Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
618-5_Deep	non-Rad	Lead	7439-92-1	4	4	0	100	µg/kg	--	--	4,700	82,300	1.4	82,300	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lead was not processed!
618-5_Deep	non-Rad	Total_U_Isotopes	Total_U_Isotopes	4	4	0	100	µg/kg	--	--	5,180	26,618	0.52	26,618	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Total_U_Isotopes was not processed!
618-5_Deep	Rad	Uranium-233/234	U-233/234	4	4	0	100	pCi/g	--	--	1.7	8.6	0.52	8.6	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-233/234 was not processed!
618-5_Deep	Rad	Uranium-235	15117-96-1	4	2	2	50	pCi/g	0.081	0.23	0.28	0.46	0.34	0.46	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-235 was not processed!
618-5_Deep	Rad	Uranium-238	U-238	4	4	0	100	pCi/g	--	--	1.7	8.9	0.52	8.9	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-238 was not processed!
618-5_Deep_Focused	non-Rad	Aluminum	7429-90-5	5	5	0	100	µg/kg	--	--	5.06E+06	7.65E+06	0.18	7.65E+06	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-5_Deep_Focused	non-Rad	Antimony	7440-36-0	5	1	4	20	µg/kg	1,360	1,710	1,800	1,800	--	1,800	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-5_Deep_Focused	non-Rad	Arsenic	7440-38-2	5	3	2	60	µg/kg	1,910	2,200	2,030	3,500	0.26	3,500	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-5_Deep_Focused	non-Rad	Barium	7440-39-3	5	5	0	100	µg/kg	--	--	74,200	106,000	0.16	106,000	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-5_Deep_Focused	non-Rad	Beryllium	7440-41-7	5	5	0	100	µg/kg	--	--	540	672	0.088	672	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-5_Deep_Focused	non-Rad	Chromium	7440-47-3	5	5	0	100	µg/kg	--	--	4,300	6,500	0.17	6,500	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-5_Deep_Focused	non-Rad	Cobalt	7440-48-4	5	5	0	100	µg/kg	--	--	8,800	10,500	0.075	10,500	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-5_Deep_Focused	non-Rad	Copper	7440-50-8	5	5	0	100	µg/kg	--	--	15,300	21,400	0.14	21,400	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-5_Deep_Focused	non-Rad	Iron	7439-89-6	5	5	0	100	µg/kg	--	--	2.57E+07	3.02E+07	0.063	3.02E+07	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-5_Deep_Focused	non-Rad	Lead	7439-92-1	5	5	0	100	µg/kg	--	--	3,800	6,600	0.25	6,600	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-5_Deep_Focused	non-Rad	Manganese	7439-96-5	5	5	0	100	µg/kg	--	--	344,000	579,000	0.25	579,000	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-5_Deep_Focused	non-Rad	Mercury	7439-97-6	5	2	3	40	µg/kg	17	17	30	33	0.067	33	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-5_Deep_Focused	non-Rad	Nickel	7440-02-0	5	5	0	100	µg/kg	--	--	6,900	11,300	0.22	11,300	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
618-5_Deep_Focused	non-Rad	Selenium	7782-49-2	5	1	4	20	µg/kg	1,970	2,520	2,270	2,270	--	2,270	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-5_Deep_Focused	non-Rad	Total_U_Isotopes	Total_U_Isotopes	5	5	0	100	µg/kg	--	--	2,688	36,540	1.3	36,540	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-5_Deep_Focused	Rad	Uranium-233/234	U-233/234	5	5	0	100	pCi/g	--	--	0.80	11	1.2	11	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-5_Deep_Focused	Rad	Uranium-235	15117-96-1	5	1	4	20	pCi/g	0.055	0.18	0.48	0.48	--	0.48	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-5_Deep_Focused	Rad	Uranium-238	U-238	5	5	0	100	pCi/g	--	--	0.90	12	1.3	12	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-5_Deep_Focused	non-Rad	Vanadium	7440-62-2	5	5	0	100	µg/kg	--	--	70,300	79,500	0.050	79,500	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-5_Deep_Focused	non-Rad	Zinc	7440-66-6	5	5	0	100	µg/kg	--	--	48,000	65,800	0.12	65,800	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-5_Overburden	non-Rad	Arsenic	7440-38-2	4	4	0	100	µg/kg	--	--	2,600	3,400	0.11	3,400	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Arsenic was not processed!
618-5_Overburden	non-Rad	Cadmium	7440-43-9	4	3	1	75	µg/kg	40	40	60	170	0.49	170	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cadmium was not processed!
618-5_Overburden	non-Rad	Chromium	7440-47-3	4	4	0	100	µg/kg	--	--	9,200	9,700	0.023	9,700	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Chromium was not processed!
618-5_Overburden	non-Rad	Lead	7439-92-1	4	4	0	100	µg/kg	--	--	3,900	7,500	0.29	7,500	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lead was not processed!
618-5_Overburden	non-Rad	Total_U_Isotopes	Total_U_Isotopes	5	5	0	100	µg/kg	--	--	0.26	13,574	1.0	9,773	95% Student's-t UCL	Warning: There are only 5 Values in this data Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions
618-5_Overburden	Rad	Uranium-233/234	U-233/234	4	4	0	100	pCi/g	--	--	1.0	4.1	0.73	4.1	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-233/234 was not processed!
618-5_Overburden	Rad	Uranium-238	U-238	4	4	0	100	pCi/g	--	--	1.1	4.6	0.82	4.6	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-238 was not processed!

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
618-5_Shallow	non-Rad	Arsenic	7440-38-2	4	4	0	100	µg/kg	--	--	3,900	4,300	0.042	4,300	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Arsenic was not processed!
618-5_Shallow	non-Rad	Chromium	7440-47-3	4	4	0	100	µg/kg	--	--	9,200	11,300	0.091	11,300	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Chromium was not processed!
618-5_Shallow	non-Rad	Lead	7439-92-1	4	4	0	100	µg/kg	--	--	4,400	6,100	0.15	6,100	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lead was not processed!
618-5_Shallow	non-Rad	Total_U_Isotopes	Total_U_Isotopes	5	4	1	80	µg/kg	26	26	1,694	3,126	0.25	2,849	95% KM (t) UCL	Warning: There are only 4 Distinct Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
618-5_Shallow	Rad	Uranium-233/234	U-233/234	4	4	0	100	pCi/g	--	--	0.78	0.94	0.080	0.94	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-233/234 was not processed!
618-5_Shallow	Rad	Uranium-238	U-238	4	4	0	100	pCi/g	--	--	0.57	1.1	0.25	1.1	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-238 was not processed!
618-5_Staging Pile_4	non-Rad	Arsenic	7440-38-2	4	4	0	100	µg/kg	--	--	2,500	3,300	0.13	3,300	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Arsenic was not processed!
618-5_Staging Pile_4	non-Rad	Cadmium	7440-43-9	4	2	2	50	µg/kg	40	40	50	50	0	50	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cadmium was not processed!
618-5_Staging Pile_4	non-Rad	Chromium	7440-47-3	4	4	0	100	µg/kg	--	--	9,200	11,800	0.12	11,800	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Chromium was not processed!
618-5_Staging Pile_4	non-Rad	Lead	7439-92-1	4	4	0	100	µg/kg	--	--	4,100	5,300	0.13	5,300	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lead was not processed!

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
618-5_Staging Pile_4	non-Rad	Total_U_Isotopes	Total_U_Isotopes	4	4	0	100	µg/kg	--	--	1,768	3,364	0.27	3,364	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Total_U_Isotopes was not processed!
618-5_Staging Pile_4	Rad	Uranium-233/234	U-233/234	4	4	0	100	pCi/g	--	--	0.59	1.2	0.29	1.2	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-233/234 was not processed!
618-5_Staging Pile_4	Rad	Uranium-238	U-238	4	4	0	100	pCi/g	--	--	0.59	1.1	0.27	1.1	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-238 was not processed!
618-5_Staging Pile_5	non-Rad	Arsenic	7440-38-2	4	4	0	100	µg/kg	--	--	2,200	2,700	0.090	2,700	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Arsenic was not processed!
618-5_Staging Pile_5	non-Rad	Chromium	7440-47-3	4	4	0	100	µg/kg	--	--	8,700	10,300	0.075	10,300	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Chromium was not processed!
618-5_Staging Pile_5	non-Rad	Lead	7439-92-1	4	4	0	100	µg/kg	--	--	3,200	3,900	0.080	3,900	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lead was not processed!
618-5_Staging Pile_5	non-Rad	Total_U_Isotopes	Total_U_Isotopes	5	4	1	80	µg/kg	9.3	9.3	2,441	5,090	0.35	4,326	95% KM (t) UCL	Warning: There are only 4 Distinct Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
618-5_Staging Pile_5	Rad	Uranium-233/234	U-233/234	4	4	0	100	pCi/g	--	--	0.92	1.5	0.24	1.5	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-233/234 was not processed!
618-5_Staging Pile_5	Rad	Uranium-235	15117-96-1	4	1	3	25	pCi/g	0.020	0.10	0.17	0.17	--	0.17	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-235 was not processed!
618-5_Staging Pile_5	Rad	Uranium-238	U-238	4	4	0	100	pCi/g	--	--	0.82	1.7	0.35	1.7	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-238 was not processed!
618-7_Shallow_1	non-Rad	Aluminum	7429-90-5	17	17	0	100	µg/kg	--	--	3.73E+06	6.98E+06	0.16	5.25E+06	95% Student's-t UCL	--
618-7_Shallow_1	non-Rad	Antimony	7440-36-0	17	11	6	65	µg/kg	410	680	350	830	0.26	560	KM (Percentile Bootstra	--

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
618-7_Shallow_1	non-Rad	Arsenic	7440-38-2	17	17	0	100	µg/kg	--	--	920	2,800	0.30	1,891	95% Student's-t UCL	--
618-7_Shallow_1	non-Rad	Barium	7440-39-3	17	17	0	100	µg/kg	--	--	55,000	89,500	0.13	68,874	¿ Approximate Gamma I	--
618-7_Shallow_1	non-Rad	Beryllium	7440-41-7	17	14	3	82	µg/kg	100	110	150	450	0.38	278	KM (Percentile Bootstra	--
618-7_Shallow_1	non-Rad	Cadmium	7440-43-9	17	6	11	35	µg/kg	30	110	40	100	0.37	65	KM (Percentile Bootstra	Warning: There are only 4 Distinct Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
618-7_Shallow_1	Rad	Cesium-137	10045-97-3	17	3	14	18	pCi/g	0.013	0.034	0.063	0.082	0.13	0.067	95% KM (t) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
618-7_Shallow_1	non-Rad	Chromium	7440-47-3	17	17	0	100	µg/kg	--	--	5,700	21,800	0.43	10,227	95% Modified-t UCL	--
618-7_Shallow_1	non-Rad	Cobalt	7440-48-4	17	17	0	100	µg/kg	--	--	6,700	10,200	0.099	9,152	95% Student's-t UCL	--
618-7_Shallow_1	non-Rad	Copper	7440-50-8	17	17	0	100	µg/kg	--	--	10,500	27,600	0.26	16,120	95% Modified-t UCL	--
618-7_Shallow_1	non-Rad	Iron	7439-89-6	17	17	0	100	µg/kg	--	--	2.10E+07	2.76E+07	0.070	2.60E+07	95% Student's-t UCL	--
618-7_Shallow_1	non-Rad	Lead	7439-92-1	17	17	0	100	µg/kg	--	--	1,700	30,800	1.3	14,567	Chebyshev (Mean, Sd)	--
618-7_Shallow_1	non-Rad	Manganese	7439-96-5	17	17	0	100	µg/kg	--	--	288,000	353,000	0.058	326,067	95% Student's-t UCL	--
618-7_Shallow_1	non-Rad	Mercury	7439-97-6	17	7	10	41	µg/kg	8.0	10	10	160	0.94	44	95% KM (t) UCL	Warning: There are only 7 Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
618-7_Shallow_1	non-Rad	Nickel	7440-02-0	17	17	0	100	µg/kg	--	--	9,200	70,400	1.0	20,977	95% Modified-t UCL	--
618-7_Shallow_1	non-Rad	Tin	7440-31-5	17	4	13	24	µg/kg	340	1,400	400	1,900	0.55	1,547	KM (Percentile Bootstra	Warning: There are only 4 Distinct Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
618-7_Shallow_1	non-Rad	Total_U_Isotopes	Total_U_Isotopes	17	17	0	100	µg/kg	--	--	923	23,725	1.1	10,814	95% H-UCL	
618-7_Shallow_1	Rad	Uranium-233/234	U-233/234	17	17	0	100	pCi/g	--	--	0.34	9.2	1.1	3.6	¿ Approximate Gamma I	--
618-7_Shallow_1	Rad	Uranium-235	15117-96-1	17	6	11	35	pCi/g	--	0.17	0.18	0.66	0.52	0.36	KM (Percentile Bootstra	Warning: There are only 6 Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
618-7_Shallow_1	Rad	Uranium-238	U-238	17	17	0	100	pCi/g	--	--	0.31	7.9	1.1	3.6	95% H-UCL	--
618-7_Shallow_1	non-Rad	Vanadium	7440-62-2	17	17	0	100	µg/kg	--	--	54,500	80,400	0.099	74,576	95% Student's-t UCL	--
618-7_Shallow_1	non-Rad	Zinc	7440-66-6	17	17	0	100	µg/kg	--	--	38,900	56,200	0.090	49,177	95% Student's-t UCL	--
618-7_Shallow_2	non-Rad	Aluminum	7429-90-5	4	4	0	100	µg/kg	--	--	4.02E+06	4.97E+06	0.095	4.97E+06	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Aluminum was not processed!
618-7_Shallow_2	non-Rad	Antimony	7440-36-0	4	1	3	25	µg/kg	380	420	660	660	--	660	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Antimony was not processed!

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
618-7_Shallow_2	non-Rad	Arsenic	7440-38-2	4	4	0	100	µg/kg	--	--	1,500	2,500	0.21	2,500	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Arsenic was not processed!
618-7_Shallow_2	non-Rad	Barium	7440-39-3	4	4	0	100	µg/kg	--	--	49,900	73,800	0.19	73,800	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Barium was not processed!
618-7_Shallow_2	non-Rad	Beryllium	7440-41-7	4	4	0	100	µg/kg	--	--	300	440	0.19	440	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Beryllium was not processed!
618-7_Shallow_2	non-Rad	Chromium	7440-47-3	4	4	0	100	µg/kg	--	--	4,700	6,800	0.15	6,800	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Chromium was not processed!
618-7_Shallow_2	non-Rad	Cobalt	7440-48-4	4	4	0	100	µg/kg	--	--	8,900	9,300	0.019	9,300	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cobalt was not processed!
618-7_Shallow_2	non-Rad	Copper	7440-50-8	4	4	0	100	µg/kg	--	--	11,600	13,600	0.069	13,600	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Copper was not processed!
618-7_Shallow_2	non-Rad	Iron	7439-89-6	4	4	0	100	µg/kg	--	--	2.48E+07	2.60E+07	0.020	2.60E+07	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Iron was not processed!
618-7_Shallow_2	non-Rad	Lead	7439-92-1	4	4	0	100	µg/kg	--	--	1,400	2,800	0.29	2,800	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lead was not processed!
618-7_Shallow_2	non-Rad	Manganese	7439-96-5	4	4	0	100	µg/kg	--	--	291,000	364,000	0.11	364,000	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Manganese was not processed!
618-7_Shallow_2	non-Rad	Mercury	7439-97-6	4	1	3	25	µg/kg	8.0	10	20	20	--	20	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Mercury was not processed!

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
618-7_Shallow_2	non-Rad	Nickel	7440-02-0	4	4	0	100	µg/kg	--	--	7,900	9,700	0.11	9,700	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nickel was not processed!
618-7_Shallow_2	non-Rad	Tin	7440-31-5	4	3	1	75	µg/kg	810	810	810	1,500	0.32	1,500	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Tin was not processed!
618-7_Shallow_2	non-Rad	Total_U_Isotopes	Total_U_Isotopes	5	4	1	80	µg/kg	691	691	0.073	1,590	0.69	1,574	95% KM (t) UCL	Warning: There are only 4 Distinct Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
618-7_Shallow_2	Rad	Uranium-233/234	U-233/234	4	3	1	75	pCi/g	0.32	0.32	0.41	0.57	0.17	0.57	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-233/234 was not processed!
618-7_Shallow_2	Rad	Uranium-238	U-238	4	3	1	75	pCi/g	0.23	0.23	0.40	0.53	0.15	0.53	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-238 was not processed!
618-7_Shallow_2	non-Rad	Vanadium	7440-62-2	4	4	0	100	µg/kg	--	--	67,500	74,700	0.041	74,700	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Vanadium was not processed!
618-7_Shallow_2	non-Rad	Zinc	7440-66-6	4	4	0	100	µg/kg	--	--	42,300	46,200	0.040	46,200	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Zinc was not processed!
618-7_Shallow_3	non-Rad	Aluminum	7429-90-5	4	4	0	100	µg/kg	--	--	5.11E+06	6.74E+06	0.11	6.74E+06	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Aluminum was not processed!
618-7_Shallow_3	non-Rad	Antimony	7440-36-0	4	4	0	100	µg/kg	--	--	370	450	0.082	450	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Antimony was not processed!
618-7_Shallow_3	non-Rad	Arsenic	7440-38-2	4	4	0	100	µg/kg	--	--	1,600	2,800	0.22	2,800	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Arsenic was not processed!

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
618-7_Shallow_3	non-Rad	Barium	7440-39-3	4	4	0	100	µg/kg	--	--	60,300	82,500	0.13	82,500	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Barium was not processed!
618-7_Shallow_3	non-Rad	Beryllium	7440-41-7	4	4	0	100	µg/kg	--	--	260	310	0.078	310	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Beryllium was not processed!
618-7_Shallow_3	non-Rad	Cadmium	7440-43-9	4	4	0	100	µg/kg	--	--	110	190	0.23	190	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cadmium was not processed!
618-7_Shallow_3	non-Rad	Chromium	7440-47-3	4	4	0	100	µg/kg	--	--	6,500	10,100	0.19	10,100	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Chromium was not processed!
618-7_Shallow_3	non-Rad	Cobalt	7440-48-4	4	4	0	100	µg/kg	--	--	7,000	8,600	0.097	8,600	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cobalt was not processed!
618-7_Shallow_3	non-Rad	Copper	7440-50-8	4	4	0	100	µg/kg	--	--	11,200	13,600	0.084	13,600	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Copper was not processed!
618-7_Shallow_3	non-Rad	Iron	7439-89-6	4	4	0	100	µg/kg	--	--	2.13E+07	2.43E+07	0.058	2.43E+07	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Iron was not processed!
618-7_Shallow_3	non-Rad	Lead	7439-92-1	4	4	0	100	µg/kg	--	--	2,800	4,300	0.18	4,300	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lead was not processed!
618-7_Shallow_3	non-Rad	Manganese	7439-96-5	4	4	0	100	µg/kg	--	--	300,000	357,000	0.078	357,000	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Manganese was not processed!
618-7_Shallow_3	non-Rad	Mercury	7439-97-6	4	2	2	50	µg/kg	9.0	10	10	20	0.47	20	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Mercury was not processed!

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
618-7_Shallow_3	non-Rad	Nickel	7440-02-0	4	4	0	100	µg/kg	--	--	9,200	10,100	0.042	10,100	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nickel was not processed!
618-7_Shallow_3	non-Rad	Tin	7440-31-5	4	4	0	100	µg/kg	--	--	1,100	1,800	0.20	1,800	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Tin was not processed!
618-7_Shallow_3	non-Rad	Total_U_Isotopes	Total_U_Isotopes	4	4	0	100	µg/kg	--	--	717	2,852	0.58	2,852	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Total_U_Isotopes was not processed!
618-7_Shallow_3	Rad	Uranium-233/234	U-233/234	4	4	0	100	pCi/g	--	--	0.32	1.1	0.57	1.1	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-233/234 was not processed!
618-7_Shallow_3	Rad	Uranium-235	15117-96-1	4	3	1	75	pCi/g	0.014	0.014	0.024	0.085	0.57	0.085	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-235 was not processed!
618-7_Shallow_3	Rad	Uranium-238	U-238	4	4	0	100	pCi/g	--	--	0.24	0.95	0.57	0.95	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-238 was not processed!
618-7_Shallow_3	non-Rad	Vanadium	7440-62-2	4	4	0	100	µg/kg	--	--	54,600	68,200	0.11	68,200	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Vanadium was not processed!
618-7_Shallow_3	non-Rad	Zinc	7440-66-6	4	4	0	100	µg/kg	--	--	40,300	44,500	0.049	44,500	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Zinc was not processed!
618-7_Shallow_4	non-Rad	Aluminum	7429-90-5	4	4	0	100	µg/kg	--	--	4.63E+06	5.65E+06	0.089	5.65E+06	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Aluminum was not processed!
618-7_Shallow_4	non-Rad	Antimony	7440-36-0	4	3	1	75	µg/kg	260	260	210	250	0.087	250	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Antimony was not processed!

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
618-7_Shallow_4	non-Rad	Arsenic	7440-38-2	4	4	0	100	µg/kg	--	--	2,000	5,200	0.53	5,200	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Arsenic was not processed!
618-7_Shallow_4	non-Rad	Barium	7440-39-3	4	4	0	100	µg/kg	--	--	52,100	57,900	0.043	57,900	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Barium was not processed!
618-7_Shallow_4	non-Rad	Beryllium	7440-41-7	4	4	0	100	µg/kg	--	--	80	220	0.45	220	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Beryllium was not processed!
618-7_Shallow_4	non-Rad	Cadmium	7440-43-9	4	3	1	75	µg/kg	40	40	50	90	0.28	90	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cadmium was not processed!
618-7_Shallow_4	non-Rad	Chromium	7440-47-3	4	4	0	100	µg/kg	--	--	8,500	11,400	0.15	11,400	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Chromium was not processed!
618-7_Shallow_4	non-Rad	Cobalt	7440-48-4	4	4	0	100	µg/kg	--	--	6,300	6,700	0.026	6,700	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Cobalt was not processed!
618-7_Shallow_4	non-Rad	Copper	7440-50-8	4	4	0	100	µg/kg	--	--	9,500	13,200	0.13	13,200	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Copper was not processed!
618-7_Shallow_4	non-Rad	Iron	7439-89-6	4	4	0	100	µg/kg	--	--	1.88E+07	2.12E+07	0.053	2.12E+07	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Iron was not processed!
618-7_Shallow_4	non-Rad	Lead	7439-92-1	4	4	0	100	µg/kg	--	--	2,500	3,000	0.087	3,000	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lead was not processed!
618-7_Shallow_4	non-Rad	Manganese	7439-96-5	4	4	0	100	µg/kg	--	--	248,000	285,000	0.062	285,000	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Manganese was not processed!

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
618-7_Shallow_4	non-Rad	Nickel	7440-02-0	4	4	0	100	µg/kg	--	--	8,900	12,900	0.18	12,900	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Nickel was not processed!
618-7_Shallow_4	non-Rad	Tin	7440-31-5	4	3	1	75	µg/kg	390	390	410	710	0.28	710	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Tin was not processed!
618-7_Shallow_4	non-Rad	Total_U_Isotopes	Total_U_Isotopes	5	5	0	100	µg/kg	--	--	0.081	2,271	0.77	2,064	95% Student's-t UCL	Warning: There are only 5 Values in this data Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions
618-7_Shallow_4	Rad	Uranium-233/234	U-233/234	4	4	0	100	pCi/g	--	--	0.13	0.69	0.51	0.69	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-233/234 was not processed!
618-7_Shallow_4	Rad	Uranium-238	U-238	4	4	0	100	pCi/g	--	--	0.18	0.76	0.49	0.76	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-238 was not processed!
618-7_Shallow_4	non-Rad	Vanadium	7440-62-2	4	4	0	100	µg/kg	--	--	48,200	54,800	0.055	54,800	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Vanadium was not processed!
618-7_Shallow_4	non-Rad	Zinc	7440-66-6	4	4	0	100	µg/kg	--	--	35,700	37,000	0.019	37,000	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Zinc was not processed!
618-7_Shallow_Focused	non-Rad	Acenaphthene	83-32-9	4	3	1	75	µg/kg	35	35	49	150	0.52	150	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Aluminum	7429-90-5	13	13	0	100	µg/kg	--	--	3.50E+06	7.61E+06	0.27	7.61E+06	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Antimony	7440-36-0	13	7	6	54	µg/kg	250	420	550	980	0.19	980	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	1	1	0	100	µg/kg	--	--	6.7	6.7	--	6.7	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Arsenic	7440-38-2	13	13	0	100	µg/kg	--	--	860	4,200	0.45	4,200	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Barium	7440-39-3	13	13	0	100	µg/kg	--	--	42,900	92,800	0.20	92,800	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Benzo(a)anthracene	56-55-3	4	4	0	100	µg/kg	--	--	1.1	88	1.2	88	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	4	4	0	100	µg/kg	--	--	1.0	66	1.2	66	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
618-7_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	4	4	0	100	µg/kg	--	--	0.68	52	1.1	52	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Benzo(k)fluoranthene	207-08-9	4	1	3	25	µg/kg	3.5	14	11	11	--	11	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Beryllium	7440-41-7	13	13	0	100	µg/kg	--	--	180	370	0.23	370	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	4	4	0	100	µg/kg	--	--	55	470	1.2	470	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Cadmium	7440-43-9	13	3	10	23	µg/kg	40	70	50	6,200	1.7	6,200	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	Rad	Cesium-137	10045-97-3	13	1	12	8	pCi/g	0.016	0.035	0.010	0.010	--	0.010	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Chromium	7440-47-3	13	13	0	100	µg/kg	--	--	3,400	65,900	1.4	65,900	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Chrysene	218-01-9	4	4	0	100	µg/kg	--	--	3.0	69	0.80	69	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Cobalt	7440-48-4	13	13	0	100	µg/kg	--	--	7,000	11,000	0.11	11,000	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Copper	7440-50-8	13	13	0	100	µg/kg	--	--	10,900	25,000	0.26	25,000	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Dibenz[a,h]anthracene	53-70-3	4	2	2	50	µg/kg	3.5	14	12	45	0.82	45	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	4	3	1	75	µg/kg	350	350	18	33	0.31	33	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Fluoranthene	206-44-0	4	1	3	25	µg/kg	3.5	14	48	48	--	48	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Iron	7439-89-6	13	13	0	100	µg/kg	--	--	2.10E+07	2.87E+07	0.088	2.87E+07	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Lead	7439-92-1	13	13	0	100	µg/kg	--	--	1,300	6,500	0.62	6,500	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Manganese	7439-96-5	13	13	0	100	µg/kg	--	--	271,000	425,000	0.12	425,000	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Mercury	7439-97-6	13	1	12	8	µg/kg	8.0	10	20	20	--	20	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Nickel	7440-02-0	13	13	0	100	µg/kg	--	--	6,800	17,200	0.27	17,200	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Pyrene	129-00-0	4	4	0	100	µg/kg	--	--	3.0	410	1.6	410	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Tin	7440-31-5	13	7	6	54	µg/kg	790	830	700	1,200	0.21	1,200	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Total petroleum hydrocarbons - motor oil (high boiling)	TPH/OILH	4	4	0	100	µg/kg	--	--	6,400	680,000	1.3	680,000	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Total_U_Isotopes	Total_U_Isotopes	13	13	0	100	µg/kg	--	--	0.045	19,563	1.3	19,563	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	Rad	Uranium-233/234	U-233/234	13	13	0	100	pCi/g	--	--	0.28	11	1.7	11	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	Rad	Uranium-235	15117-96-1	13	4	9	31	pCi/g	0.024	0.18	0.041	0.97	1.4	0.97	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	Rad	Uranium-238	U-238	13	12	1	92	pCi/g	0.20	0.20	0.21	6.4	1.2	6.4	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-7_Shallow_Focused	non-Rad	Vanadium	7440-62-2	13	13	0	100	µg/kg	--	--	54,300	80,500	0.11	80,500	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
618-7_Shallow_Focused	non-Rad	Zinc	7440-66-6	13	13	0	100	µg/kg	--	--	39,500	52,400	0.082	52,400	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-8_Shallow	non-Rad	Arsenic	7440-38-2	4	4	0	100	µg/kg	--	--	2,400	4,100	0.28	4,100	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Arsenic was not processed!
618-8_Shallow	non-Rad	Barium	7440-39-3	4	4	0	100	µg/kg	--	--	69,100	97,600	0.14	97,600	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Barium was not processed!
618-8_Shallow	non-Rad	Chromium	7440-47-3	4	4	0	100	µg/kg	--	--	9,400	12,400	0.13	12,400	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Chromium was not processed!
618-8_Shallow	non-Rad	Lead	7439-92-1	4	4	0	100	µg/kg	--	--	3,900	5,100	0.11	5,100	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Lead was not processed!
618-8_Shallow	non-Rad	Selenium	7782-49-2	4	4	0	100	µg/kg	--	--	512	846	0.21	846	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Selenium was not processed!
618-8_Shallow	non-Rad	Total_U_Isotopes	Total_U_Isotopes	5	5	0	100	µg/kg	--	--	0.12	2,185	0.97	1,935	95% Student's-t UCL	Warning: There are only 5 Values in this data Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions
618-8_Shallow	non-Rad	Uranium	7440-61-1	4	4	0	100	µg/kg	--	--	1,280	1,720	0.15	1,720	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium was not processed!
618-8_Shallow	Rad	Uranium-233/234	U-233/234	4	4	0	100	pCi/g	--	--	0.74	1.2	0.25	1.2	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-233/234 was not processed!
618-8_Shallow	Rad	Uranium-238	U-238	4	3	1	75	pCi/g	0.36	0.36	0.44	0.73	0.27	0.73	Maximum Detect	Warning: This data set only has 4 observations! Data set is too small to compute reliable and meaningful statistics and estimates! The data set for variable Uranium-238 was not processed!
618-9_Shallow_Focused	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	26	6	20	23	µg/kg	5.0	660	1.0	110	0.94	110	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Acetone	67-64-1	26	7	19	27	µg/kg	17	1,300	17	680	1.3	680	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
618-9_Shallow_Focused	non-Rad	Aldrin	309-00-2	2	1	1	50	µg/kg	8.2	8.2	390	390	--	390	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Aluminum	7429-90-5	2	2	0	100	µg/kg	--	--	6.14E+06	8.57E+06	0.23	8.57E+06	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Aroclor-1016	12674-11-2	26	1	25	4	µg/kg	39	4,100	1,900	1,900	--	1,900	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Aroclor-1221	11104-28-2	26	1	25	4	µg/kg	39	4,100	1,900	1,900	--	1,900	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Aroclor-1232	11141-16-5	26	1	25	4	µg/kg	39	4,100	1,900	1,900	--	1,900	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Aroclor-1242	53469-21-9	26	1	25	4	µg/kg	39	4,100	1,900	1,900	--	1,900	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	26	1	25	4	µg/kg	39	4,100	1,900	1,900	--	1,900	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	26	1	25	4	µg/kg	78	8,100	3,900	3,900	--	3,900	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	26	1	25	4	µg/kg	78	8,100	3,900	3,900	--	3,900	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Arsenic	7440-38-2	33	27	6	82	µg/kg	340	390	430	11,600	1.7	11,600	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Barium	7440-39-3	2	2	0	100	µg/kg	--	--	64,400	90,200	0.24	90,200	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Beryllium	7440-41-7	2	2	0	100	µg/kg	--	--	230	330	0.25	330	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	26	1	25	4	µg/kg	36	3,500	5,200	5,200	--	5,200	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	26	9	17	35	µg/kg	30	1,700	38	2,700	1.0	2,700	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Chlordane	57-74-9	2	1	1	50	µg/kg	82	82	69	69	--	69	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Chloroform	67-66-3	26	2	24	8	µg/kg	5.0	660	6.0	9.0	0.28	9.0	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Chromium	7440-47-3	2	2	0	100	µg/kg	--	--	6,700	9,700	0.26	9,700	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Cobalt	7440-48-4	2	2	0	100	µg/kg	--	--	9,300	11,400	0.14	11,400	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Copper	7440-50-8	2	2	0	100	µg/kg	--	--	11,200	16,700	0.28	16,700	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	26	20	6	77	µg/kg	1,000	2,700	1,500	7,200	0.47	7,200	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Heptachlor epoxide	1024-57-3	2	1	1	50	µg/kg	8.2	8.2	44	44	--	44	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Hexachlorobutadiene	87-68-3	26	8	18	31	µg/kg	31	3,500	120	760	0.59	760	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Hexachloroethane	67-72-1	26	6	20	23	µg/kg	30	3,400	110	17,000	1.8	17,000	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Iron	7439-89-6	2	2	0	100	µg/kg	--	--	1.91E+07	2.49E+07	0.19	2.49E+07	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Lead	7439-92-1	33	33	0	100	µg/kg	--	--	970	7,700	0.52	7,700	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Manganese	7439-96-5	2	2	0	100	µg/kg	--	--	309,000	359,000	0.11	359,000	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
618-9_Shallow_Focused	non-Rad	Mercury	7439-97-6	33	7	26	21	µg/kg	100	510	150	330	0.26	330	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	26	10	16	38	µg/kg	19	1,800	17	2,300	2.1	2,300	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Nickel	7440-02-0	2	2	0	100	µg/kg	--	--	8,300	10,600	0.17	10,600	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Nitrate	14797-55-8	33	23	10	70	µg/kg	1,300	1,300	1,900	1.67E+06	2.4	1.67E+06	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Tetrachloroethene	127-18-4	26	9	17	35	µg/kg	5.0	650	4.0	920	1.6	920	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Toluene	108-88-3	26	3	23	12	µg/kg	5.0	660	1.0	9.0	1.1	9.0	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Total_U_Isotopes	Total_U_Isotopes	19	19	0	100	µg/kg	--	--	289	8,963	1.7	8,963	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Trichloroethene	79-01-6	26	1	25	4	µg/kg	5.0	660	2.0	2.0	--	2.0	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Uranium	7440-61-1	19	6	13	32	µg/kg	500	2,000	1,960	3,100	0.19	3,100	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	Rad	Uranium-235	15117-96-1	19	13	6	68	pCi/g	0.0020	0.0040	0.0040	0.071	1.2	0.071	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	Rad	Uranium-238	U-238	19	19	0	100	pCi/g	--	--	0.097	3.0	1.7	3.0	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Vanadium	7440-62-2	2	2	0	100	µg/kg	--	--	49,900	59,300	0.12	59,300	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
618-9_Shallow_Focused	non-Rad	Zinc	7440-66-6	2	2	0	100	µg/kg	--	--	39,000	52,300	0.21	52,300	Maximum Detect	Focused Sampling Design: EPC defaults to Maximum Concentration.
628-4_Overburden	non-Rad	Arsenic	7440-38-2	6	6	0	100	µg/kg	--	--	2,500	3,700	0.16	3,374	95% Student's-t UCL	Warning: There are only 6 Values in this data Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions
628-4_Overburden	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	6	6	0	100	µg/kg	--	--	19	82	0.64	61	95% Student's-t UCL	Warning: There are only 6 Values in this data Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions
628-4_Overburden	Rad	Cesium-137	10045-97-3	6	2	4	33	pCi/g	0.0090	0.025	0.029	0.033	0.091	0.033	95% KM (% Bootstrap) U	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
628-4_Overburden	non-Rad	Lead	7439-92-1	6	6	0	100	µg/kg	--	--	3,400	9,700	0.43	7,284	95% Student's-t UCL	Warning: There are only 6 Values in this data Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
628-4_Overburden	non-Rad	Total_U_Isotopes	Total_U_Isotopes	6	6	0	100	µg/kg	--	--	1,381	2,411	0.17	2,308	95% Student's-t UCL	Warning: There are only 6 Values in this data Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions
628-4_Overburden	Rad	Uranium-233/234	U-233/234	6	6	0	100	pCi/g	--	--	0.65	1.0	0.19	0.87	95% Modified-t UCL	Warning: There are only 6 Values in this data Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions
628-4_Overburden	Rad	Uranium-238	U-238	6	6	0	100	pCi/g	--	--	0.46	0.81	0.17	0.78	95% Student's-t UCL	Warning: There are only 6 Values in this data Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions
628-4_Shallow	non-Rad	Aroclor-1242	53469-21-9	6	1	5	17	µg/kg	32	170	42	42	--	42	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Aroclor-1242 was not processed!
628-4_Shallow	non-Rad	Aroclor-1248	12672-29-6	6	1	5	17	µg/kg	32	35	1,115	1,115	--	1,115	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Aroclor-1248 was not processed!
628-4_Shallow	non-Rad	Aroclor-1254	11097-69-1	6	3	3	50	µg/kg	32	170	44	405	1.2	243	95% KM (t) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
628-4_Shallow	non-Rad	Aroclor-1260	11096-82-5	6	1	5	17	µg/kg	32	170	38	38	--	38	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Aroclor-1260 was not processed!
628-4_Shallow	non-Rad	Arsenic	7440-38-2	6	6	0	100	µg/kg	--	--	2,300	4,700	0.27	3,864	95% Student's-t UCL	Warning: There are only 6 Values in this data Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
628-4_Shallow	non-Rad	Lead	7439-92-1	6	6	0	100	µg/kg	--	--	5,800	120,000	1.2	99,167	6 Approximate Gamma U	Warning: There are only 6 Values in this data Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions
628-4_Shallow	non-Rad	Total_U_Isotopes	Total_U_Isotopes	6	6	0	100	µg/kg	--	--	1,906	3,734	0.24	3,163	95% Student's-t UCL	Warning: There are only 6 Values in this data Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions
628-4_Shallow	Rad	Uranium-233/234	U-233/234	6	6	0	100	pCi/g	--	--	0.60	1.3	0.26	1.1	95% Student's-t UCL	Warning: There are only 6 Values in this data Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions
628-4_Shallow	Rad	Uranium-235	15117-96-1	6	6	0	100	pCi/g	--	--	0.054	0.12	0.24	0.11	95% Student's-t UCL	Warning: There are only 6 Values in this data Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions
628-4_Shallow	Rad	Uranium-238	U-238	6	6	0	100	pCi/g	--	--	0.63	1.2	0.24	1.0	95% Student's-t UCL	Warning: There are only 6 Values in this data Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions
UPR-300-17_Shallow	non-Rad	Total_U_Isotopes	Total_U_Isotopes	12	12	0	100	µg/kg	--	--	1,578	38,256	1.4	12,420	6 Approximate Gamma UCL	
UPR-300-17_Shallow	non-Rad	Acenaphthene	83-32-9	12	1	11	8	µg/kg	34	37	117	117	--	117	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Acenaphthene was not processed!
UPR-300-17_Shallow	non-Rad	Aluminum	7429-90-5	12	12	0	100	µg/kg	--	--	5.36E+06	6.89E+06	0.084	6.34E+06	95% Student's-t UCL	--
UPR-300-17_Shallow	non-Rad	Anthracene	120-12-7	12	2	10	17	µg/kg	3.4	3.7	2.6	7.0	0.66	7.0	95% KM (% Bootstrap) U	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
UPR-300-17_Shallow	non-Rad	Antimony	7440-36-0	12	5	7	42	µg/kg	423	493	260	370	0.14	359	95% KM (t) UCL	Warning: There are only 5 Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
UPR-300-17_Shallow	non-Rad	Aroclor-1248	12672-29-6	12	3	9	25	µg/kg	14	55	28	1,970	0.91	1,970	KM (Percentile Bootstra	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
UPR-300-17_Shallow	non-Rad	Aroclor-1254	11097-69-1	12	12	0	100	µg/kg	--	--	6.9	819	1.2	450	ó Approximate Gamma l	--
UPR-300-17_Shallow	non-Rad	Aroclor-1260	11096-82-5	12	12	0	100	µg/kg	--	--	3.6	196	1.0	113	ó Approximate Gamma l	--
UPR-300-17_Shallow	non-Rad	Arsenic	7440-38-2	12	12	0	100	µg/kg	--	--	2,090	2,980	0.11	2,573	95% Student's-t UCL	--
UPR-300-17_Shallow	non-Rad	Barium	7440-39-3	12	12	0	100	µg/kg	--	--	64,200	92,500	0.11	81,014	95% Student's-t UCL	--
UPR-300-17_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	12	9	3	75	µg/kg	3.5	3.7	1.2	95	2.4	59	′.5% KM (Chebyshev) U	Warning: There are only 9 Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
UPR-300-17_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	12	7	5	58	µg/kg	3.5	3.7	1.2	68	1.8	44	′.5% KM (Chebyshev) U	Warning: There are only 7 Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
UPR-300-17_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	12	9	3	75	µg/kg	3.5	3.7	1.0	64	1.6	33	95% KM (Chebyshev) U	Warning: There are only 9 Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
UPR-300-17_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	12	6	6	50	µg/kg	3.4	3.7	1.0	34	1.8	9.9	95% KM (BCA) UCL	Warning: There are only 6 Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
UPR-300-17_Shallow	non-Rad	Beryllium	7440-41-7	12	12	0	100	µg/kg	--	--	173	317	0.18	240	95% Student's-t UCL	--
UPR-300-17_Shallow	non-Rad	Boron	7440-42-8	12	12	0	100	µg/kg	--	--	824	7,240	0.91	3,903	ó Approximate Gamma l	--
UPR-300-17_Shallow	non-Rad	Cadmium	7440-43-9	12	12	0	100	µg/kg	--	--	67	325	0.65	173	ó Approximate Gamma l	--
UPR-300-17_Shallow	non-Rad	Chromium	7440-47-3	12	12	0	100	µg/kg	--	--	8,140	26,000	0.44	13,795	95% Modified-t UCL	--
UPR-300-17_Shallow	non-Rad	Chrysene	218-01-9	12	9	3	75	µg/kg	3.5	3.7	1.7	72	1.5	39	95% KM (Chebyshev) U	Warning: There are only 9 Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
UPR-300-17_Shallow	non-Rad	Cobalt	7440-48-4	12	12	0	100	µg/kg	--	--	5,550	7,380	0.079	6,688	95% Student's-t UCL	--
UPR-300-17_Shallow	non-Rad	Copper	7440-50-8	12	12	0	100	µg/kg	--	--	11,600	19,400	0.18	15,135	95% Modified-t UCL	--
UPR-300-17_Shallow	non-Rad	Fluoranthene	206-44-0	12	5	7	42	µg/kg	3.4	3.5	1.8	127	1.6	35	95% KM (t) UCL	Warning: There are only 5 Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
UPR-300-17_Shallow	non-Rad	Fluorene	86-73-7	12	1	11	8	µg/kg	3.4	3.5	2.9	2.9	--	2.9	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Fluorene was not processed!
UPR-300-17_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	12	2	10	17	µg/kg	3.4	3.7	1.0	5.9	0.99	5.9	95% KM (BCA) UCL	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
UPR-300-17_Shallow	non-Rad	Iron	7439-89-6	12	12	0	100	µg/kg	--	--	1.50E+07	2.03E+07	0.078	1.90E+07	95% Student's-t UCL	--
UPR-300-17_Shallow	non-Rad	Lead	7439-92-1	12	12	0	100	µg/kg	--	--	3,290	20,000	0.69	11,240	95% Approximate Gamma U	--
UPR-300-17_Shallow	non-Rad	Manganese	7439-96-5	12	12	0	100	µg/kg	--	--	223,000	325,000	0.090	285,159	95% Student's-t UCL	--
UPR-300-17_Shallow	non-Rad	Mercury	7439-97-6	12	2	10	17	µg/kg	24	32	53	69	0.19	69	95% KM (% Bootstrap) U	Warning: Data set has only 2 Distinct Detected Values. This may not be adequate enough to compute meaningful and reliable test statistics and estimates. The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).
UPR-300-17_Shallow	non-Rad	Molybdenum	7439-98-7	12	12	0	100	µg/kg	--	--	273	578	0.23	412	95% Student's-t UCL	--
UPR-300-17_Shallow	non-Rad	Naphthalene	91-20-3	12	1	11	8	µg/kg	34	37	48	48	--	48	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Naphthalene was not processed!
UPR-300-17_Shallow	non-Rad	Nickel	7440-02-0	12	12	0	100	µg/kg	--	--	7,730	1.25E+06	3.2	563,654	Chebyshev (Mean, Sd)	--
UPR-300-17_Shallow	non-Rad	Pyrene	129-00-0	12	4	8	33	µg/kg	3.5	3.7	5.0	117	1.5	34	95% KM (t) UCL	Warning: There are only 4 Distinct Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
UPR-300-17_Shallow	non-Rad	Silver	7440-22-4	12	1	11	8	µg/kg	139	197	340	340	--	340	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Silver was not processed!

