	pCi/L	-0.014 U			
	Neptunium-237	pCi/L	-0.014 U			

Table 4.8. Results for radionuclides at the X-701B Holding Pond – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X701-BW4G	Plutonium-238	pCi/L	0.028 U			
	Plutonium-239/240	pCi/L	0.021 U			
	Technetium-99	pCi/L	374			
	Uranium	µg/L	0.0211 U			
	Uranium-233/234	pCi/L	0.0353 U			
	Uranium-235	pCi/L	9E-06 U			
	Uranium-236	pCi/L	0.0078 U			
	Uranium-238	pCi/L	0.0071 U			

Table 4.9. Results for chromium at the X-633 Pumphouse/Cooling Towers Area – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X633-07G	Chromium	µg/L		310		560
X633-PZ04G	Chromium	µg/L		11		24

Table 4.10. Volatile organic compounds detected at the X-616 Chromium Sludge Surface Impoundments – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X616-02G	1,1-Dichloroethene	µg/L	0.25 J			
X616-09G	1,1,1-Trichloroethane	µg/L	3.5			
	1,1-Dichloroethane	µg/L	1.5 J			
	1,1-Dichloroethene	µg/L	18			
	cis-1,2-Dichloroethene	µg/L	2			
	Trichloroethene	µg/L	13			
X616-13G	1,1,1-Trichloroethane	µg/L	0.78 J			
	1,1-Dichloroethane	µg/L	0.29 J			
	1,1-Dichloroethene	µg/L	3.1			
	Trichloroethene	µg/L	0.82 J			
	Trichlorofluoromethane	µg/L	0.35 J			
X616-14G	1,1,1-Trichloroethane	µg/L	0.87 J			
	1,1-Dichloroethane	µg/L	0.18 J			
	1,1-Dichloroethene	µg/L	3.1			
	Trichloroethene	µg/L	0.46 J			
	Trichlorofluoromethane	µg/L	0.71 J			
X616-16G	1,1-Dichloroethene	µg/L	0.27 J			
	cis-1,2-Dichloroethene	µg/L	2.4			
	Trichloroethene	µg/L	2.3			
X616-17G	1,1-Dichloroethene	µg/L	0.18 J			
X616-19B	Acetone	µg/L	7.7 J			
X616-20B	1,1,1-Trichloroethane	µg/L	0.21 J			
	1,1-Dichloroethane	µg/L	0.62 J			
	1,1-Dichloroethene	µg/L	0.91 J			
	Acetone	µg/L	6 J			
	cis-1,2-Dichloroethene	µg/L	0.4 J			
	Trichloroethene	µg/L	15			
X616-25G	cis-1,2-Dichloroethene	µg/L	0.61 J			
	Trichloroethene	µg/L	1.1 J			
X616-28B	1,1,1-Trichloroethane	µg/L	0.67 J			
	1,1-Dichloroethene	µg/L	0.58 J			

Table 4.11. Results for chromium at the X-616 Chromium Sludge Surface Impoundments – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X616-02G	Chromium	µg/L	2 U			
X616-05G	Chromium	µg/L	500			
X616-09G	Chromium	µg/L	31			
X616-10G	Chromium	µg/L	0.97 B			
X616-13G	Chromium	µg/L	1.5 B			
X616-14G	Chromium	µg/L	3			
X616-16G	Chromium	µg/L	0.52 B			
X616-17G	Chromium	µg/L	21			
X616-19B	Chromium	µg/L	19			
X616-20B	Chromium	µg/L	1.9 B			
X616-21G	Chromium	µg/L	30			
X616-22G	Chromium	µg/L	0.6 B			
X616-24B	Chromium	µg/L	0.83 B			
X616-25G	Chromium	µg/L	4.3			
X616-26G	Chromium	µg/L	12			
X616-28B	Chromium	µg/L	1.5 B			

Table 4.12. Results for radionuclides at the X-616 Chromium Sludge Surface Impoundments – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X616-02G	Americium-241	pCi/L	-0.011 U			
	Neptunium-237	pCi/L	-0.008 U			
	Plutonium-238	pCi/L	2E-05 U			
	Plutonium-239/240	pCi/L	0.0236 U			
	Technetium-99	pCi/L	-2.68 U			
	Uranium	µg/L	2.341			
	Uranium-233/234	pCi/L	1.082			
	Uranium-235	pCi/L	0.0448 U			
	Uranium-236	pCi/L	0.0161 U			
X616-05G	Uranium-238	pCi/L	0.7826			
	Americium-241	pCi/L	0.0362 U			
	Neptunium-237	pCi/L	0 U			
	Plutonium-238	pCi/L	0.0077 U			
	Plutonium-239/240	pCi/L	0.0155 U			
	Technetium-99	pCi/L	-1.33 U			
	Uranium	µg/L	0.1767			
	Uranium-233/234	pCi/L	0.2115			
	Uranium-235	pCi/L	0 U			
X616-09G	Uranium-236	pCi/L	0 U			
	Uranium-238	pCi/L	0.0594			
	Americium-241	pCi/L	0.0148 U			
	Neptunium-237	pCi/L	-0.008 U			
	Plutonium-238	pCi/L	0 U			
	Plutonium-239/240	pCi/L	0 U			
	Technetium-99	pCi/L	-3.98 U			
	Uranium	µg/L	2.316			
	Uranium-233/234	pCi/L	1.003			
X616-10G	Uranium-235	pCi/L	0.0173 U			
	Uranium-236	pCi/L	0 U			
	Uranium-238	pCi/L	0.7767			
	Americium-241	pCi/L	0.0188 U			
	Neptunium-237	pCi/L	0.0214 U			
	Plutonium-238	pCi/L	0.0213 U			
	Plutonium-239/240	pCi/L	0.0071 U			
	Technetium-99	pCi/L	-2.92 U			
	Uranium	µg/L	1.106			
X616-13G	Uranium-233/234	pCi/L	0.3066			
	Uranium-235	pCi/L	0.0081 U			
	Uranium-236	pCi/L	-0.007 U			
	Uranium-238	pCi/L	0.371			
	Americium-241	pCi/L	0.0377 U			
	Neptunium-237	pCi/L	-0.011 U			
	Plutonium-238	pCi/L	0.0115 U			
	Plutonium-239/240	pCi/L	1E-05 U			
	Technetium-99	pCi/L	-6.85 U			
Uranium	µg/L	1.105				
Uranium-233/234	pCi/L	0.279				
Uranium-235	pCi/L	0 U				

**Table 4.12. Results for radionuclides at the X-616 Chromium Sludge Surface Impoundments – 2009
(continued)**

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X616-13G	Uranium-236	pCi/L	0.0086 U			
	Uranium-238	pCi/L	0.3712			
X616-14G	Americium-241	pCi/L	0.0273 U			
	Neptunium-237	pCi/L	-0.028 U			
	Plutonium-238	pCi/L	2E-05 U			
	Plutonium-239/240	pCi/L	-0.028 U			
	Technetium-99	pCi/L	-3.55 U			
	Uranium	µg/L	2.425			
	Uranium-233/234	pCi/L	0.8123			
	Uranium-235	pCi/L	0.0477			
	Uranium-236	pCi/L	0 U			
	Uranium-238	pCi/L	0.8107			
X616-16G	Americium-241	pCi/L	0.0252 U			
	Neptunium-237	pCi/L	-0.023 U			
	Plutonium-238	pCi/L	0.0155 U			
	Plutonium-239/240	pCi/L	-0.008 U			
	Technetium-99	pCi/L	-3.14 U			
	Uranium	µg/L	0.4345			
	Uranium-233/234	pCi/L	0.2275			
	Uranium-235	pCi/L	0.0170 U			
	Uranium-236	pCi/L	0 U			
	Uranium-238	pCi/L	0.1445			
X616-17G	Americium-241	pCi/L	-0.031 U			
	Neptunium-237	pCi/L	8E-06 U			
	Plutonium-238	pCi/L	0.0078 U			
	Plutonium-239/240	pCi/L	0.0078 U			
	Technetium-99	pCi/L	-2.35 U			
	Uranium	µg/L	0.6908			
	Uranium-233/234	pCi/L	0.3694			
	Uranium-235	pCi/L	0 U			
	Uranium-236	pCi/L	0 U			
	Uranium-238	pCi/L	0.2321			
X616-19B	Americium-241	pCi/L	-0.015 U			
	Neptunium-237	pCi/L	0.0073 U			
	Plutonium-238	pCi/L	0.0145 U			
	Plutonium-239/240	pCi/L	0.0145 U			
	Technetium-99	pCi/L	-3.55 U			
	Uranium	µg/L	0.522			
	Uranium-233/234	pCi/L	0.3177			
	Uranium-235	pCi/L	0 U			
	Uranium-236	pCi/L	0.0075 U			
	Uranium-238	pCi/L	0.1754			
X616-20B	Americium-241	pCi/L	0.0364 U			
	Neptunium-237	pCi/L	-0.008 U			
	Plutonium-238	pCi/L	0.0085 U			
	Plutonium-239/240	pCi/L	0 U			
	Technetium-99	pCi/L	-0.833 U			
	Uranium	µg/L	0.4253			

**Table 4.12. Results for radionuclides at the X-616 Chromium Sludge Surface Impoundments – 2009
(continued)**

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X616-20B	Uranium-233/234	pCi/L	0.3134			
	Uranium-235	pCi/L	0.0088 U			
	Uranium-236	pCi/L	-0.016 U			
	Uranium-238	pCi/L	0.1422			
X616-21G	Americium-241	pCi/L	9E-06 U			
	Neptunium-237	pCi/L	-0.023 U			
	Plutonium-238	pCi/L	0.0077 U			
	Plutonium-239/240	pCi/L	0 U			
	Technetium-99	pCi/L	6.66 U			
	Uranium	µg/L	0.579			
	Uranium-233/234	pCi/L	0.1582			
	Uranium-235	pCi/L	0.0089 U			
	Uranium-236	pCi/L	0 U			
	Uranium-238	pCi/L	0.1938			
	X616-22G	Americium-241	pCi/L	0.0437 U		
Neptunium-237		pCi/L	-0.016 U			
Plutonium-238		pCi/L	0.0236 U			
Plutonium-239/240		pCi/L	0.0157 U			
Technetium-99		pCi/L	-5.07 U			
Uranium		µg/L	0.8539			
Uranium-233/234		pCi/L	0.3584			
Uranium-235		pCi/L	0.0088 U			
Uranium-236		pCi/L	0 U			
Uranium-238		pCi/L	0.2861			
X616-24B		Americium-241	pCi/L	1E-05 U		
	Neptunium-237	pCi/L	-0.007 U			
	Plutonium-238	pCi/L	7E-06 U			
	Plutonium-239/240	pCi/L	0.0070 U			
	Technetium-99	pCi/L	-5.72 U			
	Uranium	µg/L	0.2048			
	Uranium-233/234	pCi/L	0.3308			
	Uranium-235	pCi/L	0 U			
	Uranium-236	pCi/L	0 U			
	Uranium-238	pCi/L	0.0688			
	X616-25G	Americium-241	pCi/L	0.0087 U		
Neptunium-237		pCi/L	-0.04 U			
Plutonium-238		pCi/L	0.0317 U			
Plutonium-239/240		pCi/L	-0.016 U			
Technetium-99		pCi/L	-5.26 U			
Uranium		µg/L	1.212			
Uranium-233/234		pCi/L	0.4437			
Uranium-235		pCi/L	0.009 U			
Uranium-236		pCi/L	0.0081 U			
Uranium-238		pCi/L	0.4065			
X616-26G		Americium-241	pCi/L	3E-05 U		
	Neptunium-237	pCi/L	0.0097 U			
	Plutonium-238	pCi/L	0.0097 U			
	Plutonium-239/240	pCi/L	-0.01 U			

**Table 4.12. Results for radionuclides at the X-616 Chromium Sludge Surface Impoundments – 2009
(continued)**

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X616-26G	Technetium-99	pCi/L	-3.35 U			
	Uranium	µg/L	2.983			
	Uranium-233/234	pCi/L	0.7911			
	Uranium-235	pCi/L	0.0345 U			
	Uranium-236	pCi/L	0.0155 U			
	Uranium-238	pCi/L	0.9991			
X616-28B	Americium-241	pCi/L	4E-05 U			
	Neptunium-237	pCi/L	-0.198 U			
	Plutonium-238	pCi/L	0.018 U			
	Plutonium-239/240	pCi/L	2E-05 U			
	Technetium-99	pCi/L	-2.41 U			
	Uranium	µg/L	1.333			
	Uranium-233/234	pCi/L	0.8373			
	Uranium-235	pCi/L	0.0091 U			
	Uranium-236	pCi/L	0.0081 U			
	Uranium-238	pCi/L	0.4471			

Table 4.13. Volatile organic compounds detected at the X-740 Waste Oil Handling Facility – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X740-01G	Acetone	µg/L		8.3 J		
X740-02G	1,1,1-Trichloroethane	µg/L		7.3		
	1,1-Dichloroethane	µg/L		4.3		
	1,1-Dichloroethene	µg/L		6.6		
	Trichloroethene	µg/L		7.6		
X740-03G	1,1,1-Trichloroethane	µg/L		76		
	1,1-Dichloroethane	µg/L		25		
	1,1-Dichloroethene	µg/L		650		
	1,2-Dichloroethane	µg/L		100		
	Chloroform	µg/L		8 J		
	cis-1,2-Dichloroethene	µg/L		8.9 J		
	Methylene chloride	µg/L		9 BJ		
	Tetrachloroethene	µg/L		96		
	Trichloroethene	µg/L		3400		
X740-04G	1,1,1-Trichloroethane	µg/L		0.74 J		
	1,1-Dichloroethane	µg/L		0.26 J		
	1,1-Dichloroethene	µg/L		0.98 J		
	1,2-Dichloroethane	µg/L		0.34 J		
	Acetone	µg/L		6 J		
	Trichloroethene	µg/L		6.4		
X740-06G	Acetone	µg/L		1.9 J		
X740-07B	Acetone	µg/L		2.7 J		
X740-08G	1,1,1-Trichloroethane	µg/L		1.5 J		
	1,1-Dichloroethane	µg/L		14		
	1,1-Dichloroethene	µg/L		1.6 J		
	cis-1,2-Dichloroethene	µg/L		23		
	trans-1,2-Dichloroethene	µg/L		6.6		
	Trichloroethene	µg/L		14		
X740-09B	1,1,1-Trichloroethane	µg/L		30		
	1,1-Dichloroethane	µg/L		8.8		
	1,1-Dichloroethene	µg/L		190		
	1,2-Dichloroethane	µg/L		48		
	Chloroform	µg/L		4 J		
	cis-1,2-Dichloroethene	µg/L		2 J		
	Tetrachloroethene	µg/L		27		
	Trichloroethene	µg/L		960		
	Trichlorofluoromethane	µg/L		1.2 J		
X740-10G	1,1,1-Trichloroethane	µg/L		5.4		
	1,1-Dichloroethane	µg/L		3.2		
	1,1-Dichloroethene	µg/L		23		
	1,2-Dichloroethane	µg/L		6.2		
	Acetone	µg/L		6.1 J		
	Chloroform	µg/L		0.5 J		
	cis-1,2-Dichloroethene	µg/L		1.1 J		
	Tetrachloroethene	µg/L		2.2		
	Trichloroethene	µg/L		160		
X740-11G	1,1,1-Trichloroethane	µg/L		0.39 J		
	1,1-Dichloroethane	µg/L		0.27 J		