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
UPR-300-17_Shallow	non-Rad	Total petroleum hydrocarbons - diesel range	TPHDIESEL	12	1	11	8	µg/kg	3,330	3,580	2,950	2,950	--	2,950	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Total petroleum hydrocarbons - diesel range was not processed!
UPR-300-17_Shallow	non-Rad	Total petroleum hydrocarbons - motor oil (high boiling)	TPH/OILH	12	11	1	92	µg/kg	10,400	10,400	8,000	260,000	1.3	210,420	′.5% KM (Chebyshev) U	--
UPR-300-17_Shallow	Rad	Uranium-233/234	U-233/234	12	12	0	100	pCi/g	--	--	0.53	18	1.6	6.1	95% H-UCL	--
UPR-300-17_Shallow	Rad	Uranium-235	15117-96-1	12	5	7	42	pCi/g	--	0.13	0.20	2.9	1.3	0.91	95% KM (t) UCL	Warning: There are only 5 Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
UPR-300-17_Shallow	Rad	Uranium-238	U-238	12	12	0	100	pCi/g	--	--	0.53	12	1.4	4.0	ⅿ Approximate Gamma l	--
UPR-300-17_Shallow	non-Rad	Vanadium	7440-62-2	12	12	0	100	µg/kg	--	--	40,700	56,000	0.085	52,150	95% Student's-t UCL	--
UPR-300-17_Shallow	non-Rad	Zinc	7440-66-6	12	12	0	100	µg/kg	--	--	43,000	278,000	0.92	157,172	Chebyshev (Mean, Sd)	--
UPR-300-46_Shallow	non-Rad	Total_U_Isotopes	Total_U_Isotopes	13	13	0	100	µg/kg	--	--	0.14	7,353	0.59	4,897	95% Student's-t UCL	
UPR-300-46_Shallow	non-Rad	Acenaphthene	83-32-9	12	3	9	25	µg/kg	3.5	3.7	8.8	25	0.59	13	95% KM (t) UCL	Warning: There are only 3 Distinct Detected Values in this data set The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods. Those methods will return a 'N/A' value on your output display!
UPR-300-46_Shallow	non-Rad	Aluminum	7429-90-5	12	12	0	100	µg/kg	--	--	4.57E+06	7.56E+06	0.13	6.80E+06	95% Student's-t UCL	--
UPR-300-46_Shallow	non-Rad	Antimony	7440-36-0	12	4	8	33	µg/kg	441	609	267	409	0.18	381	KM (Percentile Bootstra	Warning: There are only 4 Distinct Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
UPR-300-46_Shallow	non-Rad	Aroclor-1248	12672-29-6	12	1	11	8	µg/kg	14	15	879	879	--	879	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Aroclor-1248 was not processed!
UPR-300-46_Shallow	non-Rad	Aroclor-1254	11097-69-1	12	9	3	75	µg/kg	14	15	6.7	780	2.2	490	′.5% KM (Chebyshev) U	Warning: There are only 9 Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
UPR-300-46_Shallow	non-Rad	Aroclor-1260	11096-82-5	12	11	1	92	µg/kg	14	14	4.6	153	1.2	84	95% KM (Chebyshev) U	--
UPR-300-46_Shallow	non-Rad	Arsenic	7440-38-2	12	12	0	100	µg/kg	--	--	1,870	3,400	0.18	2,846	95% Student's-t UCL	--
UPR-300-46_Shallow	non-Rad	Barium	7440-39-3	12	12	0	100	µg/kg	--	--	50,100	96,100	0.17	82,137	95% Student's-t UCL	--

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
UPR-300-46_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	12	9	3	75	µg/kg	3.6	3.6	1.1	6.8	0.69	3.9	95% KM (t) UCL	Warning: There are only 9 Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
UPR-300-46_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	12	7	5	58	µg/kg	3.5	3.6	1.3	6.3	0.58	3.4	95% KM (t) UCL	Warning: There are only 7 Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
UPR-300-46_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	12	10	2	83	µg/kg	3.6	3.6	1.1	14	1.0	5.4	95% KM (BCA) UCL	--
UPR-300-46_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	12	6	6	50	µg/kg	3.5	3.7	1.1	5.2	0.59	2.8	95% KM (t) UCL	Warning: There are only 6 Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
UPR-300-46_Shallow	non-Rad	Beryllium	7440-41-7	12	12	0	100	µg/kg	--	--	150	254	0.13	222	95% Student's-t UCL	--
UPR-300-46_Shallow	non-Rad	Boron	7440-42-8	12	12	0	100	µg/kg	--	--	627	3,100	0.49	1,714	95% H-UCL	--
UPR-300-46_Shallow	non-Rad	Cadmium	7440-43-9	12	12	0	100	µg/kg	--	--	70	118	0.19	95	% Approximate Gamma L	--
UPR-300-46_Shallow	Rad	Cesium-137	10045-97-3	12	1	11	8	pCi/g	0.019	0.054	0.070	0.070	--	0.070	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Cesium-137 was not processed!
UPR-300-46_Shallow	non-Rad	Chromium	7440-47-3	12	12	0	100	µg/kg	--	--	6,660	14,800	0.24	10,173	95% Modified-t UCL	--
UPR-300-46_Shallow	non-Rad	Chrysene	218-01-9	12	9	3	75	µg/kg	3.6	3.6	1.1	11	0.83	5.6	95% KM (t) UCL	Warning: There are only 9 Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
UPR-300-46_Shallow	non-Rad	Cobalt	7440-48-4	12	12	0	100	µg/kg	--	--	4,880	7,290	0.12	6,361	95% Student's-t UCL	--
UPR-300-46_Shallow	non-Rad	Copper	7440-50-8	12	12	0	100	µg/kg	--	--	9,120	18,200	0.22	13,151	95% Student's-t UCL	--
UPR-300-46_Shallow	non-Rad	Dibenz[a,h]anthracene	53-70-3	12	1	11	8	µg/kg	3.5	3.7	1.3	1.3	--	1.3	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Dibenz[a,h]anthracene was not processed!
UPR-300-46_Shallow	non-Rad	Fluoranthene	206-44-0	12	10	2	83	µg/kg	3.6	3.6	1.8	13	0.58	9.6	95% KM (t) UCL	--
UPR-300-46_Shallow	non-Rad	Fluorene	86-73-7	12	2	10	17	µg/kg	3.5	3.7	0.90	2.2	0.58	2.2	95% KM (% Bootstrap) U	Warning: Recommended UCL exceeds the maximum observation Note: DL/2 is not a recommended method. Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Table G-5. 300 Area Source Operable Unit Exposure Point Concentration Summary

Waste Site Decision Unit	Analyte Group	Analyte Name	CAS No.	Total Samples	Total Detects	Total Non-Detects	Frequency of Detection (%)	Units	Minimum Detection Limit	Maximum Detection Limit	Minimum Detected Result	Maximum Detected Result	Coefficient of Variation	Exposure Point Concentration	Exposure Point Concentration Basis	Comment
UPR-300-46_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	12	7	5	58	µg/kg	3.6	3.7	1.3	22	1.2	7.6	95% KM (BCA) UCL	Warning: There are only 7 Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
UPR-300-46_Shallow	non-Rad	Iron	7439-89-6	12	12	0	100	µg/kg	--	--	1.56E+07	2.27E+07	0.10	2.05E+07	95% Student's-t UCL	--
UPR-300-46_Shallow	non-Rad	Lead	7439-92-1	12	12	0	100	µg/kg	--	--	3,050	12,600	0.47	7,105	% Approximate Gamma U	--
UPR-300-46_Shallow	non-Rad	Manganese	7439-96-5	12	12	0	100	µg/kg	--	--	224,000	353,000	0.15	311,001	95% Student's-t UCL	--
UPR-300-46_Shallow	non-Rad	Mercury	7439-97-6	12	12	0	100	µg/kg	--	--	18	48	0.35	29	95% Modified-t UCL	--
UPR-300-46_Shallow	non-Rad	Molybdenum	7439-98-7	12	12	0	100	µg/kg	--	--	310	560	0.17	456	95% Student's-t UCL	--
UPR-300-46_Shallow	non-Rad	Naphthalene	91-20-3	12	6	6	50	µg/kg	3.5	3.6	7.2	110	1.2	36	95% KM (t) UCL	Warning: There are only 6 Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
UPR-300-46_Shallow	non-Rad	Nickel	7440-02-0	12	12	0	100	µg/kg	--	--	6,600	11,100	0.15	9,230	95% Student's-t UCL	--
UPR-300-46_Shallow	non-Rad	Pyrene	129-00-0	12	5	7	42	µg/kg	3.5	3.7	2.3	7.6	0.48	4.4	95% KM (t) UCL	Warning: There are only 5 Detected Values in this data Note: It should be noted that even though bootstrap may be performed on this data set the resulting calculations may not be reliable enough to draw conclusions
UPR-300-46_Shallow	Rad	Uranium-233/234	U-233/234	12	12	0	100	pCi/g	--	--	0.69	2.7	0.41	1.8	95% Student's-t UCL	--
UPR-300-46_Shallow	Rad	Uranium-235	15117-96-1	12	1	11	8	pCi/g	0.028	0.18	0.24	0.24	--	0.24	Maximum Detect	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set! It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV). The data set for variable Uranium-235 was not processed!
UPR-300-46_Shallow	Rad	Uranium-238	U-238	12	12	0	100	pCi/g	--	--	0.56	2.5	0.49	1.7	95% Student's-t UCL	--
UPR-300-46_Shallow	non-Rad	Vanadium	7440-62-2	12	12	0	100	µg/kg	--	--	38,700	65,200	0.15	53,808	95% Student's-t UCL	--
UPR-300-46_Shallow	non-Rad	Zinc	7440-66-6	12	12	0	100	µg/kg	--	--	33,800	65,500	0.19	47,945	% Approximate Gamma U	--

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Table G-6. Site-Specific RESRAD Input Parameters for the Residential Exposure Scenario

RESRAD Category	Parameter	Units	Interim Action Record of Decision Exposure Scenario		
			User Input	Rationale	Reference
Exposure Pathways	External gamma:	NA	Active		
	Inhalation:		Active		
	Plant ingestion:		Active		
	Meat ingestion:		Active		
	Milk ingestion:		Active		
	Aquatic foods:		Active		
	Drinking water:		Active		
	Soil ingestion:		Active		
	Radon:		Suppressed		
R011 – Contaminated Zone (CZ)	Area of CZ	m^2	10,000	Generic site model	Surface area presented in RESRAD user's guide, ANL/EAD-4
	Thickness of CZ[c]	m	4.6	Direct exposure cleanup standards apply to the upper 4.6 m (15 ft)	
	Length Parallel to Aquifer Flow	m	100	Square root of contaminated site area	
	Radiation Dose Limit	mrem/yr	NA		
	Elapsed Time of Waste Placement	yr	0	RESRAD default	
R012 –Principal Radionuclides Concentrations	All radionuclide contaminants of concern	pCi/g	Contaminant-specific	Contaminant-specific soil remedial action levels (pCi/g) are endpoints of the RESRAD calculations	
R013 - Cover and CZ Hydrological Data	Cover Depth	m	0	Conservative assumption; assumes cover is not maintained and direct exposure to contamination may occcurein the future.	
	Density of Cover Material	g/cm^3	Not used		
	Cover Erosion Rate	m/yr	Not used		
	Density of CZ	g/cm^3	1.6	Hanford 100 Area-specific data	DOE/RL-90-07
	CZ Erosion Rate	m/yr	0.001	RESRAD default	
	CZ Total Porosity	Unitless	0.4	WDOH guidance	WDOH/320-015
	CZ Field Capacity	Unitless	0.15	Same as SZ Field Capacity	
	CZ Hydraulic Conductivity	m/yr	250	Hanford 100 Area-specific data	DOE/RL-96-11 DOE/RL-93-37
	CZ b Parameter	Unitless	4.05	WDOH guidance	WDOH/320-015
	Humidity in Air	g/cm^3	8	RESRAD default	
	Evapotranspiration Coefficient	Unitless	0.91		Letter from EPA
	Wind Speed	m/s	3.4	Hanford Site average	PNNL-12087
	Precipitation	m/yr	0.16	Based on 16 cm (6.3 in.) average annual rainfall	DOE/RL-90-07
	Irrigation Rate	m/yr	0.76	EPA, Region X guidance	Letter from EPA
	Irrigation Mode	NA	Overhead	RESRAD default	
	Runoff Coefficient	Unitless	0.2	RESRAD default	
	Watershed Area for Nearby Stream or Pond	m^2	1,000,000	RESRAD default	
	Accuracy for Water/Soil Computations	Unitless	0.001	RESRAD default	

Table G-6. Site-Specific RESRAD Input Parameters for the Residential Exposure Scenario

RESRAD Category	Parameter	Units	Interim Action Record of Decision Exposure Scenario		
			User Input	Rationale	Reference
R014 - SZ Hydrological Data	Density of SZ	g/cm^3	1.6	Hanford 100 Area-specific data	DOE/RL-90-07
	SZ Total Porosity	Unitless	0.4	WDOH guidance	WDOH/320-015
	SZ Effective Porosity	Unitless	0.25	Agreement among the Tri-Parties [a]	ANL/EAD/LD-2, Table 3.2
	SZ Field Capacity	Unitless	0.15	Field capacity = total porosity - effective porosity	ANL/EAD/LD-2, Equation 4.4
	SZ Hydraulic Conductivity	m/yr	5,530	Hanford 100-Area specific data	DOE/RL-96-11 DOE/RL-93-37
	SZ Hydraulic Gradient	Unitless	1.25E-03	Based on GW velocity = 27.8 m/yr, porosity = 0.25, hydraulic conductivity = 5,530	DOE/RL-94-136
	SZ b Parameter	Unitless	4.05	WDOH guidance	WDOH/320-015
	Water Table Drop Rate	m/yr	0.001	RESRAD default	
	Well Pump Intake Depth	m below water table	4.6	Typical RCRA well screen length	
	Nondispersion (ND) or Mass-Balance (MB)	NA	ND		
	Well Pumping Rate	m^3/yr	250	RESRAD default	
R015 - Uncontaminated and Unsaturated Strata Hydrological Data	Number of Unsaturated Strata	NA	1	Generic site model; one contaminated zone, one uncontaminated zone	
	Thickness	m	12	Generic site model	
	Soil Density	g/cm^3	1.6	Hanford 100 Area-specific data	DOE/RL-90-07
	Total Porosity	Unitless	0.4	WDOH guidance	WDOH/320-015
	Effective Porosity	Unitless	0.25	Agreement among the Tri-Parties	ANL/EAD/LD-2, 1993, Table 3.2
	Field Capacity	Unitless	0.15	Field capacity = total porosity - effective porosity	ANL/EAD/LD-2, 1993, Equation 4.4
	Soil-specific b Parameter	Unitless	4.05	WDOH guidance	WDOH/320-015
	Hydraulic Conductivity	m/yr	250	Hanford 100-Area specific data	DOE/RL-96-11 DOE/RL-93-37
R016 - Distribution Coefficients and Leach Rates	CZ K_d	mL/g	Contaminant-specific	Kds values assigned to contaminated zone are for sand-dominated sediment (Hss). Kds values assigned to uncontaminated unsaturated zone and saturated zone are for sandy gravel (Hg).	Kd values are taken from following hierarchy of information sources: DOE/RL-96-17 Table (first preference), and RESRAD default (ANL 2009)
	Leach Rate	yr^{-1}	Contaminant-specific	RESRAD manual	Note - leach rates are not used; Kd values are used for all radionuclides for leaching calculations
	Saturated Solubility	mol/L	0	RESRAD default	Not used - Kd values are used for all leaching calculations

Table G-6. Site-Specific RESRAD Input Parameters for the Residential Exposure Scenario

RESRAD Category	Parameter	Units	Interim Action Record of Decision Exposure Scenario		
			User Input	Rationale	Reference
R017 - Inhalation and External Gamma	Inhalation Rate	m^3/yr	7,300	WDOH guidance	WDOH/320-015
	Mass Loading for Inhalation	g/m^3	0.0001	WDOH guidance	WDOH/320-015
	Exposure duration	yr	30		EPA/540/R-92/003
	Indoor Dust Filtration Factor	Unitless	0.4	RESRAD default	
	External Gamma Shielding Factor	Unitless	0.4		EPA/540-R-00-007, Equation 4
	Indoor Time Fraction	Unitless	0.6	Based on 15 hr/day x 350 day/yr (5,250 hr/8,760 hr)	
	Outdoor Time Fraction	Unitless	0.12	Based on 3 hr/day x 350 days/yr (1,050 hr/8,760 hr)	
	Shape Factor	NA	Circular	RESRAD default	
R018 - Ingestion Pathway Data, Dietary Parameters	Fruits, Vegetables, and Grain Consumption	kg/yr	110	WDOH guidance	WDOH/320-015
	Leafy Vegetable Consumption	kg/yr	2.7	WDOH guidance	WDOH/320-015
	Milk Consumption	L/yr	100	WDOH guidance	WDOH/320-015
	Meat and Poultry Consumption	kg/yr	36	WDOH guidance	WDOH/320-015
	Fish Consumption	kg/yr	19.7	WDOH guidance	WDOH/320-015
	Other Seafood Consumption	kg/yr	0.9	RESRAD default	
	Soil Ingestion	g/yr	36.5	Based on 100 mg/day x 365 days/yr	EPA/540/R-92/003
	Drinking Water Intake	L/yr	730	WDOH guidance	WDOH/320-015
	Drinking Water Contamination Fraction	Unitless	1	RESRAD default	
	Household Water Contamination Fraction	Unitless	1	RESRAD default	
	Livestock Water Contamination Fraction	Unitless	1	RESRAD default	
	Irrigation Water Contamination Fraction	Unitless	1	RESRAD default	
	Aquatic Food Contamination Fraction	Unitless	0.5	RESRAD default	
	Plant Food Contamination Fraction	Unitless	-1	RESRAD default	
	Meat Contamination Fraction	Unitless	-1	RESRAD default	
	Milk Contamination Fraction	Unitless	-1	RESRAD default	
R019 - Ingestion Pathway Data, Nondietary	Livestock Fodder Intake for Meat	kg/d	68	RESRAD default	
	Livestock Fodder Intake for Milk	kg/d	55	RESRAD default	
	Livestock Water Intake for Meat	L/d	50	RESRAD default	
	Livestock Water Intake for Milk	L/d	160	RESRAD default	
	Livestock Intake of Soil	kg/d	0.5	RESRAD default	
	Mass Loading for Foliar Deposition	g/m^3	0.0001	RESRAD default	
	Depth of Soil Mixing Layer	m	0.15	RESRAD default	
	Depth of Roots	m	0.9	RESRAD default	

Table G-6. Site-Specific RESRAD Input Parameters for the Residential Exposure Scenario

RESRAD Category	Parameter	Units	Interim Action Record of Decision Exposure Scenario		
			User Input	Rationale	Reference
R020 – Groundwater Usage	Groundwater Fractional Usage - Drinking Water	Unitless	1	RESRAD default	
	Groundwater Fractional Usage - Household Usage	Unitless	1	RESRAD default	
	Groundwater Fractional Usage - Livestock Water	Unitless	1	RESRAD default	
	Groundwater Usage – Irrigation	Unitless	1	RESRAD default	
R021 - Radon	Radon parameters are not used; Radon is not a Hanford Site COPC.			WDOH guidance	WDOH/320-015

a. Use of an effective porosity of 0.25 as a generic 100 Area input parameter is ased upon agreement among the Tri-Parites. An effective poosity of 0.25 corresponds to values for sand and gravel lreported in ANL/EAD/LD-2, Table 3.2.

ANL = Argonne National Laboratory
COPC = contaminant of potential concern
CZ = contaminated zone
EPA = U.S. Environmental Protection Agency
NA = not applicable
ND = nondispersion
RCRA = *Resource Conservation and Recovery Act of 1976*
RESRAD = RESidual RADioactivity code
SZ = saturated zone
WDOH = Washington State Department of Health

ANL/EAD-4, 2001, *User's Manual for RESRAD Version 6*, , Environmental Assessment Division, Argonne National Laboratory, Argonne, Illinois

ANL/EAD/LD-2, 1993, *Manual for Implementing Residual Radioactive Materials Guidelines Using RESRAD, Version 5.0, Evnironmental Assessment Division, Argonne National Laboratory, Argonne, IL*

ANL, 2009, RESRAD for Windows, Version 6.5, Environmental Assessment Division, Argonne National Laboratory, Argonne, Illinois.

DOE/RL-96-17, 2009, *Remedial Design Report/Remedial Action Work Plan for the 100 Area*, Rev. 6 (For Approval July 2009), U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-2008-66, *Hanford Site Groundwater Monitoring for Fiscal Year 2008*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

EPA/540/R-92/003, 1991, *Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual Supplemental Guidance "Standard Default Exposure Factors" Interim Final*, OSWER Directive 9285.6-03, Office of Emergency and Remedial Response, Toxics Integration Branch, U.S. Environmental Protection Agency, Washington, D.C.

EPA 540/R/99/006, 1999, *Radiation Risk Assessment at CERCLA Sites: Q & A*, OSWER Directive No. 9200.4-31P, , U.S. Environmental Protection Agency, Washington, D.C.

EPA/540-R-00-007, 2000, *Soil Screening Guidance for Radionuclides: User's Guide*, OSWER Directive No. 9355.4 16A, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, Washington, D.C.

EPA/600/P-95/002Fa, 1997, *Exposure Factors Handbook Volume I: General Factors*, U.S. Environmental Protection Agency, National Center for Environmental Assessment, Washington, D.C.

PNNL-12087, 1999, Hanford Site Climatological Data Summary 1998 with Historical Data, Pacific Northwest National Laboratory, Richland, Washington.

PNNL-15160, 2005, *Hanford Site Climatological Summary 2004 With Historical Data*, Pacific Northwest National Laboratory, Richland, Washington

PNNL-14702, 2006, *Vadose Zone Hydrology Data Package for Hanford Assessments*, Rev. 1, Pacific Northwest National Laboratory, Richland, Washington

PNNL-14753, 2006, Groundwater Data Package for Hanford Assessments, Rev. 1, Pacific Northwest National Laboratory, Richland, Washington.

PNNL-18564, 2009, *Selection and Traceability of Parameters to Support Hanford-Specific RESRAD Analyses – Fiscal Year 2008 Status Report*, Pacific Northwest National Laboratory, Richland, Washington.

WDOH/320-015, 1997, *Hanford Guidance for Radiological Cleanup*, Rev. 1, Washington State Department of Health, Olympia, Washington

Table G-7. Site-Specific RESRAD Input Parameters for the Industrial Exposure Scenario

RESRAD Category	Parameter	Units	User Input, Industrial Worker Direct Exposure	Rationale	Reference
Exposure Pathways	External gamma:	NA	Active		
	Inhalation:		Active		
	Plant ingestion:		Suppressed		
	Meat ingestion:		Suppressed		
	Milk ingestion:		Suppressed		
	Aquatic foods:		Suppressed		
	Drinking water:		Suppressed		
	Soil ingestion:		Active		
	Radon:		Suppressed		
R011 – Contaminated Zone (CZ)	Area of CZ	m^2	10,000	Generic site model[a]	
	Thickness of CZ	m	4.6	Direct exposure cleanup standards apply to the upper 4.6 m (15 ft)[a]	
	Length Parallel to Aquifer Flow	m	100	Square root of contaminated site area	
	Radiation Dose Limit	mrem/yr	Not used	EPA guidance. PRGs are calculated for target cancer risks.	EPA 540/R/99/006
	Elapsed Time of Waste Placement	yr	0	RESRAD default	
R012 –Principal Radionuclides Concentrations	All radionuclide contaminants of concern	pCi/g	Contaminant-specific	Contaminant-specific soil remedial action levels (pCi/g) are endpoints of the RESRAD calculations	
R013 - Cover and CZ Hydrological Data	Cover Depth	m	0	Generic site model[a]	
	Density of Cover Material	g/cm^3	Not used		
	Cover Erosion Rate	m/yr	Not used		
	Density of CZ	g/cm^3	1.6		DOE/RL-2001-47
	CZ Erosion Rate	m/yr	0.001	RESRAD default	
	CZ Total Porosity	Unitless	0.3		DOE/RL-2001-47
	CZ Field Capacity	Unitless	0.25		DOE/RL-2001-47
	CZ Hydraulic Conductivity	m/yr	0.0022		DOE/RL-2001-47
	CZ b Parameter	Unitless	15		DOE/RL-2001-47
	Humidity in Air	g/cm^3	8	RESRAD default	
	Evapotranspiration Coefficient	Unitless	0.91		Letter from EPA
	Wind Speed	m/s	3.4		DOE/RL-2001-47
	Precipitation	m/yr	0.16	Based on 16 cm (6.3 in.) average annual rainfall	DOE/RL-90-07
	Irrigation Rate	m/yr	0	Not applicable[b]	
	Irrigation Mode	NA	Overhead	RESRAD default	
	Runoff Coefficient	Unitless	0.2	RESRAD default	
	Watershed Area for Nearby Stream or Pond	m^2	Not used		
	Accuracy for Water/Soil Computations	Unitless	Not used		

Table G-7. Site-Specific RESRAD Input Parameters for the Industrial Exposure Scenario

RESRAD Category	Parameter	Units	User Input, Industrial Worker Direct Exposure	Rationale	Reference
R014 - Saturated Zone (SZ) Hydrological Data	Density of SZ	g/cm^3	NA	Not applicable[b]	
	SZ Total Porosity	Unitless	NA	Not applicable[b]	
	SZ Effective Porosity	Unitless	NA	Not applicable[b]	
	SZ Field Capacity	Unitless	NA	Not applicable[b]	
	SZ Hydraulic Conductivity	m/yr	NA	Not applicable[b]	
	SZ Hydraulic Gradient	Unitless	NA	Not applicable[b]	
	SZ b Parameter	Unitless	NA	Not applicable[b]	
	Water Table Drop Rate	m/yr	NA	Not applicable[b]	
	Well Pump Intake Depth	m below water table	NA	Not applicable[b]	
	Nondispersion (ND) or Mass-Balance (MB)	NA	NA	Not applicable[b]	
	Well Pumping Rate	m^3/yr	NA	Not applicable[b]	
R015 - Uncontaminated and Unsaturated Strata Hydrological Data	Number of Unsaturated Strata	NA	NA	Not applicable[b]	
	Thickness	m	NA	Not applicable[b]	
	Soil Density	g/cm^3	NA	Not applicable[b]	
	Total Porosity	Unitless	NA	Not applicable[b]	
	Effective Porosity	Unitless	NA	Not applicable[b]	
	Field Capacity	Unitless	NA	Not applicable[b]	
	Soil-specific b Parameter	Unitless	NA	Not applicable[b]	
	Hydraulic Conductivity	m/yr	NA	Not applicable[b]	
R016 - Distribution Coefficients and Leach Rates	CZ K_d	mL/g	Contaminant-specific	Table 3-2.	K_d values (except for uranium) taken from DOE/RL-96-17, Table B-7 (RESRAD default used where no value is reported). Uranium K_ds taken from EPA, Ecology, and DOE, 2004.
	Leach Rate	yr^{-1}	Contaminant-specific	RESRAD manual	Note - leach rates are not used; Kd values are used for all radionuclides for leaching calculations
	Saturated Solubility	mol/L	0	RESRAD default	Not used - Kd values are used for all leaching calculations

Table G-7. Site-Specific RESRAD Input Parameters for the Industrial Exposure Scenario

RESRAD Category	Parameter	Units	User Input, Industrial Worker Direct Exposure	Rationale	Reference
R017 - Inhalation and External Gamma	Inhalation Rate	m^3/yr	7,300	Average annual air intake based on a daily inhalation rate of 20 m^3/day (365 days/yr).	OSWER Directive 9285.6-03
	Mass Loading for Inhalation	g/m^3	0.0001	WDOH guidance	WDOH/320-015
	Exposure duration	yr	25	EPA guidance	OSWER Directive 9285.6-03
	Indoor Dust Filtration Factor	Unitless	0.4	RESRAD default	
	External Gamma Shielding Factor	Unitless	0.4	EPA guidance	EPA/540-R-00-007, Equation 4
	Indoor Time Fraction	Unitless	0.17	Fraction of the year spent onsite indoors. Assumes 6 hr/day, 250 days/yr (1,500 hr/8,760 hr).	
	Outdoor Time Fraction	Unitless	0.057	Fraction of the year spent onsite outdoors. Assumes 2 hr/day, 250 days/yr (500 hr/8,760 hr).	
	Shape Factor	NA	Circular	RESRAD default	
R018 - Ingestion Pathway Data, Dietary Parameters	Fruits, Vegetables, and Grain Consumption	kg/yr	NA	Not applicable[b]	
	Leafy Vegetable Consumption	kg/yr	NA	Not applicable[b]	
	Milk Consumption	L/yr	NA	Not applicable[b]	
	Meat and Poultry Consumption	kg/yr	NA	Not applicable[b]	
	Fish Consumption	kg/yr	NA	Not applicable[b]	
	Other Seafood Consumption	kg/yr	NA	Not applicable[b]	
	Soil Ingestion	g/yr	18.25	Based on 50 mg/day x 365 days/yr	OSWER 9355.4-24
	Drinking Water Intake	L/yr	NA	Not applicable[b]	
	Drinking Water Contamination Fraction	Unitless	NA	Not applicable[b]	
	Household Water Contamination Fraction	Unitless	NA	Not applicable[b]	
	Livestock Water Contamination Fraction	Unitless	NA	Not applicable[b]	
	Irrigation Water Contamination Fraction	Unitless	NA	Not applicable[b]	
	Aquatic Food Contamination Fraction	Unitless	NA	Not applicable[b]	
	Plant Food Contamination Fraction	Unitless	NA	Not applicable[b]	
	Meat Contamination Fraction	Unitless	NA	Not applicable[b]	
	Milk Contamination Fraction	Unitless	NA	Not applicable[b]	

Table G-7. Site-Specific RESRAD Input Parameters for the Industrial Exposure Scenario

RESRAD Category	Parameter	Units	User Input, Industrial Worker Direct Exposure	Rationale	Reference
R019 - Ingestion Pathway Data, Nondietary	Livestock Fodder Intake for Meat	kg/d	NA	Not applicable[b]	
	Livestock Fodder Intake for Milk	kg/d	NA	Not applicable[b]	
	Livestock Water Intake for Meat	L/d	NA	Not applicable[b]	
	Livestock Water Intake for Milk	L/d	NA	Not applicable[b]	
	Livestock Intake of Soil	kg/d	NA	Not applicable[b]	
	Mass Loading for Foliar Deposition	g/m^3	NA	Not applicable[b]	
	Depth of Soil Mixing Layer	m	NA	Not applicable[b]	
	Depth of Roots	m	NA	Not applicable[b]	
R020 – Groundwater Usage	Groundwater Fractional Usage - Drinking Water	Unitless	NA	Not applicable[b]	
	Groundwater Fractional Usage - Household Usage	Unitless	NA	Not applicable[b]	
	Groundwater Fractional Usage - Livestock Water	Unitless	NA	Not applicable[b]	
	Groundwater Usage – Irrigation	Unitless	NA	Not applicable[b]	
R021 - Radon	potential concern.			Not applicable[b]	

Notes:

a. Generic site model parameters will be changed to site-specific values for cleanup verification.

b. Not applicable – the following parameters are not used in the model when drinking water and food ingestion pathways are suppressed: contaminated zone

CZ = contaminated zone

EPA= U.S. Environmental Protection Agency

NA = not applicable

PRG = preliminary remediation goal

RESRAD= RESidual RADioactivity code (ANL 2009)

SZ = saturated zone

WDOH= Washington State Department of Health

ANL, 2009, RESRAD for Windows, Version 6.5.

DOE/RL-90-07, *Remedial Investigation/Feasibility Study Work Plan for the 100-BC-1 Operable Unit, Hanford Site, Richland, Washington.*

DOE/RL-96-17, *Remedial Design Report/Remedial Action Work Plan for the 100 Area*.

DOE/RL-2001-47, *Remedial Design Report/Remedial Action Work Plan for the 300 Area*.

EPA/540-R-00-007, *Soil Screening Guidance for Radionuclides: User's Guide.*

EPA 540/R/99/006, *Radiation Risk Assessment at CERCLA Sites: Q & A*.

EPA, Ecology, and DOE, 2004, *Explanation of Significant Differences for the 300-FF-2 Operable Unit Record of Decision.*

OSWER Directive 9285.6-03, *Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual* Supplemental Guidance *"Standard Default*

OSWER 9355.4-24, *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites*.

WDOH/320-015, *Hanford Guidance for Radiological Cleanup*.