**Table 4.13. Volatile organic compounds detected at the X-740 Waste Oil Handling Facility – 2009
(continued)**

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X740-11G	1,1-Dichloroethene	µg/L		3.1		
	1,2-Dichloroethane	µg/L		1.2J		
	Acetone	µg/L		8.3J		
	Trichloroethene	µg/L		11		
X740-12B	Acetone	µg/L		6.7J		
X740-13G	Acetone	µg/L		16		
X740-14B	1,1-Dichloroethane	µg/L		0.31 J		
	1,1-Dichloroethene	µg/L		2.1		
	1,2-Dichloroethane	µg/L		0.52 J		
	Acetone	µg/L		5.1 J		
	Trichloroethene	µg/L		3.8		
X740-PZ10G	1,1,1-Trichloroethane	µg/L		1.8J		
	1,1-Dichloroethane	µg/L		0.34J		
	1,1-Dichloroethene	µg/L		2.2		
	1,2-Dichloroethane	µg/L		1 J		
	Acetone	µg/L		13		
	Bromodichloromethane	µg/L		0.21 J		
	Chloroform	µg/L		0.7J		
	Tetrachloroethene	µg/L		0.58 J		
	Trichloroethene	µg/L		22		
X740-PZ12G	1,1,1-Trichloroethane	µg/L		3.7		
	1,1-Dichloroethane	µg/L		0.92 J		
	1,1-Dichloroethene	µg/L		22		
	1,2-Dichloroethane	µg/L		6.2		
	Acetone	µg/L		2J		
	Chloroform	µg/L		0.56J		
	Tetrachloroethene	µg/L		1.1 J		
X740-PZ14G	Trichloroethene	µg/L		110		
	1,1,1-Trichloroethane	µg/L		4.8		
	1,1-Dichloroethane	µg/L		1.5J		
	1,1-Dichloroethene	µg/L		47		
	1,2-Dichloroethane	µg/L		10		
	Acetone	µg/L		11		
	Chloroform	µg/L		0.9J		
	cis-1,2-Dichloroethene	µg/L		0.26J		
	Tetrachloroethene	µg/L		0.82 J		
X740-PZ17G	Trichloroethene	µg/L		180		
	1,1,1-Trichloroethane	µg/L		0.35 J		
	1,1-Dichloroethane	µg/L		1.3J		
	1,2-Dichloroethane	µg/L		0.5J		
	Acetone	µg/L		2.3J		
	Trichloroethene	µg/L		5.7		

Table 4.14. Results for beryllium and chromium at the X-611A Former Lime Sludge Lagoons – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
F-07G	Beryllium	µg/L	3		5	
	Chromium	µg/L	1.6 B		3.4	
F-08B	Beryllium	µg/L	1 U		0.08 U	
	Chromium	µg/L	2 U		0.5 U	
X611-01B	Beryllium	µg/L	1 U		0.19 B	
	Chromium	µg/L	9.5		6.5	
X611-02BA	Beryllium	µg/L	0.092 B		0.08 U	
	Chromium	µg/L	1.2 B		0.62 B	
X611-03G	Beryllium	µg/L	1 U		0.08 U	
	Chromium	µg/L	2 U		0.5 U	
X611-04BA	Beryllium	µg/L	0.72 B		0.54 B	
	Chromium	µg/L	1.3 B		0.5 U	

Table 4.15. Volatile organic compounds detected at the X-735 Landfills – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X735-01G	1,1-Dichloroethane	µg/L		0.41 J		
	Acetone	µg/L		4.1 J		
	Trichloroethene	µg/L		0.17 J		
X735-03G	1,1,1-Trichloroethane	µg/L		0.3 J		
	1,1-Dichloroethane	µg/L		0.49 J		
	Acetone	µg/L		19		
	Chloroethane	µg/L		0.76 J		
	Dichlorodifluoromethane	µg/L		0.41 J		
	Trichloroethene	µg/L		0.17 J		
	Methylene chloride	µg/L		0.33 J		
X735-04G	Methylene chloride	µg/L		0.33 J		
X735-13GA	Acetone	µg/L		27		
X735-17B	Methylene chloride	µg/L		0.33 J		
X735-19G	Methylene chloride	µg/L		0.33 J		
X735-21G	Acetone	µg/L		6.4 J		
X737-09G	Methylene chloride	µg/L		0.37 J		

Table 4.16. Results for radionuclides at the X-735 Landfills – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X735-01G	Americium-241	pCi/L		-0.0146 U		
	Neptunium-237	pCi/L		0 U		
	Plutonium-238	pCi/L		0.00726 U		
	Plutonium-239/240	pCi/L		0.00724 U		
	Technetium-99	pCi/L		-3.16 U		
	Uranium	µg/L		-0.0226 U		
	Uranium-233/234	pCi/L		0.03819 U		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		-0.0076 U		
X735-01GA	Americium-241	pCi/L		0.02907 U		
	Neptunium-237	pCi/L		0.00649 U		
	Plutonium-238	pCi/L		0.00649 U		
	Plutonium-239/240	pCi/L		-0.0258 U		
	Technetium-99	pCi/L		-1.93 U		
	Uranium	µg/L		0.02606 U		
	Uranium-233/234	pCi/L		0.09334		
	Uranium-235	pCi/L		0.01772 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.00717 U		
X735-02GA	Americium-241	pCi/L		0.00832 U		
	Neptunium-237	pCi/L		-0.0139 U		
	Plutonium-238	pCi/L		0.01391 U		
	Plutonium-239/240	pCi/L		0.00695 U		
	Technetium-99	pCi/L		-2.03 U		
	Uranium	µg/L		0.02618 U		
	Uranium-233/234	pCi/L		0.03159 U		
	Uranium-235	pCi/L		0.00974 U		
	Uranium-236	pCi/L		0.00875 U		
	Uranium-238	pCi/L		0.00788 U		
X735-03G	Americium-241	pCi/L		0.0519 U		
	Neptunium-237	pCi/L		0.0073 U		
	Plutonium-238	pCi/L		1.5E-05 U		
	Plutonium-239/240	pCi/L		7.3E-06 U		
	Technetium-99	pCi/L		-4.64 U		
	Uranium	µg/L		0.3601		
	Uranium-233/234	pCi/L		0.2155		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		0.00746 U		
	Uranium-238	pCi/L		0.121		
X735-03GA	Americium-241	pCi/L		0.01017 U		
	Neptunium-237	pCi/L		0.00767 U		
	Plutonium-238	pCi/L		0.00768 U		
	Plutonium-239/240	pCi/L		0.02296 U		
	Technetium-99	pCi/L		0.16 U		
	Uranium	µg/L		0.00022 U		
	Uranium-233/234	pCi/L		0.07959 U		
	Uranium-235	pCi/L		0 U		

Table 4.16. Results for radionuclides at the X-735 Landfills – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X735-03GA	Uranium-236	pCi/L		0.00881 U		
	Uranium-238	pCi/L		2.4E-05 U		
X735-04G	Americium-241	pCi/L		0.02062 U		
	Neptunium-237	pCi/L		-0.029 U		
	Plutonium-238	pCi/L		0.00725 U		
	Plutonium-239/240	pCi/L		0.01447 U		
	Technetium-99	pCi/L		2.11 U		
	Uranium	µg/L		0.134 U		
	Uranium-233/234	pCi/L		0.0902		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.04502 U		
X735-04GA	Americium-241	pCi/L		-0.0085 U		
	Neptunium-237	pCi/L		-0.0216 U		
	Plutonium-238	pCi/L		0 U		
	Plutonium-239/240	pCi/L		7.2E-06 U		
	Technetium-99	pCi/L		-2 U		
	Uranium	µg/L		0.101 U		
	Uranium-233/234	pCi/L		0.0875		
	Uranium-235	pCi/L		0.01349 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.03275 U		
X735-05G	Americium-241	pCi/L		0.01929 U		
	Neptunium-237	pCi/L		-0.0356 U		
	Plutonium-238	pCi/L		0.00711 U		
	Plutonium-239/240	pCi/L		0.00711 U		
	Technetium-99	pCi/L		-0.715 U		
	Uranium	µg/L		0.1342		
	Uranium-233/234	pCi/L		0.0973		
	Uranium-235	pCi/L		0.01091 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.04413		
X735-05GA	Americium-241	pCi/L		0.00818 U		
	Neptunium-237	pCi/L		0 U		
	Plutonium-238	pCi/L		-0.014 U		
	Plutonium-239/240	pCi/L		0.01397 U		
	Technetium-99	pCi/L		0.415 U		
	Uranium	µg/L		0.08529 U		
	Uranium-233/234	pCi/L		0.06459		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.02866 U		
X735-06GAA	Americium-241	pCi/L		0.0116 U		
	Neptunium-237	pCi/L		-0.0077 U		
	Plutonium-238	pCi/L		0.03085 U		
	Plutonium-239/240	pCi/L		7.7E-06 U		
	Technetium-99	pCi/L		-4.06 U		
	Uranium	µg/L		0.1369		

Table 4.16. Results for radionuclides at the X-735 Landfills – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X735-06GAA	Uranium-233/234	pCi/L		0.06145		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.046		
X735-12G	Americium-241	pCi/L		0 U		
	Neptunium-237	pCi/L		-0.0299 U		
	Plutonium-238	pCi/L		0.02988 U		
	Plutonium-239/240	pCi/L		0.00747 U		
	Technetium-99	pCi/L		-0.015 U		
	Uranium	µg/L		0.3638		
	Uranium-233/234	pCi/L		0.1512		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		0.00798 U		
	Uranium-238	pCi/L		0.1222		
	X735-13GA	Americium-241	pCi/L		0.00863 U	
Neptunium-237		pCi/L		1.5E-05 U		
Plutonium-238		pCi/L		0.00739 U		
Plutonium-239/240		pCi/L		0.00738 U		
Technetium-99		pCi/L		-5.8 U		
Uranium		µg/L		0.1064		
Uranium-233/234		pCi/L		0.04907 U		
Uranium-235		pCi/L		0.00865 U		
Uranium-236		pCi/L		0 U		
Uranium-238		pCi/L		0.03497		
X735-16B		Americium-241	pCi/L		0.01602 U	
	Neptunium-237	pCi/L		-0.0070 U		
	Plutonium-238	pCi/L		0.01404 U		
	Plutonium-239/240	pCi/L		-0.0140 U		
	Technetium-99	pCi/L		4.26 U		
	Uranium	µg/L		0.1641		
	Uranium-233/234	pCi/L		0.04603		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.05513		
	X735-17B	Americium-241	pCi/L		0.01306 U	
Neptunium-237		pCi/L		-0.0074 U		
Plutonium-238		pCi/L		0.00738 U		
Plutonium-239/240		pCi/L		0 U		
Technetium-99		pCi/L		0.932 U		
Uranium		µg/L		0.4481		
Uranium-233/234		pCi/L		0.1887		
Uranium-235		pCi/L		0 U		
Uranium-236		pCi/L		-0.0104 U		
Uranium-238		pCi/L		0.1506		
X735-18B		Americium-241	pCi/L		0.03666 U	
	Neptunium-237	pCi/L		0.00693 U		
	Plutonium-238	pCi/L		0.01381 U		
	Plutonium-239/240	pCi/L		0 U		

Table 4.16. Results for radionuclides at the X-735 Landfills – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter	
X735-18B	Technetium-99	pCi/L		-5.06 U			
	Uranium	µg/L		0.1602			
	Uranium-233/234	pCi/L		0.1527			
	Uranium-235	pCi/L		0 U			
	Uranium-236	pCi/L		0.00995 U			
	Uranium-238	pCi/L		0.05379			
X735-19G	Americium-241	pCi/L		0.02101 U			
	Neptunium-237	pCi/L		-0.0066 U			
	Plutonium-238	pCi/L		0.01974 U			
	Plutonium-239/240	pCi/L		0.00658 U			
	Technetium-99	pCi/L		-3.17 U			
	Uranium	µg/L		0.02269 U			
	Uranium-233/234	pCi/L		0.06794			
	Uranium-235	pCi/L		0 U			
	Uranium-236	pCi/L		0.01672 U			
	Uranium-238	pCi/L		0.00753 U			
	X735-20B	Americium-241	pCi/L		0 U		
		Neptunium-237	pCi/L		1.3E-05 U		
		Plutonium-238	pCi/L		0 U		
		Plutonium-239/240	pCi/L		0.01912 U		
Technetium-99		pCi/L		-1.89 U			
Uranium		µg/L		0.2233			
Uranium-233/234		pCi/L		0.2946			
Uranium-235		pCi/L		-0.0135 U			
Uranium-236		pCi/L		0 U			
Uranium-238		pCi/L		0.07623			
X735-21G	Americium-241	pCi/L		-0.0348 U			
	Neptunium-237	pCi/L		-0.0168 U			
	Plutonium-238	pCi/L		0.01674 U			
	Plutonium-239/240	pCi/L		0.01674 U			
	Technetium-99	pCi/L		1.01 U			
	Uranium	µg/L		0.5097			
	Uranium-233/234	pCi/L		0.2752			
	Uranium-235	pCi/L		0.03772 U			
	Uranium-236	pCi/L		0.00847 U			
	Uranium-238	pCi/L		0.1679			
X737-05B	Americium-241	pCi/L		0.03445 U			
	Neptunium-237	pCi/L		0.00779 U			
	Plutonium-238	pCi/L		0.01554 U			
	Plutonium-239/240	pCi/L		-0.0155 U			
	Technetium-99	pCi/L		-0.0479 U			
	Uranium	µg/L		0.02319 U			
	Uranium-233/234	pCi/L		0.06244			
	Uranium-235	pCi/L		0 U			
	Uranium-236	pCi/L		0 U			
	Uranium-238	pCi/L		0.00779 U			
X737-06G	Americium-241	pCi/L		-0.0128 U			
	Neptunium-237	pCi/L		7.3E-06 U			

Table 4.16. Results for radionuclides at the X-735 Landfills – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X737-06G	Plutonium-238	pCi/L		0.00727 U		
	Plutonium-239/240	pCi/L		7.3E-06 U		
	Technetium-99	pCi/L		-0.585 U		
	Uranium	µg/L		0.05128 U		
	Uranium-233/234	pCi/L		0.05972		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		0.0378 U		
	Uranium-238	pCi/L		0.01703 U		
X737-07B	Americium-241	pCi/L		0.01172 U		
	Neptunium-237	pCi/L		-0.0069 U		
	Plutonium-238	pCi/L		-0.0069 U		
	Plutonium-239/240	pCi/L		0.00694 U		
	Technetium-99	pCi/L		-0.103 U		
	Uranium	µg/L		-0.0455 U		
	Uranium-233/234	pCi/L		-0.0153 U		
	Uranium-235	pCi/L		0 U		
X737-08B	Uranium-236	pCi/L		-0.0085 U		
	Uranium-238	pCi/L		-0.0152 U		
	Americium-241	pCi/L		0.01672 U		
	Neptunium-237	pCi/L		2.1E-05 U		
	Plutonium-238	pCi/L		0.02132 U		
	Plutonium-239/240	pCi/L		7.1E-06 U		
	Technetium-99	pCi/L		-3.49 U		
	Uranium	µg/L		0.2618		
X737-09G	Uranium-233/234	pCi/L		0.3709		
	Uranium-235	pCi/L		-0.0091 U		
	Uranium-236	pCi/L		-0.0082 U		
	Uranium-238	pCi/L		0.08883		
	Americium-241	pCi/L		0.04282 U		
	Neptunium-237	pCi/L		0.00702 U		
	Plutonium-238	pCi/L		0.01395 U		
	Plutonium-239/240	pCi/L		0.02091 U		
	Technetium-99	pCi/L		0.0477 U		
	Uranium	µg/L		0.236		
	Uranium-233/234	pCi/L		0.1429		
	Uranium-235	pCi/L		0.01603 U		
	Uranium-236	pCi/L		0.01439 U		
	Uranium-238	pCi/L		0.07779		