Table G-8. Exposure Parameters Used to Calculate Method B Soil Direct Contact CULs

Exposure Factor	Symbol	Value	Units	Source
Gastrointestinal absorption fraction	AB1	1	unitless	WAC-173-340-740(3)(b)(B)(I) and WAC-173-340-740(3)(b)(B)(II)
Average body weight	ABW	16	kg	WAC-173-340-740(3)(b)(B)(I) and WAC-173-340-740(3)(b)(B)(II)
Averaging time - Carcinogens	ATc	75	years	WAC-173-340-740(3)(b)(B)(II)
Averaging time -Noncarcinogens	ATnc	6	years	WAC-173-340-740(3)(b)(B)(I)
Carcinogenic Potency Factor	CPF	Chemical-Specific	kg-day/mg	See Table G-17
Exposure duration	ED	6	years	WAC-173-340-740(3)(b)(B)(I) and WAC-173-340-740(3)(b)(B)(II)
Exposure Frequency	EF	1	unitless	WAC-173-340-740(3)(b)(B)(I) and WAC-173-340-740(3)(b)(B)(II)
Hazard quotient	HQ	1	unitless	WAC-173-340-740(3)(b)(B)(I)
Reference Dose	RfD	Chemical-Specific	mg/kg-day	See Table G-17
Acceptable cancer risk level	RISK	1 in 1,000,000	unitless	WAC-173-340-740(3)(b)(B)(II)
Soil ingestion rate	SIR	200	mg/day	WAC-173-340-740(3)(b)(B)(I) and WAC-173-340-740(3)(b)(B)(II)
Unit conversion factor	UCF	1,000,000	mg/kg	WAC-173-340-740(3)(b)(B)(I) and WAC-173-340-740(3)(b)(B)(II)

Table G-9. Exposure Parameters Used to Calculate Method C Soil Direct Contact CULs

Exposure Factor	Symbol	Value	Units	Source
Gastrointestinal absorption fraction	AB1	1	unitless	WAC 173-340-745(5)(b)(iii)(B)(I) Equation 745-1 and WAC 173-340-745(5)(b)(iii)(B)(II) Equation 745-2
Average body weight	ABW	70	kg	WAC 173-340-745(5)(b)(iii)(B)(I) Equation 745-1 and WAC 173-340-745(5)(b)(iii)(B)(II) Equation 745-2
Averaging time - carcinogens	AT	75	years	WAC 173-340-745(5)(b)(iii)(B)(II) Equation 745-2
Averaging time - noncarcinogens	AT	20	years	WAC 173-340-745(5)(b)(iii)(B)(I) Equation 745-1
Carcinogenic Potency Factor	CPF	chemical-specific	kg-day/mg	See Table G-17
Exposure duration	ED	20	years	WAC 173-340-745(5)(b)(iii)(B)(I) Equation 745-1 and WAC 173-340-745(5)(b)(iii)(B)(II) Equation 745-2
Exposure frequency	EF	0.4	unitless	WAC 173-340-745(5)(b)(iii)(B)(I) Equation 745-1 and WAC 173-340-745(5)(b)(iii)(B)(II) Equation 745-2
Hazard quotient	HQ	1	unitless	WAC 173-340-745(5)(b)(iii)(B)(I) Equation 745-1
Reference Dose	RfD	chemical-specific	mg/kg-day	See Table G-17
Acceptable cancer risk level	RISK	1 in 100,000	unitless	WAC 173-340-745(5)(b)(iii)(B)(II) Equation 745-2
Soil ingestion rate	SIR	50	mg/day	WAC 173-340-745(5)(b)(iii)(B)(I) Equation 745-1 and WAC 173-340-745(5)(b)(iii)(B)(II) Equation 745-2
Unit conversion factor	UCF	1,000,000	mg/kg	WAC 173-340-745(5)(b)(iii)(B)(I) Equation 745-1 and WAC 173-340-745(5)(b)(iii)(B)(II) Equation 745-2

Notes:

WAC 173-340-745(5)(b)(iii)(B)(I), "Model Toxics Control Act—Cleanup, Soil Cleanup Standards for Industrial Properties, Method C Industrial Soil Cleanup Levels, Standard Method C Industrial Soil Cleanup Levels, Human Health Pr
WAC 173-340-745(5)(b)(iii)(B)(II), "Model Toxics Control Act—Cleanup, Soil Cleanup Standards for Industrial Properties, Method C Industrial Soil Cleanup Levels, Standard Method C Industrial Soil Cleanup Levels, Human Health P

Table G-10. Exposure Parameters Used to Calculate Method B Soil Inhalation Pathway CULs

Exposure Factor	Symbol	Value	Units	Source
Average Body Weight – Carcinogen	ABW	70	kg	WAC 173-340-750(3)(b)(ii)(B) Equation 750-2
Average Body Weight - Noncarcinogen	ABW	16	kg	WAC 173-340-750(3)(b)(ii)(A) Equation 750-1
Averaging Time - Carcinogen	AT	75	years	WAC 173-340-750(3)(b)(ii)(B) Equation 750-2
Averaging Time - Noncarcinogen	AT	6	years	WAC 173-340-750(3)(b)(ii)(A) Equation 750-1
Breathing Rate - Carcinogen	BR	20	m^3/day	WAC 173-340-750(3)(b)(ii)(B) Equation 750-2
Breathing Rate - Noncarcinogen	BR	10	m^3/day	WAC 173-340-750(3)(b)(ii)(A) Equation 750-1
Cancer Potency Factor	CPF	Chemical-Specific	$(mg/kg\text{-}day)^{-1}$	See Table G-17
Exposure Duration - Carcinogen	ED	30	year	WAC 173-340-750(3)(b)(ii)(B) Equation 750-2
Exposure Duration – Noncarcinogen	ED	6	year	WAC 173-340-750(3)(b)(ii)(A) Equation 750-1
Exposure Frequency	EF	1	unitless	WAC 173-340-750(3)(b)(ii)(A) Equation 750-1 and WAC 173-340-750(3)(b)(ii)(B) Equation 750-2
Inhalation Absorption Factor	ABS	1	unitless	WAC 173-340-750(3)(b)(ii)(A) Equation 750-1 and WAC 173-340-750(3)(b)(ii)(B) Equation 750-2
Reference Dose	RfD	Chemical-Specific	(mg/kg-day)	See Table G-17
Target Hazard Quotient	HQ	1	Unitless	WAC 173-340-750(3)(b)(ii)(A) Equation 750-1
Target Risk	RISK	1 in 1,000,000	Unitless	WAC 173-340-750(3)(b)(ii)(B) Equation 750-2
Unit Conversion Factor	UCF	1000	µg/mg	WAC 173-340-750(3)(b)(ii)(A) Equation 750-1 and WAC 173-340-750(3)(b)(ii)(B) Equation 750-2

Notes:

WAC 173-340-750(3), "Model Toxics Control Act--Cleanup," "Cleanup Standards to Protect Air Quality," "Method B Air Cleanup Levels,"

Table G-11. Exposure Parameters Used to Calculate Method C Soil Inhalation Pathway CULs

Exposure Factor	Symbol	Value	Units	Source
Average Body Weight - Carcinogen and Noncarcinogen	ABW	70	kg	WAC 173-340-750(4)(b)(ii)(A) Equation 750-1 and WAC 173-340-750(4)(b)(ii)(B) Equation 750-2
Averaging Time - Carcinogen	AT	75	years	WAC 173-340-750(4)(b)(ii)(B) Equation 750-2
Averaging Time - Noncarcinogen	AT	30	years	WAC 173-340-750(4)(b)(ii)(A) Equation 750-1
Breathing Rate - Carcinogen and Noncarcinogen	BR	20	m^3/day	WAC 173-340-750(4)(b)(ii)(A) Equation 750-1 and WAC 173-340-750(4)(b)(ii)(B) Equation 750-2
Cancer Potency Factor	CPF	Chemical Specific	$(mg/kg\text{-}day)^{-1}$	See Table G-17
Exposure Duration - Carcinogen and Noncarcinogen	ED	30	year	WAC 173-340-750(4)(b)(ii)(A) Equation 750-1 and WAC 173-340-750(4)(b)(ii)(B) Equation 750-2
Exposure Frequency	EF	1	unitless	WAC 173-340-750(4)(b)(ii)(A) Equation 750-1 and WAC 173-340-750(4)(b)(ii)(B) Equation 750-2
Inhalation Absorption Factor	ABS	1	unitless	WAC 173-340-750(4)(b)(ii)(A) Equation 750-1 and WAC 173-340-750(4)(b)(ii)(B) Equation 750-2
Reference Dose	RfD	Chemical Specific	(mg/kg-day)	See Table G-17
Target Hazard Quotient	HQ	1	Unitless	WAC 173-340-750(4)(b)(ii)(A) Equation 750-1
Target Risk	RISK	1 in 100,000	Unitless	WAC 173-340-750(4)(b)(ii)(B) Equation 750-2
Unit Conversion Factor	UCF	1,000	µg/mg	WAC 173-340-750(4)(b)(ii)(A) Equation 750-1 and WAC 173-340-750(4)(b)(ii)(B) Equation 750-2

Notes:

WAC 173-340-750(4)(b)(ii)(A), "Model Toxics Control Act—Cleanup, Cleanup Standards to Protect Air Quality, Method C Air Cleanup Levels, Standard Method C Air Cleanup Levels, Human Health Protection, Noncarcinogens."

WAC 173-340-750(4)(b)(ii)(B) , "Model Toxics Control Act—Cleanup, Cleanup Standards to Protect Air Quality, Method C Air Cleanup Levels, Standard Method C Air Cleanup Levels, Human Health Protection, Carcinogens."

Table G-12. Exposure Parameters Used to Calculate Residential Monument Worker Scenario RBSLs.

Exposure Route/Exposure Factor	Symbol	Value	Units	Source
Chronic Daily Intake - Resident Monument Worker, External Exposure, Occupational Fraction	$CDI_{rmw_rad_ext_occ}$	Radioisotope-Specific	pCi-year/g	Calculated
Chronic Daily Intake - Resident Monument Worker, Ingestion, Occupational Fraction	$CDI_{rmw_rad_ing_occ}$	Radioisotope-Specific	pCi	Calculated
Chronic Daily Intake - Resident Monument Worker, Inhalation, Occupational Fraction	$CDI_{rmw_rad_inh_occ}$	Radioisotope-Specific	pCi	Calculated
Concentration in Soil (Broad Area)	C_s	Radioisotope-Specific	pCi/g	Radioisotope-Specific
Exposure Duration - Resident Monument Worker	ED_{rmw}	25	years	OSWER Directive 9285.6-03, value for industrial worker
Exposure Frequency - Resident Monument Worker, Occupational Fraction	EF_{rmw_occ}	250	days/year	OSWER Directive 9285.6-03, value for industrial worker
Exposure Frequency - Resident Monument Worker, Residential Fraction	EF_{rmw_res}	350	days/year	OSWER Directive 9285.6-03, value for adult resident
Exposure Time - Resident Monument Worker, Occupational Fraction	ET_{rmw_occ}	8	hour/day	OSWER Directive 9285.6-03, value for industrial worker
Exposure Time - Resident Monument Worker, Occupational Fraction, Indoors	$ET_{rmw_occ_in}$	0	hour/day	Assumes no time is spent indoors
Exposure Time - Resident Monument Worker, Occupational Fraction, Outdoors	$ET_{rmw_occ_out}$	8	hour/day	OSWER Directive 9285.6-03, value for an outdoor industrial worker
Exposure Time - Resident Monument Worker, Residential Fraction	ET_{rmw_res}	16	hrs/day	Assumes 8 hours on the worksite, and 16 hours at home
Exposure Time - Resident Monument Worker, Residential Fraction, Indoors	$ET_{rmw_res_in}$	13	hour/day	DOE/RL-2007-21, 24 hr/day total - (11 hours/day Outdoors)(Workday)
Exposure Time - Resident Monument Worker, Residential Fraction, Outdoors	$ET_{rmw_res_out}$	3	hour/day	DOE/RL-2007-21
Gamma Shielding Factor, Indoors	GSF_{in}	0.4	unitless	U.S. EPA. 2000
Gamma Shielding Factor, Outdoors	GSF_{out}	1	unitless	U.S. EPA. 2000
Inhalation Rate - Residential Monument Worker	IRA_{rmw}	8.30E-01	m^3/hour	OSWER Directive 9285.6-03, value for adult resident, based on a value of 20 m^3/day
Soil Ingestion Rate - Resident Monument Worker	IRS_{rmw}	100	mg/day	OSWER Directive 9285.6-03, value for adult resident; OSWER 9355.4 24, value for outdoor worker
Soil ingestion rate - Resident Monument Worker, Occupational Fraction, adjusted	$IRS_{rmw_occ_adj}$	23.8	mg/day	Calculated
Soil Ingestion Rate - Resident Monument Worker, Residential Fraction, adjusted	$IRS_{rmw_res_adj}$	76.20	mg/day	Calculated
Particulate Emission Factor (Broad Area)	PEF_B	2.58E+10	m^3/kg	Calculated
Particulate Emission Factor (Local Area)	PEF_L	7.30E+10	m^3/kg	See Table G-14
Preliminary Remediation Goal - Resident Monument Worker, External Exposure, Residential Fraction	$RBSL_{rmw_rad_ext_res}$	Radioisotope-Specific	pCi/g	Calculated
Preliminary Remediation Goal - Resident Monument Worker, Ingestion, Residential Fraction	$RBSL_{rmw_rad_ing_res}$	Radioisotope-Specific	pCi/g	Calculated
Preliminary Remediation Goals- Resident Monument Worker, Inhalation, Residential Fraction	$RBSL_{rmw_rad_inh_res}$	Radioisotope-Specific	pCi/g	Calculated
Cancer Risk from Broad Area Exposure for Occupational Portion of Resident Monument Worker through Incidental Ingestion of Soil	$RISK_{rmw_rad_ing_occ}$	Radioisotope-Specific	unitless	Calculated
Cancer Risk from Broad Area Exposure for Occupational Portion of Resident Monument Worker through Ionizing Radiation	$RISK_{rmw_rad_ext_occ}$	Radioisotope-Specific	unitless	Calculated
Cancer Risk from Broad Area Exposure for Occupational Portion of Resident Monument Worker through Inhalation of Dust in Soil	$RISK_{rmw_rad_inh_occ}$	Radioisotope-Specific	unitless	Calculated
Slope Factor - Inhalation	SF_i	Radioisotope-Specific	risk/pCi	See Table G-17
Slope Factor – Soil Ingestion	SF_s	Radioisotope-Specific	risk/pCi	See Table G-17
Slope Factor – External Exposure	SF_x	Radioisotope-Specific	Risk/year per pCi/g	See Table G-17
Target Risk – Radioisotope	TR_{rad}	1.0E-04	unitless	OSWER Directive 9355.4-24
Time - Resident Monument Worker	t_{rmw}	25	years	Equivalent to the Exposure Duration
Unit Conversion Factor	UCF1	1.00E-03	g/mg	1 g = 1,000 mg
Unit Conversion Factor	UCF2	1000	g/kg	1 kg = 1,000 g
Unit Conversion Factor	UCF3	0.000114	years/hour	1 year =8,760 hours
Decay Constant	λ	Radioisotope-Specific	yr^{-1}	0.693/half-life
Half Life		Radioisotope-Specific	years	U.S. EPA 2001

DOE/RL-2007-21, *Risk Assessment Report for the 100 Area and 300 Area Component of the River Corridor Baseline Risk Assessment*

DOE/RL-96-12, Rev. 0, *Hanford Site Background: Part 2, Soil Background for Radionuclides*

OSWER 9355.4 24, *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites*

OSWER Directive 9285.6 03 , *Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual Supplemental Guidance "Standard Default Exposure Factors"*

U.S. EPA 2001. *US EPA Health Effects Assessment Summary Tables (HEAST) Slope Factors Table*

U.S. EPA. 2000. S*oil Screening Guidance for Radionuclides: User's Guide* .

Table G-13. Exposure Parameters Used to Calculate Casual Recreational User Scenario RBSLs.

Exposure Route/Exposure Factor	Symbol	Value	Units	Source
Dermal Absorption Fraction	ABS_d	Chemical-specific	unitless	See Table G-17
Area Correction Factor	ACF	Chemical-specific	unitless	Eckerman 2007
Skin Adherence Factor - Adult	AF_a	0.07	mg/cm^2	EPA/540/R-99/005
Skin Adherence Factor - Child	AF_{ccu}	0.2	mg/cm^2	EPA/540/R-99/005
Averaging Time - Carcinogenic	AT_{ca}	25,550	days	= 365 days/year x 70 years
Averaging Time - Noncarcinogenic, Child Casual User	AT_{nc_cu}	2,190	days	= 365 days/year x 6 years
Body Weight- Adult	BW_a	70	kg	OSWER Directive 9285.6-03
Body Weight – Child	BW_{ccu}	15	kg	OSWER Directive 9285.6-03
Cancer Slope Factor - oral	CSF_o	Chemical-Specific	$(mg/kg\text{-}day)^{-1}$	See Table G-17
Age-adjusted dermal contact rate, Casual User	DFS_{adj_cu}	361	(mg-year)/(kg-day)	Calculated value
Age-adjusted dermal contact rate – mutagens, Casual User	$DFSM_{adj_cu}$	1,445	(mg-year)/(kg-day)	Calculated value
Exposure Duration -Adult + Child	ED_{a+ccu}	30	years	OSWER Directive 9285.6-03
Exposure Duration - Child Casual User	ED_{ccu}	6	years	OSWER Directive 9285.6-03
Exposure Duration - 0-2 years	$ED_{0\text{-}2}$	2	years	EPA/630/R-03/003F
Exposure Duration - 2-6 years	$ED_{2\text{-}6}$	4	years	EPA/630/R-03/003F
Exposure Duration - 6-16 years	$ED_{6\text{-}16}$	10	years	EPA/630/R-03/003F
Exposure Duration -16-30 years	$ED_{16\text{-}30}$	14	years	EPA/630/R-03/003F
Exposure Frequency - Casual User	EF_{cu}	30	days/year	DOE/RL-2007-21, Table 3-16
Exposure Time - Casual User	ET_{cu}	6	hours/day	PNNL 2001; Table 4.9
Gastro-Intestinal Absorption Fraction	GIABS	Chemical-Specific	unitless	See Table G-17
Soil Ingestion Rate - Adult	IRS_a	100	mg/day	OSWER Directive 9285.6-03.
Age-adjusted inhalation Rate - Casual User	IRA_{adj_cu}	7.50E-01	m^3/hour	Calculated value
Age-adjusted soil ingestion rate, Casual User, Radioisotopes	$IRS_{adj_cu_rad}$	120	mg/day	Calculated value
Age-adjusted soil ingestion rate, Casual User	IRS_{adj_cu}	114	mg-yr/kg-day	Calculated value
Age-adjusted soil ingestion rate – mutagens, Casual User	$IRSM_{adj_cu}$	489.5	mg-yr/kg-day	Calculated value
Soil Ingestion Rate - Child Casual User	IRS_{ccu}	200	mg/day	OSWER Directive 9285.6-03.
Inhalation Unit Risk	IUR	Chemical-Specific	$(\mu g/m^3)^{-1}$	See Table G-17
Inhalation Rate - Casual User Child	IRA_{ccu}	4.17E-01	m^3/hour	EPA/540/R-92/003, based on a value of 10 m^3/day
Inhalation Rate - Casual User Adult	IRA_a	8.33E-01	m^3/hour	EPA/540/R-92/003, based on a value of 20 m^3/day
Particulate Emission Factor	PEF	7.30E+10	m^3/kg	See Table 6-15
PRG – casual user, carcinogen, incidental soil ingestion	$PRG_{cu_ca_ing}$	Chemical-Specific	mg/kg	Calculated value

Table G-13. Exposure Parameters Used to Calculate Casual Recreational User Scenario RBSLs.

Exposure Route/Exposure Factor	Symbol	Value	Units	Source
PRG – casual user, noncarcinogen, incidental soil ingestion	$PRG_{cu_nc_ing}$	Chemical-Specific	mg/kg	Calculated value
PRG – casual user, mutagen, incidental soil ingestion	$PRG_{cu_mu_ing}$	Chemical-Specific	mg/kg	Calculated value
PRG – casual user, vinyl chloride, incidental soil ingestion	$PRG_{cu_vc_ing}$	Chemical-Specific	mg/kg	Calculated value
PRG – casual user, carcinogen, dermal contact	$PRG_{cu_ca_dc}$	Chemical-Specific	mg/kg	Calculated value
PRG – casual user, non-carcinogen, dermal contact	$PRG_{cu_nc_dc}$	Chemical-Specific	mg/kg	Calculated value
PRG – casual user, mutagen, dermal contact	$PRG_{cu_mu_dc}$	Chemical-Specific	mg/kg	Calculated value
PRG – casual user, vinyl chloride, dermal contact	$PRG_{cu_vc_dc}$	Chemical-Specific	mg/kg	Calculated value
PRG – casual user, carcinogen, inhalation	$PRG_{cu_ca_inh}$	Chemical-Specific	mg/kg	Calculated value
PRG – casual user, noncarcinogen, inhalation	$PRG_{cu_nc_inh}$	Chemical-Specific	mg/kg	Calculated value
PRG – casual user, mutagen, inhalation	$PRG_{cu_mu_inh}$	Chemical-Specific	mg/kg	Calculated value
PRG – casual user, vinyl chloride, inhalation	$PRG_{cu_vc_inh}$	Chemical-Specific	mg/kg	Calculated value
PRG – casual user, carcinogen, total	$PRG_{cu_ca_total}$	Chemical-Specific	mg/kg	Calculated value
PRG – casual user, noncarcinogen, total	$PRG_{cu_nc_total}$	Chemical-Specific	mg/kg	Calculated value
PRG – casual user, mutagen, total	$PRG_{cu_mu_total}$	Chemical-Specific	mg/kg	Calculated value
PRG – casual user, vinyl chloride, total	$PRG_{cu_vc_total}$	Chemical-Specific	mg/kg	Calculated value
PRG – casual user, radionuclide, external exposure	$PRG_{cu_rad_ext}$	Radioisotope-Specific	pCi/g	Calculated value
PRG – casual user, radionuclide, incidental soil ingestion	$PRG_{cu_rad_ing}$	Radioisotope-Specific	pCi/g	Calculated value
PRG – casual user, radionuclide, inhalation	$PRG_{cu_rad_inh}$	Radioisotope-Specific	pCi/g	Calculated value
PRG – casual user, radionuclide, total	$PRG_{cu_rad_tot}$	Radioisotope-Specific	pCi/g	Calculated value
Reference Concentration	RfC	Chemical-Specific	mg/m^3	See Table G-17
Reference Dose - oral	RfD_o	Chemical-Specific	mg/kg-day	See Table G-17
Skin Surface Area- Adult	SA_a	5700	cm^2/day	Assumes dermal exposure to soil is to the head, hands, forearms, and lower legs. EPA/540/R/99/005, Section 3.2.2.1, Exhibit 3-5.
Skin Surface Area – Child Casual User	SA_{ccu}	2800	cm^2/day	Assumes dermal exposure to soil is to the head, hands, forearms, lower legs and feet. EPA/540/R/99/005, Section 3.2.2.1, Exhibit 3-5.
Slope Factor - Inhalation	SF_i	Radioisotope-Specific	risk/pCi	EPA/540/R-92/003
Slope Factor –soil ingestion	SF_s	Radioisotope-Specific	risk/pCi	EPA/540/R-92/003
Slope Factor – external exposure	SF_x	Radioisotope-Specific	Risk/year per pCi/g	EPA/540/R-92/003
Target Hazard Quotient	THQ	1	unitless	OSWER 9355.4-24
Target Risk	TR	1 in 1,000,000	unitless	OSWER 9355.4-24

Table G-13. Exposure Parameters Used to Calculate Casual Recreational User Scenario RBSLs.

Exposure Route/Exposure Factor	Symbol	Value	Units	Source
Target Cancer Risk - radioisotope	TR_rad	1 in 10,000	unitless	OSWER Directive 9355.4-24
Time - Casual User	t_{cu}	30	years	Same as Exposure Duration
Unit Conversion Factor	UCF1	1.00E-06	kg/mg	1 kg = 1.0E+06 mg
Unit Conversion Factor	UCF2	1.00E+03	µg/mg	1 mg = 1.0E+03 µg
Unit Conversion Factor	UCF3	1.00E-03	g/mg	1 g = 1,000 milligrams
Unit Conversion Factor	UCF4	1000	g/kg	1 kg = 1,000 grams
Unit Conversion Factor	UCF5	0.002739726	years/day	1 year = 365 days
Volatilization Factor for Tritium	VF_H3	1.70E+01	m^3/kg	Etnier, 1980
Volatilization Factor	VF	Chemical-Specific	m^3/kg	See Table G-17
Decay Constant	λ	Radioisotope-Specific	yr^{-1}	=0.693/halflife
Half Life		Radioisotope-Specific	years	EPA/540/R-92/003

Notes:

DOE/RL-2007-21, *Risk Assessment Report for the 100 Area and 300 Area Component of the River Corridor Baseline Risk Assessment*

OSWER 9355.4-24, *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites*

OSWER Directive 9285.6-03 , *Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual Supplemental Guidance "Standard Default Exposure Factors"*

EPA/540/R-92/003, *Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part B, Development of Risk-Based Preliminary Remediation Goals)*

EPA/540/R/99/005, *Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment)*

EPA-540-R-070-002*, Risk Assessment Guidance for Superfund: Volume 1—Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment*)

EPA/630/R-03/003F, *Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens*

PNNL, *2007 Columbia River Recreation Survey – Implications for the Hanford Site*

Table G-14. Input Parameters Used to Calculate Particulate Emission Factor for the Resident Monument Worker Exposure Scenario.

Particulate Emission Factors Calculations				
Factor	**Symbol**	**Value**	**Unit**	**Reference**
A Constant	A	11.3161	unitless	OSWER Directive 9355.4-24; Exhibit D-2 for Boise Idaho.
Site Area (Broad Area)	A_B	500	acres	largest area in range of sites used by EPA (OSWER 9355.4 24, Appdx D) to do curve fits for calculating Q/C. 100 Area is ~26 mi^2.
Site Area (Local Area)	A_L	0.5	acres	OSWER Directive 9355.4-24
B Constant	B	19.6437	unitless	OSWER Directive 9355.4-24; Exhibit D-2 for Boise Idaho.
C Constant	C	224.8172	unitless	OSWER Directive 9355.4-24; Exhibit D-2 for Boise Idaho.
Windspeed Distribution Function	F(x)	7.21E-03	unitless	Calculated
Particulate Emission Factor (Base Area)	PEF_B	2.58E+10	m^3/kg	Calculated
Particulate Emission Factor (local area)	PEF_L	7.30E+10	m^3/kg	Calculated
Inverse of mean concentration at center of a source, Broad Area	Q/C_B	25.24	g/m^2-s per kg/m^3	Calculated
Inverse of mean concentration at center of a source, Local Area	Q/C_L	71.23	g/m^2-s per kg/m^3	Calculated
Annual average wind speed	u_m	3.4	m/s	PNNL-15160, Table 5.1
Wind speed at anemometer height equivalent to corrected threshold friction velocity	u_{t_7}	11.32	m/s	OSWER Directive 9355.4-24
Fraction of vegetative cover	V	0.5	unitless	OSWER Directive 9355.4-24
	x	2.95E+00	unitless	Calculated

OSWER 9355.4 24, *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites*

PNNL 15160, *Hanford Site Climatological Summary 2004 with Historical Data*

Table G-15. Input Parameters Used to Calculate Particulate Emission Factor and Chemical-Specific Volatilization Factors for the Casual Recreational User Exposure Scenario.

Input Parameter	Symbol	Value	Units	Source
A Constant	A	11.3161	unitless	OSWER Directive 9355.4-24; Exhibit D-2 for Boise Idaho.
Site Area	A_s	0.5	acres	OSWER Directive 9355.4-24
B Constant	B	19.6437	unitless	OSWER Directive 9355.4-24; Exhibit D-2 for Boise Idaho.
C Constant	C	224.8172	unitless	OSWER Directive 9355.4-24; Exhibit D-2 for Boise Idaho.
Apparent diffusivity	D_A	Chemical-Specific	cm^2/s	See Table G-16
Diffusivity in air	D_i	Chemical-Specific	cm^2/s	See Table G-16
Diffusivity in water	D_w	Chemical-Specific	cm^2/s	See Table G-16
Wind speed distribution function	F(x)	7.21E-03	unitless	Calculated value
Fraction organic carbon in soil	f_{oc}	0.001	g/g	DOE/RL-96-17
Henry's law constant	H'	Chemical-Specific	dimensionless	See Table G-16
Soil-water partition coefficient	K_d	Chemical-Specific	L/kg	=for organic analytes $K_d=f_{oc} \times K_{oc}$, for inorganic analytes, the inorganic K_d is used
Soil organic carbon/water partition coefficient	K_{oc}	Chemical-Specific	L/kg	Calculated value
Soil porosity	n	0.434	unitless	$= 1 - (\rho_b/\rho_s)$; EPA/540/R-96/018
Particulate Emission Factor	PEF	7.30E+10	m^3/kg	Calculated value
Inverse of mean concentration at center of a source	Q/C	71.22808	g/m^2-s per kg/m^3	Calculated value
Exposure Time	T	9.50E+08	s	EPA/540/R-96/018
Annual average wind speed	u_m	3.4	m/s	PNNL-15160, Table 5.1
Wind speed at anemometer height equivalent to corrected threshold friction velocity	u_t	11.32	m/s	OSWER Directive 9355.4-24
Fraction of vegetative cover	V	0.5	unitless	OSWER Directive 9355.4-24
Volatilization Factor	VF	Chemical-Specific	m^3/kg	See Table G-16
	x	2.95E+00	unitless	Calculated value
Air-filled soil porosity	Θ_a	0.284	L_{air}/L_{soil}	EPA/540/R-96/018; $=n-\Theta_w$
Water-filled soil porosity	Θ_w	0.15	L_{water}/L_{soil}	EPA/540/R-96/018
Dry soil bulk density	ρ_b	1.5	kg/L	EPA/540/R-96/018

Notes:

DOE/RL-96-17, *Remedial Design Report/Remedial Action Work Plan for the 100 Area*

EPA/540/R-96/018, *Soil Screening Guidance: User's Guide Second Edition*

OSWER 9355.4-24, *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites*

PNNL-15160, 2005, *Hanford Site Climatological Summary 2004 with Historical Data*

Table G-16. Input Parameters Used to Calculate Chemical-Specific Volatilization Factors

Analyte Name	Diffusivity in Air (D_i) (cm^2/s)	Source[a]	Diffusivity in Water (D_w) (cm^2/s)	Source[a]	Henry's Law Constant (H') (Dimensionless)	Source[a]	Soil/Water Distribution Coefficient (K_d) (cm^3/g)	Source[a]	Apparent Diffusivity (D_A) (cm^2/s)	Does this meet EPA's definition of Volatile?[b]	Does this meet MTCA's definition of Volatile?[c]	Volatilization Factor (VF) (m^3/kg)
1,1,2,2-Tetrachloroethane	4.90E-02	EPA 2010	9.30E-06	EPA 2010	1.40E-02	CLARC 2010	7.90E-02	CLARC 2010	2.02E-04	V	V	9.13E+03
1,2,4-Trichlorobenzene	4.00E-02	EPA 2010	8.40E-06	EPA 2010	5.80E-02	CLARC 2010	1.66E+00	DOE/RL-96-17	6.98E-05	V	V	1.55E+04
1,4-Dichlorobenzene	5.50E-02	EPA 2010	8.70E-06	EPA 2010	1.00E-01	CLARC 2010	6.16E-01	DOE/RL-96-17	3.99E-04	V	V	6.49E+03
2-Butanone	9.10E-02	EPA 2010	1.00E-05	EPA 2010	2.30E-03	EPA 2010	4.51E-03	EPA 2010	1.07E-04	V	V	1.25E+04
2-Butoxyethanol	6.30E-02	EPA 2010	8.10E-06	EPA 2010	6.50E-05	EPA 2010	2.82E-03	EPA 2010	2.62E-06	--	V	--
2-Chlorophenol	6.60E-02	EPA 2010	9.50E-06	EPA 2010	1.60E-02	CLARC 2010	3.88E-01	DOE/RL-96-17	1.15E-04	V	V	1.21E+04
2-methylnaphthalene	5.20E-03	EPA 2010	7.80E-06	ORNL 2010	2.12E-02	ORNL 2010	2.98E+00	DOE/RL-96-17	1.92E-06	V	V	9.36E+04
Acenaphthene	5.10E-02	EPA 2010	8.30E-06	EPA 2010	6.40E-03	CLARC 2010	6.12E+00	DOE/RL-96-17	2.80E-06	V	--	7.74E+04
Acetone	1.10E-01	EPA 2010	1.10E-05	EPA 2010	1.60E-03	CLARC 2010	6.00E-04	DOE/RL-96-17	9.36E-05	V	V	1.34E+04
Aldrin	--	--	--	--	7.00E-03	CLARC 2010	4.87E+01	DOE/RL-96-17	--	--	V	--
Anthracene	3.90E-02	EPA 2010	7.90E-06	EPA 2010	2.70E-03	CLARC 2010	2.35E+01	DOE/RL-96-17	2.40E-07	V	--	2.65E+05
Aroclor-1221	5.80E-02	EPA 2010	6.70E-06	EPA 2010	3.00E-02	EPA 2010	1.03E+01	DOE/RL-96-17	8.91E-06	V	--	4.34E+04
Aroclor-1232	5.80E-02	EPA 2010	6.70E-06	EPA 2010	3.00E-02	EPA 2010	1.03E+01	DOE/RL-96-17	8.91E-06	V	--	4.34E+04
Chloroform	7.70E-02	EPA 2010	1.10E-05	EPA 2010	1.50E-01	CLARC 2010	5.30E-02	CLARC 2010	3.39E-03	V	V	2.23E+03
Dibenzofuran	4.10E-02	EPA 2010	7.40E-06	EPA 2010	8.70E-03	EPA 2010	1.13E+01	DOE/RL-96-17	1.67E-06	V	--	1.00E+05
Diethyl ether	8.50E-02	EPA 2010	9.40E-06	EPA 2010	5.00E-02	EPA 2010	9.70E-03	EPA 2010	1.90E-03	V	V	2.97E+03
Fluorene	4.40E-02	EPA 2010	7.90E-06	EPA 2010	2.60E-03	CLARC 2010	7.71E+00	DOE/RL-96-17	7.87E-07	V	--	1.46E+05
Heptachlor epoxide	--	--	--	--	3.90E-04	CLARC 2010	8.32E+01	DOE/RL-96-17	--	--	V	--
Hexachlorobutadiene	--	--	--	--	3.30E-01	CLARC 2010	5.37E+01	DOE/RL-96-17	--	--	V	--
Hexachloroethane	--	--	--	--	1.60E-01	CLARC 2010	1.78E+00	DOE/RL-96-17	--	--	V	--
Methylene chloride	1.00E-01	EPA 2010	1.30E-05	EPA 2010	9.00E-02	CLARC 2010	1.00E-02	DOE/RL-96-17	3.78E-03	V	V	2.11E+03
Naphthalene	6.00E-02	EPA 2010	8.40E-06	EPA 2010	2.00E-02	CLARC 2010	1.19E+00	DOE/RL-96-17	4.95E-05	V	V	1.84E+04
Phenol	8.30E-02	EPA 2010	1.00E-05	EPA 2010	1.60E-05	CLARC 2010	2.88E-02	DOE/RL-96-17	1.04E-06	--	V	--
Pyrene	2.80E-02	EPA 2010	7.20E-06	EPA 2010	4.50E-04	CLARC 2010	6.80E+01	DOE/RL-96-17	1.05E-08	V	--	1.26E+06
Tetrachloroethene	5.00E-02	EPA 2010	9.50E-06	EPA 2010	7.50E-01	CLARC 2010	2.70E-01	CLARC 2010	3.90E-03	V	V	2.08E+03
Toluene	7.80E-02	EPA 2010	9.20E-06	EPA 2010	2.70E-01	CLARC 2010	1.40E-01	DOE/RL-96-17	3.85E-03	V	V	2.09E+03
Trichloroethene	6.90E-02	EPA 2010	1.00E-05	EPA 2010	4.20E-01	CLARC 2010	9.40E-02	CLARC 2010	5.65E-03	V	V	1.73E+03
Trichloromonofluoromethane	6.50E-02	EPA 2010	1.00E-05	EPA 2010	4.00E+00	EPA 2010	4.39E-02	EPA 2010	6.50E-02	V	V	1.05E+03

Notes:

a. Chemical-specific parameters (H_{cc}, K_d, and K_d) were obtained from the following sources, in order of preference:

1. Values found in the DOE/RL-96-17 Rev. 6, Remedial Design Report/Remedial Action Work Plan (RDR/RAWP) for the 100 Area
2. Ecology, 2010, Cleanup Levels and Risk Calculations (CLARC) Database, Washington State Department of Ecology, Olympia, Washington, available on the internet at <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>.
3. EPA, 2010, "Regional Screening Levels for Chemical Contaminants at Superfund Sites", screening level/preliminary remediation goal website, updated May 27, 2010
4. ORNL, 2010, Risk Assessment Information System, Oak Ridge National Laboratory, Oak Ridge, Tennessee, available on the internet at < http://rais.ornl.gov/ >.

b. volatile compounds are those defined by the EPA regional screening table

c. Is defined as volatile based on WAC 173-340-200 "Definitions" "Volatiles"

-- = Not Applicable

EPA, 2010, "*Regional Screening Levels for Chemical Contaminants at Superfund Sites* "

ORNL, 2010, "*Risk Assessment Information System* ", housed at the Oak Ridge National Laboratory

Ecology, 2010, *Cleanup Levels and Risk Calculations (CLARC) Database*

Table G-17. Summary of Toxicity Values used to Calculate RBSLs

Analyte	Oral Cancer Slope Factor[a] (mg/kg-day)$^{-1}$	Source	Soil Ingestion Slope Factor[b] (Risk/pCi)	Source	Inhalation Unit Risk[a] (µg/m3)$^{-1}$	Source	Inhalation Cancer Slope Factor[c] (mg/kg-day)$^{-1}$	Source	Inhalation Cancer Slope Factor[b] (Risk/pCi)	Source	External Slope Factor[b] (Risk/year per pCi/g)	Source	Oral Reference Dose[a] (mg/kg-day)	Source	Inhalation Reference Concentration[a] (mg/m3)	Source	Inhalation Reference Dose[d] (mg/kg-day)	Source	Dermal Absorption Fraction[a] (unitless)	Gastro-Intestinal Absorption Fraction[a] (unitless)	Area Correction Factor[e] (unitless)	Half Life[e] (years)
1,1,2,2-Tetrachloroethane	2.00E-01	I	--	--	5.80E-05	I	2.03E-01	I	--	--	--	--	4.00E-03	P	--	--	--	--	--	1.00E+00	--	--
1,2,4-Trichlorobenzene	2.90E-02	P	--	--	--	--	--	--	--	--	--	--	1.00E-02	I	2.00E-03	P	5.71E-04	P	--	1.00E+00	--	--
1,4-Dichlorobenzene	5.40E-03	C	--	--	1.10E-05	C	3.85E-02	C	--	--	--	--	7.00E-02	A	8.00E-01	I	2.29E-01	I	--	1.00E+00	--	--
2,4-Dinitrotoluene	3.10E-01	C	--	--	8.90E-05	C	3.12E-01	C	--	--	--	--	2.00E-03	I	--	--	--	--	1.02E-01	1.00E+00	--	--
2-Butanone	--	--	--	--	--	--	--	--	--	--	--	--	6.00E-01	I	5.00E+00	I	1.43E+00	I	--	1.00E+00	--	--
2-Butoxyethanol	--	--	--	--	--	--	--	--	--	--	--	--	5.00E-01	I	1.30E+01	I	3.71E+00	I	1.00E-01	1.00E+00	--	--
2-Chlorophenol	--	--	--	--	--	--	--	--	--	--	--	--	5.00E-03	I	--	--	--	--	--	1.00E+00	--	--
2-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--	--	--	4.00E-03	I	--	--	--	--	1.30E-01	1.00E+00	--	--
4,4'-DDE (Dichlorodiphenyldichloroethylene)	3.40E-01	I	--	--	9.70E-05	C	3.40E-01	C	--	--	--	--	--	--	--	--	--	--	1.00E-01	1.00E+00	--	--
4-Chloro-3-methylphenol	--	--	--	--	--	--	--	--	--	--	--	--	1.00E-01	X	--	--	--	--	1.00E-01	1.00E+00	--	--
Acenaphthene	--	--		--	--	--	--	--	--	--	--	--	6.00E-02	I	--	--	--	--	1.30E-01	1.00E+00	--	--
Acetone	--	--	--	--	--	--	--	--	--	--	--	--	9.00E-01	I	3.10E+01	A	8.86E+00	A	--	1.00E+00	--	--
Aldrin	1.70E+01	I	--	--	4.90E-03	I	1.72E+01	I	--	--	--	--	3.00E-05	I	--	--	--	--	1.00E-01	1.00E+00	--	--
Alpha-BHC	6.30E+00	I	--	--	1.80E-03	I	6.30E+00	I	--	--	--	--	8.00E-03	A	--	--	--	--	1.00E-01	1.00E+00	--	--
Aluminum	--	--	--	--	--	--	--	--	--	--	--	--	1.00E+00	P	5.00E-03	P	1.43E-03	P	--	1.00E+00	--	--
Americium-241	--	--	2.17E-10	H	--	--	--	--	2.81E-08	H	2.76E-08	H	--	--	--	--	--	--	--	--	9.65E-01	4.32E+02
Anthracene	--	--	--	--	--	--	--	--	--	--	--	--	3.00E-01	I	--	--	--	--	1.30E-01	1.00E+00	--	--
Antimony	--	--	--	--	--	--	--	--	--	--	--	--	4.00E-04	I	--	--	--	--	--	1.50E-01	--	--
Aroclor-1016	7.00E-02	I	--	--	2.00E-05	I	7.00E-02	I	--	--	--	--	7.00E-05	I	--	--	--	--	1.40E-01	1.00E+00	--	--
Aroclor-1221	2.00E+00	I	--	--	5.70E-04	I	2.00E+00	I	--	--	--	--	--	--	--	--	--	--	1.40E-01	1.00E+00	--	--
Aroclor-1232	2.00E+00	I	--	--	5.70E-04	I	2.00E+00	I	--	--	--	--	--	--	--	--	--	--	1.40E-01	1.00E+00	--	--
Aroclor-1242	2.00E+00	I	--	--	5.70E-04	I	2.00E+00	I	--	--	--	--	--	--	--	--	--	--	1.40E-01	1.00E+00	--	--
Aroclor-1248	2.00E+00	I	--	--	5.70E-04	I	2.00E+00	I	--	--	--	--	--	--	--	--	--	--	1.40E-01	1.00E+00	--	--
Aroclor-1254	2.00E+00	I	--	--	5.70E-04	I	2.00E+00	I	--	--	--	--	2.00E-05	I	--	--	--	--	1.40E-01	1.00E+00	--	--
Aroclor-1260	2.00E+00	I	--	--	5.70E-04	I	2.00E+00	I	--	--	--	--	--	--	--	--	--	--	1.40E-01	1.00E+00	--	--
Arsenic	1.50E+00	I	--	--	4.30E-03	I	1.51E+01	I	--	--	--	--	3.00E-04	I	1.50E-05	C	4.29E-06	C	3.00E-02	1.00E+00	--	--
Barium	--	--	--	--	--	--	--	--	--	--	--	--	2.00E-01	I	5.00E-04	H	1.43E-04	H	--	7.00E-02	--	--
Benzo(a)anthracene	7.30E-01	C	--	--	1.10E-04	C	3.85E-01	C	--	--	--	--	--	--	--	--	--	--	1.30E-01	1.00E+00	--	--
Benzo(a)pyrene	7.30E+00	I	--	--	1.10E-03	C	3.85E+00	C	--	--	--	--	--	--	--	--	--	--	1.30E-01	1.00E+00	--	--
Benzo(b)fluoranthene	7.30E-01	C	--	--	1.10E-04	C	3.85E-01	C	--	--	--	--	--	--	--	--	--	--	1.30E-01	1.00E+00	--	--
Benzo(k)fluoranthene	7.30E-01	C	--	--	1.10E-04	C	3.85E-01	C	--	--	--	--	--	--	--	--	--	--	1.30E-01	1.00E+00	--	--
Beryllium	--	--	--	--	2.40E-03	I	8.40E+00	I	--	--	--	--	2.00E-03	I	2.00E-05	I	5.71E-06	I	--	7.00E-03	--	--
Bis(2-ethylhexyl) phthalate	1.40E-02	I	--	--	2.40E-06	C	8.40E-03	C	--	--	--	--	2.00E-02	I	--	--	--	--	1.00E-01	1.00E+00	--	--
Boron	--	--	--	--	--	--	--	--	--	--	--	--	2.00E-01	I	2.00E-02	H	5.71E-03	H	--	1.00E+00	--	--
Butylbenzylphthalate	1.90E-03	P	--	--	--	--	--	--	--	--	--	--	2.00E-01	I	--	--	--	--	1.00E-01	1.00E+00	--	--
Cadmium	--	--	--	--	1.80E-03	I	6.30E+00	I	--	--	--	--	1.00E-03	I	1.00E-05	A	2.86E-06	A	1.00E-03	2.50E-02	--	--
Cesium-137	--	--	4.33E-11	H	--	--	--	--	1.19E-11	H	2.55E-06	H	--	--	--	--	--	--	--	--	8.77E-01	3.00E+01
Chlordane	3.50E-01	I	--	--	1.00E-04	I	3.50E-01	I	--	--	--	--	5.00E-04	I	7.00E-04	I	2.00E-04	I	4.00E-02	1.00E+00	--	--
Chloroform	3.10E-02	C	--	--	2.30E-05	I	8.05E-02	I	--	--	--	--	1.00E-02	I	9.80E-02	A	2.80E-02	A	--	1.00E+00	--	--
Chromium	--	--	--	--	--	--	--	--	--	--	--	--	1.50E+00	I	--	--	--	--	--	1.30E-02	--	--
Chrysene	7.30E-02	C	--	--	1.10E-05	C	3.85E-02	C	--	--	--	--	--	--	--	--	--	--	1.30E-01	1.00E+00	--	--
Cobalt	--	--	--	--	9.00E-03	P	3.15E+01	P	--	--	--	--	3.00E-04	P	6.00E-06	P	1.71E-06	P	--	1.00E+00	--	--
Cobalt-60	--	--	4.03E-11	H	--	--	--	--	3.58E-11	H	1.24E-05	H	--	--	--	--	--	--	--	--	8.34E-01	5.27E+00
Copper	--	--	--	--	--	--	--	--	--	--	--	--	4.00E-02	H	--	--	--	--	--	1.00E+00	--	--
Dibenz[a,h]anthracene	7.30E-01	C	--	--	1.10E-04	C	3.85E-01	C	--	--	--	--	--	--	--	--	--	--	1.30E-01	1.00E+00	--	--
Dibenzofuran	--	--	--	--	--	--	--	--	--	--	--	--	1.00E-03	X	--	--	--	--	--	1.00E+00	--	--
Dieldrin	1.60E+01	I	--	--	4.60E-03	I	1.61E+01	I	--	--	--	--	5.00E-05	I	--	--	--	--	1.00E-01	1.00E+00	--	--
Diethyl ether	--	--	--	--	--	--	--	--	--	--	--	--	2.00E-01	I	--	--	--	--	--	1.00E+00	--	--
Di-n-butylphthalate	--	--	--	--	--	--	--	--	--	--	--	--	1.00E-01	I	--	--	--	--	1.00E-01	1.00E+00	--	--
Endosulfan I	--	--	--	--	--	--	--	--	--	--	--	--	6.00E-03	I	--	--	--	--	1.00E-01	1.00E+00	--	--
Endosulfan II	--	--	--	--	--	--	--	--	--	--	--	--	6.00E-03	I	--	--	--	--	1.00E-01	1.00E+00	--	--
Europium-155	--	--	5.40E-12	H	--	--	--	--	1.48E-11	H	1.24E-07	H	--	--	--	--	--	--	--	--	9.41E-01	4.96E+00
Fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	4.00E-02	I	--	--	--	--	1.30E-01	1.00E+00	--	--
Fluorene	--	--	--	--	--	--	--	--	--	--	--	--	4.00E-02	I	--	--	--	--	1.30E-01	1.00E+00	--	--
Fluoride	--	--	--	--	--	--	--	--	--	--	--	--	6.00E-02	I	1.30E-02	C	3.71E-03	C	--	1.00E+00	--	--
Heptachlor epoxide	9.10E+00	I	--	--	2.60E-03	I	9.10E+00	I	--	--	--	--	1.30E-05	I	--	--	--	--	1.00E-01	1.00E+00	--	--
Hexachlorobutadiene	7.80E-02	I	--	--	2.20E-05	I	7.70E-02	I	--	--	--	--	1.00E-03	P	--	--	--	--	1.00E-01	1.00E+00	--	--

Table G-17. Summary of Toxicity Values used to Calculate RBSLs

Analyte	Oral Cancer Slope Factor[a] (mg/kg-day)$^{-1}$	Source	Soil Ingestion Slope Factor[b] (Risk/pCi)	Source	Inhalation Unit Risk[a] (µg/m3)$^{-1}$	Source	Inhalation Cancer Slope Factor[c] (mg/kg-day)$^{-1}$	Source	Inhalation Cancer Slope Factor[b] (Risk/pCi)	Source	External Slope Factor[b] (Risk/year per pCi/g)	Source	Oral Reference Dose[a] (mg/kg-day)	Source	Inhalation Reference Concentration[a] (mg/m3)	Source	Inhalation Reference Dose[d] (mg/kg-day)	Source	Dermal Absorption Fraction[a] (unitless)	Gastro-Intestinal Absorption Fraction[a] (unitless)	Area Correction Factor[e] (unitless)	Half Life[e] (years)
Hexachloroethane	1.40E-02	I	--	--	4.00E-06	I	1.40E-02	I	--	--	--	--	1.00E-03	I	--	--	--	--	1.00E-01	1.00E+00	--	--
Hexavalent Chromium	--	--	--	--	8.40E-02	I	2.94E+02	I	--	--	--	--	3.00E-03	I	1.00E-04	I	2.86E-05	I	--	2.50E-02	--	--
Indeno(1,2,3-cd)pyrene	7.30E-01	C	--	--	1.10E-04	C	3.85E-01	C	--	--	--	--	--	--	--	--	--	--	1.30E-01	1.00E+00	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	7.00E-01	P	--	--	--	--	--	1.00E+00	--	--
Lead	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.00E+00	--	--
Lithium	--	--	--	--	--	--	--	--	--	--	--	--	2.00E-03	P	--	--	--	--	--	1.00E+00	--	--
Manganese	--	--	--	--	--	--	--	--	--	--	--	--	1.40E-01	I	5.00E-05	I	1.43E-05	I	--	1.00E+00	--	--
Mercury	--	--	--	--	--	--	--	--	--	--	--	--	3.00E-04	I	3.00E-05	C	8.57E-06	C	--	7.00E-02	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--	--	--	--	5.00E-03	I	--	--	--	--	1.00E-01	1.00E+00	--	--
Methylene chloride	7.50E-03	I	--	--	4.70E-07	I	1.65E-03	I	--	--	--	--	6.00E-02	I	1.00E+00	A	2.86E-01	A	--	1.00E+00	--	--
Molybdenum	--	--	--	--	--	--	--	--	--	--	--	--	5.00E-03	I	--	--	--	--	--	1.00E+00	--	--
Naphthalene	--	--	--	--	3.40E-05	C	1.19E-01	C	--	--	--	--	2.00E-02	I	3.00E-03	I	8.57E-04	I	1.30E-01	1.00E+00	--	--
Nickel	--	--	--	--	2.60E-04	C	9.10E-01	C	--	--	--	--	2.00E-02	I	9.00E-05	A	2.57E-05	A	--	4.00E-02	--	--
Nitrate	--	--	--	--	--	--	--	--	--	--	--	--	7.10E+00	I	--	--	--	--	--	1.00E+00	--	--
Nitrogen in Nitrite and Nitrate	--	--	--	--	--	--	--	--	--	--	--	--	1.60E+00	I	--	--	--	--	--	1.00E+00	--	--
n-Nitrosodi-n-dipropylamine	7.00E+00	I	--	--	2.00E-03	C	7.00E+00	C	--	--	--	--	--	--	--	--	--	--	1.00E-01	1.00E+00	--	--
Pentachlorophenol	1.20E-01	I	--	--	5.10E-06	C	1.79E-02	C	--	--	--	--	3.00E-02	I	--	--	--	--	2.50E-01	1.00E+00	--	--
Phenol	--	--	--	--	--	--	--	--	--	--	--	--	3.00E-01	I	2.00E-01	C	5.71E-02	C	1.00E-01	1.00E+00	--	--
Plutonium-238	--	--	2.72E-10	H	--	--	--	--	3.36E-08	H	7.22E-11	H	--	--	--	--	--	--	--	--	9.99E-01	8.77E+01
Plutonium-239/240	--	--	2.76E-10	H	--	--	--	--	3.33E-08	H	2.00E-10	H	--	--	--	--	--	--	--	--	9.99E-01	2.41E+04
Plutonium-241	--	--	3.29E-12	H	--	--	--	--	3.34E-10	H	4.11E-12	H	--	--	--	--	--	--	--	--	1.00E+00	1.44E+01
Pyrene	--	--	--	--	--	--	--	--	--	--	--	--	3.00E-02	I	--	--	--	--	1.30E-01	1.00E+00	--	--
Selenium	--	--	--	--	--	--	--	--	--	--	--	--	5.00E-03	I	2.00E-02	C	5.71E-03	C	--	1.00E+00	--	--
Silver	--	--	--	--	--	--	--	--	--	--	--	--	5.00E-03	I	--	--	--	--	--	4.00E-02	--	--
Strontium	--	--	--	--	--	--	--	--	--	--	--	--	6.00E-01	I	--	--	--	--	--	1.00E+00	--	--
Tetrachloroethene	5.40E-01	C	--	--	5.90E-06	C	2.07E-02	C	--	--	--	--	1.00E-02	I	2.70E-01	A	7.71E-02	A	--	1.00E+00	--	--
Tin	--	--	--	--	--	--	--	--	--	--	--	--	6.00E-01	H	--	--	--	--	--	1.00E+00	--	--
Toluene	--	--	--	--	--	--	--	--	--	--	--	--	8.00E-02	I	5.00E+00	I	1.43E+00	I	--	1.00E+00	--	--
Total beta radiostrontium	--	--	1.44E-10	H	--	--	--	--	1.13E-10	H	1.96E-08	H	--	--	--	--	--	--	--	--	1.00E+00	2.91E+01
Total petroleum hydrocarbons - diesel range	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total petroleum hydrocarbons - kerosene range	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total petroleum hydrocarbons - motor oil (high boiling)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	8.90E-02	H	--	--	2.50E-05	H	8.75E-02	H	--	--	--	--	--	--	3.50E-02	H	1.00E-02	H	--	1.00E+00	--	--
Trichloromonofluoromethane	--	--	--	--	--	--	--	--	--	--	--	--	3.00E-01	I	7.00E-01	H	2.00E-01	H	--	1.00E+00	--	--
Tritium	--	--	2.20E-13	H	--	--	--	--	5.62E-14	H	--	--	--	--	--	--	--	--	--	--	--	1.24E+01
Uranium	--	--	--	--	--	--	--	--	--	--	--	--	3.00E-03	I	3.00E-04	A	8.57E-05	A	--	1.00E+00	--	--
Uranium-233/234	--	--	1.58E-10	H	--	--	--	--	1.14E-08	H	2.52E-10	H	--	--	--	--	--	--	--	--	9.98E-01	2.45E+05
Uranium-235	--	--	1.63E-10	H	--	--	--	--	1.01E-08	H	5.43E-07	H	--	--	--	--	--	--	--	--	9.60E-01	7.04E+08
Uranium-238	--	--	2.10E-10	H	--	--	--	--	9.35E-09	H	1.14E-07	H	--	--	--	--	--	--	--	--	9.79E-01	4.47E+09
Vanadium	--	--	--	--	--	--	--	--	--	--	--	--	5.00E-03	S	--	--	--	--	--	1.00E+00	--	--
Zinc	--	--	--	--	--	--	--	--	--	--	--	--	3.00E-01	I	--	--	--	--	--	1.00E+00	--	--

Notes:

a. Source = EPA, 2009.
b. Source = EPA, 2001.
c. CSF_i (kg-day/mg) = IUR (m^3/µg) x 1/20 (m^3/day) x 70 (kg) x 1000 (µg/mg)
d. RfD_i (mg/kg-day) = RfC (mg/m^3) x 20 (m^3/day) x 1/70 (kg)
e. Source = EPA, 2007

-- = indicates toxicity value not available for this contaminant and exposure route.
A = ATSDR
C = Cal EPA
H = HEAST
I = IRIS
P = PPRTV
X= PPRTV Appendix
N=National Center for Environmental Assessment (NCEA)
EPA, 2001, *Health Effects Assessment Summary Tables* database, "April 16, 2001 Update: Radionuclide Toxicity," "Radionuclide Table: Radionuclide Carcinogenicity – Slope Factors."
EPA, 2007, EPA's Superfund Radionuclide Preliminary Remediation Goal (PRG) Equations (http://epa-prgs.ornl.gov/radionuclides/equations.shtml)
EPA, 2009, "Regional Screening Levels for Chemical Contaminants at Superfund Sites."

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Table G-18. Hanford Site Soil Background Values

Analyte Name	Analyte Class	Units	Lognormal 90th Percentile Background Value	Maximum Background Value	Source of Background Values
Cesium-137	RAD	pCi/g	1.1	1.64	DOE/RL-96-12, Rev.0
Cobalt-60	RAD	pCi/g	0.0084	0.039	DOE/RL-96-12, Rev.0
Europium-154	RAD	pCi/g	0.033	0.079	DOE/RL-96-12, Rev.0
Europium-155	RAD	pCi/g	0.054	0.098	DOE/RL-96-12, Rev.0
Gross beta	RAD	pCi/g	23	25	DOE/RL-96-12, Rev.0
Plutonium-238	RAD	pCi/g	0.0038	0.019	DOE/RL-96-12, Rev.0
Plutonium-239/240	RAD	pCi/g	0.025	0.033	DOE/RL-96-12, Rev.0
Potassium-40	RAD	pCi/g	17	19.7	DOE/RL-96-12, Rev.0
Radium-226	RAD	pCi/g	0.82	1.16	DOE/RL-96-12, Rev.0
Strontium-90	RAD	pCi/g	0.18	0.37	DOE/RL-96-12, Rev.0
Thorium-232	RAD	pCi/g	1.3	1.58	DOE/RL-96-12, Rev.0
Total beta radiostrontium	RAD	pCi/g	0.18	0.37	DOE/RL-96-12, Rev.0
Uranium-233/234	RAD	pCi/g	1.1	1.51	DOE/RL-96-12, Rev.0
Uranium-234	RAD	pCi/g	1.1	1.51	DOE/RL-96-12, Rev.0
Uranium-235	RAD	pCi/g	0.11	0.39	DOE/RL-96-12, Rev.0
Uranium-238	RAD	pCi/g	1.1	1.21	DOE/RL-96-12, Rev.0
Aluminum	METAL	ug/kg	1.18E+07	2.88E+07	DOE/RL-92-24, V.1, Rev.4
Antimony	METAL	ug/kg	130	385	ECF-HANFORD-11-0038
Arsenic	METAL	ug/kg	6,470	27,700	DOE/RL-92-24, V.1, Rev.4
Barium	METAL	ug/kg	132,000	480,000	DOE/RL-92-24, V.1, Rev.4
Beryllium	METAL	ug/kg	1,510	10,000	DOE/RL-92-24, V.1, Rev.4
Boron	METAL	ug/kg	3,890	5,860	ECF-HANFORD-11-0038
Cadmium	METAL	ug/kg	563	2980	ECF-HANFORD-11-0038
Calcium	METAL	ug/kg	1.72E+07	1.05E+08	DOE/RL-92-24, V.1, Rev.4
Chromium	METAL	ug/kg	18,500	320,000	DOE/RL-92-24, V.1, Rev.4
Cobalt	METAL	ug/kg	15,700	110,000	DOE/RL-92-24, V.1, Rev.4
Copper	METAL	ug/kg	22,000	61,000	DOE/RL-92-24, V.1, Rev.4
Iron	METAL	ug/kg	3.26E+07	6.81E+07	DOE/RL-92-24, V.1, Rev.4
Lead	METAL	ug/kg	10,200	74,100	DOE/RL-92-24, V.1, Rev.4
Lithium	METAL	ug/kg	13,300	19,200	ECF-HANFORD-11-0038

Table G-18. Hanford Site Soil Background Values

Analyte Name	Analyte Class	Units	Lognormal 90th Percentile Background Value	Maximum Background Value	Source of Background Values
Magnesium	METAL	ug/kg	7.06E+06	3.23E+07	DOE/RL-92-24, V.1, Rev.4
Manganese	METAL	ug/kg	512,000	1.11E+06	DOE/RL-92-24, V.1, Rev.4
Mercury	METAL	ug/kg	13	29	ECF-HANFORD-11-0038
Molybdenum	METAL	ug/kg	470	3170	ECF-HANFORD-11-0038
Nickel	METAL	ug/kg	19,100	200,000	DOE/RL-92-24, V.1, Rev.4
Potassium	METAL	ug/kg	2.15E+06	7.90E+06	DOE/RL-92-24, V.1, Rev.4
Selenium	METAL	ug/kg	780	840	ECF-HANFORD-11-0038
Silver	METAL	ug/kg	167	273	ECF-HANFORD-11-0038
Sodium	METAL	ug/kg	690,000	6.06E+06	DOE/RL-92-24, V.1, Rev.4
Thallium	METAL	ug/kg	185	523	ECF-HANFORD-11-0038
Uranium	METAL	ug/kg	3,210	4,042	Isotopic Activity Conversion based on DOE/RL-96-12 values
Vanadium	METAL	ug/kg	85,100	140,000	DOE/RL-92-24, V.1, Rev.4
Zinc	METAL	ug/kg	67,800	366,000	DOE/RL-92-24, V.1, Rev.4
Ammonia	ANIONS	ug/kg	9,230	26,400	DOE/RL-92-24, V.1, Rev.4
Chloride	ANIONS	ug/kg	100,000	1.48E+06	DOE/RL-92-24, V.1, Rev.4
Fluoride	ANIONS	ug/kg	2,810	73,300	DOE/RL-92-24, V.1, Rev.4
Nitrate	ANIONS	ug/kg	52,000	9.06E+05	DOE/RL-92-24, V.1, Rev.4
Phosphate	ANIONS	ug/kg	785	2.25E+05	DOE/RL-92-24, V.1, Rev.4
Sulfate	ANIONS	ug/kg	237,000	1.26E+07	DOE/RL-92-24, V.1, Rev.4

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
300 ASH PITS_Shallow	non-Rad	Aroclor-1248	12672-29-6	ug/kg	52	--	--	--	--
300 ASH PITS_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	6077.5806	6.47E+03	No	2.77E+04	No
300 ASH PITS_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	96	--	--	--	--
300 ASH PITS_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	ug/kg	76	--	--	--	--
300 ASH PITS_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	0.0387762	1.09E-01	No	3.86E-01	No
300 ASH PITS_Shallow	Rad	Uranium-238	U-238	pCi/g	0.823	1.06E+00	No	1.21E+00	No
300 VTS_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	0.029	1.05E+00	No	1.64E+00	No
300-10_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	13500	6.47E+03	Yes	2.77E+04	No
300-10_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	200	--	--	--	--
300-10_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	ug/kg	230	--	--	--	--
300-10_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	0.155	1.05E+00	No	1.64E+00	No
300-10_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	0.0406	1.09E-01	No	3.86E-01	No
300-10_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.37	1.06E+00	Yes	1.21E+00	Yes
300-109_Shallow_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	5620000	1.18E+07	No	2.88E+07	No
300-109_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	122	--	--	--	--
300-109_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	39.7	--	--	--	--
300-109_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	2420	6.47E+03	No	2.77E+04	No
300-109_Shallow_Focused	non-Rad	Barium	7440-39-3	ug/kg	63300	1.32E+05	No	4.80E+05	No
300-109_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	1.24	--	--	--	--
300-109_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	2.3	--	--	--	--
300-109_Shallow_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	180	1.51E+03	No	1.00E+04	No
300-109_Shallow_Focused	non-Rad	Boron	7440-42-8	ug/kg	632	3.89E+03	No	5.86E+03	No
300-109_Shallow_Focused	non-Rad	Cadmium	7440-43-9	ug/kg	59	5.63E+02	No	2.98E+03	No
300-109_Shallow_Focused	non-Rad	Chromium	7440-47-3	ug/kg	6950	1.85E+04	No	3.20E+05	No
300-109_Shallow_Focused	non-Rad	Chrysene	218-01-9	ug/kg	1.77	--	--	--	--
300-109_Shallow_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	6420	1.57E+04	No	1.10E+05	No
300-109_Shallow_Focused	non-Rad	Copper	7440-50-8	ug/kg	10800	2.20E+04	No	6.10E+04	No
300-109_Shallow_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	14	--	--	--	--
300-109_Shallow_Focused	non-Rad	Iron	7439-89-6	ug/kg	17500000	3.26E+07	No	6.81E+07	No
300-109_Shallow_Focused	non-Rad	Lead	7439-92-1	ug/kg	2890	1.02E+04	No	7.41E+04	No
300-109_Shallow_Focused	non-Rad	Manganese	7439-96-5	ug/kg	278000	5.12E+05	No	1.11E+06	No
300-109_Shallow_Focused	non-Rad	Mercury	7439-97-6	ug/kg	22	1.31E+01	Yes	2.92E+01	No
300-109_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	ug/kg	341	4.70E+02	No	3.17E+03	No
300-109_Shallow_Focused	non-Rad	Nickel	7440-02-0	ug/kg	8490	1.91E+04	No	2.00E+05	No
300-109_Shallow_Focused	non-Rad	Pyrene	129-00-0	ug/kg	1.56	--	--	--	--
300-109_Shallow_Focused	non-Rad	Vanadium	7440-62-2	ug/kg	47600	8.51E+04	No	1.40E+05	No
300-109_Shallow_Focused	non-Rad	Zinc	7440-66-6	ug/kg	34700	6.78E+04	No	3.66E+05	No
300-109_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.4	1.10E+00	Yes	1.51E+00	No
300-109_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.38	1.06E+00	Yes	1.21E+00	Yes
300-109_Staging Pile Area_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	5780000	1.18E+07	No	2.88E+07	No
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	36.8	--	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	19.4	--	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	2580	6.47E+03	No	2.77E+04	No
300-109_Staging Pile Area_Focused	non-Rad	Barium	7440-39-3	ug/kg	72700	1.32E+05	No	4.80E+05	No
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)anthracene	56-55-3	ug/kg	2.08	--	--	--	--

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	3.3	--	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	1.31	--	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	203	1.51E+03	No	1.00E+04	No
300-109_Staging Pile Area_Focused	non-Rad	Boron	7440-42-8	ug/kg	1060	3.89E+03	No	5.86E+03	No
300-109_Staging Pile Area_Focused	non-Rad	Cadmium	7440-43-9	ug/kg	66	5.63E+02	No	2.98E+03	No
300-109_Staging Pile Area_Focused	non-Rad	Chromium	7440-47-3	ug/kg	8170	1.85E+04	No	3.20E+05	No
300-109_Staging Pile Area_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	5950	1.57E+04	No	1.10E+05	No
300-109_Staging Pile Area_Focused	non-Rad	Copper	7440-50-8	ug/kg	11600	2.20E+04	No	6.10E+04	No
300-109_Staging Pile Area_Focused	non-Rad	Fluoranthene	206-44-0	ug/kg	5.14	--	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	29.2	--	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Iron	7439-89-6	ug/kg	18400000	3.26E+07	No	6.81E+07	No
300-109_Staging Pile Area_Focused	non-Rad	Lead	7439-92-1	ug/kg	5030	1.02E+04	No	7.41E+04	No
300-109_Staging Pile Area_Focused	non-Rad	Manganese	7439-96-5	ug/kg	286000	5.12E+05	No	1.11E+06	No
300-109_Staging Pile Area_Focused	non-Rad	Molybdenum	7439-98-7	ug/kg	408	4.70E+02	No	3.17E+03	No
300-109_Staging Pile Area_Focused	non-Rad	Nickel	7440-02-0	ug/kg	8570	1.91E+04	No	2.00E+05	No
300-109_Staging Pile Area_Focused	non-Rad	Pyrene	129-00-0	ug/kg	6.96	--	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Tin	7440-31-5	ug/kg	1450	--	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Vanadium	7440-62-2	ug/kg	45100	8.51E+04	No	1.40E+05	No
300-109_Staging Pile Area_Focused	non-Rad	Zinc	7440-66-6	ug/kg	48800	6.78E+04	No	3.66E+05	No
300-109_Staging Pile Area_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	2.54	1.10E+00	Yes	1.51E+00	Yes
300-109_Staging Pile Area_Focused	Rad	Uranium-238	U-238	pCi/g	2.31	1.06E+00	Yes	1.21E+00	Yes
300-18_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	2200	6.47E+03	No	2.77E+04	No
300-18_Shallow	non-Rad	Barium	7440-39-3	ug/kg	63400	1.32E+05	No	4.80E+05	No
300-18_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	650	1.51E+03	No	1.00E+04	No
300-18_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	40	5.63E+02	No	2.98E+03	No
300-18_Shallow	non-Rad	Chromium	7440-47-3	ug/kg	6900	1.85E+04	No	3.20E+05	No
300-18_Shallow	non-Rad	Lead	7439-92-1	ug/kg	3600	1.02E+04	No	7.41E+04	No
300-18_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	0.649	1.10E+00	No	1.51E+00	No
300-18_Shallow	Rad	Uranium-238	U-238	pCi/g	0.411	1.06E+00	No	1.21E+00	No
300-223_Shallow_Focused	non-Rad	Total petroleum hydrocarbons - diesel range	TPHDIESEL	ug/kg	120000	--	--	--	--
300-223_Shallow_Focused	non-Rad	Total petroleum hydrocarbons - motor oil (high boiling)	TPH/OILH	ug/kg	230000	--	--	--	--
300-23_Shallow_Focused	non-Rad	Total petroleum hydrocarbons - motor oil (high boiling)	TPH/OILH	ug/kg	52000	--	--	--	--
300-259_Shallow	non-Rad	Aluminum	7429-90-5	ug/kg	5992086.2	1.18E+07	No	2.88E+07	No
300-259_Shallow	non-Rad	Antimony	7440-36-0	ug/kg	322.41177	1.30E+02	Yes	3.85E+02	No
300-259_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	2095.8301	6.47E+03	No	2.77E+04	No
300-259_Shallow	non-Rad	Barium	7440-39-3	ug/kg	75232.258	1.32E+05	No	4.80E+05	No
300-259_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	225.58556	1.51E+03	No	1.00E+04	No
300-259_Shallow	non-Rad	Boron	7440-42-8	ug/kg	1302.923	3.89E+03	No	5.86E+03	No
300-259_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	251.50493	5.63E+02	No	2.98E+03	No
300-259_Shallow	non-Rad	Chromium	7440-47-3	ug/kg	7901.1621	1.85E+04	No	3.20E+05	No
300-259_Shallow	non-Rad	Cobalt	7440-48-4	ug/kg	5830.7504	1.57E+04	No	1.10E+05	No
300-259_Shallow	non-Rad	Copper	7440-50-8	ug/kg	10692.405	2.20E+04	No	6.10E+04	No
300-259_Shallow	non-Rad	Iron	7439-89-6	ug/kg	19605816	3.26E+07	No	6.81E+07	No
300-259_Shallow	non-Rad	Lead	7439-92-1	ug/kg	4624.5336	1.02E+04	No	7.41E+04	No
300-259_Shallow	non-Rad	Manganese	7439-96-5	ug/kg	318873.58	5.12E+05	No	1.11E+06	No

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
300-259_Shallow	non-Rad	Mercury	7439-97-6	ug/kg	10	1.31E+01	No	2.92E+01	No
300-259_Shallow	non-Rad	Molybdenum	7439-98-7	ug/kg	302.80436	4.70E+02	No	3.17E+03	No
300-259_Shallow	non-Rad	Nickel	7440-02-0	ug/kg	8751.3102	1.91E+04	No	2.00E+05	No
300-259_Shallow	non-Rad	Vanadium	7440-62-2	ug/kg	42625.614	8.51E+04	No	1.40E+05	No
300-259_Shallow	non-Rad	Zinc	7440-66-6	ug/kg	479584.29	6.78E+04	Yes	3.66E+05	Yes
300-259_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.593804	1.10E+00	Yes	1.51E+00	Yes
300-259_Shallow	Rad	Uranium-238	U-238	pCi/g	1.3476467	1.06E+00	Yes	1.21E+00	Yes
300-260_Shallow_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	8170000	1.18E+07	No	2.88E+07	No
300-260_Shallow_Focused	non-Rad	Antimony	7440-36-0	ug/kg	922	1.30E+02	Yes	3.85E+02	Yes
300-260_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	3160	6.47E+03	No	2.77E+04	No
300-260_Shallow_Focused	non-Rad	Barium	7440-39-3	ug/kg	122000	1.32E+05	No	4.80E+05	No
300-260_Shallow_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	239	1.51E+03	No	1.00E+04	No
300-260_Shallow_Focused	non-Rad	Boron	7440-42-8	ug/kg	8360	3.89E+03	Yes	5.86E+03	Yes
300-260_Shallow_Focused	non-Rad	Cadmium	7440-43-9	ug/kg	110	5.63E+02	No	2.98E+03	No
300-260_Shallow_Focused	non-Rad	Chromium	7440-47-3	ug/kg	9890	1.85E+04	No	3.20E+05	No
300-260_Shallow_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	7430	1.57E+04	No	1.10E+05	No
300-260_Shallow_Focused	non-Rad	Copper	7440-50-8	ug/kg	73300	2.20E+04	Yes	6.10E+04	Yes
300-260_Shallow_Focused	non-Rad	Iron	7439-89-6	ug/kg	20400000	3.26E+07	No	6.81E+07	No
300-260_Shallow_Focused	non-Rad	Lead	7439-92-1	ug/kg	18300	1.02E+04	Yes	7.41E+04	No
300-260_Shallow_Focused	non-Rad	Manganese	7439-96-5	ug/kg	328000	5.12E+05	No	1.11E+06	No
300-260_Shallow_Focused	non-Rad	Mercury	7439-97-6	ug/kg	12	1.31E+01	No	2.92E+01	No
300-260_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	ug/kg	537	4.70E+02	Yes	3.17E+03	No
300-260_Shallow_Focused	non-Rad	Nickel	7440-02-0	ug/kg	10200	1.91E+04	No	2.00E+05	No
300-260_Shallow_Focused	non-Rad	Silver	7440-22-4	ug/kg	206	1.67E+02	Yes	2.73E+02	No
300-260_Shallow_Focused	non-Rad	Vanadium	7440-62-2	ug/kg	59000	8.51E+04	No	1.40E+05	No
300-260_Shallow_Focused	non-Rad	Zinc	7440-66-6	ug/kg	77400	6.78E+04	Yes	3.66E+05	No
300-260_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	0.251	1.09E-01	Yes	3.86E-01	No
300-260_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.3	1.06E+00	Yes	1.21E+00	Yes
300-272_Overburden_Focused	non-Rad	Total petroleum hydrocarbons - diesel range	TPHDIESEL	ug/kg	13100	--	--	--	--
300-272_Shallow_Focused	non-Rad	Total petroleum hydrocarbons - diesel range	TPHDIESEL	ug/kg	43100	--	--	--	--
300-275_Shallow_1	non-Rad	Acenaphthene	83-32-9	ug/kg	960	--	--	--	--
300-275_Shallow_1	non-Rad	Aluminum	7429-90-5	ug/kg	5613961.3	1.18E+07	No	2.88E+07	No
300-275_Shallow_1	non-Rad	Antimony	7440-36-0	ug/kg	260	1.30E+02	Yes	3.85E+02	No
300-275_Shallow_1	non-Rad	Arsenic	7440-38-2	ug/kg	2210.6834	6.47E+03	No	2.77E+04	No
300-275_Shallow_1	non-Rad	Barium	7440-39-3	ug/kg	75260.877	1.32E+05	No	4.80E+05	No
300-275_Shallow_1	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	1.3	--	--	--	--
300-275_Shallow_1	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	1.87	--	--	--	--
300-275_Shallow_1	non-Rad	Beryllium	7440-41-7	ug/kg	451.75046	1.51E+03	No	1.00E+04	No
300-275_Shallow_1	non-Rad	Boron	7440-42-8	ug/kg	1466.2284	3.89E+03	No	5.86E+03	No
300-275_Shallow_1	non-Rad	Cadmium	7440-43-9	ug/kg	83.333333	5.63E+02	No	2.98E+03	No
300-275_Shallow_1	non-Rad	Chromium	7440-47-3	ug/kg	8021.7632	1.85E+04	No	3.20E+05	No
300-275_Shallow_1	non-Rad	Chrysene	218-01-9	ug/kg	2.2	--	--	--	--
300-275_Shallow_1	non-Rad	Cobalt	7440-48-4	ug/kg	5846.5886	1.57E+04	No	1.10E+05	No
300-275_Shallow_1	non-Rad	Copper	7440-50-8	ug/kg	42923.445	2.20E+04	Yes	6.10E+04	No
300-275_Shallow_1	non-Rad	Fluoranthene	206-44-0	ug/kg	2300	--	--	--	--