Table 4.17. Volatile organic compounds detected at the X-734 Landfills – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
RSY-02B	Acetone	µg/L		10 U		2.1 BJ
X734-02B	Acetone	µg/L		10 U		2.6 BJ
X734-03G	1,1,2-Trichloroethane	µg/L		2 U		2
	1,1-Dichloroethane	µg/L		0.25 J		0.16 U
	1,2-Dimethylbenzene	µg/L		2 U		0.19 J
	Acetone	µg/L		10 U		12 B
	Benzene	µg/L		2 U		2.6
	Ethylbenzene	µg/L		2 U		0.3 J
	Toluene	µg/L		2 U		0.81 J
	X734-04G	Trichloroethene	µg/L		0.4 J	
X734-05B	1,1,2-Trichloroethane	µg/L		2 U		2
	1,2-Dimethylbenzene	µg/L		0.81 J		0.19 J
	Acetone	µg/L		20		12 B
	Benzene	µg/L		1.8 J		2.6
	Ethylbenzene	µg/L		1 J		0.3 J
	M + P Xylene	µg/L		0.4 J		0.34 U
	Toluene	µg/L		0.42 J		0.81 J
X734-06G	Acetone	µg/L		10 U		2.7 BJ
X734-10G	Acetone	µg/L		10 U		2.8 BJ
	Methylene chloride	µg/L		5 U		1.1 BJ
X734-14G	Acetone	µg/L		4.8 J		1.9 U
X734-15G	1,1-Dichloroethane	µg/L		0.24 J		0.24 J
X734-20G	Acetone	µg/L		10 U		2.8 BJ
X734-22G	Acetone	µg/L		10 U		2.5 BJ
	Methylene chloride	µg/L		5 U		1 BJ
X734-23G	cis-1,2-Dichloroethene	µg/L		7.7		8.9
	trans-1,2-Dichloroethene	µg/L		0.39 J		0.49 J
	Vinyl chloride	µg/L		3		1.8

Table 4.18. Results for radionuclides at the X-734 Landfills – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
RSY-02B	Americium-241	pCi/L		0.01082 U		
	Neptunium-237	pCi/L		-0.0672 U		
	Plutonium-238	pCi/L		-0.0067 U		
	Plutonium-239/240	pCi/L		-0.0134 U		
	Technetium-99	pCi/L		-0.877 U		
	Uranium	µg/L		0.02264 U		
	Uranium-233/234	pCi/L		0.06893		
	Uranium-235	pCi/L		0.00850 U		
	Uranium-236	pCi/L		-0.0076 U		
	Uranium-238	pCi/L		0.00689 U		
X734-01G	Americium-241	pCi/L		-0.0156 U		
	Neptunium-237	pCi/L		-0.0218 U		
	Plutonium-238	pCi/L		0.01452 U		
	Plutonium-239/240	pCi/L		0.00726 U		
	Technetium-99	pCi/L		0.582 U		
	Uranium	µg/L		0.1256		
	Uranium-233/234	pCi/L		0.09863		
	Uranium-235	pCi/L		8.7E-06 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.04218		
X734-02B	Americium-241	pCi/L		0.0146 U		
	Neptunium-237	pCi/L		1.5E-05 U		
	Plutonium-238	pCi/L		1.5E-05 U		
	Plutonium-239/240	pCi/L		0.00773 U		
	Technetium-99	pCi/L		-1.2 U		
	Uranium	µg/L		0.07398 U		
	Uranium-233/234	pCi/L		0.08003 U		
	Uranium-235	pCi/L		0.00988 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.02397 U		
X734-03G	Americium-241	pCi/L		0.01532 U		
	Neptunium-237	pCi/L		1.4E-05 U		
	Plutonium-238	pCi/L		0.0208 U		
	Plutonium-239/240	pCi/L		6.9E-06 U		
	Technetium-99	pCi/L		-3.03 U		
	Uranium	µg/L		0.9706		
	Uranium-233/234	pCi/L		0.735		
	Uranium-235	pCi/L		0.05181		
	Uranium-236	pCi/L		0.02326 U		
	Uranium-238	pCi/L		0.3214		
X734-04G	Americium-241	pCi/L		0.05927 U		
	Neptunium-237	pCi/L		7.4E-06 U		
	Plutonium-238	pCi/L		0.01471 U		
	Plutonium-239/240	pCi/L		0 U		
	Technetium-99	pCi/L		-1.3 U		
	Uranium	µg/L		2.874		
	Uranium-233/234	pCi/L		0.8886		
	Uranium-235	pCi/L		0.05481		

Table 4.18. Results for radionuclides at the X-734 Landfills – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X734-04G	Uranium-236	pCi/L		0.00820 U		
	Uranium-238	pCi/L		0.9607		
X734-05B	Americium-241	pCi/L		0.01031 U		
	Neptunium-237	pCi/L		-0.0406 U		
	Plutonium-238	pCi/L		0.00813 U		
	Plutonium-239/240	pCi/L		0.01621 U		
	Technetium-99	pCi/L		1.29 U		
	Uranium	µg/L		0.619		
	Uranium-233/234	pCi/L		0.3721		
	Uranium-235	pCi/L		9.2E-06 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.208		
	X734-06G	Americium-241	pCi/L		0.01403 U	
Neptunium-237		pCi/L		-0.0078 U		
Plutonium-238		pCi/L		0.00784 U		
Plutonium-239/240		pCi/L		0.00783 U		
Technetium-99		pCi/L		1.79 U		
Uranium		µg/L		0.09241		
Uranium-233/234		pCi/L		0.09841		
Uranium-235		pCi/L		0.00934 U		
Uranium-236		pCi/L		0 U		
Uranium-238		pCi/L		0.03021 U		
X734-10G		Americium-241	pCi/L		0.02155 U	
	Neptunium-237	pCi/L		-0.0474 U		
	Plutonium-238	pCi/L		0.01353 U		
	Plutonium-239/240	pCi/L		0.00677 U		
	Technetium-99	pCi/L		-1.44 U		
	Uranium	µg/L		0.2484		
	Uranium-233/234	pCi/L		0.1381		
	Uranium-235	pCi/L		0.00852 U		
	Uranium-236	pCi/L		0.00765 U		
	Uranium-238	pCi/L		0.08268		
	X734-14G	Americium-241	pCi/L		0.06239 U	
Neptunium-237		pCi/L		-0.0270 U		
Plutonium-238		pCi/L		0.01354 U		
Plutonium-239/240		pCi/L		2.0E-05 U		
Technetium-99		pCi/L		-2.32 U		
Uranium		µg/L		0.7018		
Uranium-233/234		pCi/L		0.4481		
Uranium-235		pCi/L		0.00937 U		
Uranium-236		pCi/L		-0.0084 U		
Uranium-238		pCi/L		0.235		
X734-15G		Americium-241	pCi/L		2.2E-05 U	
	Neptunium-237	pCi/L		-0.0499 U		
	Plutonium-238	pCi/L		0.00712 U		
	Plutonium-239/240	pCi/L		0 U		
	Technetium-99	pCi/L		-4.36 U		
	Uranium	µg/L		0.2093 U		