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
300-275_Shallow_1	non-Rad	Fluorene	86-73-7	ug/kg	81.134616	--	--	--	--
300-275_Shallow_1	non-Rad	Iron	7439-89-6	ug/kg	17901836	3.26E+07	No	6.81E+07	No
300-275_Shallow_1	non-Rad	Lead	7439-92-1	ug/kg	7188.6282	1.02E+04	No	7.41E+04	No
300-275_Shallow_1	non-Rad	Lithium	7439-93-2	ug/kg	6686.355	1.33E+04	No	1.92E+04	No
300-275_Shallow_1	non-Rad	Manganese	7439-96-5	ug/kg	276815.49	5.12E+05	No	1.11E+06	No
300-275_Shallow_1	non-Rad	Mercury	7439-97-6	ug/kg	16.666667	1.31E+01	Yes	2.92E+01	No
300-275_Shallow_1	non-Rad	Molybdenum	7439-98-7	ug/kg	378.14547	4.70E+02	No	3.17E+03	No
300-275_Shallow_1	non-Rad	Nickel	7440-02-0	ug/kg	9460.794	1.91E+04	No	2.00E+05	No
300-275_Shallow_1	non-Rad	Silver	7440-22-4	ug/kg	120.89078	1.67E+02	No	2.73E+02	No
300-275_Shallow_1	non-Rad	Strontium	7440-24-6	ug/kg	20195.541	--	--	--	--
300-275_Shallow_1	non-Rad	Tin	7440-31-5	ug/kg	1483.3333	--	--	--	--
300-275_Shallow_1	non-Rad	Uranium	7440-61-1	ug/kg	2500	3.21E+03	No	4.04E+03	No
300-275_Shallow_1	non-Rad	Vanadium	7440-62-2	ug/kg	45127.74	8.51E+04	No	1.40E+05	No
300-275_Shallow_1	non-Rad	Zinc	7440-66-6	ug/kg	41013.868	6.78E+04	No	3.66E+05	No
300-275_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	0.0464926	1.05E+00	No	1.64E+00	No
300-275_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	7.7156701	1.10E+00	Yes	1.51E+00	Yes
300-275_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1	1.09E-01	Yes	3.86E-01	Yes
300-275_Shallow_1	Rad	Uranium-238	U-238	pCi/g	7.4056647	1.06E+00	Yes	1.21E+00	Yes
300-275_Shallow_2	non-Rad	Acenaphthene	83-32-9	ug/kg	3.6	--	--	--	--
300-275_Shallow_2	non-Rad	Aluminum	7429-90-5	ug/kg	6237970.4	1.18E+07	No	2.88E+07	No
300-275_Shallow_2	non-Rad	Arsenic	7440-38-2	ug/kg	2761.3529	6.47E+03	No	2.77E+04	No
300-275_Shallow_2	non-Rad	Barium	7440-39-3	ug/kg	68606.661	1.32E+05	No	4.80E+05	No
300-275_Shallow_2	non-Rad	Beryllium	7440-41-7	ug/kg	254.16556	1.51E+03	No	1.00E+04	No
300-275_Shallow_2	non-Rad	Boron	7440-42-8	ug/kg	1146.5781	3.89E+03	No	5.86E+03	No
300-275_Shallow_2	non-Rad	Cadmium	7440-43-9	ug/kg	143.92783	5.63E+02	No	2.98E+03	No
300-275_Shallow_2	non-Rad	Chromium	7440-47-3	ug/kg	8993.6377	1.85E+04	No	3.20E+05	No
300-275_Shallow_2	non-Rad	Cobalt	7440-48-4	ug/kg	5976.89	1.57E+04	No	1.10E+05	No
300-275_Shallow_2	non-Rad	Copper	7440-50-8	ug/kg	11595.833	2.20E+04	No	6.10E+04	No
300-275_Shallow_2	non-Rad	Fluoranthene	206-44-0	ug/kg	56	--	--	--	--
300-275_Shallow_2	non-Rad	Fluorene	86-73-7	ug/kg	2.6004308	--	--	--	--
300-275_Shallow_2	non-Rad	Iron	7439-89-6	ug/kg	19571687	3.26E+07	No	6.81E+07	No
300-275_Shallow_2	non-Rad	Lead	7439-92-1	ug/kg	4099.1187	1.02E+04	No	7.41E+04	No
300-275_Shallow_2	non-Rad	Lithium	7439-93-2	ug/kg	7066.6688	1.33E+04	No	1.92E+04	No
300-275_Shallow_2	non-Rad	Manganese	7439-96-5	ug/kg	292731.34	5.12E+05	No	1.11E+06	No
300-275_Shallow_2	non-Rad	Mercury	7439-97-6	ug/kg	28	1.31E+01	Yes	2.92E+01	No
300-275_Shallow_2	non-Rad	Molybdenum	7439-98-7	ug/kg	403.78447	4.70E+02	No	3.17E+03	No
300-275_Shallow_2	non-Rad	Nickel	7440-02-0	ug/kg	9592.6939	1.91E+04	No	2.00E+05	No
300-275_Shallow_2	non-Rad	Strontium	7440-24-6	ug/kg	27080.652	--	--	--	--
300-275_Shallow_2	non-Rad	Tin	7440-31-5	ug/kg	1149.2698	--	--	--	--
300-275_Shallow_2	non-Rad	Vanadium	7440-62-2	ug/kg	51631.53	8.51E+04	No	1.40E+05	No
300-275_Shallow_2	non-Rad	Zinc	7440-66-6	ug/kg	41245.058	6.78E+04	No	3.66E+05	No
300-275_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.305637	1.10E+00	Yes	1.51E+00	No
300-275_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	0.237	1.09E-01	Yes	3.86E-01	No
300-275_Shallow_2	Rad	Uranium-238	U-238	pCi/g	1.2444564	1.06E+00	Yes	1.21E+00	Yes
300-33, 300-41, 300-256_Shallow	non-Rad	Aluminum	7429-90-5	ug/kg	6321201.6	1.18E+07	No	2.88E+07	No

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1016	12674-11-2	ug/kg	10.3	--	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1242	53469-21-9	ug/kg	16.4	--	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1248	12672-29-6	ug/kg	190	--	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	84.416667	--	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1260	11096-82-5	ug/kg	17.288125	--	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	2638.0398	6.47E+03	No	2.77E+04	No
300-33, 300-41, 300-256_Shallow	non-Rad	Barium	7440-39-3	ug/kg	72411.016	1.32E+05	No	4.80E+05	No
300-33, 300-41, 300-256_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	255.61124	1.51E+03	No	1.00E+04	No
300-33, 300-41, 300-256_Shallow	non-Rad	Boron	7440-42-8	ug/kg	1483.9168	3.89E+03	No	5.86E+03	No
300-33, 300-41, 300-256_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	ug/kg	228	--	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	93.9375	5.63E+02	No	2.98E+03	No
300-33, 300-41, 300-256_Shallow	non-Rad	Chromium	7440-47-3	ug/kg	8781.1801	1.85E+04	No	3.20E+05	No
300-33, 300-41, 300-256_Shallow	non-Rad	Cobalt	7440-48-4	ug/kg	6272.801	1.57E+04	No	1.10E+05	No
300-33, 300-41, 300-256_Shallow	non-Rad	Copper	7440-50-8	ug/kg	13662.454	2.20E+04	No	6.10E+04	No
300-33, 300-41, 300-256_Shallow	non-Rad	Fluoride	16984-48-8	ug/kg	1651.3546	2.81E+03	No	7.33E+04	No
300-33, 300-41, 300-256_Shallow	non-Rad	Iron	7439-89-6	ug/kg	20019858	3.26E+07	No	6.81E+07	No
300-33, 300-41, 300-256_Shallow	non-Rad	Lead	7439-92-1	ug/kg	4268.1205	1.02E+04	No	7.41E+04	No
300-33, 300-41, 300-256_Shallow	non-Rad	Lithium	7439-93-2	ug/kg	5495.0169	1.33E+04	No	1.92E+04	No
300-33, 300-41, 300-256_Shallow	non-Rad	Manganese	7439-96-5	ug/kg	314762.37	5.12E+05	No	1.11E+06	No
300-33, 300-41, 300-256_Shallow	non-Rad	Mercury	7439-97-6	ug/kg	16	1.31E+01	Yes	2.92E+01	No
300-33, 300-41, 300-256_Shallow	non-Rad	Methylene chloride	75-09-2	ug/kg	2.913436	--	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Molybdenum	7439-98-7	ug/kg	485.69493	4.70E+02	Yes	3.17E+03	No
300-33, 300-41, 300-256_Shallow	non-Rad	Nickel	7440-02-0	ug/kg	8879.5629	1.91E+04	No	2.00E+05	No
300-33, 300-41, 300-256_Shallow	non-Rad	Nitrate	14797-55-8	ug/kg	8616.6667	5.20E+04	No	9.06E+05	No
300-33, 300-41, 300-256_Shallow	non-Rad	Silver	7440-22-4	ug/kg	782	1.67E+02	Yes	2.73E+02	Yes
300-33, 300-41, 300-256_Shallow	non-Rad	Uranium	7440-61-1	ug/kg	7260	3.21E+03	Yes	4.04E+03	Yes
300-33, 300-41, 300-256_Shallow	non-Rad	Vanadium	7440-62-2	ug/kg	52694.189	8.51E+04	No	1.40E+05	No
300-33, 300-41, 300-256_Shallow	non-Rad	Zinc	7440-66-6	ug/kg	41462.118	6.78E+04	No	3.66E+05	No
300-33, 300-41, 300-256_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	2.1374068	1.10E+00	Yes	1.51E+00	Yes
300-33, 300-41, 300-256_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	0.338	1.09E-01	Yes	3.86E-01	No
300-33, 300-41, 300-256_Shallow	Rad	Uranium-238	U-238	pCi/g	2.0580264	1.06E+00	Yes	1.21E+00	Yes
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	5510000	1.18E+07	No	2.88E+07	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	ug/kg	330	--	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	385	--	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	52	--	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	3240	6.47E+03	No	2.77E+04	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Barium	7440-39-3	ug/kg	64600	1.32E+05	No	4.80E+05	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	169	1.51E+03	No	1.00E+04	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Boron	7440-42-8	ug/kg	1030	3.89E+03	No	5.86E+03	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Cadmium	7440-43-9	ug/kg	100	5.63E+02	No	2.98E+03	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Chromium	7440-47-3	ug/kg	8080	1.85E+04	No	3.20E+05	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	5640	1.57E+04	No	1.10E+05	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Copper	7440-50-8	ug/kg	10400	2.20E+04	No	6.10E+04	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Fluoride	16984-48-8	ug/kg	1300	2.81E+03	No	7.33E+04	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Iron	7439-89-6	ug/kg	18600000	3.26E+07	No	6.81E+07	No

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Lead	7439-92-1	ug/kg	3160	1.02E+04	No	7.41E+04	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Lithium	7439-93-2	ug/kg	6580	1.33E+04	No	1.92E+04	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Manganese	7439-96-5	ug/kg	259000	5.12E+05	No	1.11E+06	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	ug/kg	2.21	--	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	ug/kg	275	4.70E+02	No	3.17E+03	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Nickel	7440-02-0	ug/kg	8040	1.91E+04	No	2.00E+05	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Nitrate	14797-55-8	ug/kg	17900	5.20E+04	No	9.06E+05	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Vanadium	7440-62-2	ug/kg	51400	8.51E+04	No	1.40E+05	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Zinc	7440-66-6	ug/kg	38900	6.78E+04	No	3.66E+05	No
300-33, 300-41, 300-256_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	3.02	1.10E+00	Yes	1.51E+00	Yes
300-33, 300-41, 300-256_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	2.17	1.06E+00	Yes	1.21E+00	Yes
300-37_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	100	--	--	--	--
300-37_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	3200	--	--	--	--
300-44_Overburden_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	9100	6.47E+03	Yes	2.77E+04	No
300-44_Overburden_Focused	Rad	Uranium-238	U-238	pCi/g	0.345	1.06E+00	No	1.21E+00	No
300-44_Shallow_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	6710000	1.18E+07	No	2.88E+07	No
300-44_Shallow_Focused	non-Rad	Antimony	7440-36-0	ug/kg	4100	1.30E+02	Yes	3.85E+02	Yes
300-44_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	16900	6.47E+03	Yes	2.77E+04	No
300-44_Shallow_Focused	non-Rad	Barium	7440-39-3	ug/kg	75200	1.32E+05	No	4.80E+05	No
300-44_Shallow_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	480	1.51E+03	No	1.00E+04	No
300-44_Shallow_Focused	non-Rad	Chromium	7440-47-3	ug/kg	9300	1.85E+04	No	3.20E+05	No
300-44_Shallow_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	8200	1.57E+04	No	1.10E+05	No
300-44_Shallow_Focused	non-Rad	Copper	7440-50-8	ug/kg	7800	2.20E+04	No	6.10E+04	No
300-44_Shallow_Focused	non-Rad	Iron	7439-89-6	ug/kg	19400000	3.26E+07	No	6.81E+07	No
300-44_Shallow_Focused	non-Rad	Manganese	7439-96-5	ug/kg	303000	5.12E+05	No	1.11E+06	No
300-44_Shallow_Focused	non-Rad	Nickel	7440-02-0	ug/kg	8600	1.91E+04	No	2.00E+05	No
300-44_Shallow_Focused	non-Rad	Vanadium	7440-62-2	ug/kg	43200	8.51E+04	No	1.40E+05	No
300-44_Shallow_Focused	non-Rad	Zinc	7440-66-6	ug/kg	37800	6.78E+04	No	3.66E+05	No
300-44_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	0.293	1.06E+00	No	1.21E+00	No
300-45_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	86	--	--	--	--
300-45_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	290	--	--	--	--
300-45_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	0.0228	1.05E+00	No	1.64E+00	No
300-45_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	0.0606	1.09E-01	No	3.86E-01	No
300-45_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.2	1.06E+00	Yes	1.21E+00	No
300-49_Overburden	non-Rad	1,2,4-Trichlorobenzene	120-82-1	ug/kg	30.521	--	--	--	--
300-49_Overburden	non-Rad	1,4-Dichlorobenzene	106-46-7	ug/kg	28.761	--	--	--	--
300-49_Overburden	non-Rad	2,4-Dinitrotoluene	121-14-2	ug/kg	18.933	--	--	--	--
300-49_Overburden	non-Rad	2-Chlorophenol	95-57-8	ug/kg	51.333	--	--	--	--
300-49_Overburden	non-Rad	4-Chloro-3-methylphenol	59-50-7	ug/kg	45.95	--	--	--	--
300-49_Overburden	non-Rad	Acenaphthene	83-32-9	ug/kg	30.706	--	--	--	--
300-49_Overburden	non-Rad	Aluminum	7429-90-5	ug/kg	6298268	1.18E+07	No	2.88E+07	No
300-49_Overburden	non-Rad	Antimony	7440-36-0	ug/kg	232	1.30E+02	Yes	3.85E+02	No
300-49_Overburden	non-Rad	Aroclor-1254	11097-69-1	ug/kg	3007.72	--	--	--	--
300-49_Overburden	non-Rad	Arsenic	7440-38-2	ug/kg	3291.4547	6.47E+03	No	2.77E+04	No
300-49_Overburden	non-Rad	Barium	7440-39-3	ug/kg	76067.996	1.32E+05	No	4.80E+05	No

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
300-49_Overburden	non-Rad	Beryllium	7440-41-7	ug/kg	201	1.51E+03	No	1.00E+04	No
300-49_Overburden	non-Rad	Cadmium	7440-43-9	ug/kg	174.23168	5.63E+02	No	2.98E+03	No
300-49_Overburden	non-Rad	Chromium	7440-47-3	ug/kg	18105.752	1.85E+04	No	3.20E+05	No
300-49_Overburden	non-Rad	Cobalt	7440-48-4	ug/kg	7126.7862	1.57E+04	No	1.10E+05	No
300-49_Overburden	non-Rad	Copper	7440-50-8	ug/kg	536000	2.20E+04	Yes	6.10E+04	Yes
300-49_Overburden	non-Rad	Di-n-butylphthalate	84-74-2	ug/kg	51.612	--	--	--	--
300-49_Overburden	non-Rad	Iron	7439-89-6	ug/kg	20785221	3.26E+07	No	6.81E+07	No
300-49_Overburden	non-Rad	Lead	7439-92-1	ug/kg	36964.316	1.02E+04	Yes	7.41E+04	No
300-49_Overburden	non-Rad	Manganese	7439-96-5	ug/kg	316668.7	5.12E+05	No	1.11E+06	No
300-49_Overburden	non-Rad	Nickel	7440-02-0	ug/kg	13035.047	1.91E+04	No	2.00E+05	No
300-49_Overburden	non-Rad	n-Nitrosodi-n-dipropylamine	621-64-7	ug/kg	39.728	--	--	--	--
300-49_Overburden	non-Rad	Pentachlorophenol	87-86-5	ug/kg	49.824	--	--	--	--
300-49_Overburden	non-Rad	Phenol	108-95-2	ug/kg	49.958	--	--	--	--
300-49_Overburden	non-Rad	Pyrene	129-00-0	ug/kg	40.131	--	--	--	--
300-49_Overburden	non-Rad	Silver	7440-22-4	ug/kg	702.5	1.67E+02	Yes	2.73E+02	Yes
300-49_Overburden	non-Rad	Vanadium	7440-62-2	ug/kg	50379.9	8.51E+04	No	1.40E+05	No
300-49_Overburden	non-Rad	Zinc	7440-66-6	ug/kg	141984.11	6.78E+04	Yes	3.66E+05	No
300-49_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	1.0071423	1.10E+00	No	1.51E+00	No
300-49_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	0.057	1.09E-01	No	3.86E-01	No
300-49_Overburden	Rad	Uranium-238	U-238	pCi/g	1.0270629	1.06E+00	No	1.21E+00	No
300-49_Shallow	non-Rad	Aluminum	7429-90-5	ug/kg	6920407.4	1.18E+07	No	2.88E+07	No
300-49_Shallow	non-Rad	Antimony	7440-36-0	ug/kg	176	1.30E+02	Yes	3.85E+02	No
300-49_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	4430.9173	6.47E+03	No	2.77E+04	No
300-49_Shallow	non-Rad	Barium	7440-39-3	ug/kg	89873.548	1.32E+05	No	4.80E+05	No
300-49_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	302.82112	1.51E+03	No	1.00E+04	No
300-49_Shallow	non-Rad	Chromium	7440-47-3	ug/kg	9170.4553	1.85E+04	No	3.20E+05	No
300-49_Shallow	non-Rad	Cobalt	7440-48-4	ug/kg	9322.7233	1.57E+04	No	1.10E+05	No
300-49_Shallow	non-Rad	Copper	7440-50-8	ug/kg	14870.141	2.20E+04	No	6.10E+04	No
300-49_Shallow	non-Rad	Iron	7439-89-6	ug/kg	25857610	3.26E+07	No	6.81E+07	No
300-49_Shallow	non-Rad	Lead	7439-92-1	ug/kg	6628.6916	1.02E+04	No	7.41E+04	No
300-49_Shallow	non-Rad	Manganese	7439-96-5	ug/kg	361805.31	5.12E+05	No	1.11E+06	No
300-49_Shallow	non-Rad	Nickel	7440-02-0	ug/kg	10664.053	1.91E+04	No	2.00E+05	No
300-49_Shallow	non-Rad	Silver	7440-22-4	ug/kg	621	1.67E+02	Yes	2.73E+02	Yes
300-49_Shallow	non-Rad	Vanadium	7440-62-2	ug/kg	58672.352	8.51E+04	No	1.40E+05	No
300-49_Shallow	non-Rad	Zinc	7440-66-6	ug/kg	54650.548	6.78E+04	No	3.66E+05	No
300-49_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	0.151	1.05E+00	No	1.64E+00	No
300-49_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.3170357	1.10E+00	Yes	1.51E+00	No
300-49_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	0.24	1.09E-01	Yes	3.86E-01	No
300-49_Shallow	Rad	Uranium-238	U-238	pCi/g	1.0645462	1.06E+00	Yes	1.21E+00	No
300-50_Overburden	non-Rad	Aluminum	7429-90-5	ug/kg	6682542.4	1.18E+07	No	2.88E+07	No
300-50_Overburden	non-Rad	Aroclor-1254	11097-69-1	ug/kg	33.449	--	--	--	--
300-50_Overburden	non-Rad	Aroclor-1260	11096-82-5	ug/kg	229.191	--	--	--	--
300-50_Overburden	non-Rad	Arsenic	7440-38-2	ug/kg	6896.5178	6.47E+03	Yes	2.77E+04	No
300-50_Overburden	non-Rad	Barium	7440-39-3	ug/kg	117741.8	1.32E+05	No	4.80E+05	No
300-50_Overburden	non-Rad	Beryllium	7440-41-7	ug/kg	325	1.51E+03	No	1.00E+04	No

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
300-50_Overburden	non-Rad	Cadmium	7440-43-9	ug/kg	563	5.63E+02	No	2.98E+03	No
300-50_Overburden	non-Rad	Chromium	7440-47-3	ug/kg	12197.473	1.85E+04	No	3.20E+05	No
300-50_Overburden	non-Rad	Cobalt	7440-48-4	ug/kg	9388.7545	1.57E+04	No	1.10E+05	No
300-50_Overburden	non-Rad	Copper	7440-50-8	ug/kg	64526.564	2.20E+04	Yes	6.10E+04	Yes
300-50_Overburden	non-Rad	Iron	7439-89-6	ug/kg	19010912	3.26E+07	No	6.81E+07	No
300-50_Overburden	non-Rad	Lead	7439-92-1	ug/kg	5904.5145	1.02E+04	No	7.41E+04	No
300-50_Overburden	non-Rad	Manganese	7439-96-5	ug/kg	314270.52	5.12E+05	No	1.11E+06	No
300-50_Overburden	non-Rad	Nickel	7440-02-0	ug/kg	15229.321	1.91E+04	No	2.00E+05	No
300-50_Overburden	non-Rad	Silver	7440-22-4	ug/kg	1201.8495	1.67E+02	Yes	2.73E+02	Yes
300-50_Overburden	non-Rad	Vanadium	7440-62-2	ug/kg	45242.833	8.51E+04	No	1.40E+05	No
300-50_Overburden	non-Rad	Zinc	7440-66-6	ug/kg	45888.899	6.78E+04	No	3.66E+05	No
300-50_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	0.056	1.05E+00	No	1.64E+00	No
300-50_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	6.0283138	1.10E+00	Yes	1.51E+00	Yes
300-50_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	0.4488182	1.09E-01	Yes	3.86E-01	Yes
300-50_Overburden	Rad	Uranium-238	U-238	pCi/g	5.9538855	1.06E+00	Yes	1.21E+00	Yes
300-50_Shallow	non-Rad	Aluminum	7429-90-5	ug/kg	6879877.8	1.18E+07	No	2.88E+07	No
300-50_Shallow	non-Rad	Antimony	7440-36-0	ug/kg	3000	1.30E+02	Yes	3.85E+02	Yes
300-50_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	126.33679	--	--	--	--
300-50_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	6402.8179	6.47E+03	No	2.77E+04	No
300-50_Shallow	non-Rad	Barium	7440-39-3	ug/kg	103029.03	1.32E+05	No	4.80E+05	No
300-50_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	281.58191	1.51E+03	No	1.00E+04	No
300-50_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	19.28	--	--	--	--
300-50_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	463	5.63E+02	No	2.98E+03	No
300-50_Shallow	non-Rad	Chromium	7440-47-3	ug/kg	16841.216	1.85E+04	No	3.20E+05	No
300-50_Shallow	non-Rad	Cobalt	7440-48-4	ug/kg	9109.2337	1.57E+04	No	1.10E+05	No
300-50_Shallow	non-Rad	Copper	7440-50-8	ug/kg	16820.364	2.20E+04	No	6.10E+04	No
300-50_Shallow	non-Rad	Iron	7439-89-6	ug/kg	19567463	3.26E+07	No	6.81E+07	No
300-50_Shallow	non-Rad	Lead	7439-92-1	ug/kg	6381.1054	1.02E+04	No	7.41E+04	No
300-50_Shallow	non-Rad	Manganese	7439-96-5	ug/kg	318119.94	5.12E+05	No	1.11E+06	No
300-50_Shallow	non-Rad	Nickel	7440-02-0	ug/kg	12413.18	1.91E+04	No	2.00E+05	No
300-50_Shallow	non-Rad	Silver	7440-22-4	ug/kg	2991.6221	1.67E+02	Yes	2.73E+02	Yes
300-50_Shallow	non-Rad	Vanadium	7440-62-2	ug/kg	46964.326	8.51E+04	No	1.40E+05	No
300-50_Shallow	non-Rad	Zinc	7440-66-6	ug/kg	41343.824	6.78E+04	No	3.66E+05	No
300-50_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	0.056	1.05E+00	No	1.64E+00	No
300-50_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	7.8915667	1.10E+00	Yes	1.51E+00	Yes
300-50_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	0.6638635	1.09E-01	Yes	3.86E-01	Yes
300-50_Shallow	Rad	Uranium-238	U-238	pCi/g	8.4149511	1.06E+00	Yes	1.21E+00	Yes
300-8_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	573.94308	1.51E+03	No	1.00E+04	No
300-8_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	0.7864932	1.10E+00	No	1.51E+00	No
300-8_Shallow	Rad	Uranium-238	U-238	pCi/g	0.821461	1.06E+00	No	1.21E+00	No
316-1_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	0.101	1.05E+00	No	1.64E+00	No
316-1_Overburden	Rad	Cobalt-60	10198-40-0	pCi/g	0.318	8.42E-03	Yes	3.87E-02	Yes
316-1_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	12.951255	1.10E+00	Yes	1.51E+00	Yes
316-1_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	1.0800649	1.09E-01	Yes	3.86E-01	Yes
316-1_Overburden	Rad	Uranium-238	U-238	pCi/g	13.461979	1.06E+00	Yes	1.21E+00	Yes

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
316-1_Shallow_1	non-Rad	Aroclor-1248	12672-29-6	ug/kg	3000	--	--	--	--
316-1_Shallow_1	non-Rad	Arsenic	7440-38-2	ug/kg	19014.394	6.47E+03	Yes	2.77E+04	No
316-1_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	68.568864	--	--	--	--
316-1_Shallow_1	non-Rad	Butylbenzylphthalate	85-68-7	ug/kg	97.692869	--	--	--	--
316-1_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	0.0318	1.05E+00	No	1.64E+00	No
316-1_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.2129255	1.09E-01	Yes	3.86E-01	Yes
316-1_Shallow_1	Rad	Uranium-238	U-238	pCi/g	27.705268	1.06E+00	Yes	1.21E+00	Yes
316-1_Shallow_3	non-Rad	Aluminum	7429-90-5	ug/kg	11100903	1.18E+07	No	2.88E+07	No
316-1_Shallow_3	non-Rad	Antimony	7440-36-0	ug/kg	490	1.30E+02	Yes	3.85E+02	Yes
316-1_Shallow_3	non-Rad	Aroclor-1254	11097-69-1	ug/kg	98.222211	--	--	--	--
316-1_Shallow_3	non-Rad	Arsenic	7440-38-2	ug/kg	5138.1841	6.47E+03	No	2.77E+04	No
316-1_Shallow_3	non-Rad	Barium	7440-39-3	ug/kg	129105.65	1.32E+05	No	4.80E+05	No
316-1_Shallow_3	non-Rad	Beryllium	7440-41-7	ug/kg	415.94651	1.51E+03	No	1.00E+04	No
316-1_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	342.15909	--	--	--	--
316-1_Shallow_3	non-Rad	Cadmium	7440-43-9	ug/kg	474.44444	5.63E+02	No	2.98E+03	No
316-1_Shallow_3	non-Rad	Chromium	7440-47-3	ug/kg	50455.279	1.85E+04	Yes	3.20E+05	No
316-1_Shallow_3	non-Rad	Cobalt	7440-48-4	ug/kg	9703.0862	1.57E+04	No	1.10E+05	No
316-1_Shallow_3	non-Rad	Copper	7440-50-8	ug/kg	1366370.3	2.20E+04	Yes	6.10E+04	Yes
316-1_Shallow_3	non-Rad	Heptachlor epoxide	1024-57-3	ug/kg	3.2	--	--	--	--
316-1_Shallow_3	non-Rad	Iron	7439-89-6	ug/kg	24412967	3.26E+07	No	6.81E+07	No
316-1_Shallow_3	non-Rad	Lead	7439-92-1	ug/kg	14409.04	1.02E+04	Yes	7.41E+04	No
316-1_Shallow_3	non-Rad	Manganese	7439-96-5	ug/kg	392825.12	5.12E+05	No	1.11E+06	No
316-1_Shallow_3	non-Rad	Mercury	7439-97-6	ug/kg	1105.3045	1.31E+01	Yes	2.92E+01	Yes
316-1_Shallow_3	non-Rad	Nickel	7440-02-0	ug/kg	94655.889	1.91E+04	Yes	2.00E+05	No
316-1_Shallow_3	non-Rad	Phenol	108-95-2	ug/kg	28	--	--	--	--
316-1_Shallow_3	non-Rad	Selenium	7782-49-2	ug/kg	1444.348	7.80E+02	Yes	8.40E+02	Yes
316-1_Shallow_3	non-Rad	Silver	7440-22-4	ug/kg	13195.532	1.67E+02	Yes	2.73E+02	Yes
316-1_Shallow_3	non-Rad	Vanadium	7440-62-2	ug/kg	56706.602	8.51E+04	No	1.40E+05	No
316-1_Shallow_3	non-Rad	Zinc	7440-66-6	ug/kg	82015.898	6.78E+04	Yes	3.66E+05	No
316-1_Shallow_3	Rad	Cesium-137	10045-97-3	pCi/g	0.3745263	1.05E+00	No	1.64E+00	No
316-1_Shallow_3	Rad	Cobalt-60	10198-40-0	pCi/g	2.3247895	8.42E-03	Yes	3.87E-02	Yes
316-1_Shallow_3	Rad	Uranium-233/234	U-233/234	pCi/g	22.712418	1.10E+00	Yes	1.51E+00	Yes
316-1_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	2.6366316	1.09E-01	Yes	3.86E-01	Yes
316-1_Shallow_3	Rad	Uranium-238	U-238	pCi/g	20.816237	1.06E+00	Yes	1.21E+00	Yes
316-1_Shallow_4	non-Rad	Aroclor-1254	11097-69-1	ug/kg	62	--	--	--	--
316-1_Shallow_4	Rad	Cobalt-60	10198-40-0	pCi/g	0.12	8.42E-03	Yes	3.87E-02	Yes
316-1_Shallow_4	Rad	Uranium-233/234	U-233/234	pCi/g	16.144021	1.10E+00	Yes	1.51E+00	Yes
316-1_Shallow_4	Rad	Uranium-235	15117-96-1	pCi/g	1.0503117	1.09E-01	Yes	3.86E-01	Yes
316-1_Shallow_4	Rad	Uranium-238	U-238	pCi/g	14.274537	1.06E+00	Yes	1.21E+00	Yes
316-2_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	0.031	1.05E+00	No	1.64E+00	No
316-2_Shallow_1	Rad	Cobalt-60	10198-40-0	pCi/g	0.0921667	8.42E-03	Yes	3.87E-02	Yes
316-2_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	86.35838	1.10E+00	Yes	1.51E+00	Yes
316-2_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	12.2	1.09E-01	Yes	3.86E-01	Yes
316-2_Shallow_1	Rad	Uranium-238	U-238	pCi/g	68.849849	1.06E+00	Yes	1.21E+00	Yes
316-2_Shallow_2	non-Rad	Aroclor-1248	12672-29-6	ug/kg	696.77511	--	--	--	--

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
316-2_Shallow_2	non-Rad	Aroclor-1254	11097-69-1	ug/kg	42	--	--	--	--
316-2_Shallow_2	non-Rad	Aroclor-1260	11096-82-5	ug/kg	110	--	--	--	--
316-2_Shallow_2	Rad	Cesium-137	10045-97-3	pCi/g	0.4483926	1.05E+00	No	1.64E+00	No
316-2_Shallow_2	Rad	Cobalt-60	10198-40-0	pCi/g	0.4526667	8.42E-03	Yes	3.87E-02	Yes
316-2_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	114.58501	1.10E+00	Yes	1.51E+00	Yes
316-2_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	11.099701	1.09E-01	Yes	3.86E-01	Yes
316-2_Shallow_2	Rad	Uranium-238	U-238	pCi/g	96.184072	1.06E+00	Yes	1.21E+00	Yes
316-2_Shallow_3	non-Rad	Arsenic	7440-38-2	ug/kg	8000	6.47E+03	Yes	2.77E+04	No
316-2_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	260	--	--	--	--
316-2_Shallow_3	non-Rad	Butylbenzylphthalate	85-68-7	ug/kg	180	--	--	--	--
316-2_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	0.9087753	1.09E-01	Yes	3.86E-01	Yes
316-2_Shallow_3	Rad	Uranium-238	U-238	pCi/g	24.443479	1.06E+00	Yes	1.21E+00	Yes
316-5_Shallow_1	non-Rad	Arsenic	7440-38-2	ug/kg	3069.7819	6.47E+03	No	2.77E+04	No
316-5_Shallow_1	non-Rad	Benzo(a)anthracene	56-55-3	ug/kg	38	--	--	--	--
316-5_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	145.94371	--	--	--	--
316-5_Shallow_1	non-Rad	Butylbenzylphthalate	85-68-7	ug/kg	100	--	--	--	--
316-5_Shallow_1	Rad	Americium-241	14596-10-2	pCi/g	0.479	--	--	--	--
316-5_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	2.3133333	1.05E+00	Yes	1.64E+00	Yes
316-5_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	18.6	1.09E-01	Yes	3.86E-01	Yes
316-5_Shallow_1	Rad	Uranium-238	U-238	pCi/g	89.204573	1.06E+00	Yes	1.21E+00	Yes
316-5_Shallow_2	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	140	--	--	--	--
316-5_Shallow_2	non-Rad	2-Butoxyethanol	111-76-2	ug/kg	240	--	--	--	--
316-5_Shallow_2	non-Rad	Arsenic	7440-38-2	ug/kg	3180.1122	6.47E+03	No	2.77E+04	No
316-5_Shallow_2	non-Rad	Barium	7440-39-3	ug/kg	76700	1.32E+05	No	4.80E+05	No
316-5_Shallow_2	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	180.10955	--	--	--	--
316-5_Shallow_2	non-Rad	Butylbenzylphthalate	85-68-7	ug/kg	110	--	--	--	--
316-5_Shallow_2	non-Rad	Chromium	7440-47-3	ug/kg	6900	1.85E+04	No	3.20E+05	No
316-5_Shallow_2	non-Rad	Chrysene	218-01-9	ug/kg	38	--	--	--	--
316-5_Shallow_2	non-Rad	Di-n-butylphthalate	84-74-2	ug/kg	146.4259	--	--	--	--
316-5_Shallow_2	non-Rad	Lead	7439-92-1	ug/kg	3200	1.02E+04	No	7.41E+04	No
316-5_Shallow_2	non-Rad	Selenium	7782-49-2	ug/kg	490	7.80E+02	No	8.40E+02	No
316-5_Shallow_2	non-Rad	Silver	7440-22-4	ug/kg	3600	1.67E+02	Yes	2.73E+02	Yes
316-5_Shallow_2	Rad	Americium-241	14596-10-2	pCi/g	0.124	--	--	--	--
316-5_Shallow_2	Rad	Cesium-137	10045-97-3	pCi/g	1.7138871	1.05E+00	Yes	1.64E+00	Yes
316-5_Shallow_2	Rad	Cobalt-60	10198-40-0	pCi/g	0.118	8.42E-03	Yes	3.87E-02	Yes
316-5_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	9.0404196	1.09E-01	Yes	3.86E-01	Yes
316-5_Shallow_2	Rad	Uranium-238	U-238	pCi/g	67.516215	1.06E+00	Yes	1.21E+00	Yes
316-5_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	ug/kg	57	--	--	--	--
316-5_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	70	--	--	--	--
316-5_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	52	--	--	--	--
316-5_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	4300	6.47E+03	No	2.77E+04	No
316-5_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	190	--	--	--	--
316-5_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	ug/kg	1500	--	--	--	--
316-5_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.83	1.05E+00	Yes	1.64E+00	Yes
316-5_Shallow_Focused	Rad	Europium-155	14391-16-3	pCi/g	0.0719	5.39E-02	Yes	9.84E-02	No

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
316-5_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	7.67	1.09E-01	Yes	3.86E-01	Yes
316-5_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	45.2	1.06E+00	Yes	1.21E+00	Yes
331 LSLDF_Shallow_Focused	non-Rad	4,4'-DDE (Dichlorodiphenyldichloroethylene)	72-55-9	ug/kg	25	--	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Acetone	67-64-1	ug/kg	590	--	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Aldrin	309-00-2	ug/kg	0.56	--	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Alpha-BHC	319-84-6	ug/kg	0.39	--	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	6900000	1.18E+07	No	2.88E+07	No
331 LSLDF_Shallow_Focused	non-Rad	Antimony	7440-36-0	ug/kg	360	1.30E+02	Yes	3.85E+02	No
331 LSLDF_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	850	--	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	2400	6.47E+03	No	2.77E+04	No
331 LSLDF_Shallow_Focused	non-Rad	Barium	7440-39-3	ug/kg	78600	1.32E+05	No	4.80E+05	No
331 LSLDF_Shallow_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	570	1.51E+03	No	1.00E+04	No
331 LSLDF_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	910	--	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Boron	7440-42-8	ug/kg	1700	3.89E+03	No	5.86E+03	No
331 LSLDF_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	ug/kg	340	--	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Cadmium	7440-43-9	ug/kg	140	5.63E+02	No	2.98E+03	No
331 LSLDF_Shallow_Focused	non-Rad	Chromium	7440-47-3	ug/kg	10300	1.85E+04	No	3.20E+05	No
331 LSLDF_Shallow_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	8600	1.57E+04	No	1.10E+05	No
331 LSLDF_Shallow_Focused	non-Rad	Copper	7440-50-8	ug/kg	15400	2.20E+04	No	6.10E+04	No
331 LSLDF_Shallow_Focused	non-Rad	Dieldrin	60-57-1	ug/kg	13	--	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	ug/kg	98	--	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Endosulfan I	959-98-8	ug/kg	1.9	--	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Endosulfan II	33213-65-9	ug/kg	3.1	--	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Iron	7439-89-6	ug/kg	22000000	3.26E+07	No	6.81E+07	No
331 LSLDF_Shallow_Focused	non-Rad	Lead	7439-92-1	ug/kg	9000	1.02E+04	No	7.41E+04	No
331 LSLDF_Shallow_Focused	non-Rad	Manganese	7439-96-5	ug/kg	349000	5.12E+05	No	1.11E+06	No
331 LSLDF_Shallow_Focused	non-Rad	Mercury	7439-97-6	ug/kg	110	1.31E+01	Yes	2.92E+01	Yes
331 LSLDF_Shallow_Focused	non-Rad	Methoxychlor	72-43-5	ug/kg	3.3	--	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	ug/kg	11	--	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	ug/kg	590	4.70E+02	Yes	3.17E+03	No
331 LSLDF_Shallow_Focused	non-Rad	Nickel	7440-02-0	ug/kg	10000	1.91E+04	No	2.00E+05	No
331 LSLDF_Shallow_Focused	non-Rad	Nitrate	14797-55-8	ug/kg	41700	5.20E+04	No	9.06E+05	No
331 LSLDF_Shallow_Focused	non-Rad	Nitrogen in Nitrite and Nitrate	NO2-N	ug/kg	9500	--	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Silver	7440-22-4	ug/kg	1100	1.67E+02	Yes	2.73E+02	Yes
331 LSLDF_Shallow_Focused	non-Rad	Uranium	7440-61-1	ug/kg	2300	3.21E+03	No	4.04E+03	No
331 LSLDF_Shallow_Focused	non-Rad	Vanadium	7440-62-2	ug/kg	53100	8.51E+04	No	1.40E+05	No
331 LSLDF_Shallow_Focused	non-Rad	Zinc	7440-66-6	ug/kg	137000	6.78E+04	Yes	3.66E+05	No
331 LSLDF_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	0.54	1.10E+00	No	1.51E+00	No
331 LSLDF_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	0.471	1.06E+00	No	1.21E+00	No
600-243_Shallow	non-Rad	2-Methylnaphthalene	91-57-6	ug/kg	278.59236	--	--	--	--
600-243_Shallow	non-Rad	Anthracene	120-12-7	ug/kg	31.262901	--	--	--	--
600-243_Shallow	non-Rad	Antimony	7440-36-0	ug/kg	1300	1.30E+02	Yes	3.85E+02	Yes
600-243_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	26.987489	--	--	--	--
600-243_Shallow	non-Rad	Aroclor-1260	11096-82-5	ug/kg	18.402222	--	--	--	--
600-243_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	6158.9308	6.47E+03	No	2.77E+04	No

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
600-243_Shallow	non-Rad	Barium	7440-39-3	ug/kg	292071.71	1.32E+05	Yes	4.80E+05	No
600-243_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	ug/kg	43.286942	--	--	--	--
600-243_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	42.700019	--	--	--	--
600-243_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	46.313874	--	--	--	--
600-243_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	ug/kg	31.751949	--	--	--	--
600-243_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	2079.1361	1.51E+03	Yes	1.00E+04	No
600-243_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	432.14579	--	--	--	--
600-243_Shallow	non-Rad	Boron	7440-42-8	ug/kg	294462.62	3.89E+03	Yes	5.86E+03	Yes
600-243_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	792.5	5.63E+02	Yes	2.98E+03	No
600-243_Shallow	non-Rad	Chromium	7440-47-3	ug/kg	18006.452	1.85E+04	No	3.20E+05	No
600-243_Shallow	non-Rad	Chrysene	218-01-9	ug/kg	62.589462	--	--	--	--
600-243_Shallow	non-Rad	Cobalt	7440-48-4	ug/kg	6206.7353	1.57E+04	No	1.10E+05	No
600-243_Shallow	non-Rad	Copper	7440-50-8	ug/kg	53981.061	2.20E+04	Yes	6.10E+04	No
600-243_Shallow	non-Rad	Dibenzofuran	132-64-9	ug/kg	78.499839	--	--	--	--
600-243_Shallow	non-Rad	Di-n-butylphthalate	84-74-2	ug/kg	37.233317	--	--	--	--
600-243_Shallow	non-Rad	Fluoranthene	206-44-0	ug/kg	79.093552	--	--	--	--
600-243_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	28	--	--	--	--
600-243_Shallow	non-Rad	Lead	7439-92-1	ug/kg	40139.054	1.02E+04	Yes	7.41E+04	No
600-243_Shallow	non-Rad	Manganese	7439-96-5	ug/kg	208289.02	5.12E+05	No	1.11E+06	No
600-243_Shallow	non-Rad	Molybdenum	7439-98-7	ug/kg	1869.1697	4.70E+02	Yes	3.17E+03	No
600-243_Shallow	non-Rad	Naphthalene	91-20-3	ug/kg	203.57985	--	--	--	--
600-243_Shallow	non-Rad	Nickel	7440-02-0	ug/kg	21394.694	1.91E+04	Yes	2.00E+05	No
600-243_Shallow	non-Rad	Pyrene	129-00-0	ug/kg	69.970075	--	--	--	--
600-243_Shallow	non-Rad	Selenium	7782-49-2	ug/kg	5708.5512	7.80E+02	Yes	8.40E+02	Yes
600-243_Shallow	non-Rad	Silver	7440-22-4	ug/kg	500	1.67E+02	Yes	2.73E+02	Yes
600-243_Shallow	non-Rad	Total petroleum hydrocarbons - diesel range	TPHDIESEL	ug/kg	95318.604	--	--	--	--
600-243_Shallow	non-Rad	Total petroleum hydrocarbons - motor oil (high boiling)	TPH/OILH	ug/kg	334524.06	--	--	--	--
600-243_Shallow	non-Rad	Vanadium	7440-62-2	ug/kg	46986.305	8.51E+04	No	1.40E+05	No
600-243_Shallow	non-Rad	Zinc	7440-66-6	ug/kg	84099.429	6.78E+04	Yes	3.66E+05	No
600-259_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	0.034	1.05E+00	No	1.64E+00	No
600-259_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	0.068	1.05E+00	No	1.64E+00	No
600-259_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	0.038	1.05E+00	No	1.64E+00	No
600-47_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	2300	6.47E+03	No	2.77E+04	No
600-47_Shallow	non-Rad	Barium	7440-39-3	ug/kg	67000	1.32E+05	No	4.80E+05	No
600-47_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	500	1.51E+03	No	1.00E+04	No
600-47_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	90	5.63E+02	No	2.98E+03	No
600-47_Shallow	non-Rad	Chromium	7440-47-3	ug/kg	5500	1.85E+04	No	3.20E+05	No
600-47_Shallow	non-Rad	Lead	7439-92-1	ug/kg	3500	1.02E+04	No	7.41E+04	No
600-47_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.36	1.10E+00	Yes	1.51E+00	No
600-47_Shallow	Rad	Uranium-238	U-238	pCi/g	1.58	1.06E+00	Yes	1.21E+00	Yes
618-1_Deep	non-Rad	Aluminum	7429-90-5	ug/kg	6370000	1.18E+07	No	2.88E+07	No
618-1_Deep	non-Rad	Aroclor-1254	11097-69-1	ug/kg	1760	--	--	--	--
618-1_Deep	non-Rad	Aroclor-1260	11096-82-5	ug/kg	294	--	--	--	--
618-1_Deep	non-Rad	Arsenic	7440-38-2	ug/kg	2550	6.47E+03	No	2.77E+04	No
618-1_Deep	non-Rad	Barium	7440-39-3	ug/kg	299000	1.32E+05	Yes	4.80E+05	No

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
618-1_Deep	non-Rad	Beryllium	7440-41-7	ug/kg	218	1.51E+03	No	1.00E+04	No
618-1_Deep	non-Rad	Boron	7440-42-8	ug/kg	1360	3.89E+03	No	5.86E+03	No
618-1_Deep	non-Rad	Cadmium	7440-43-9	ug/kg	263	5.63E+02	No	2.98E+03	No
618-1_Deep	non-Rad	Chromium	7440-47-3	ug/kg	7740	1.85E+04	No	3.20E+05	No
618-1_Deep	non-Rad	Cobalt	7440-48-4	ug/kg	8600	1.57E+04	No	1.10E+05	No
618-1_Deep	non-Rad	Copper	7440-50-8	ug/kg	46300	2.20E+04	Yes	6.10E+04	No
618-1_Deep	non-Rad	Fluoride	16984-48-8	ug/kg	2800	2.81E+03	No	7.33E+04	No
618-1_Deep	non-Rad	Iron	7439-89-6	ug/kg	24700000	3.26E+07	No	6.81E+07	No
618-1_Deep	non-Rad	Lead	7439-92-1	ug/kg	58400	1.02E+04	Yes	7.41E+04	No
618-1_Deep	non-Rad	Lithium	7439-93-2	ug/kg	5980	1.33E+04	No	1.92E+04	No
618-1_Deep	non-Rad	Manganese	7439-96-5	ug/kg	352000	5.12E+05	No	1.11E+06	No
618-1_Deep	non-Rad	Mercury	7439-97-6	ug/kg	1180	1.31E+01	Yes	2.92E+01	Yes
618-1_Deep	non-Rad	Molybdenum	7439-98-7	ug/kg	493	4.70E+02	Yes	3.17E+03	No
618-1_Deep	non-Rad	Nickel	7440-02-0	ug/kg	17600	1.91E+04	No	2.00E+05	No
618-1_Deep	non-Rad	Nitrate	14797-55-8	ug/kg	1700	5.20E+04	No	9.06E+05	No
618-1_Deep	non-Rad	Nitrogen in Nitrite and Nitrate	NO2-N	ug/kg	220	--	--	--	--
618-1_Deep	non-Rad	Uranium	7440-61-1	ug/kg	37400	3.21E+03	Yes	4.04E+03	Yes
618-1_Deep	non-Rad	Vanadium	7440-62-2	ug/kg	73000	8.51E+04	No	1.40E+05	No
618-1_Deep	non-Rad	Zinc	7440-66-6	ug/kg	134000	6.78E+04	Yes	3.66E+05	No
618-1_Deep	Rad	Cesium-137	10045-97-3	pCi/g	0.461	1.05E+00	No	1.64E+00	No
618-1_Deep	Rad	Uranium-233/234	U-233/234	pCi/g	33.1	1.10E+00	Yes	1.51E+00	Yes
618-1_Deep	Rad	Uranium-235	15117-96-1	pCi/g	2.74	1.09E-01	Yes	3.86E-01	Yes
618-1_Deep	Rad	Uranium-238	U-238	pCi/g	32	1.06E+00	Yes	1.21E+00	Yes
618-1_Deep_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	8570000	1.18E+07	No	2.88E+07	No
618-1_Deep_Focused	non-Rad	Antimony	7440-36-0	ug/kg	407	1.30E+02	Yes	3.85E+02	Yes
618-1_Deep_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	1240000	--	--	--	--
618-1_Deep_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	99.2	--	--	--	--
618-1_Deep_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	4580	6.47E+03	No	2.77E+04	No
618-1_Deep_Focused	non-Rad	Barium	7440-39-3	ug/kg	1870000	1.32E+05	Yes	4.80E+05	Yes
618-1_Deep_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	323	1.51E+03	No	1.00E+04	No
618-1_Deep_Focused	non-Rad	Boron	7440-42-8	ug/kg	6620	3.89E+03	Yes	5.86E+03	Yes
618-1_Deep_Focused	non-Rad	Cadmium	7440-43-9	ug/kg	1030	5.63E+02	Yes	2.98E+03	No
618-1_Deep_Focused	non-Rad	Chromium	7440-47-3	ug/kg	18900	1.85E+04	Yes	3.20E+05	No
618-1_Deep_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	8920	1.57E+04	No	1.10E+05	No
618-1_Deep_Focused	non-Rad	Copper	7440-50-8	ug/kg	68700	2.20E+04	Yes	6.10E+04	Yes
618-1_Deep_Focused	non-Rad	Fluoride	16984-48-8	ug/kg	3300	2.81E+03	Yes	7.33E+04	No
618-1_Deep_Focused	non-Rad	Iron	7439-89-6	ug/kg	24100000	3.26E+07	No	6.81E+07	No
618-1_Deep_Focused	non-Rad	Lead	7439-92-1	ug/kg	333000	1.02E+04	Yes	7.41E+04	Yes
618-1_Deep_Focused	non-Rad	Lithium	7439-93-2	ug/kg	8450	1.33E+04	No	1.92E+04	No
618-1_Deep_Focused	non-Rad	Manganese	7439-96-5	ug/kg	351000	5.12E+05	No	1.11E+06	No
618-1_Deep_Focused	non-Rad	Mercury	7439-97-6	ug/kg	8940	1.31E+01	Yes	2.92E+01	Yes
618-1_Deep_Focused	non-Rad	Molybdenum	7439-98-7	ug/kg	2140	4.70E+02	Yes	3.17E+03	No
618-1_Deep_Focused	non-Rad	Nickel	7440-02-0	ug/kg	13700	1.91E+04	No	2.00E+05	No
618-1_Deep_Focused	non-Rad	Nitrate	14797-55-8	ug/kg	11900	5.20E+04	No	9.06E+05	No
618-1_Deep_Focused	non-Rad	Nitrogen in Nitrite and Nitrate	NO2-N	ug/kg	1560	--	--	--	--

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
618-1_Deep_Focused	non-Rad	Silver	7440-22-4	ug/kg	1290	1.67E+02	Yes	2.73E+02	Yes
618-1_Deep_Focused	non-Rad	Uranium	7440-61-1	ug/kg	209000	3.21E+03	Yes	4.04E+03	Yes
618-1_Deep_Focused	non-Rad	Vanadium	7440-62-2	ug/kg	70900	8.51E+04	No	1.40E+05	No
618-1_Deep_Focused	non-Rad	Zinc	7440-66-6	ug/kg	82000	6.78E+04	Yes	3.66E+05	No
618-1_Deep_Focused	Rad	Cesium-137	10045-97-3	pCi/g	6.52	1.05E+00	Yes	1.64E+00	Yes
618-1_Deep_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	69.9	1.10E+00	Yes	1.51E+00	Yes
618-1_Deep_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.46	1.09E-01	Yes	3.86E-01	Yes
618-1_Deep_Focused	Rad	Uranium-238	U-238	pCi/g	65.2	1.06E+00	Yes	1.21E+00	Yes
618-1_Shallow	non-Rad	Aluminum	7429-90-5	ug/kg	6210000	1.18E+07	No	2.88E+07	No
618-1_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	264	--	--	--	--
618-1_Shallow	non-Rad	Aroclor-1260	11096-82-5	ug/kg	53.5	--	--	--	--
618-1_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	2280	6.47E+03	No	2.77E+04	No
618-1_Shallow	non-Rad	Barium	7440-39-3	ug/kg	97200	1.32E+05	No	4.80E+05	No
618-1_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	188	1.51E+03	No	1.00E+04	No
618-1_Shallow	non-Rad	Boron	7440-42-8	ug/kg	1190	3.89E+03	No	5.86E+03	No
618-1_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	68	5.63E+02	No	2.98E+03	No
618-1_Shallow	non-Rad	Chromium	7440-47-3	ug/kg	7930	1.85E+04	No	3.20E+05	No
618-1_Shallow	non-Rad	Cobalt	7440-48-4	ug/kg	6360	1.57E+04	No	1.10E+05	No
618-1_Shallow	non-Rad	Copper	7440-50-8	ug/kg	11400	2.20E+04	No	6.10E+04	No
618-1_Shallow	non-Rad	Fluoride	16984-48-8	ug/kg	400	2.81E+03	No	7.33E+04	No
618-1_Shallow	non-Rad	Iron	7439-89-6	ug/kg	20500000	3.26E+07	No	6.81E+07	No
618-1_Shallow	non-Rad	Lead	7439-92-1	ug/kg	3100	1.02E+04	No	7.41E+04	No
618-1_Shallow	non-Rad	Lithium	7439-93-2	ug/kg	6380	1.33E+04	No	1.92E+04	No
618-1_Shallow	non-Rad	Manganese	7439-96-5	ug/kg	300000	5.12E+05	No	1.11E+06	No
618-1_Shallow	non-Rad	Mercury	7439-97-6	ug/kg	31	1.31E+01	Yes	2.92E+01	Yes
618-1_Shallow	non-Rad	Molybdenum	7439-98-7	ug/kg	336	4.70E+02	No	3.17E+03	No
618-1_Shallow	non-Rad	Nickel	7440-02-0	ug/kg	8150	1.91E+04	No	2.00E+05	No
618-1_Shallow	non-Rad	Nitrate	14797-55-8	ug/kg	1600	5.20E+04	No	9.06E+05	No
618-1_Shallow	non-Rad	Nitrogen in Nitrite and Nitrate	NO2-N	ug/kg	300	--	--	--	--
618-1_Shallow	non-Rad	Vanadium	7440-62-2	ug/kg	56300	8.51E+04	No	1.40E+05	No
618-1_Shallow	non-Rad	Zinc	7440-66-6	ug/kg	42100	6.78E+04	No	3.66E+05	No
618-1_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.93	1.10E+00	Yes	1.51E+00	Yes
618-1_Shallow	Rad	Uranium-238	U-238	pCi/g	1.51	1.06E+00	Yes	1.21E+00	Yes
618-1_Shallow_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	12200000	1.18E+07	Yes	2.88E+07	No
618-1_Shallow_Focused	non-Rad	Antimony	7440-36-0	ug/kg	455	1.30E+02	Yes	3.85E+02	Yes
618-1_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	ug/kg	35.1	--	--	--	--
618-1_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	981	--	--	--	--
618-1_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	56	--	--	--	--
618-1_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	6090	6.47E+03	No	2.77E+04	No
618-1_Shallow_Focused	non-Rad	Barium	7440-39-3	ug/kg	102000	1.32E+05	No	4.80E+05	No
618-1_Shallow_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	371	1.51E+03	No	1.00E+04	No
618-1_Shallow_Focused	non-Rad	Boron	7440-42-8	ug/kg	3740	3.89E+03	No	5.86E+03	No
618-1_Shallow_Focused	non-Rad	Cadmium	7440-43-9	ug/kg	266	5.63E+02	No	2.98E+03	No
618-1_Shallow_Focused	non-Rad	Chromium	7440-47-3	ug/kg	19500	1.85E+04	Yes	3.20E+05	No
618-1_Shallow_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	8600	1.57E+04	No	1.10E+05	No

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
618-1_Shallow_Focused	non-Rad	Copper	7440-50-8	ug/kg	23800	2.20E+04	Yes	6.10E+04	No
618-1_Shallow_Focused	non-Rad	Fluoride	16984-48-8	ug/kg	900	2.81E+03	No	7.33E+04	No
618-1_Shallow_Focused	non-Rad	Iron	7439-89-6	ug/kg	22800000	3.26E+07	No	6.81E+07	No
618-1_Shallow_Focused	non-Rad	Lead	7439-92-1	ug/kg	6210	1.02E+04	No	7.41E+04	No
618-1_Shallow_Focused	non-Rad	Lithium	7439-93-2	ug/kg	13300	1.33E+04	No	1.92E+04	No
618-1_Shallow_Focused	non-Rad	Manganese	7439-96-5	ug/kg	403000	5.12E+05	No	1.11E+06	No
618-1_Shallow_Focused	non-Rad	Mercury	7439-97-6	ug/kg	198	1.31E+01	Yes	2.92E+01	Yes
618-1_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	ug/kg	356	4.70E+02	No	3.17E+03	No
618-1_Shallow_Focused	non-Rad	Nickel	7440-02-0	ug/kg	16800	1.91E+04	No	2.00E+05	No
618-1_Shallow_Focused	non-Rad	Nitrate	14797-55-8	ug/kg	3800	5.20E+04	No	9.06E+05	No
618-1_Shallow_Focused	non-Rad	Nitrogen in Nitrite and Nitrate	NO2-N	ug/kg	260	--	--	--	--
618-1_Shallow_Focused	non-Rad	Silver	7440-22-4	ug/kg	1120	1.67E+02	Yes	2.73E+02	Yes
618-1_Shallow_Focused	non-Rad	Uranium	7440-61-1	ug/kg	7080	3.21E+03	Yes	4.04E+03	Yes
618-1_Shallow_Focused	non-Rad	Vanadium	7440-62-2	ug/kg	64700	8.51E+04	No	1.40E+05	No
618-1_Shallow_Focused	non-Rad	Zinc	7440-66-6	ug/kg	68100	6.78E+04	Yes	3.66E+05	No
618-1_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	11.3	1.10E+00	Yes	1.51E+00	Yes
618-1_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	0.987	1.09E-01	Yes	3.86E-01	Yes
618-1_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	8.23	1.06E+00	Yes	1.21E+00	Yes
618-12_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	8557.1429	6.47E+03	Yes	2.77E+04	No
618-12_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	63	--	--	--	--
618-12_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	ug/kg	60	--	--	--	--
618-12_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	0.4705577	1.09E-01	Yes	3.86E-01	Yes
618-12_Shallow	Rad	Uranium-238	U-238	pCi/g	10.709664	1.06E+00	Yes	1.21E+00	Yes
618-13_Shallow	non-Rad	Acetone	67-64-1	ug/kg	8.64	--	--	--	--
618-13_Shallow	non-Rad	Aluminum	7429-90-5	ug/kg	6340000	1.18E+07	No	2.88E+07	No
618-13_Shallow	non-Rad	Antimony	7440-36-0	ug/kg	312	1.30E+02	Yes	3.85E+02	No
618-13_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	3500	6.47E+03	No	2.77E+04	No
618-13_Shallow	non-Rad	Barium	7440-39-3	ug/kg	74000	1.32E+05	No	4.80E+05	No
618-13_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	212	1.51E+03	No	1.00E+04	No
618-13_Shallow	non-Rad	Boron	7440-42-8	ug/kg	1050	3.89E+03	No	5.86E+03	No
618-13_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	63	5.63E+02	No	2.98E+03	No
618-13_Shallow	non-Rad	Chromium	7440-47-3	ug/kg	10700	1.85E+04	No	3.20E+05	No
618-13_Shallow	non-Rad	Cobalt	7440-48-4	ug/kg	6290	1.57E+04	No	1.10E+05	No
618-13_Shallow	non-Rad	Copper	7440-50-8	ug/kg	11500	2.20E+04	No	6.10E+04	No
618-13_Shallow	non-Rad	Iron	7439-89-6	ug/kg	20100000	3.26E+07	No	6.81E+07	No
618-13_Shallow	non-Rad	Lead	7439-92-1	ug/kg	3620	1.02E+04	No	7.41E+04	No
618-13_Shallow	non-Rad	Manganese	7439-96-5	ug/kg	344000	5.12E+05	No	1.11E+06	No
618-13_Shallow	non-Rad	Methylene chloride	75-09-2	ug/kg	5.12	--	--	--	--
618-13_Shallow	non-Rad	Molybdenum	7439-98-7	ug/kg	420	4.70E+02	No	3.17E+03	No
618-13_Shallow	non-Rad	Nickel	7440-02-0	ug/kg	12400	1.91E+04	No	2.00E+05	No
618-13_Shallow	non-Rad	Tin	7440-31-5	ug/kg	1050	--	--	--	--
618-13_Shallow	non-Rad	Uranium	7440-61-1	ug/kg	1750	3.21E+03	No	4.04E+03	No
618-13_Shallow	non-Rad	Vanadium	7440-62-2	ug/kg	55800	8.51E+04	No	1.40E+05	No
618-13_Shallow	non-Rad	Zinc	7440-66-6	ug/kg	41400	6.78E+04	No	3.66E+05	No
618-13_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	0.038	1.05E+00	No	1.64E+00	No

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
618-13_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.92	1.10E+00	Yes	1.51E+00	Yes
618-13_Shallow	Rad	Uranium-238	U-238	pCi/g	1.7	1.06E+00	Yes	1.21E+00	Yes
618-13_Shallow_Focused	non-Rad	Acetone	67-64-1	ug/kg	5.9	--	--	--	--
618-13_Shallow_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	5220000	1.18E+07	No	2.88E+07	No
618-13_Shallow_Focused	non-Rad	Antimony	7440-36-0	ug/kg	233	1.30E+02	Yes	3.85E+02	No
618-13_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	3390	6.47E+03	No	2.77E+04	No
618-13_Shallow_Focused	non-Rad	Barium	7440-39-3	ug/kg	57700	1.32E+05	No	4.80E+05	No
618-13_Shallow_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	184	1.51E+03	No	1.00E+04	No
618-13_Shallow_Focused	non-Rad	Boron	7440-42-8	ug/kg	960	3.89E+03	No	5.86E+03	No
618-13_Shallow_Focused	non-Rad	Cadmium	7440-43-9	ug/kg	47	5.63E+02	No	2.98E+03	No
618-13_Shallow_Focused	non-Rad	Chromium	7440-47-3	ug/kg	8740	1.85E+04	No	3.20E+05	No
618-13_Shallow_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	5710	1.57E+04	No	1.10E+05	No
618-13_Shallow_Focused	non-Rad	Copper	7440-50-8	ug/kg	10100	2.20E+04	No	6.10E+04	No
618-13_Shallow_Focused	non-Rad	Hexavalent Chromium	18540-29-9	ug/kg	150	--	--	--	--
618-13_Shallow_Focused	non-Rad	Iron	7439-89-6	ug/kg	17900000	3.26E+07	No	6.81E+07	No
618-13_Shallow_Focused	non-Rad	Lead	7439-92-1	ug/kg	4940	1.02E+04	No	7.41E+04	No
618-13_Shallow_Focused	non-Rad	Manganese	7439-96-5	ug/kg	268000	5.12E+05	No	1.11E+06	No
618-13_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	ug/kg	5.03	--	--	--	--
618-13_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	ug/kg	297	4.70E+02	No	3.17E+03	No
618-13_Shallow_Focused	non-Rad	Nickel	7440-02-0	ug/kg	10000	1.91E+04	No	2.00E+05	No
618-13_Shallow_Focused	non-Rad	Tin	7440-31-5	ug/kg	745	--	--	--	--
618-13_Shallow_Focused	non-Rad	Uranium	7440-61-1	ug/kg	1500	3.21E+03	No	4.04E+03	No
618-13_Shallow_Focused	non-Rad	Vanadium	7440-62-2	ug/kg	48600	8.51E+04	No	1.40E+05	No
618-13_Shallow_Focused	non-Rad	Zinc	7440-66-6	ug/kg	37100	6.78E+04	No	3.66E+05	No
618-13_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.14	1.10E+00	Yes	1.51E+00	No
618-13_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	0.959	1.06E+00	No	1.21E+00	No
618-2_Deep	non-Rad	Arsenic	7440-38-2	ug/kg	1500	6.47E+03	No	2.77E+04	No
618-2_Deep	non-Rad	Barium	7440-39-3	ug/kg	83300	1.32E+05	No	4.80E+05	No
618-2_Deep	non-Rad	Chromium	7440-47-3	ug/kg	6700	1.85E+04	No	3.20E+05	No
618-2_Deep	non-Rad	Lead	7439-92-1	ug/kg	6600	1.02E+04	No	7.41E+04	No
618-2_Deep	non-Rad	Selenium	7782-49-2	ug/kg	780	7.80E+02	No	8.40E+02	No
618-2_Deep	non-Rad	Tin	7440-31-5	ug/kg	2900	--	--	--	--
618-2_Deep	non-Rad	Uranium	7440-61-1	ug/kg	501000	3.21E+03	Yes	4.04E+03	Yes
618-2_Deep	Rad	Americium-241	14596-10-2	pCi/g	7.94	--	--	--	--
618-2_Deep	Rad	Cesium-137	10045-97-3	pCi/g	1.04	1.05E+00	No	1.64E+00	No
618-2_Deep	Rad	Plutonium-238	13981-16-3	pCi/g	1.5	3.78E-03	Yes	1.93E-02	Yes
618-2_Deep	Rad	Plutonium-239/240	PU-239/240	pCi/g	90.6	2.48E-02	Yes	3.31E-02	Yes
618-2_Deep	Rad	Plutonium-241	14119-32-5	pCi/g	42	--	--	--	--
618-2_Deep	Rad	Total beta radiostrontium	SR-RAD	pCi/g	11.6	1.78E-01	Yes	3.66E-01	Yes
618-2_Deep	Rad	Uranium-233/234	U-233/234	pCi/g	161	1.10E+00	Yes	1.51E+00	Yes
618-2_Deep	Rad	Uranium-235	15117-96-1	pCi/g	0.776	1.09E-01	Yes	3.86E-01	Yes
618-2_Deep	Rad	Uranium-238	U-238	pCi/g	165	1.06E+00	Yes	1.21E+00	Yes
618-2_Deep_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	6.9	--	--	--	--
618-2_Deep_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	3300	6.47E+03	No	2.77E+04	No
618-2_Deep_Focused	non-Rad	Barium	7440-39-3	ug/kg	109000	1.32E+05	No	4.80E+05	No

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
618-2_Deep_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	27	--	--	--	--
618-2_Deep_Focused	non-Rad	Cadmium	7440-43-9	ug/kg	200	5.63E+02	No	2.98E+03	No
618-2_Deep_Focused	non-Rad	Chromium	7440-47-3	ug/kg	10400	1.85E+04	No	3.20E+05	No
618-2_Deep_Focused	non-Rad	Di-n-butylphthalate	84-74-2	ug/kg	18	--	--	--	--
618-2_Deep_Focused	non-Rad	Lead	7439-92-1	ug/kg	6800	1.02E+04	No	7.41E+04	No
618-2_Deep_Focused	non-Rad	Selenium	7782-49-2	ug/kg	1200	7.80E+02	Yes	8.40E+02	Yes
618-2_Deep_Focused	non-Rad	Silver	7440-22-4	ug/kg	600	1.67E+02	Yes	2.73E+02	Yes
618-2_Deep_Focused	non-Rad	Tin	7440-31-5	ug/kg	42500	--	--	--	--
618-2_Deep_Focused	non-Rad	Uranium	7440-61-1	ug/kg	148000	3.21E+03	Yes	4.04E+03	Yes
618-2_Deep_Focused	Rad	Americium-241	14596-10-2	pCi/g	9.19	--	--	--	--
618-2_Deep_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.12	1.05E+00	Yes	1.64E+00	No
618-2_Deep_Focused	Rad	Plutonium-238	13981-16-3	pCi/g	1.57	3.78E-03	Yes	1.93E-02	Yes
618-2_Deep_Focused	Rad	Plutonium-239/240	PU-239/240	pCi/g	91.6	2.48E-02	Yes	3.31E-02	Yes
618-2_Deep_Focused	Rad	Plutonium-241	14119-32-5	pCi/g	32.9	--	--	--	--
618-2_Deep_Focused	Rad	Total beta radiostrontium	SR-RAD	pCi/g	7.2	1.78E-01	Yes	3.66E-01	Yes
618-2_Deep_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	47.8	1.10E+00	Yes	1.51E+00	Yes
618-2_Deep_Focused	Rad	Uranium-235	15117-96-1	pCi/g	2.42	1.09E-01	Yes	3.86E-01	Yes
618-2_Deep_Focused	Rad	Uranium-238	U-238	pCi/g	50.1	1.06E+00	Yes	1.21E+00	Yes
618-2_Overburden	non-Rad	Arsenic	7440-38-2	ug/kg	2700	6.47E+03	No	2.77E+04	No
618-2_Overburden	non-Rad	Barium	7440-39-3	ug/kg	74700	1.32E+05	No	4.80E+05	No
618-2_Overburden	non-Rad	Chromium	7440-47-3	ug/kg	6600	1.85E+04	No	3.20E+05	No
618-2_Overburden	non-Rad	Lead	7439-92-1	ug/kg	4300	1.02E+04	No	7.41E+04	No
618-2_Overburden	non-Rad	Selenium	7782-49-2	ug/kg	1000	7.80E+02	Yes	8.40E+02	Yes
618-2_Overburden	non-Rad	Tin	7440-31-5	ug/kg	2700	--	--	--	--
618-2_Overburden	non-Rad	Uranium	7440-61-1	ug/kg	1140	3.21E+03	No	4.04E+03	No
618-2_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	0.058	1.05E+00	No	1.64E+00	No
618-2_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	0.644	1.10E+00	No	1.51E+00	No
618-2_Overburden	Rad	Uranium-238	U-238	pCi/g	0.591	1.06E+00	No	1.21E+00	No
618-2_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	1900	6.47E+03	No	2.77E+04	No
618-2_Shallow	non-Rad	Barium	7440-39-3	ug/kg	79100	1.32E+05	No	4.80E+05	No
618-2_Shallow	non-Rad	Chromium	7440-47-3	ug/kg	7100	1.85E+04	No	3.20E+05	No
618-2_Shallow	non-Rad	Lead	7439-92-1	ug/kg	5600	1.02E+04	No	7.41E+04	No
618-2_Shallow	non-Rad	Selenium	7782-49-2	ug/kg	760	7.80E+02	No	8.40E+02	No
618-2_Shallow	non-Rad	Tin	7440-31-5	ug/kg	2400	--	--	--	--
618-2_Shallow	non-Rad	Uranium	7440-61-1	ug/kg	4530	3.21E+03	Yes	4.04E+03	Yes
618-2_Shallow	Rad	Americium-241	14596-10-2	pCi/g	0.813	--	--	--	--
618-2_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	2.24	1.05E+00	Yes	1.64E+00	Yes
618-2_Shallow	Rad	Plutonium-239/240	PU-239/240	pCi/g	7.67	2.48E-02	Yes	3.31E-02	Yes
618-2_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	2.2	1.10E+00	Yes	1.51E+00	Yes
618-2_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	0.214	1.09E-01	Yes	3.86E-01	No
618-2_Shallow	Rad	Uranium-238	U-238	pCi/g	2.2	1.06E+00	Yes	1.21E+00	Yes
618-2_Staging Pile	non-Rad	Arsenic	7440-38-2	ug/kg	3062.5	6.47E+03	No	2.77E+04	No
618-2_Staging Pile	non-Rad	Barium	7440-39-3	ug/kg	67689.618	1.32E+05	No	4.80E+05	No
618-2_Staging Pile	non-Rad	Chromium	7440-47-3	ug/kg	6424.1864	1.85E+04	No	3.20E+05	No
618-2_Staging Pile	non-Rad	Lead	7439-92-1	ug/kg	4010.7719	1.02E+04	No	7.41E+04	No

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
618-2_Staging Pile	non-Rad	Uranium	7440-61-1	ug/kg	5021.7539	3.21E+03	Yes	4.04E+03	Yes
618-2_Staging Pile	Rad	Americium-241	14596-10-2	pCi/g	0.818	--	--	--	--
618-2_Staging Pile	Rad	Cesium-137	10045-97-3	pCi/g	0.095	1.05E+00	No	1.64E+00	No
618-2_Staging Pile	Rad	Plutonium-239/240	PU-239/240	pCi/g	10	2.48E-02	Yes	3.31E-02	Yes
618-2_Staging Pile	Rad	Tritium	10028-17-8	pCi/g	2.33	--	--	--	--
618-2_Staging Pile	Rad	Uranium-233/234	U-233/234	pCi/g	2.039822	1.10E+00	Yes	1.51E+00	Yes
618-2_Staging Pile	Rad	Uranium-235	15117-96-1	pCi/g	0.1221591	1.09E-01	Yes	3.86E-01	No
618-2_Staging Pile	Rad	Uranium-238	U-238	pCi/g	1.9715351	1.06E+00	Yes	1.21E+00	Yes
618-3_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	2800	6.47E+03	No	2.77E+04	No
618-3_Shallow	non-Rad	Barium	7440-39-3	ug/kg	76500	1.32E+05	No	4.80E+05	No
618-3_Shallow	non-Rad	Chromium	7440-47-3	ug/kg	9700	1.85E+04	No	3.20E+05	No
618-3_Shallow	non-Rad	Lead	7439-92-1	ug/kg	3900	1.02E+04	No	7.41E+04	No
618-3_Shallow	non-Rad	Selenium	7782-49-2	ug/kg	659	7.80E+02	No	8.40E+02	No
618-3_Shallow	non-Rad	Uranium	7440-61-1	ug/kg	1610	3.21E+03	No	4.04E+03	No
618-3_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	0.677	1.10E+00	No	1.51E+00	No
618-3_Shallow	Rad	Uranium-238	U-238	pCi/g	0.747	1.06E+00	No	1.21E+00	No
618-3_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	79.6	1.10E+00	Yes	1.51E+00	Yes
618-3_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.79	1.09E-01	Yes	3.86E-01	Yes
618-3_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	79.4	1.06E+00	Yes	1.21E+00	Yes
618-4_Deep	non-Rad	Arsenic	7440-38-2	ug/kg	2200	6.47E+03	No	2.77E+04	No
618-4_Deep	non-Rad	Lead	7439-92-1	ug/kg	20000	1.02E+04	Yes	7.41E+04	No
618-4_Deep	Rad	Uranium-233/234	U-233/234	pCi/g	20.2	1.10E+00	Yes	1.51E+00	Yes
618-4_Deep	Rad	Uranium-235	15117-96-1	pCi/g	1.09	1.09E-01	Yes	3.86E-01	Yes
618-4_Deep	Rad	Uranium-238	U-238	pCi/g	21.5	1.06E+00	Yes	1.21E+00	Yes
618-4_Deep_Focused	non-Rad	2-Butanone	78-93-3	ug/kg	130	--	--	--	--
618-4_Deep_Focused	non-Rad	Acetone	67-64-1	ug/kg	15.964	--	--	--	--
618-4_Deep_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	1600	--	--	--	--
618-4_Deep_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	2700	6.47E+03	No	2.77E+04	No
618-4_Deep_Focused	non-Rad	Barium	7440-39-3	ug/kg	104000	1.32E+05	No	4.80E+05	No
618-4_Deep_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	4700	--	--	--	--
618-4_Deep_Focused	non-Rad	Cadmium	7440-43-9	ug/kg	1500	5.63E+02	Yes	2.98E+03	No
618-4_Deep_Focused	non-Rad	Chromium	7440-47-3	ug/kg	27700	1.85E+04	Yes	3.20E+05	No
618-4_Deep_Focused	non-Rad	Diethyl ether	60-29-7	ug/kg	1	--	--	--	--
618-4_Deep_Focused	non-Rad	Lead	7439-92-1	ug/kg	24900	1.02E+04	Yes	7.41E+04	No
618-4_Deep_Focused	non-Rad	Methylene chloride	75-09-2	ug/kg	40	--	--	--	--
618-4_Deep_Focused	non-Rad	Phenol	108-95-2	ug/kg	110	--	--	--	--
618-4_Deep_Focused	non-Rad	Tetrachloroethene	127-18-4	ug/kg	24	--	--	--	--
618-4_Deep_Focused	non-Rad	Toluene	108-88-3	ug/kg	4.81	--	--	--	--
618-4_Deep_Focused	non-Rad	Total petroleum hydrocarbons - diesel range	TPHDIESEL	ug/kg	34000	--	--	--	--
618-4_Deep_Focused	non-Rad	Total petroleum hydrocarbons - kerosene range	TPHKEROSENE	ug/kg	42000	--	--	--	--
618-4_Deep_Focused	non-Rad	Total petroleum hydrocarbons - motor oil (high boiling)	TPH/OILH	ug/kg	65	--	--	--	--
618-4_Deep_Focused	non-Rad	Trichloroethene	79-01-6	ug/kg	2	--	--	--	--
618-4_Deep_Focused	non-Rad	Trichloromonofluoromethane	75-69-4	ug/kg	12	--	--	--	--
618-4_Deep_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	7.18	1.10E+00	Yes	1.51E+00	Yes
618-4_Deep_Focused	Rad	Uranium-235	15117-96-1	pCi/g	0.512	1.09E-01	Yes	3.86E-01	Yes