Table 4.18. Results for radionuclides at the X-734 Landfills – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X734-15G	Uranium-233/234	pCi/L		0.1394		
	Uranium-235	pCi/L		0.0086 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.06957 U		
X734-16G	Americium-241	pCi/L		0.0274 U		
	Neptunium-237	pCi/L		-0.027 U		
	Plutonium-238	pCi/L		0.02696 U		
	Plutonium-239/240	pCi/L		0.02022 U		
	Technetium-99	pCi/L		-1.03 U		
	Uranium	µg/L		2.229		
	Uranium-233/234	pCi/L		0.858		
	Uranium-235	pCi/L		0.0168 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.7475		
	X734-18G	Americium-241	pCi/L		1.0E-05 U	
Neptunium-237		pCi/L		-0.0207 U		
Plutonium-238		pCi/L		-0.0069 U		
Plutonium-239/240		pCi/L		-0.0069 U		
Technetium-99		pCi/L		-0.976 U		
Uranium		µg/L		1.68		
Uranium-233/234		pCi/L		1.143		
Uranium-235		pCi/L		0.01855 U		
Uranium-236		pCi/L		0 U		
Uranium-238		pCi/L		0.5627		
X734-20G		Americium-241	pCi/L		1.6E-05 U	
	Neptunium-237	pCi/L		0.00676 U		
	Plutonium-238	pCi/L		0.01348 U		
	Plutonium-239/240	pCi/L		0.01348 U		
	Technetium-99	pCi/L		-0.979 U		
	Uranium	µg/L		0.08701 U		
	Uranium-233/234	pCi/L		0.1098		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.02923 U		
	X734-22G	Americium-241	pCi/L		0.01371 U	
Neptunium-237		pCi/L		0.02692 U		
Plutonium-238		pCi/L		0.01342 U		
Plutonium-239/240		pCi/L		1.3E-05 U		
Technetium-99		pCi/L		1.1 U		
Uranium		µg/L		0.7734		
Uranium-233/234		pCi/L		0.5173		
Uranium-235		pCi/L		0.01878 U		
Uranium-236		pCi/L		0.00843 U		
Uranium-238		pCi/L		0.2581		
X734-23G		Americium-241	pCi/L		0.02041 U	
	Neptunium-237	pCi/L		-0.0071 U		
	Plutonium-238	pCi/L		-0.0141 U		
	Plutonium-239/240	pCi/L		-0.0071 U		

Table 4.18. Results for radionuclides at the X-734 Landfills – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
X734-23G	Technetium-99	pCi/L		-3.02 U		
	Uranium	µg/L		0.04205 U		
	Uranium-233/234	pCi/L		0.03541 U		
	Uranium-235	pCi/L		0 U		
	Uranium-236	pCi/L		0 U		
	Uranium-238	pCi/L		0.01413 U		

Table 4.19. Results for cadmium, cobalt, and nickel at the X-533 Switchyard Area – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
F-03G	Cadmium	µg/L		48		40
	Cobalt	µg/L		82		72
	Nickel	µg/L		530		460
TCP-01G	Cadmium	µg/L		17		14
	Cobalt	µg/L		48		42
	Nickel	µg/L		200		170
X533-03G	Cadmium	µg/L		11		18
	Cobalt	µg/L		32		50
	Nickel	µg/L		180		270

Table 4.20. Volatile organic compounds detected at surface water monitoring locations – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
BRC-SW01	Acetone	µg/L	4.4 J	10 U	10 U	4.3 BJ
	Bromodichloromethane	µg/L	0.17 U	1.7 J	1.1 J	3.1
	Bromoform	µg/L	0.19 U	0.34 J	0.34 J	1.5 J
	Chloroform	µg/L	0.16 U	3.3	1.8 J	4.2
	cis-1,2-Dichloroethene	µg/L	0.15 U	2 U	0.51 J	0.15 U
	Dibromochloromethane	µg/L	0.17 U	1.7 J	1.1 J	3.6
	Methylene chloride	µg/L	0.32 U	5 U	5 U	0.66 BJ
	Tetrachloroethene	µg/L	0.2 U	2 U	0.24 J	0.2 U
	Trichloroethene	µg/L	0.16 U	2 U	0.49 J	0.16 U
BRC-SW02	Acetone	µg/L	4.1 J	4.6 J	3.2 J	2.9 BJ
	Bromodichloromethane	µg/L	2	2 U	2 U	0.17 U
	Bromoform	µg/L	0.94 J	2 U	2 U	0.19 U
	Chloroform	µg/L	2	2 U	2 U	0.16 U
	cis-1,2-Dichloroethene	µg/L	0.23 J	2 U	2 U	0.15 U
	Dibromochloromethane	µg/L	2.3	2 U	2 U	0.17 U
	Methylene chloride	µg/L	0.32 U	5 U	5 U	0.7 BJ
	Acetone	µg/L	3.3 J	9.9 J	2.9 J	2.5 BJ
	Bromodichloromethane	µg/L	2.1	3.5	2.4	3.4
EDD-SW01	Bromoform	µg/L	1.6 J	0.49 J	0.74 J	2.3
	Chloroform	µg/L	2	7.7	2.6	3.5
	cis-1,2-Dichloroethene	µg/L	0.37 J	0.21 J	0.3 J	0.26 J
	Dibromochloromethane	µg/L	3.3	3	2.4	5
	Methylene chloride	µg/L	0.32 U	5 U	5 U	0.73 BJ
	Toluene	µg/L	0.17 U	0.61 J	2 U	0.17 U
	Trichloroethene	µg/L	0.87 J	0.6 J	0.44 J	0.51 J
	Acetone	µg/L	2 J	9.1 J	3 J	2.3 BJ
	Bromodichloromethane	µg/L	1.6 J	1.4 J	0.82 J	2.4
LBC-SW01	Bromoform	µg/L	1.1 J	2 U	0.25 J	1.5 J
	Chloroform	µg/L	1.4 J	3.1	0.83 J	2.5
	cis-1,2-Dichloroethene	µg/L	0.39 J	0.17 J	0.17 J	0.2 J
	Dibromochloromethane	µg/L	2.3	1.2 J	0.79 J	3.2
	Methylene chloride	µg/L	0.32 U	5 U	5 U	0.6 BJ
	Toluene	µg/L	0.17 U	0.21 J	2 U	0.17 U
	Trichloroethene	µg/L	0.77 J	0.32 J	0.18 J	0.35 J
	Acetone	µg/L	2.6 J	2.5 J	2.3 J	2.8 BJ
	Bromodichloromethane	µg/L	0.41 J	0.84 J	0.91 J	1.2 J
LBC-SW02	Bromoform	µg/L	2 U	2 U	0.28 J	1.1 J
	Chloroform	µg/L	0.43 J	1.9 J	0.87 J	1.2 J
	cis-1,2-Dichloroethene	µg/L	0.18 J	2 U	2 U	0.15 U
	Dibromochloromethane	µg/L	0.52 J	0.84 J	0.91 J	1.9 J
	Methylene chloride	µg/L	5 U	5 U	5 U	0.71 BJ
	Trichloroethene	µg/L	2 U	0.19 J	2 U	0.16 U
	Acetone	µg/L	10 U	2 J	2.1 J	1.9 U
	Bromodichloromethane	µg/L	2 U	0.28 J	0.74 J	0.19 J
	Bromoform	µg/L	2 U	2 U	0.38 J	0.38 J
LBC-SW03	Chloroform	µg/L	2 U	0.55 J	0.58 J	0.16 U
	Dibromochloromethane	µg/L	0.23 J	0.29 J	0.91 J	0.42 J
	Methylene chloride	µg/L	5 U	5 U	5 U	0.73 BJ