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
618-4_Deep_Focused	Rad	Uranium-238	U-238	pCi/g	6.9	1.06E+00	Yes	1.21E+00	Yes
618-4_Overburden_2	non-Rad	Arsenic	7440-38-2	ug/kg	2500	6.47E+03	No	2.77E+04	No
618-4_Overburden_2	non-Rad	Lead	7439-92-1	ug/kg	4700	1.02E+04	No	7.41E+04	No
618-4_Overburden_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.3	1.10E+00	Yes	1.51E+00	No
618-4_Overburden_2	Rad	Uranium-238	U-238	pCi/g	1.41	1.06E+00	Yes	1.21E+00	Yes
618-4_Overburden_3	non-Rad	Lead	7439-92-1	ug/kg	5000	1.02E+04	No	7.41E+04	No
618-4_Overburden_3	Rad	Uranium-233/234	U-233/234	pCi/g	0.424	1.10E+00	No	1.51E+00	No
618-4_Overburden_3	Rad	Uranium-235	15117-96-1	pCi/g	0.032	1.09E-01	No	3.86E-01	No
618-4_Overburden_3	Rad	Uranium-238	U-238	pCi/g	0.438	1.06E+00	No	1.21E+00	No
618-4_Overburden_4	non-Rad	Lead	7439-92-1	ug/kg	4800	1.02E+04	No	7.41E+04	No
618-4_Overburden_4	Rad	Uranium-233/234	U-233/234	pCi/g	0.942	1.10E+00	No	1.51E+00	No
618-4_Overburden_4	Rad	Uranium-238	U-238	pCi/g	0.942	1.06E+00	No	1.21E+00	No
618-4_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	3200	6.47E+03	No	2.77E+04	No
618-4_Shallow	non-Rad	Lead	7439-92-1	ug/kg	49000	1.02E+04	Yes	7.41E+04	No
618-4_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	3.22	1.10E+00	Yes	1.51E+00	Yes
618-4_Shallow	Rad	Uranium-238	U-238	pCi/g	3.07	1.06E+00	Yes	1.21E+00	Yes
618-5_Deep	non-Rad	Arsenic	7440-38-2	ug/kg	5200	6.47E+03	No	2.77E+04	No
618-5_Deep	non-Rad	Cadmium	7440-43-9	ug/kg	470	5.63E+02	No	2.98E+03	No
618-5_Deep	non-Rad	Chromium	7440-47-3	ug/kg	14700	1.85E+04	No	3.20E+05	No
618-5_Deep	non-Rad	Lead	7439-92-1	ug/kg	82300	1.02E+04	Yes	7.41E+04	Yes
618-5_Deep	Rad	Uranium-233/234	U-233/234	pCi/g	8.6	1.10E+00	Yes	1.51E+00	Yes
618-5_Deep	Rad	Uranium-235	15117-96-1	pCi/g	0.462	1.09E-01	Yes	3.86E-01	Yes
618-5_Deep	Rad	Uranium-238	U-238	pCi/g	8.87	1.06E+00	Yes	1.21E+00	Yes
618-5_Deep_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	7650000	1.18E+07	No	2.88E+07	No
618-5_Deep_Focused	non-Rad	Antimony	7440-36-0	ug/kg	1800	1.30E+02	Yes	3.85E+02	Yes
618-5_Deep_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	3500	6.47E+03	No	2.77E+04	No
618-5_Deep_Focused	non-Rad	Barium	7440-39-3	ug/kg	106000	1.32E+05	No	4.80E+05	No
618-5_Deep_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	672	1.51E+03	No	1.00E+04	No
618-5_Deep_Focused	non-Rad	Chromium	7440-47-3	ug/kg	6500	1.85E+04	No	3.20E+05	No
618-5_Deep_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	10500	1.57E+04	No	1.10E+05	No
618-5_Deep_Focused	non-Rad	Copper	7440-50-8	ug/kg	21400	2.20E+04	No	6.10E+04	No
618-5_Deep_Focused	non-Rad	Iron	7439-89-6	ug/kg	30200000	3.26E+07	No	6.81E+07	No
618-5_Deep_Focused	non-Rad	Lead	7439-92-1	ug/kg	6600	1.02E+04	No	7.41E+04	No
618-5_Deep_Focused	non-Rad	Manganese	7439-96-5	ug/kg	579000	5.12E+05	Yes	1.11E+06	No
618-5_Deep_Focused	non-Rad	Mercury	7439-97-6	ug/kg	33	1.31E+01	Yes	2.92E+01	Yes
618-5_Deep_Focused	non-Rad	Nickel	7440-02-0	ug/kg	11300	1.91E+04	No	2.00E+05	No
618-5_Deep_Focused	non-Rad	Selenium	7782-49-2	ug/kg	2270	7.80E+02	Yes	8.40E+02	Yes
618-5_Deep_Focused	non-Rad	Vanadium	7440-62-2	ug/kg	79500	8.51E+04	No	1.40E+05	No
618-5_Deep_Focused	non-Rad	Zinc	7440-66-6	ug/kg	65800	6.78E+04	No	3.66E+05	No
618-5_Deep_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	10.7	1.10E+00	Yes	1.51E+00	Yes
618-5_Deep_Focused	Rad	Uranium-235	15117-96-1	pCi/g	0.482	1.09E-01	Yes	3.86E-01	Yes
618-5_Deep_Focused	Rad	Uranium-238	U-238	pCi/g	12.2	1.06E+00	Yes	1.21E+00	Yes
618-5_Overburden	non-Rad	Arsenic	7440-38-2	ug/kg	3400	6.47E+03	No	2.77E+04	No
618-5_Overburden	non-Rad	Cadmium	7440-43-9	ug/kg	170	5.63E+02	No	2.98E+03	No
618-5_Overburden	non-Rad	Chromium	7440-47-3	ug/kg	9700	1.85E+04	No	3.20E+05	No

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
618-5_Overburden	non-Rad	Lead	7439-92-1	ug/kg	7500	1.02E+04	No	7.41E+04	No
618-5_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	4.14	1.10E+00	Yes	1.51E+00	Yes
618-5_Overburden	Rad	Uranium-238	U-238	pCi/g	4.56	1.06E+00	Yes	1.21E+00	Yes
618-5_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	4300	6.47E+03	No	2.77E+04	No
618-5_Shallow	non-Rad	Chromium	7440-47-3	ug/kg	11300	1.85E+04	No	3.20E+05	No
618-5_Shallow	non-Rad	Lead	7439-92-1	ug/kg	6100	1.02E+04	No	7.41E+04	No
618-5_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	0.938	1.10E+00	No	1.51E+00	No
618-5_Shallow	Rad	Uranium-238	U-238	pCi/g	1.05	1.06E+00	No	1.21E+00	No
618-5_Staging Pile_4	non-Rad	Arsenic	7440-38-2	ug/kg	3300	6.47E+03	No	2.77E+04	No
618-5_Staging Pile_4	non-Rad	Cadmium	7440-43-9	ug/kg	50	5.63E+02	No	2.98E+03	No
618-5_Staging Pile_4	non-Rad	Chromium	7440-47-3	ug/kg	11800	1.85E+04	No	3.20E+05	No
618-5_Staging Pile_4	non-Rad	Lead	7439-92-1	ug/kg	5300	1.02E+04	No	7.41E+04	No
618-5_Staging Pile_4	Rad	Uranium-233/234	U-233/234	pCi/g	1.15	1.10E+00	Yes	1.51E+00	No
618-5_Staging Pile_4	Rad	Uranium-238	U-238	pCi/g	1.13	1.06E+00	Yes	1.21E+00	No
618-5_Staging Pile_5	non-Rad	Arsenic	7440-38-2	ug/kg	2700	6.47E+03	No	2.77E+04	No
618-5_Staging Pile_5	non-Rad	Chromium	7440-47-3	ug/kg	10300	1.85E+04	No	3.20E+05	No
618-5_Staging Pile_5	non-Rad	Lead	7439-92-1	ug/kg	3900	1.02E+04	No	7.41E+04	No
618-5_Staging Pile_5	Rad	Uranium-233/234	U-233/234	pCi/g	1.52	1.10E+00	Yes	1.51E+00	Yes
618-5_Staging Pile_5	Rad	Uranium-235	15117-96-1	pCi/g	0.168	1.09E-01	Yes	3.86E-01	No
618-5_Staging Pile_5	Rad	Uranium-238	U-238	pCi/g	1.71	1.06E+00	Yes	1.21E+00	Yes
618-7_Shallow_1	non-Rad	Aluminum	7429-90-5	ug/kg	5251003.1	1.18E+07	No	2.88E+07	No
618-7_Shallow_1	non-Rad	Antimony	7440-36-0	ug/kg	559.96324	1.30E+02	Yes	3.85E+02	Yes
618-7_Shallow_1	non-Rad	Arsenic	7440-38-2	ug/kg	1890.9461	6.47E+03	No	2.77E+04	No
618-7_Shallow_1	non-Rad	Barium	7440-39-3	ug/kg	68874.223	1.32E+05	No	4.80E+05	No
618-7_Shallow_1	non-Rad	Beryllium	7440-41-7	ug/kg	278.23529	1.51E+03	No	1.00E+04	No
618-7_Shallow_1	non-Rad	Cadmium	7440-43-9	ug/kg	65.248869	5.63E+02	No	2.98E+03	No
618-7_Shallow_1	non-Rad	Chromium	7440-47-3	ug/kg	10227.486	1.85E+04	No	3.20E+05	No
618-7_Shallow_1	non-Rad	Cobalt	7440-48-4	ug/kg	9152.1764	1.57E+04	No	1.10E+05	No
618-7_Shallow_1	non-Rad	Copper	7440-50-8	ug/kg	16119.796	2.20E+04	No	6.10E+04	No
618-7_Shallow_1	non-Rad	Iron	7439-89-6	ug/kg	25958039	3.26E+07	No	6.81E+07	No
618-7_Shallow_1	non-Rad	Lead	7439-92-1	ug/kg	14567.215	1.02E+04	Yes	7.41E+04	No
618-7_Shallow_1	non-Rad	Manganese	7439-96-5	ug/kg	326067.08	5.12E+05	No	1.11E+06	No
618-7_Shallow_1	non-Rad	Mercury	7439-97-6	ug/kg	44.28838	1.31E+01	Yes	2.92E+01	Yes
618-7_Shallow_1	non-Rad	Nickel	7440-02-0	ug/kg	20977.494	1.91E+04	Yes	2.00E+05	No
618-7_Shallow_1	non-Rad	Tin	7440-31-5	ug/kg	1547.0588	--	--	--	--
618-7_Shallow_1	non-Rad	Vanadium	7440-62-2	ug/kg	74575.766	8.51E+04	No	1.40E+05	No
618-7_Shallow_1	non-Rad	Zinc	7440-66-6	ug/kg	49177.026	6.78E+04	No	3.66E+05	No
618-7_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	0.067047	1.05E+00	No	1.64E+00	No
618-7_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	3.6148553	1.10E+00	Yes	1.51E+00	Yes
618-7_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	0.3636471	1.09E-01	Yes	3.86E-01	No
618-7_Shallow_1	Rad	Uranium-238	U-238	pCi/g	3.5749186	1.06E+00	Yes	1.21E+00	Yes
618-7_Shallow_2	non-Rad	Aluminum	7429-90-5	ug/kg	4970000	1.18E+07	No	2.88E+07	No
618-7_Shallow_2	non-Rad	Antimony	7440-36-0	ug/kg	660	1.30E+02	Yes	3.85E+02	Yes
618-7_Shallow_2	non-Rad	Arsenic	7440-38-2	ug/kg	2500	6.47E+03	No	2.77E+04	No
618-7_Shallow_2	non-Rad	Barium	7440-39-3	ug/kg	73800	1.32E+05	No	4.80E+05	No

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
618-7_Shallow_2	non-Rad	Beryllium	7440-41-7	ug/kg	440	1.51E+03	No	1.00E+04	No
618-7_Shallow_2	non-Rad	Chromium	7440-47-3	ug/kg	6800	1.85E+04	No	3.20E+05	No
618-7_Shallow_2	non-Rad	Cobalt	7440-48-4	ug/kg	9300	1.57E+04	No	1.10E+05	No
618-7_Shallow_2	non-Rad	Copper	7440-50-8	ug/kg	13600	2.20E+04	No	6.10E+04	No
618-7_Shallow_2	non-Rad	Iron	7439-89-6	ug/kg	26000000	3.26E+07	No	6.81E+07	No
618-7_Shallow_2	non-Rad	Lead	7439-92-1	ug/kg	2800	1.02E+04	No	7.41E+04	No
618-7_Shallow_2	non-Rad	Manganese	7439-96-5	ug/kg	364000	5.12E+05	No	1.11E+06	No
618-7_Shallow_2	non-Rad	Mercury	7439-97-6	ug/kg	20	1.31E+01	Yes	2.92E+01	No
618-7_Shallow_2	non-Rad	Nickel	7440-02-0	ug/kg	9700	1.91E+04	No	2.00E+05	No
618-7_Shallow_2	non-Rad	Tin	7440-31-5	ug/kg	1500	--	--	--	--
618-7_Shallow_2	non-Rad	Vanadium	7440-62-2	ug/kg	74700	8.51E+04	No	1.40E+05	No
618-7_Shallow_2	non-Rad	Zinc	7440-66-6	ug/kg	46200	6.78E+04	No	3.66E+05	No
618-7_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	0.566	1.10E+00	No	1.51E+00	No
618-7_Shallow_2	Rad	Uranium-238	U-238	pCi/g	0.534	1.06E+00	No	1.21E+00	No
618-7_Shallow_3	non-Rad	Aluminum	7429-90-5	ug/kg	6740000	1.18E+07	No	2.88E+07	No
618-7_Shallow_3	non-Rad	Antimony	7440-36-0	ug/kg	450	1.30E+02	Yes	3.85E+02	Yes
618-7_Shallow_3	non-Rad	Arsenic	7440-38-2	ug/kg	2800	6.47E+03	No	2.77E+04	No
618-7_Shallow_3	non-Rad	Barium	7440-39-3	ug/kg	82500	1.32E+05	No	4.80E+05	No
618-7_Shallow_3	non-Rad	Beryllium	7440-41-7	ug/kg	310	1.51E+03	No	1.00E+04	No
618-7_Shallow_3	non-Rad	Cadmium	7440-43-9	ug/kg	190	5.63E+02	No	2.98E+03	No
618-7_Shallow_3	non-Rad	Chromium	7440-47-3	ug/kg	10100	1.85E+04	No	3.20E+05	No
618-7_Shallow_3	non-Rad	Cobalt	7440-48-4	ug/kg	8600	1.57E+04	No	1.10E+05	No
618-7_Shallow_3	non-Rad	Copper	7440-50-8	ug/kg	13600	2.20E+04	No	6.10E+04	No
618-7_Shallow_3	non-Rad	Iron	7439-89-6	ug/kg	24300000	3.26E+07	No	6.81E+07	No
618-7_Shallow_3	non-Rad	Lead	7439-92-1	ug/kg	4300	1.02E+04	No	7.41E+04	No
618-7_Shallow_3	non-Rad	Manganese	7439-96-5	ug/kg	357000	5.12E+05	No	1.11E+06	No
618-7_Shallow_3	non-Rad	Mercury	7439-97-6	ug/kg	20	1.31E+01	Yes	2.92E+01	No
618-7_Shallow_3	non-Rad	Nickel	7440-02-0	ug/kg	10100	1.91E+04	No	2.00E+05	No
618-7_Shallow_3	non-Rad	Tin	7440-31-5	ug/kg	1800	--	--	--	--
618-7_Shallow_3	non-Rad	Vanadium	7440-62-2	ug/kg	68200	8.51E+04	No	1.40E+05	No
618-7_Shallow_3	non-Rad	Zinc	7440-66-6	ug/kg	44500	6.78E+04	No	3.66E+05	No
618-7_Shallow_3	Rad	Uranium-233/234	U-233/234	pCi/g	1.07	1.10E+00	No	1.51E+00	No
618-7_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	0.085	1.09E-01	No	3.86E-01	No
618-7_Shallow_3	Rad	Uranium-238	U-238	pCi/g	0.945	1.06E+00	No	1.21E+00	No
618-7_Shallow_4	non-Rad	Aluminum	7429-90-5	ug/kg	5650000	1.18E+07	No	2.88E+07	No
618-7_Shallow_4	non-Rad	Antimony	7440-36-0	ug/kg	250	1.30E+02	Yes	3.85E+02	No
618-7_Shallow_4	non-Rad	Arsenic	7440-38-2	ug/kg	5200	6.47E+03	No	2.77E+04	No
618-7_Shallow_4	non-Rad	Barium	7440-39-3	ug/kg	57900	1.32E+05	No	4.80E+05	No
618-7_Shallow_4	non-Rad	Beryllium	7440-41-7	ug/kg	220	1.51E+03	No	1.00E+04	No
618-7_Shallow_4	non-Rad	Cadmium	7440-43-9	ug/kg	90	5.63E+02	No	2.98E+03	No
618-7_Shallow_4	non-Rad	Chromium	7440-47-3	ug/kg	11400	1.85E+04	No	3.20E+05	No
618-7_Shallow_4	non-Rad	Cobalt	7440-48-4	ug/kg	6700	1.57E+04	No	1.10E+05	No
618-7_Shallow_4	non-Rad	Copper	7440-50-8	ug/kg	13200	2.20E+04	No	6.10E+04	No
618-7_Shallow_4	non-Rad	Iron	7439-89-6	ug/kg	21200000	3.26E+07	No	6.81E+07	No
618-7_Shallow_4	non-Rad	Lead	7439-92-1	ug/kg	3000	1.02E+04	No	7.41E+04	No

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
618-7_Shallow_4	non-Rad	Manganese	7439-96-5	ug/kg	285000	5.12E+05	No	1.11E+06	No
618-7_Shallow_4	non-Rad	Nickel	7440-02-0	ug/kg	12900	1.91E+04	No	2.00E+05	No
618-7_Shallow_4	non-Rad	Tin	7440-31-5	ug/kg	710	--	--	--	--
618-7_Shallow_4	non-Rad	Vanadium	7440-62-2	ug/kg	54800	8.51E+04	No	1.40E+05	No
618-7_Shallow_4	non-Rad	Zinc	7440-66-6	ug/kg	37000	6.78E+04	No	3.66E+05	No
618-7_Shallow_4	Rad	Uranium-233/234	U-233/234	pCi/g	0.689	1.10E+00	No	1.51E+00	No
618-7_Shallow_4	Rad	Uranium-238	U-238	pCi/g	0.763	1.06E+00	No	1.21E+00	No
618-7_Shallow_Focused	non-Rad	Acenaphthene	83-32-9	ug/kg	150	--	--	--	--
618-7_Shallow_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	7610000	1.18E+07	No	2.88E+07	No
618-7_Shallow_Focused	non-Rad	Antimony	7440-36-0	ug/kg	980	1.30E+02	Yes	3.85E+02	Yes
618-7_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	ug/kg	6.7	--	--	--	--
618-7_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	4200	6.47E+03	No	2.77E+04	No
618-7_Shallow_Focused	non-Rad	Barium	7440-39-3	ug/kg	92800	1.32E+05	No	4.80E+05	No
618-7_Shallow_Focused	non-Rad	Benzo(a)anthracene	56-55-3	ug/kg	88	--	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	66	--	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	52	--	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(k)fluoranthene	207-08-9	ug/kg	11	--	--	--	--
618-7_Shallow_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	370	1.51E+03	No	1.00E+04	No
618-7_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	470	--	--	--	--
618-7_Shallow_Focused	non-Rad	Cadmium	7440-43-9	ug/kg	6200	5.63E+02	Yes	2.98E+03	Yes
618-7_Shallow_Focused	non-Rad	Chromium	7440-47-3	ug/kg	65900	1.85E+04	Yes	3.20E+05	No
618-7_Shallow_Focused	non-Rad	Chrysene	218-01-9	ug/kg	69	--	--	--	--
618-7_Shallow_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	11000	1.57E+04	No	1.10E+05	No
618-7_Shallow_Focused	non-Rad	Copper	7440-50-8	ug/kg	25000	2.20E+04	Yes	6.10E+04	No
618-7_Shallow_Focused	non-Rad	Dibenz[a,h]anthracene	53-70-3	ug/kg	45	--	--	--	--
618-7_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	ug/kg	33	--	--	--	--
618-7_Shallow_Focused	non-Rad	Fluoranthene	206-44-0	ug/kg	48	--	--	--	--
618-7_Shallow_Focused	non-Rad	Iron	7439-89-6	ug/kg	28700000	3.26E+07	No	6.81E+07	No
618-7_Shallow_Focused	non-Rad	Lead	7439-92-1	ug/kg	6500	1.02E+04	No	7.41E+04	No
618-7_Shallow_Focused	non-Rad	Manganese	7439-96-5	ug/kg	425000	5.12E+05	No	1.11E+06	No
618-7_Shallow_Focused	non-Rad	Mercury	7439-97-6	ug/kg	20	1.31E+01	Yes	2.92E+01	No
618-7_Shallow_Focused	non-Rad	Nickel	7440-02-0	ug/kg	17200	1.91E+04	No	2.00E+05	No
618-7_Shallow_Focused	non-Rad	Pyrene	129-00-0	ug/kg	410	--	--	--	--
618-7_Shallow_Focused	non-Rad	Tin	7440-31-5	ug/kg	1200	--	--	--	--
618-7_Shallow_Focused	non-Rad	Total petroleum hydrocarbons - motor oil (high boiling)	TPH/OILH	ug/kg	680000	--	--	--	--
618-7_Shallow_Focused	non-Rad	Vanadium	7440-62-2	ug/kg	80500	8.51E+04	No	1.40E+05	No
618-7_Shallow_Focused	non-Rad	Zinc	7440-66-6	ug/kg	52400	6.78E+04	No	3.66E+05	No
618-7_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	0.01	1.05E+00	No	1.64E+00	No
618-7_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	10.9	1.10E+00	Yes	1.51E+00	Yes
618-7_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	0.974	1.09E-01	Yes	3.86E-01	Yes
618-7_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	6.42	1.06E+00	Yes	1.21E+00	Yes
618-8_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	4100	6.47E+03	No	2.77E+04	No
618-8_Shallow	non-Rad	Barium	7440-39-3	ug/kg	97600	1.32E+05	No	4.80E+05	No
618-8_Shallow	non-Rad	Chromium	7440-47-3	ug/kg	12400	1.85E+04	No	3.20E+05	No
618-8_Shallow	non-Rad	Lead	7439-92-1	ug/kg	5100	1.02E+04	No	7.41E+04	No

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
618-8_Shallow	non-Rad	Selenium	7782-49-2	ug/kg	846	7.80E+02	Yes	8.40E+02	Yes
618-8_Shallow	non-Rad	Uranium	7440-61-1	ug/kg	1720	3.21E+03	No	4.04E+03	No
618-8_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.19	1.10E+00	Yes	1.51E+00	No
618-8_Shallow	Rad	Uranium-238	U-238	pCi/g	0.734	1.06E+00	No	1.21E+00	No
618-9_Shallow_Focused	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	110	--	--	--	--
618-9_Shallow_Focused	non-Rad	Acetone	67-64-1	ug/kg	680	--	--	--	--
618-9_Shallow_Focused	non-Rad	Aldrin	309-00-2	ug/kg	390	--	--	--	--
618-9_Shallow_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	8570000	1.18E+07	No	2.88E+07	No
618-9_Shallow_Focused	non-Rad	Aroclor-1016	12674-11-2	ug/kg	1900	--	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1221	11104-28-2	ug/kg	1900	--	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1232	11141-16-5	ug/kg	1900	--	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1242	53469-21-9	ug/kg	1900	--	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	ug/kg	1900	--	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	3900	--	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	3900	--	--	--	--
618-9_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	11600	6.47E+03	Yes	2.77E+04	No
618-9_Shallow_Focused	non-Rad	Barium	7440-39-3	ug/kg	90200	1.32E+05	No	4.80E+05	No
618-9_Shallow_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	330	1.51E+03	No	1.00E+04	No
618-9_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	5200	--	--	--	--
618-9_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	ug/kg	2700	--	--	--	--
618-9_Shallow_Focused	non-Rad	Chlordane	57-74-9	ug/kg	69	--	--	--	--
618-9_Shallow_Focused	non-Rad	Chloroform	67-66-3	ug/kg	9	--	--	--	--
618-9_Shallow_Focused	non-Rad	Chromium	7440-47-3	ug/kg	9700	1.85E+04	No	3.20E+05	No
618-9_Shallow_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	11400	1.57E+04	No	1.10E+05	No
618-9_Shallow_Focused	non-Rad	Copper	7440-50-8	ug/kg	16700	2.20E+04	No	6.10E+04	No
618-9_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	ug/kg	7200	--	--	--	--
618-9_Shallow_Focused	non-Rad	Heptachlor epoxide	1024-57-3	ug/kg	44	--	--	--	--
618-9_Shallow_Focused	non-Rad	Hexachlorobutadiene	87-68-3	ug/kg	760	--	--	--	--
618-9_Shallow_Focused	non-Rad	Hexachloroethane	67-72-1	ug/kg	17000	--	--	--	--
618-9_Shallow_Focused	non-Rad	Iron	7439-89-6	ug/kg	24900000	3.26E+07	No	6.81E+07	No
618-9_Shallow_Focused	non-Rad	Lead	7439-92-1	ug/kg	7700	1.02E+04	No	7.41E+04	No
618-9_Shallow_Focused	non-Rad	Manganese	7439-96-5	ug/kg	359000	5.12E+05	No	1.11E+06	No
618-9_Shallow_Focused	non-Rad	Mercury	7439-97-6	ug/kg	330	1.31E+01	Yes	2.92E+01	Yes
618-9_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	ug/kg	2300	--	--	--	--
618-9_Shallow_Focused	non-Rad	Nickel	7440-02-0	ug/kg	10600	1.91E+04	No	2.00E+05	No
618-9_Shallow_Focused	non-Rad	Nitrate	14797-55-8	ug/kg	1670000	5.20E+04	Yes	9.06E+05	Yes
618-9_Shallow_Focused	non-Rad	Tetrachloroethene	127-18-4	ug/kg	920	--	--	--	--
618-9_Shallow_Focused	non-Rad	Toluene	108-88-3	ug/kg	9	--	--	--	--
618-9_Shallow_Focused	non-Rad	Trichloroethene	79-01-6	ug/kg	2	--	--	--	--
618-9_Shallow_Focused	non-Rad	Uranium	7440-61-1	ug/kg	3100	3.21E+03	No	4.04E+03	No
618-9_Shallow_Focused	non-Rad	Vanadium	7440-62-2	ug/kg	59300	8.51E+04	No	1.40E+05	No
618-9_Shallow_Focused	non-Rad	Zinc	7440-66-6	ug/kg	52300	6.78E+04	No	3.66E+05	No
618-9_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	0.071	1.09E-01	No	3.86E-01	No
618-9_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	3	1.06E+00	Yes	1.21E+00	Yes
628-4_Overburden	non-Rad	Arsenic	7440-38-2	ug/kg	3374.1234	6.47E+03	No	2.77E+04	No

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
628-4_Overburden	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	60.931552	--	--	--	--
628-4_Overburden	non-Rad	Lead	7439-92-1	ug/kg	7284.4357	1.02E+04	No	7.41E+04	No
628-4_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	0.033	1.05E+00	No	1.64E+00	No
628-4_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	0.8703393	1.10E+00	No	1.51E+00	No
628-4_Overburden	Rad	Uranium-238	U-238	pCi/g	0.7751992	1.06E+00	No	1.21E+00	No
628-4_Shallow	non-Rad	Aroclor-1242	53469-21-9	ug/kg	42.354	--	--	--	--
628-4_Shallow	non-Rad	Aroclor-1248	12672-29-6	ug/kg	1115.476	--	--	--	--
628-4_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	242.87825	--	--	--	--
628-4_Shallow	non-Rad	Aroclor-1260	11096-82-5	ug/kg	37.768	--	--	--	--
628-4_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	3864.0533	6.47E+03	No	2.77E+04	No
628-4_Shallow	non-Rad	Lead	7439-92-1	ug/kg	99167.457	1.02E+04	Yes	7.41E+04	Yes
628-4_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.1286829	1.10E+00	Yes	1.51E+00	No
628-4_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	0.111915	1.09E-01	Yes	3.86E-01	No
628-4_Shallow	Rad	Uranium-238	U-238	pCi/g	1.0482979	1.06E+00	No	1.21E+00	No
UPR-300-17_Shallow	non-Rad	Acenaphthene	83-32-9	ug/kg	117	--	--	--	--
UPR-300-17_Shallow	non-Rad	Aluminum	7429-90-5	ug/kg	6341053.8	1.18E+07	No	2.88E+07	No
UPR-300-17_Shallow	non-Rad	Anthracene	120-12-7	ug/kg	7.01	--	--	--	--
UPR-300-17_Shallow	non-Rad	Antimony	7440-36-0	ug/kg	358.57092	1.30E+02	Yes	3.85E+02	No
UPR-300-17_Shallow	non-Rad	Aroclor-1248	12672-29-6	ug/kg	1970	--	--	--	--
UPR-300-17_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	450.00081	--	--	--	--
UPR-300-17_Shallow	non-Rad	Aroclor-1260	11096-82-5	ug/kg	113.2752	--	--	--	--
UPR-300-17_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	2573.0231	6.47E+03	No	2.77E+04	No
UPR-300-17_Shallow	non-Rad	Barium	7440-39-3	ug/kg	81013.83	1.32E+05	No	4.80E+05	No
UPR-300-17_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	ug/kg	59.244294	--	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	43.787997	--	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	32.68784	--	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	ug/kg	9.9369444	--	--	--	--
UPR-300-17_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	239.82148	1.51E+03	No	1.00E+04	No
UPR-300-17_Shallow	non-Rad	Boron	7440-42-8	ug/kg	3902.7336	3.89E+03	Yes	5.86E+03	No
UPR-300-17_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	172.56327	5.63E+02	No	2.98E+03	No
UPR-300-17_Shallow	non-Rad	Chromium	7440-47-3	ug/kg	13794.625	1.85E+04	No	3.20E+05	No
UPR-300-17_Shallow	non-Rad	Chrysene	218-01-9	ug/kg	39.251255	--	--	--	--
UPR-300-17_Shallow	non-Rad	Cobalt	7440-48-4	ug/kg	6687.6455	1.57E+04	No	1.10E+05	No
UPR-300-17_Shallow	non-Rad	Copper	7440-50-8	ug/kg	15135.068	2.20E+04	No	6.10E+04	No
UPR-300-17_Shallow	non-Rad	Fluoranthene	206-44-0	ug/kg	35.334557	--	--	--	--
UPR-300-17_Shallow	non-Rad	Fluorene	86-73-7	ug/kg	2.93	--	--	--	--
UPR-300-17_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	5.85	--	--	--	--
UPR-300-17_Shallow	non-Rad	Iron	7439-89-6	ug/kg	18978974	3.26E+07	No	6.81E+07	No
UPR-300-17_Shallow	non-Rad	Lead	7439-92-1	ug/kg	11240.472	1.02E+04	Yes	7.41E+04	No
UPR-300-17_Shallow	non-Rad	Manganese	7439-96-5	ug/kg	285159.32	5.12E+05	No	1.11E+06	No
UPR-300-17_Shallow	non-Rad	Mercury	7439-97-6	ug/kg	69	1.31E+01	Yes	2.92E+01	Yes
UPR-300-17_Shallow	non-Rad	Molybdenum	7439-98-7	ug/kg	412.3462	4.70E+02	No	3.17E+03	No
UPR-300-17_Shallow	non-Rad	Naphthalene	91-20-3	ug/kg	47.9	--	--	--	--
UPR-300-17_Shallow	non-Rad	Nickel	7440-02-0	ug/kg	563653.88	1.91E+04	Yes	2.00E+05	Yes
UPR-300-17_Shallow	non-Rad	Pyrene	129-00-0	ug/kg	34.110693	--	--	--	--

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
UPR-300-17_Shallow	non-Rad	Silver	7440-22-4	ug/kg	340	1.67E+02	Yes	2.73E+02	Yes
UPR-300-17_Shallow	non-Rad	Total petroleum hydrocarbons - diesel range	TPHDIESEL	ug/kg	2950	--	--	--	--
UPR-300-17_Shallow	non-Rad	Total petroleum hydrocarbons - motor oil (high boiling)	TPH/OILH	ug/kg	210419.68	--	--	--	--
UPR-300-17_Shallow	non-Rad	Vanadium	7440-62-2	ug/kg	52149.755	8.51E+04	No	1.40E+05	No
UPR-300-17_Shallow	non-Rad	Zinc	7440-66-6	ug/kg	157172	6.78E+04	Yes	3.66E+05	No
UPR-300-17_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	6.1478874	1.10E+00	Yes	1.51E+00	Yes
UPR-300-17_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	0.9139146	1.09E-01	Yes	3.86E-01	Yes
UPR-300-17_Shallow	Rad	Uranium-238	U-238	pCi/g	4.0414797	1.06E+00	Yes	1.21E+00	Yes
UPR-300-46_Shallow	non-Rad	Acenaphthene	83-32-9	ug/kg	13.078234	--	--	--	--
UPR-300-46_Shallow	non-Rad	Aluminum	7429-90-5	ug/kg	6798173.1	1.18E+07	No	2.88E+07	No
UPR-300-46_Shallow	non-Rad	Antimony	7440-36-0	ug/kg	380.66667	1.30E+02	Yes	3.85E+02	No
UPR-300-46_Shallow	non-Rad	Aroclor-1248	12672-29-6	ug/kg	879	--	--	--	--
UPR-300-46_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	489.58783	--	--	--	--
UPR-300-46_Shallow	non-Rad	Aroclor-1260	11096-82-5	ug/kg	84.414122	--	--	--	--
UPR-300-46_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	2846.0617	6.47E+03	No	2.77E+04	No
UPR-300-46_Shallow	non-Rad	Barium	7440-39-3	ug/kg	82137.009	1.32E+05	No	4.80E+05	No
UPR-300-46_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	ug/kg	3.8759894	--	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	3.4038535	--	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	5.3952778	--	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	ug/kg	2.7838302	--	--	--	--
UPR-300-46_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	221.77899	1.51E+03	No	1.00E+04	No
UPR-300-46_Shallow	non-Rad	Boron	7440-42-8	ug/kg	1713.9346	3.89E+03	No	5.86E+03	No
UPR-300-46_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	94.69089	5.63E+02	No	2.98E+03	No
UPR-300-46_Shallow	non-Rad	Chromium	7440-47-3	ug/kg	10173.082	1.85E+04	No	3.20E+05	No
UPR-300-46_Shallow	non-Rad	Chrysene	218-01-9	ug/kg	5.5829205	--	--	--	--
UPR-300-46_Shallow	non-Rad	Cobalt	7440-48-4	ug/kg	6360.9413	1.57E+04	No	1.10E+05	No
UPR-300-46_Shallow	non-Rad	Copper	7440-50-8	ug/kg	13150.899	2.20E+04	No	6.10E+04	No
UPR-300-46_Shallow	non-Rad	Dibenz[a,h]anthracene	53-70-3	ug/kg	1.25	--	--	--	--
UPR-300-46_Shallow	non-Rad	Fluoranthene	206-44-0	ug/kg	9.5544858	--	--	--	--
UPR-300-46_Shallow	non-Rad	Fluorene	86-73-7	ug/kg	2.15	--	--	--	--
UPR-300-46_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	7.5508333	--	--	--	--
UPR-300-46_Shallow	non-Rad	Iron	7439-89-6	ug/kg	20531088	3.26E+07	No	6.81E+07	No
UPR-300-46_Shallow	non-Rad	Lead	7439-92-1	ug/kg	7105.2772	1.02E+04	No	7.41E+04	No
UPR-300-46_Shallow	non-Rad	Manganese	7439-96-5	ug/kg	311000.56	5.12E+05	No	1.11E+06	No
UPR-300-46_Shallow	non-Rad	Mercury	7439-97-6	ug/kg	29.229029	1.31E+01	Yes	2.92E+01	Yes
UPR-300-46_Shallow	non-Rad	Molybdenum	7439-98-7	ug/kg	456.12087	4.70E+02	No	3.17E+03	No
UPR-300-46_Shallow	non-Rad	Naphthalene	91-20-3	ug/kg	35.739198	--	--	--	--
UPR-300-46_Shallow	non-Rad	Nickel	7440-02-0	ug/kg	9230.4782	1.91E+04	No	2.00E+05	No
UPR-300-46_Shallow	non-Rad	Pyrene	129-00-0	ug/kg	4.4359125	--	--	--	--
UPR-300-46_Shallow	non-Rad	Vanadium	7440-62-2	ug/kg	53808.248	8.51E+04	No	1.40E+05	No
UPR-300-46_Shallow	non-Rad	Zinc	7440-66-6	ug/kg	47944.577	6.78E+04	No	3.66E+05	No
UPR-300-46_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	0.07	1.05E+00	No	1.64E+00	No
UPR-300-46_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.7716524	1.10E+00	Yes	1.51E+00	Yes
UPR-300-46_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	0.243	1.09E-01	Yes	3.86E-01	No

Table G-19. Comparison of EPCs for the 300 Area Source Operable Unit Waste Site Decision Units to Hanford Site Background Values