Table 4.20. Volatile organic compounds detected at surface water monitoring locations – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
LBC-SW04	Acetone	µg/L	10 U	1.9 J	10 U	1.9 U
	Methylene chloride	µg/L	5 U	5 U	5 U	0.74 BJ
NHP-SW01	Acetone	µg/L	10 U	20	2.1 J	2.8 BJ
	Chloroform	µg/L	2 U	0.33 J	2 U	0.16 U
	Methylene chloride	µg/L	5 U	5 U	5 U	0.72 BJ
UND-SW01	1,1-Dichloroethane	µg/L	2 U	2 U	2 U	0.21 J
	1,1-Dichloroethene	µg/L	2 U	0.28 J	2 U	0.23 J
	2-Butanone	µg/L	6 U	6 U	7.6	1.8 U
	Acetone	µg/L	10 U	10 U	5.3 J	2.6 BJ
	cis-1,2-Dichloroethene	µg/L	2 U	2 U	2 U	0.38 J
UND-SW02	Trichloroethene	µg/L	0.76 J	2.7	0.25 J	5.7
	2-Butanone	µg/L	6 U	7.7	6 U	1.8 U
	Acetone	µg/L	10 U	7.2 J	10 U	3.3 BJ
WDD-SW01	Acetone	µg/L	2.5 J	14	4.7 J	2.7 BJ
	Bromodichloromethane	µg/L	0.39 J	0.49 J	0.2 J	0.65 J
	Bromoform	µg/L	2 U	2 U	2 U	1.4 J
	Chloroform	µg/L	0.35 J	0.71 J	0.25 J	0.33 J
	Dibromochloromethane	µg/L	0.44 J	0.53 J	0.2 J	1.5 J
	Methylene chloride	µg/L	5 U	5 U	5 U	0.8 BJ
WDD-SW02	Acetone	µg/L	10 U	5.2 J	3.7 J	2.2 BJ
	Bromodichloromethane	µg/L	0.37 J	2 U	2 U	0.17 U
	Bromoform	µg/L	0.3 J	2 U	2 U	0.19 U
	Chloroform	µg/L	0.34 J	2 U	2 U	0.16 U
	Dibromochloromethane	µg/L	0.47 J	2 U	2 U	0.17 U
	Methylene chloride	µg/L	5 U	5 U	5 U	0.79 BJ
WDD-SW03	Acetone	µg/L	10 U	11	10 U	2.7 BJ
	Bromodichloromethane	µg/L	2 U	0.22 J	2 U	0.17 U
	Bromoform	µg/L	2 U	2 U	2 U	0.23 J
	Chloroform	µg/L	0.19 J	0.41 J	2 U	0.16 U
	Dibromochloromethane	µg/L	2 U	0.19 J	2 U	0.2 J
	Methylene chloride	µg/L	5 U	5 U	5 U	0.78 BJ

Table 4.21. Results for radionuclides at surface water monitoring locations – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
BRC-SW01	Americium-241	pCi/L	0.0094 U	2.8E-05 U		0.02708 U
	Neptunium-237	pCi/L	0.0081 U	-0.0075 U		-0.02352 U
	Plutonium-238	pCi/L	0.0161 U	0.01497 U		0.02349 U
	Plutonium-239/240	pCi/L	0 U	0 U		-0.03909 U
	Technetium-99	pCi/L	-1 U	-0.331 U	8.42 U	18
	Uranium	µg/L	0.5706	1.565	20.9	0.562
	Uranium-233/234	pCi/L	0.6915	0.8039	6.27	0.2669
	Uranium-235	pCi/L	0.0464	0.00927 U	0.3192	0.009682 U
	Uranium-236	pCi/L	0.0083 U	0.00832 U	0.02529 U	0.008693 U
	Uranium-238	pCi/L	0.1875	0.5249	6.994	0.188
BRC-SW02	Americium-241	pCi/L	0.0163 U	1.1E-05 U		0 U
	Neptunium-237	pCi/L	-0.007 U	6.9E-06 U		-0.00811 U
	Plutonium-238	pCi/L	0.0143 U	0.00687 U		0.0162 U
	Plutonium-239/240	pCi/L	0.0287 U	-0.0069 U		0.0162 U
	Technetium-99	pCi/L	-1.25 U	-4.88 U	-0.0619 U	-3.86 U
	Uranium	µg/L	2.08	0.8493	0.5728	0.582
	Uranium-233/234	pCi/L	1.131	0.8913	0.3966	0.873
	Uranium-235	pCi/L	0.0810	0.06207	-0.01844 U	0.01046 U
	Uranium-236	pCi/L	0 U	0.00796 U	-0.008279 U	0 U
	Uranium-238	pCi/L	0.6917	0.2798	0.1941	0.1945
EDD-SW01	Americium-241	pCi/L	2E-05 U	9.6E-06 U		0.008816 U
	Neptunium-237	pCi/L	-0.015 U	0.00695 U		-0.02404 U
	Plutonium-238	pCi/L	0.0373 U	0 U		0.007999 U
	Plutonium-239/240	pCi/L	0.0149 U	0.01387 U		0.007999 U
	Technetium-99	pCi/L	15.9	1.85 U	2.62 U	-2.73 U
	Uranium	µg/L	1.02	2.161	1.13	0.272
	Uranium-233/234	pCi/L	1.686	3.291	1.906	0.5692
	Uranium-235	pCi/L	0.1306	0.137	0.07098	0.02538 U
	Uranium-236	pCi/L	0.0234 U	0.01538 U	0.007967 U	0.01519 U
	Uranium-238	pCi/L	0.3309	0.7137	0.3733	0.08898
LBC-SW01	Americium-241	pCi/L	0.0083 U	-0.0108 U		-0.00844 U
	Neptunium-237	pCi/L	0.0073 U	0 U		8.27E-06 U
	Plutonium-238	pCi/L	0.029 U	7.4E-06 U		0.008254 U
	Plutonium-239/240	pCi/L	0.0073 U	0.00738 U		0.008254 U
	Technetium-99	pCi/L	14	3.13 U	0.378 U	0.406 U
	Uranium	µg/L	0.6528	1.175	0.5313	0.345
	Uranium-233/234	pCi/L	1.357	1.466	0.7688	0.5954
	Uranium-235	pCi/L	0.0090 U	0.07981	0.009982 U	0.01884 U
	Uranium-236	pCi/L	0.0081 U	0.02389 U	-0.01791 U	-0.01688 U
	Uranium-238	pCi/L	0.2184	0.3874	0.1777	0.1143
LBC-SW02	Americium-241	pCi/L	0.0168 U	1.4E-05 U		-0.00919 U
	Neptunium-237	pCi/L	0.0220 U	0 U		7.87E-06 U
	Plutonium-238	pCi/L	0.0147 U	1.5E-05 U		0.03141 U
	Plutonium-239/240	pCi/L	7E-06 U	0 U		0.01571 U
	Technetium-99	pCi/L	12.6	3.47 U	0.149 U	1.03 U
	Uranium	µg/L	0.9554	0.959	0.4626	0.343
	Uranium-233/234	pCi/L	1.543	1.604	0.9162	0.6755
	Uranium-235	pCi/L	0.1135	0.05599	0.008311 U	0.01755 U

Table 4.21. Results for radionuclides at surface water monitoring locations – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
LBC-SW02	Uranium-236	pCi/L	0.0079 U	0.01676 U	0 U	0.01575 U
	Uranium-238	pCi/L	0.3108	0.3171	0.1547	0.1135
LBC-SW03	Americium-241	pCi/L	0.0092 U	0.01735 U		0.009022 U
	Neptunium-237	pCi/L	8E-06 U	-0.0070 U		9.31E-06 U
	Plutonium-238	pCi/L	0.0078 U	-0.007 U		0.03717 U
	Plutonium-239/240	pCi/L	0.0078 U	7E-06 U		-0.06499 U
	Technetium-99	pCi/L	8.95 U	3.94 U	-0.765 U	0.587 U
	Uranium	µg/L	0.982	1.093	1.018	0.271
	Uranium-233/234	pCi/L	1.434	1.41	1.702	0.6777
	Uranium-235	pCi/L	0.0438	0.0527	0.07706	0.009299 U
	Uranium-236	pCi/L	0.0079 U	0 U	0 U	0 U
	Uranium-238	pCi/L	0.326	0.3624	0.3351	0.0902
LBC-SW04	Americium-241	pCi/L	2E-05 U	0.00669 U		0.01804 U
	Neptunium-237	pCi/L	0.0227 U	0.01345 U		8.32E-06 U
	Plutonium-238	pCi/L	0.0075 U	0.01341 U		-0.0083 U
	Plutonium-239/240	pCi/L	-0.008 U	0.01341 U		0 U
	Technetium-99	pCi/L	7.27 U	3.22 U	3.02 U	-0.0938 U
	Uranium	µg/L	1.158	1.155	1.811	0.65
	Uranium-233/234	pCi/L	1.181	1.221	1.775	0.8573
	Uranium-235	pCi/L	0.0353 U	0.0162 U	0.07929	0.02759 U
	Uranium-236	pCi/L	0.0159 U	0.01455 U	0 U	0.03303 U
	Uranium-238	pCi/L	0.3857	0.3866	0.6013	0.2158
NHP-SW01	Americium-241	pCi/L	-0.02 U	0.02042 U		0.01136 U
	Neptunium-237	pCi/L	0 U	7.2E-06 U		0 U
	Plutonium-238	pCi/L	0.0352 U	0.00718 U		0.01539 U
	Plutonium-239/240	pCi/L	-0.009 U	0.01436 U		0.03076 U
	Technetium-99	pCi/L	2.79 U	-1.21 U	-0.352 U	2.85 U
	Uranium	µg/L	5.073	4.917	4.795	5.71
	Uranium-233/234	pCi/L	2.128	2.415	1.757	2.4
	Uranium-235	pCi/L	0.1381	0.07955	0.04775	0.09803
	Uranium-236	pCi/L	0.0177 U	0.04762	0 U	0 U
	Uranium-238	pCi/L	1.692	1.645	1.607	1.911
UND-SW01	Americium-241	pCi/L	0.0366 U	0.02247 U		0.03949 U
	Neptunium-237	pCi/L	0 U	0.00839 U		-0.00814 U
	Plutonium-238	pCi/L	0.0166 U	0 U		0.008125 U
	Plutonium-239/240	pCi/L	0.0331 U	0.01674 U		-0.01623 U
	Technetium-99	pCi/L	1.79 U	0.522 U	2.33 U	0.456 U
	Uranium	µg/L	2.202	2.695	0.7261	2.23
	Uranium-233/234	pCi/L	0.7518	1.334	0.3831	1.018
	Uranium-235	pCi/L	0.0574	0.06543	0 U	0.08432
	Uranium-236	pCi/L	-0.017 U	0 U	-0.009019 U	0 U
	Uranium-238	pCi/L	0.7348	0.8999	0.244	0.7428
UND-SW02	Americium-241	pCi/L	0.0081 U	0 U		0 U
	Neptunium-237	pCi/L	0.0072 U	0.00704 U		0 U
	Plutonium-238	pCi/L	0.0144 U	-0.0210 U		0.007652 U
	Plutonium-239/240	pCi/L	0.0072 U	0.01405 U		0 U
	Technetium-99	pCi/L	-2.63 U	2.17 U	-3.99 U	-0.893 U
	Uranium	µg/L	1.01	2.031	1.253	1.43

Table 4.21. Results for radionuclides at surface water monitoring locations – 2009 (continued)

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
UND-SW02	Uranium-233/234	pCi/L	0.4522	0.7997	0.5928	0.7141
	Uranium-235	pCi/L	-0.009 U	0.02573 U	0.0515	0.05339
	Uranium-236	pCi/L	-0.008 U	0 U	-0.009238 U	-0.00798 U
	Uranium-238	pCi/L	0.3402	0.6801	0.4166	0.4751
WDD-SW01	Americium-241	pCi/L	0.0115 U	-0.018 U		0.01917 U
	Neptunium-237	pCi/L	3E-05 U	0.01375 U		-0.00754 U
	Plutonium-238	pCi/L	0 U	-0.0137 U		3.01E-05 U
	Plutonium-239/240	pCi/L	0.0185 U	0 U		0.01507 U
	Technetium-99	pCi/L	-4.58 U	1.27 U	-2.36 U	4.81 U
	Uranium	µg/L	3.967	4.054	0.9153	1.86
	Uranium-233/234	pCi/L	2.561	2.097	0.8544	0.7025
	Uranium-235	pCi/L	0.1327	0.1168	0.009245 U	0.04166
	Uranium-236	pCi/L	0.0238 U	0.00807 U	0.008301 U	0.01496 U
	Uranium-238	pCi/L	1.321	1.352	0.3067	0.6202
	WDD-SW02	Americium-241	pCi/L	0.0296 U	1.3E-05 U	
Neptunium-237		pCi/L	-0.008 U	0.00814 U		0.007827 U
Plutonium-238		pCi/L	-0.008 U	0.00811 U		0.01561 U
Plutonium-239/240		pCi/L	0.0079 U	-0.0081 U		0.02342 U
Technetium-99		pCi/L	-0.442 U	-3.6 U	-2.68 U	-2.92 U
Uranium		µg/L	1.748	2.142	0.7486	3.68
Uranium-233/234		pCi/L	0.9964	1.431	0.3352	1.349
Uranium-235		pCi/L	0.0509	0.06119	0.02885 U	0.0603
Uranium-236		pCi/L	0.0076 U	0.0157 U	0 U	0 U
Uranium-238		pCi/L	0.5829	0.7142	0.249	1.229
WDD-SW03		Americium-241	pCi/L	0.0285 U	0.02786 U	
	Neptunium-237	pCi/L	-0.013 U	6.9E-06 U		0.007875 U
	Plutonium-238	pCi/L	0.0201 U	6.9E-06 U		-0.00783 U
	Plutonium-239/240	pCi/L	0.0067 U	0.02762 U		-0.01569 U
	Technetium-99	pCi/L	-3.98 U	2.82 U	-3.08 U	-3.21 U
	Uranium	µg/L	2.293	3.648	0.9601	3.08
	Uranium-233/234	pCi/L	1.429	1.754	0.6795	1.48
	Uranium-235	pCi/L	0.0643 U	0.07094	0.02826 U	0.05102 U
	Uranium-236	pCi/L	-0.016 U	0 U	0.008457 U	0 U
	Uranium-238	pCi/L	0.7649	1.22	0.32	1.032

Table 4.22. Results for radionuclides at exit pathway monitoring locations – 2009

Sampling Location	Parameter	Unit	First quarter	Second quarter	Third quarter	Fourth quarter
F-29B	Americium-241	pCi/L			0.01757 U	
	Neptunium-237	pCi/L			-0.01349 U	
	Plutonium-238	pCi/L			0.01348 U	
	Plutonium-239/240	pCi/L			-0.006734 U	
	Technetium-99	pCi/L			2.94 U	
	Uranium	µg/L			-0.0205 U	
	Uranium-233/234	pCi/L			-0.01381 U	
	Uranium-235	pCi/L			0 U	
	Uranium-236	pCi/L			0 U	
	Uranium-238	pCi/L			-0.006896 U	

A table is not provided for VOCs at exit pathway monitoring locations because none were detected in well F-29B. Results for other exit pathway monitoring locations sampled during 2009 are included in the tables for their respective monitoring areas as follows:

- Tables 4.1 and 4.2. VOCs and radionuclides detected at the X-749/X-120/PK Landfill wells X749-44G, X749-45G, X749-64B, X749-68G, X749-96G, X749-97G, and X749-98G
- Tables 4.7 and 4.8. VOCs and radionuclides detected at the X-701B Holding Pond well X701-48G
- Tables 4.20 and 4.21. VOCs and radionuclides detected at surface water monitoring locations BRC-SW02, LBC-SW04, UND-SW02, and WDD-SW03

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