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	Lognormal 90th Percentile Background Value	Is EPC > Background?	Maximum Background Value	Is EPC > Maximum Background?
UPR-300-46_Shallow	Rad	Uranium-238	U-238	pCi/g	1.7265688	1.06E+00	Yes	1.21E+00	Yes

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300 ASH PITS_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	5.20E+01	5.00E+02	1.04E-07	1.13%	--	--	--
300 ASH PITS_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	6.08E+03	6.67E+02	9.12E-06	98.86%	2.40E+04	2.53E-01	99.97%
300 ASH PITS_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	9.60E+01	7.14E+04	1.34E-09	0.01%	1.60E+06	6.00E-05	0.02%
300 ASH PITS_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	7.60E+01	5.26E+05	1.44E-10	0.00%	1.60E+07	4.75E-06	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**9.22E-06**	--	--	**2.53E-01**	--
300 ASH PITS_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	3.88E-02	1.63E+01	2.38E-07	13.50%	--	--	--
300 ASH PITS_Shallow	Rad	Uranium-238	U-238	pCi/g	8.23E-01	5.40E+01	1.52E-06	86.50%	--	--	--
Total Radiological Risk Estimate						--	**1.76E-06**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.10E-05**	--	--	--	--
300 VTS_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	2.90E-02	4.40E+00	6.59E-07	100.00%	--	--	--
Total Radiological Risk Estimate						--	**6.59E-07**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**6.59E-07**	--	--	--	--
300-10_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.35E+04	6.67E+02	2.02E-05	99.98%	2.40E+04	5.63E-01	99.98%
300-10_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.00E+02	7.14E+04	2.80E-09	0.01%	1.60E+06	1.25E-04	0.02%
300-10_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	2.30E+02	5.26E+05	4.37E-10	0.00%	1.60E+07	1.44E-05	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**2.03E-05**	--	--	**5.63E-01**	--
300-10_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.55E-01	4.40E+00	3.52E-06	55.84%	--	--	--
300-10_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.06E-02	1.63E+01	2.49E-07	3.95%	--	--	--
300-10_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.37E+00	5.40E+01	2.54E-06	40.21%	--	--	--
Total Radiological Risk Estimate						--	**6.31E-06**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**2.66E-05**	--	--	--	--
300-109_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	5.62E+06	--	--	--	8.00E+07	7.03E-02	7.10%
300-109_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.22E+02	5.00E+02	2.44E-07	6.14%	1.60E+03	7.63E-02	7.70%
300-109_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.97E+01	5.00E+02	7.94E-08	2.00%	--	--	--
300-109_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	2.42E+03	6.67E+02	3.63E-06	91.33%	2.40E+04	1.01E-01	10.19%
300-109_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	6.33E+04	--	--	--	1.60E+07	3.96E-03	0.40%
300-109_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	1.24E+00	1.37E+02	9.05E-09	0.23%	--	--	--
300-109_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	2.30E+00	1.37E+03	1.68E-09	0.04%	--	--	--
300-109_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	1.80E+02	--	--	--	1.60E+05	1.13E-03	0.11%
300-109_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	6.32E+02	--	--	--	1.60E+07	3.95E-05	0.00%
300-109_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	5.90E+01	--	--	--	4.00E+04	1.48E-03	0.15%
300-109_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	6.95E+03	--	--	--	1.20E+08	5.79E-05	0.01%
300-109_Shallow_Focused	non-Rad	Chrysene	218-01-9	µg/kg	1.77E+00	1.37E+04	1.29E-10	0.00%	--	--	--
300-109_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	6.42E+03	--	--	--	2.40E+04	2.68E-01	27.03%
300-109_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	1.08E+04	--	--	--	3.20E+06	3.38E-03	0.34%
300-109_Shallow_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	1.40E+01	1.37E+03	1.02E-08	0.26%	--	--	--
300-109_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	1.75E+07	--	--	--	5.60E+07	3.13E-01	31.58%
300-109_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	2.89E+03	--	--	--	--	--	--
300-109_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	2.78E+05	--	--	--	1.12E+07	2.48E-02	2.51%
300-109_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	2.20E+01	--	--	--	2.40E+04	9.17E-04	0.09%
300-109_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	3.41E+02	--	--	--	4.00E+05	8.53E-04	0.09%

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-109_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	8.49E+03	--	--	--	1.60E+06	5.31E-03	0.54%
300-109_Shallow_Focused	non-Rad	Pyrene	129-00-0	µg/kg	1.56E+00	--	--	--	2.40E+06	6.50E-07	0.00%
300-109_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	4.76E+04	--	--	--	4.00E+05	1.19E-01	12.02%
300-109_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	3.47E+04	--	--	--	2.40E+07	1.45E-03	0.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.97E-06**	**--**	**--**	**9.90E-01**	**--**
300-109_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.40E+00	1.33E+02	1.05E-06	29.17%	--	--	--
300-109_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.38E+00	5.40E+01	2.56E-06	70.83%	--	--	--
Total Radiological Risk Estimate						**--**	**3.61E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.58E-06**	**--**	**--**	**--**	**--**
300-109_Staging Pile Area_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	5.78E+06	--	--	--	8.00E+07	7.23E-02	7.71%
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.68E+01	5.00E+02	7.36E-08	1.83%	1.60E+03	2.30E-02	2.45%
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.94E+01	5.00E+02	3.88E-08	0.96%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	2.58E+03	6.67E+02	3.87E-06	96.02%	2.40E+04	1.08E-01	11.47%
300-109_Staging Pile Area_Focused	non-Rad	Barium	7440-39-3	µg/kg	7.27E+04	--	--	--	1.60E+07	4.54E-03	0.48%
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	2.08E+00	1.37E+03	1.52E-09	0.04%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	3.30E+00	1.37E+02	2.41E-08	0.60%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	1.31E+00	1.37E+03	9.56E-10	0.02%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	2.03E+02	--	--	--	1.60E+05	1.27E-03	0.14%
300-109_Staging Pile Area_Focused	non-Rad	Boron	7440-42-8	µg/kg	1.06E+03	--	--	--	1.60E+07	6.63E-05	0.01%
300-109_Staging Pile Area_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	6.60E+01	--	--	--	4.00E+04	1.65E-03	0.18%
300-109_Staging Pile Area_Focused	non-Rad	Chromium	7440-47-3	µg/kg	8.17E+03	--	--	--	1.20E+08	6.81E-05	0.01%
300-109_Staging Pile Area_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	5.95E+03	--	--	--	2.40E+04	2.48E-01	26.45%
300-109_Staging Pile Area_Focused	non-Rad	Copper	7440-50-8	µg/kg	1.16E+04	--	--	--	3.20E+06	3.63E-03	0.39%
300-109_Staging Pile Area_Focused	non-Rad	Fluoranthene	206-44-0	µg/kg	5.14E+00	--	--	--	3.20E+06	1.61E-06	0.00%
300-109_Staging Pile Area_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	2.92E+01	1.37E+03	2.13E-08	0.53%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Iron	7439-89-6	µg/kg	1.84E+07	--	--	--	5.60E+07	3.29E-01	35.06%
300-109_Staging Pile Area_Focused	non-Rad	Lead	7439-92-1	µg/kg	5.03E+03	--	--	--	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Manganese	7439-96-5	µg/kg	2.86E+05	--	--	--	1.12E+07	2.55E-02	2.72%
300-109_Staging Pile Area_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	4.08E+02	--	--	--	4.00E+05	1.02E-03	0.11%
300-109_Staging Pile Area_Focused	non-Rad	Nickel	7440-02-0	µg/kg	8.57E+03	--	--	--	1.60E+06	5.36E-03	0.57%
300-109_Staging Pile Area_Focused	non-Rad	Pyrene	129-00-0	µg/kg	6.96E+00	--	--	--	2.40E+06	2.90E-06	0.00%
300-109_Staging Pile Area_Focused	non-Rad	Tin	7440-31-5	µg/kg	1.45E+03	--	--	--	4.80E+07	3.02E-05	0.00%
300-109_Staging Pile Area_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	4.51E+04	--	--	--	4.00E+05	1.13E-01	12.03%
300-109_Staging Pile Area_Focused	non-Rad	Zinc	7440-66-6	µg/kg	4.88E+04	--	--	--	2.40E+07	2.03E-03	0.22%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.03E-06**	**--**	**--**	**9.37E-01**	**--**
300-109_Staging Pile Area_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	2.54E+00	1.33E+02	1.91E-06	30.86%	--	--	--
300-109_Staging Pile Area_Focused	Rad	Uranium-238	U-238	pCi/g	2.31E+00	5.40E+01	4.28E-06	69.14%	--	--	--
Total Radiological Risk Estimate						**--**	**6.19E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.02E-05**	**--**	**--**	**--**	**--**
300-18_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.20E+03	6.67E+02	3.30E-06	100.00%	2.40E+04	9.17E-02	90.99%
300-18_Shallow	non-Rad	Barium	7440-39-3	µg/kg	6.34E+04	--	--	--	1.60E+07	3.96E-03	3.93%
300-18_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	6.50E+02	--	--	--	1.60E+05	4.06E-03	4.03%
300-18_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	4.00E+01	--	--	--	4.00E+04	1.00E-03	0.99%
300-18_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	6.90E+03	--	--	--	1.20E+08	5.75E-05	0.06%

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-18_Shallow	non-Rad	Lead	7439-92-1	µg/kg	3.60E+03	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.30E-06**	**--**	**--**	**1.01E-01**	**--**
300-18_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	6.49E-01	1.33E+02	4.88E-07	39.07%	--	--	--
300-18_Shallow	Rad	Uranium-238	U-238	pCi/g	4.11E-01	5.40E+01	7.61E-07	60.93%	--	--	--
Total Radiological Risk Estimate						**--**	**1.25E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.55E-06**	**--**	**--**	**--**	**--**
300-223_Shallow_Focused	non-Rad	Total petroleum hydrocarbons - diesel range	TPHDIESEL	µg/kg	1.20E+05	--	--	--	--	--	--
300-223_Shallow_Focused	non-Rad	Total petroleum hydrocarbons - motor oil (high boiling)	TPH/OILH	µg/kg	2.30E+05	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
300-23_Shallow_Focused	non-Rad	Total petroleum hydrocarbons - motor oil (high boiling)	TPH/OILH	µg/kg	5.20E+04	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
300-259_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	5.99E+06	--	--	--	8.00E+07	7.49E-02	7.94%
300-259_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.22E+02	--	--	--	3.20E+04	1.01E-02	1.07%
300-259_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.10E+03	6.67E+02	3.14E-06	100.00%	2.40E+04	8.73E-02	9.26%
300-259_Shallow	non-Rad	Barium	7440-39-3	µg/kg	7.52E+04	--	--	--	1.60E+07	4.70E-03	0.50%
300-259_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.26E+02	--	--	--	1.60E+05	1.41E-03	0.15%
300-259_Shallow	non-Rad	Boron	7440-42-8	µg/kg	1.30E+03	--	--	--	1.60E+07	8.14E-05	0.01%
300-259_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	2.52E+02	--	--	--	4.00E+04	6.29E-03	0.67%
300-259_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	7.90E+03	--	--	--	1.20E+08	6.58E-05	0.01%
300-259_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	5.83E+03	--	--	--	2.40E+04	2.43E-01	25.77%
300-259_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.07E+04	--	--	--	3.20E+06	3.34E-03	0.35%
300-259_Shallow	non-Rad	Iron	7439-89-6	µg/kg	1.96E+07	--	--	--	5.60E+07	3.50E-01	37.13%
300-259_Shallow	non-Rad	Lead	7439-92-1	µg/kg	4.62E+03	--	--	--	--	--	--
300-259_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.19E+05	--	--	--	1.12E+07	2.85E-02	3.02%
300-259_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	1.00E+01	--	--	--	2.40E+04	4.17E-04	0.04%
300-259_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	3.03E+02	--	--	--	4.00E+05	7.57E-04	0.08%
300-259_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	8.75E+03	--	--	--	1.60E+06	5.47E-03	0.58%
300-259_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	4.26E+04	--	--	--	4.00E+05	1.07E-01	11.30%
300-259_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.80E+05	--	--	--	2.40E+07	2.00E-02	2.12%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.14E-06**	**--**	**--**	**9.43E-01**	**--**
300-259_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.59E+00	1.33E+02	1.20E-06	32.44%	--	--	--
300-259_Shallow	Rad	Uranium-238	U-238	pCi/g	1.35E+00	5.40E+01	2.50E-06	67.56%	--	--	--
Total Radiological Risk Estimate						**--**	**3.69E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.84E-06**	**--**	**--**	**--**	**--**
300-260_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	8.17E+06	--	--	--	8.00E+07	1.02E-01	8.80%
300-260_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	9.22E+02	--	--	--	3.20E+04	2.88E-02	2.48%
300-260_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	3.16E+03	6.67E+02	4.74E-06	100.00%	2.40E+04	1.32E-01	11.34%

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-260_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	1.22E+05	--	--	--	1.60E+07	7.63E-03	0.66%
300-260_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	2.39E+02	--	--	--	1.60E+05	1.49E-03	0.13%
300-260_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	8.36E+03	--	--	--	1.60E+07	5.23E-04	0.05%
300-260_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	1.10E+02	--	--	--	4.00E+04	2.75E-03	0.24%
300-260_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	9.89E+03	--	--	--	1.20E+08	8.24E-05	0.01%
300-260_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	7.43E+03	--	--	--	2.40E+04	3.10E-01	26.67%
300-260_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	7.33E+04	--	--	--	3.20E+06	2.29E-02	1.97%
300-260_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	2.04E+07	--	--	--	5.60E+07	3.64E-01	31.39%
300-260_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	1.83E+04	--	--	--	--	--	--
300-260_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	3.28E+05	--	--	--	1.12E+07	2.93E-02	2.52%
300-260_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	1.20E+01	--	--	--	2.40E+04	5.00E-04	0.04%
300-260_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	5.37E+02	--	--	--	4.00E+05	1.34E-03	0.12%
300-260_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.02E+04	--	--	--	1.60E+06	6.38E-03	0.55%
300-260_Shallow_Focused	non-Rad	Silver	7440-22-4	µg/kg	2.06E+02	--	--	--	4.00E+05	5.15E-04	0.04%
300-260_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	5.90E+04	--	--	--	4.00E+05	1.48E-01	12.71%
300-260_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	7.74E+04	--	--	--	2.40E+07	3.23E-03	0.28%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.74E-06**	**--**	**--**	**1.16E+00**	**--**
300-260_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	2.51E-01	1.63E+01	1.54E-06	16.20%	--	--	--
300-260_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.30E+00	5.40E+01	7.96E-06	83.80%	--	--	--
Total Radiological Risk Estimate						**--**	**9.50E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.42E-05**	**--**	**--**	**--**	**--**

300-272_Overburden_Focused	non-Rad	Total petroleum hydrocarbons - diesel range	TPHDIESEL	µg/kg	1.31E+04	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**

300-272_Shallow_Focused	non-Rad	Total petroleum hydrocarbons - diesel range	TPHDIESEL	µg/kg	4.31E+04	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**

300-275_Shallow_1	non-Rad	Acenaphthene	83-32-9	µg/kg	9.60E+02	--	--	--	4.80E+06	2.00E-04	0.02%
300-275_Shallow_1	non-Rad	Aluminum	7429-90-5	µg/kg	5.61E+06	--	--	--	8.00E+07	7.02E-02	7.33%
300-275_Shallow_1	non-Rad	Antimony	7440-36-0	µg/kg	2.60E+02	--	--	--	3.20E+04	8.13E-03	0.85%
300-275_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	2.21E+03	6.67E+02	3.32E-06	99.67%	2.40E+04	9.21E-02	9.62%
300-275_Shallow_1	non-Rad	Barium	7440-39-3	µg/kg	7.53E+04	--	--	--	1.60E+07	4.70E-03	0.49%
300-275_Shallow_1	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	1.30E+00	1.37E+02	9.49E-09	0.29%	--	--	--
300-275_Shallow_1	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	1.87E+00	1.37E+03	1.37E-09	0.04%	--	--	--
300-275_Shallow_1	non-Rad	Beryllium	7440-41-7	µg/kg	4.52E+02	--	--	--	1.60E+05	2.82E-03	0.29%
300-275_Shallow_1	non-Rad	Boron	7440-42-8	µg/kg	1.47E+03	--	--	--	1.60E+07	9.16E-05	0.01%
300-275_Shallow_1	non-Rad	Cadmium	7440-43-9	µg/kg	8.33E+01	--	--	--	4.00E+04	2.08E-03	0.22%
300-275_Shallow_1	non-Rad	Chromium	7440-47-3	µg/kg	8.02E+03	--	--	--	1.20E+08	6.68E-05	0.01%
300-275_Shallow_1	non-Rad	Chrysene	218-01-9	µg/kg	2.20E+00	1.37E+04	1.61E-10	0.00%	--	--	--
300-275_Shallow_1	non-Rad	Cobalt	7440-48-4	µg/kg	5.85E+03	--	--	--	2.40E+04	2.44E-01	25.44%
300-275_Shallow_1	non-Rad	Copper	7440-50-8	µg/kg	4.29E+04	--	--	--	3.20E+06	1.34E-02	1.40%

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-275_Shallow_1	non-Rad	Fluoranthene	206-44-0	µg/kg	2.30E+03	--	--	--	3.20E+06	7.19E-04	0.08%
300-275_Shallow_1	non-Rad	Fluorene	86-73-7	µg/kg	8.11E+01	--	--	--	3.20E+06	2.54E-05	0.00%
300-275_Shallow_1	non-Rad	Iron	7439-89-6	µg/kg	1.79E+07	--	--	--	5.60E+07	3.20E-01	33.38%
300-275_Shallow_1	non-Rad	Lead	7439-92-1	µg/kg	7.19E+03	--	--	--	--	--	--
300-275_Shallow_1	non-Rad	Lithium	7439-93-2	µg/kg	6.69E+03	--	--	--	1.60E+05	4.18E-02	4.36%
300-275_Shallow_1	non-Rad	Manganese	7439-96-5	µg/kg	2.77E+05	--	--	--	1.12E+07	2.47E-02	2.58%
300-275_Shallow_1	non-Rad	Mercury	7439-97-6	µg/kg	1.67E+01	--	--	--	2.40E+04	6.94E-04	0.07%
300-275_Shallow_1	non-Rad	Molybdenum	7439-98-7	µg/kg	3.78E+02	--	--	--	4.00E+05	9.45E-04	0.10%
300-275_Shallow_1	non-Rad	Nickel	7440-02-0	µg/kg	9.46E+03	--	--	--	1.60E+06	5.91E-03	0.62%
300-275_Shallow_1	non-Rad	Silver	7440-22-4	µg/kg	1.21E+02	--	--	--	4.00E+05	3.02E-04	0.03%
300-275_Shallow_1	non-Rad	Strontium	7440-24-6	µg/kg	2.02E+04	--	--	--	4.80E+07	4.21E-04	0.04%
300-275_Shallow_1	non-Rad	Tin	7440-31-5	µg/kg	1.48E+03	--	--	--	4.80E+07	3.09E-05	0.00%
300-275_Shallow_1	non-Rad	Uranium	7440-61-1	µg/kg	2.50E+03	--	--	--	2.40E+05	1.04E-02	1.09%
300-275_Shallow_1	non-Rad	Vanadium	7440-62-2	µg/kg	4.51E+04	--	--	--	4.00E+05	1.13E-01	11.78%
300-275_Shallow_1	non-Rad	Zinc	7440-66-6	µg/kg	4.10E+04	--	--	--	2.40E+07	1.71E-03	0.18%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.33E-06**	**--**	**--**	**9.58E-01**	**--**
300-275_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	4.65E-02	4.40E+00	1.06E-06	3.96%	--	--	--
300-275_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	7.72E+00	1.33E+02	5.80E-06	21.72%	--	--	--
300-275_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.00E+00	1.63E+01	6.13E-06	22.97%	--	--	--
300-275_Shallow_1	Rad	Uranium-238	U-238	pCi/g	7.41E+00	5.40E+01	1.37E-05	51.35%	--	--	--
Total Radiological Risk Estimate						**--**	**2.67E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.00E-05**	**--**	**--**	**--**	**--**
300-275_Shallow_2	non-Rad	Acenaphthene	83-32-9	µg/kg	3.60E+00	--	--	--	4.80E+06	7.50E-07	0.00%
300-275_Shallow_2	non-Rad	Aluminum	7429-90-5	µg/kg	6.24E+06	--	--	--	8.00E+07	7.80E-02	7.68%
300-275_Shallow_2	non-Rad	Arsenic	7440-38-2	µg/kg	2.76E+03	6.67E+02	4.14E-06	100.00%	2.40E+04	1.15E-01	11.34%
300-275_Shallow_2	non-Rad	Barium	7440-39-3	µg/kg	6.86E+04	--	--	--	1.60E+07	4.29E-03	0.42%
300-275_Shallow_2	non-Rad	Beryllium	7440-41-7	µg/kg	2.54E+02	--	--	--	1.60E+05	1.59E-03	0.16%
300-275_Shallow_2	non-Rad	Boron	7440-42-8	µg/kg	1.15E+03	--	--	--	1.60E+07	7.17E-05	0.01%
300-275_Shallow_2	non-Rad	Cadmium	7440-43-9	µg/kg	1.44E+02	--	--	--	4.00E+04	3.60E-03	0.35%
300-275_Shallow_2	non-Rad	Chromium	7440-47-3	µg/kg	8.99E+03	--	--	--	1.20E+08	7.49E-05	0.01%
300-275_Shallow_2	non-Rad	Cobalt	7440-48-4	µg/kg	5.98E+03	--	--	--	2.40E+04	2.49E-01	24.54%
300-275_Shallow_2	non-Rad	Copper	7440-50-8	µg/kg	1.16E+04	--	--	--	3.20E+06	3.62E-03	0.36%
300-275_Shallow_2	non-Rad	Fluoranthene	206-44-0	µg/kg	5.60E+01	--	--	--	3.20E+06	1.75E-05	0.00%
300-275_Shallow_2	non-Rad	Fluorene	86-73-7	µg/kg	2.60E+00	--	--	--	3.20E+06	8.13E-07	0.00%
300-275_Shallow_2	non-Rad	Iron	7439-89-6	µg/kg	1.96E+07	--	--	--	5.60E+07	3.49E-01	34.44%
300-275_Shallow_2	non-Rad	Lead	7439-92-1	µg/kg	4.10E+03	--	--	--	--	--	--
300-275_Shallow_2	non-Rad	Lithium	7439-93-2	µg/kg	7.07E+03	--	--	--	1.60E+05	4.42E-02	4.35%
300-275_Shallow_2	non-Rad	Manganese	7439-96-5	µg/kg	2.93E+05	--	--	--	1.12E+07	2.61E-02	2.58%
300-275_Shallow_2	non-Rad	Mercury	7439-97-6	µg/kg	2.80E+01	--	--	--	2.40E+04	1.17E-03	0.11%
300-275_Shallow_2	non-Rad	Molybdenum	7439-98-7	µg/kg	4.04E+02	--	--	--	4.00E+05	1.01E-03	0.10%
300-275_Shallow_2	non-Rad	Nickel	7440-02-0	µg/kg	9.59E+03	--	--	--	1.60E+06	6.00E-03	0.59%
300-275_Shallow_2	non-Rad	Strontium	7440-24-6	µg/kg	2.71E+04	--	--	--	4.80E+07	5.64E-04	0.06%
300-275_Shallow_2	non-Rad	Tin	7440-31-5	µg/kg	1.15E+03	--	--	--	4.80E+07	2.39E-05	0.00%
300-275_Shallow_2	non-Rad	Vanadium	7440-62-2	µg/kg	5.16E+04	--	--	--	4.00E+05	1.29E-01	12.72%
300-275_Shallow_2	non-Rad	Zinc	7440-66-6	µg/kg	4.12E+04	--	--	--	2.40E+07	1.72E-03	0.17%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.14E-06**	**--**	**--**	**1.01E+00**	**--**

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-275_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.31E+00	1.33E+02	9.82E-07	20.71%	--	--	--
300-275_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	2.37E-01	1.63E+01	1.45E-06	30.67%	--	--	--
300-275_Shallow_2	Rad	Uranium-238	U-238	pCi/g	1.24E+00	5.40E+01	2.30E-06	48.62%	--	--	--
Total Radiological Risk Estimate						**--**	**4.74E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.88E-06**	**--**	**--**	**--**	**--**
300-33, 300-41, 300-256_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.32E+06	--	--	--	8.00E+07	7.90E-02	7.11%
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1016	12674-11-2	µg/kg	1.03E+01	1.43E+04	7.21E-10	0.02%	5.60E+03	1.84E-03	0.17%
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1242	53469-21-9	µg/kg	1.64E+01	5.00E+02	3.28E-08	0.72%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.90E+02	5.00E+02	3.80E-07	8.31%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	8.44E+01	5.00E+02	1.69E-07	3.69%	1.60E+03	5.28E-02	4.75%
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.73E+01	5.00E+02	3.46E-08	0.76%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.64E+03	6.67E+02	3.96E-06	86.50%	2.40E+04	1.10E-01	9.89%
300-33, 300-41, 300-256_Shallow	non-Rad	Barium	7440-39-3	µg/kg	7.24E+04	--	--	--	1.60E+07	4.53E-03	0.41%
300-33, 300-41, 300-256_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.56E+02	--	--	--	1.60E+05	1.60E-03	0.14%
300-33, 300-41, 300-256_Shallow	non-Rad	Boron	7440-42-8	µg/kg	1.48E+03	--	--	--	1.60E+07	9.27E-05	0.01%
300-33, 300-41, 300-256_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	2.28E+02	5.26E+05	4.33E-10	0.01%	1.60E+07	1.43E-05	0.00%
300-33, 300-41, 300-256_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	9.39E+01	--	--	--	4.00E+04	2.35E-03	0.21%
300-33, 300-41, 300-256_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	8.78E+03	--	--	--	1.20E+08	7.32E-05	0.01%
300-33, 300-41, 300-256_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.27E+03	--	--	--	2.40E+04	2.61E-01	23.52%
300-33, 300-41, 300-256_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.37E+04	--	--	--	3.20E+06	4.27E-03	0.38%
300-33, 300-41, 300-256_Shallow	non-Rad	Fluoride	16984-48-8	µg/kg	1.65E+03	--	--	--	4.80E+06	3.44E-04	0.03%
300-33, 300-41, 300-256_Shallow	non-Rad	Iron	7439-89-6	µg/kg	2.00E+07	--	--	--	5.60E+07	3.57E-01	32.17%
300-33, 300-41, 300-256_Shallow	non-Rad	Lead	7439-92-1	µg/kg	4.27E+03	--	--	--	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Lithium	7439-93-2	µg/kg	5.50E+03	--	--	--	1.60E+05	3.43E-02	3.09%
300-33, 300-41, 300-256_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.15E+05	--	--	--	1.12E+07	2.81E-02	2.53%
300-33, 300-41, 300-256_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	1.60E+01	--	--	--	2.40E+04	6.67E-04	0.06%
300-33, 300-41, 300-256_Shallow	non-Rad	Methylene chloride	75-09-2	µg/kg	2.91E+00	1.33E+05	2.19E-11	0.00%	4.80E+06	6.07E-07	0.00%
300-33, 300-41, 300-256_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	4.86E+02	--	--	--	4.00E+05	1.21E-03	0.11%
300-33, 300-41, 300-256_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	8.88E+03	--	--	--	1.60E+06	5.55E-03	0.50%
300-33, 300-41, 300-256_Shallow	non-Rad	Nitrate	14797-55-8	µg/kg	8.62E+03	--	--	--	5.68E+08	1.52E-05	0.00%
300-33, 300-41, 300-256_Shallow	non-Rad	Silver	7440-22-4	µg/kg	7.82E+02	--	--	--	4.00E+05	1.96E-03	0.18%
300-33, 300-41, 300-256_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	7.26E+03	--	--	--	2.40E+05	3.03E-02	2.72%
300-33, 300-41, 300-256_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	5.27E+04	--	--	--	4.00E+05	1.32E-01	11.85%
300-33, 300-41, 300-256_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.15E+04	--	--	--	2.40E+07	1.73E-03	0.16%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.57E-06**	**--**	**--**	**1.11E+00**	**--**
300-33, 300-41, 300-256_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	2.14E+00	1.33E+02	1.61E-06	21.45%	--	--	--
300-33, 300-41, 300-256_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	3.38E-01	1.63E+01	2.07E-06	27.68%	--	--	--
300-33, 300-41, 300-256_Shallow	Rad	Uranium-238	U-238	pCi/g	2.06E+00	5.40E+01	3.81E-06	50.87%	--	--	--
Total Radiological Risk Estimate						**--**	**7.49E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.21E-05**	**--**	**--**	**--**	**--**
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	5.51E+06	--	--	--	8.00E+07	6.89E-02	5.63%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.30E+02	5.00E+02	6.60E-07	10.32%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.85E+02	5.00E+02	7.70E-07	12.04%	1.60E+03	2.41E-01	19.67%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.20E+01	5.00E+02	1.04E-07	1.63%	--	--	--

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	3.24E+03	6.67E+02	4.86E-06	76.01%	2.40E+04	1.35E-01	11.04%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	6.46E+04	--	--	--	1.60E+07	4.04E-03	0.33%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	1.69E+02	--	--	--	1.60E+05	1.06E-03	0.09%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	1.03E+03	--	--	--	1.60E+07	6.44E-05	0.01%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	1.00E+02	--	--	--	4.00E+04	2.50E-03	0.20%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	8.08E+03	--	--	--	1.20E+08	6.73E-05	0.01%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	5.64E+03	--	--	--	2.40E+04	2.35E-01	19.21%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	1.04E+04	--	--	--	3.20E+06	3.25E-03	0.27%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Fluoride	16984-48-8	µg/kg	1.30E+03	--	--	--	4.80E+06	2.71E-04	0.02%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	1.86E+07	--	--	--	5.60E+07	3.32E-01	27.16%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	3.16E+03	--	--	--	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Lithium	7439-93-2	µg/kg	6.58E+03	--	--	--	1.60E+05	4.11E-02	3.36%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	2.59E+05	--	--	--	1.12E+07	2.31E-02	1.89%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	2.21E+00	1.33E+05	1.66E-11	0.00%	4.80E+06	4.60E-07	0.00%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	2.75E+02	--	--	--	4.00E+05	6.88E-04	0.06%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	8.04E+03	--	--	--	1.60E+06	5.03E-03	0.41%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Nitrate	14797-55-8	µg/kg	1.79E+04	--	--	--	5.68E+08	3.15E-05	0.00%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	5.14E+04	--	--	--	4.00E+05	1.29E-01	10.51%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	3.89E+04	--	--	--	2.40E+07	1.62E-03	0.13%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.39E-06**	**--**	**--**	**1.22E+00**	**--**
300-33, 300-41, 300-256_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	3.02E+00	1.33E+02	2.27E-06	36.10%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	2.17E+00	5.40E+01	4.02E-06	63.90%	--	--	--
Total Radiological Risk Estimate						**--**	**6.29E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.27E-05**	**--**	**--**	**--**	**--**
300-37_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.00E+02	5.00E+02	2.00E-07	3.03%	1.60E+03	6.25E-02	100.00%
300-37_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.20E+03	5.00E+02	6.40E-06	96.97%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.60E-06**	**--**	**--**	**6.25E-02**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.60E-06**	**--**	**--**	**--**	**--**
300-44_Overburden_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	9.10E+03	6.67E+02	1.36E-05	100.00%	2.40E+04	3.79E-01	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.36E-05**	**--**	**--**	**3.79E-01**	**--**
300-44_Overburden_Focused	Rad	Uranium-238	U-238	pCi/g	3.45E-01	5.40E+01	6.39E-07	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**6.39E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.43E-05**	**--**	**--**	**--**	**--**
300-44_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	6.71E+06	--	--	--	8.00E+07	8.39E-02	4.78%
300-44_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	4.10E+03	--	--	--	3.20E+04	1.28E-01	7.29%
300-44_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.69E+04	6.67E+02	2.53E-05	100.00%	2.40E+04	7.04E-01	40.09%
300-44_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	7.52E+04	--	--	--	1.60E+07	4.70E-03	0.27%
300-44_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	4.80E+02	--	--	--	1.60E+05	3.00E-03	0.17%
300-44_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	9.30E+03	--	--	--	1.20E+08	7.75E-05	0.00%
300-44_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	8.20E+03	--	--	--	2.40E+04	3.42E-01	19.45%
300-44_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	7.80E+03	--	--	--	3.20E+06	2.44E-03	0.14%

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-44_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	1.94E+07	--	--	--	5.60E+07	3.46E-01	19.72%
300-44_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	3.03E+05	--	--	--	1.12E+07	2.71E-02	1.54%
300-44_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	8.60E+03	--	--	--	1.60E+06	5.38E-03	0.31%
300-44_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	4.32E+04	--	--	--	4.00E+05	1.08E-01	6.15%
300-44_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	3.78E+04	--	--	--	2.40E+07	1.58E-03	0.09%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.53E-05**	**--**	**--**	**1.76E+00**	**--**
300-44_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	2.93E-01	5.40E+01	5.43E-07	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**5.43E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.59E-05**	**--**	**--**	**--**	**--**
300-45_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	8.60E+01	5.00E+02	1.72E-07	97.69%	--	--	--
300-45_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.90E+02	7.14E+04	4.06E-09	2.31%	1.60E+06	1.81E-04	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.76E-07**	**--**	**--**	**1.81E-04**	**--**
300-45_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	2.28E-02	4.40E+00	5.18E-07	16.65%	--	--	--
300-45_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	6.06E-02	1.63E+01	3.72E-07	11.95%	--	--	--
300-45_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.20E+00	5.40E+01	2.22E-06	71.40%	--	--	--
Total Radiological Risk Estimate						**--**	**3.11E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.29E-06**	**--**	**--**	**--**	**--**
300-49_Overburden	non-Rad	1,2,4-Trichlorobenzene	120-82-1	µg/kg	3.05E+01	3.45E+04	8.85E-10	0.01%	8.00E+05	3.82E-05	0.00%
300-49_Overburden	non-Rad	1,4-Dichlorobenzene	106-46-7	µg/kg	2.88E+01	1.85E+05	1.55E-10	0.00%	5.60E+06	5.14E-06	0.00%
300-49_Overburden	non-Rad	2,4-Dinitrotoluene	121-14-2	µg/kg	1.89E+01	3.23E+03	5.87E-09	0.05%	1.60E+05	1.18E-04	0.00%
300-49_Overburden	non-Rad	2-Chlorophenol	95-57-8	µg/kg	5.13E+01	--	--	--	4.00E+05	1.28E-04	0.00%
300-49_Overburden	non-Rad	4-Chloro-3-methylphenol	59-50-7	µg/kg	4.60E+01	--	--	--	8.00E+06	5.74E-06	0.00%
300-49_Overburden	non-Rad	Acenaphthene	83-32-9	µg/kg	3.07E+01	--	--	--	4.80E+06	6.40E-06	0.00%
300-49_Overburden	non-Rad	Aluminum	7429-90-5	µg/kg	6.30E+06	--	--	--	8.00E+07	7.87E-02	2.52%
300-49_Overburden	non-Rad	Antimony	7440-36-0	µg/kg	2.32E+02	--	--	--	3.20E+04	7.25E-03	0.23%
300-49_Overburden	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.01E+03	5.00E+02	6.02E-06	53.50%	1.60E+03	1.88E+00	60.26%
300-49_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	3.29E+03	6.67E+02	4.94E-06	43.91%	2.40E+04	1.37E-01	4.40%
300-49_Overburden	non-Rad	Barium	7440-39-3	µg/kg	7.61E+04	--	--	--	1.60E+07	4.75E-03	0.15%
300-49_Overburden	non-Rad	Beryllium	7440-41-7	µg/kg	2.01E+02	--	--	--	1.60E+05	1.26E-03	0.04%
300-49_Overburden	non-Rad	Cadmium	7440-43-9	µg/kg	1.74E+02	--	--	--	4.00E+04	4.36E-03	0.14%
300-49_Overburden	non-Rad	Chromium	7440-47-3	µg/kg	1.81E+04	--	--	--	1.20E+08	1.51E-04	0.00%
300-49_Overburden	non-Rad	Cobalt	7440-48-4	µg/kg	7.13E+03	--	--	--	2.40E+04	2.97E-01	9.52%
300-49_Overburden	non-Rad	Copper	7440-50-8	µg/kg	5.36E+05	--	--	--	3.20E+06	1.68E-01	5.37%
300-49_Overburden	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	5.16E+01	--	--	--	8.00E+06	6.45E-06	0.00%
300-49_Overburden	non-Rad	Iron	7439-89-6	µg/kg	2.08E+07	--	--	--	5.60E+07	3.71E-01	11.90%
300-49_Overburden	non-Rad	Lead	7439-92-1	µg/kg	3.70E+04	--	--	--	--	--	--
300-49_Overburden	non-Rad	Manganese	7439-96-5	µg/kg	3.17E+05	--	--	--	1.12E+07	2.83E-02	0.91%
300-49_Overburden	non-Rad	Nickel	7440-02-0	µg/kg	1.30E+04	--	--	--	1.60E+06	8.15E-03	0.26%
300-49_Overburden	non-Rad	n-Nitrosodi-n-dipropylamine	621-64-7	µg/kg	3.97E+01	1.43E+02	2.78E-07	2.47%	--	--	--
300-49_Overburden	non-Rad	Pentachlorophenol	87-86-5	µg/kg	4.98E+01	8.33E+03	5.98E-09	0.05%	2.40E+06	2.08E-05	0.00%
300-49_Overburden	non-Rad	Phenol	108-95-2	µg/kg	5.00E+01	--	--	--	2.40E+07	2.08E-06	0.00%
300-49_Overburden	non-Rad	Pyrene	129-00-0	µg/kg	4.01E+01	--	--	--	2.40E+06	1.67E-05	0.00%
300-49_Overburden	non-Rad	Silver	7440-22-4	µg/kg	7.03E+02	--	--	--	4.00E+05	1.76E-03	0.06%
300-49_Overburden	non-Rad	Vanadium	7440-62-2	µg/kg	5.04E+04	--	--	--	4.00E+05	1.26E-01	4.04%

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-49_Overburden	non-Rad	Zinc	7440-66-6	µg/kg	1.42E+05	--	--	--	2.40E+07	5.92E-03	0.19%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.12E-05**	**--**	**--**	**3.12E+00**	**--**
300-49_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	1.01E+00	1.33E+02	7.57E-07	25.17%	--	--	--
300-49_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	5.70E-02	1.63E+01	3.50E-07	11.62%	--	--	--
300-49_Overburden	Rad	Uranium-238	U-238	pCi/g	1.03E+00	5.40E+01	1.90E-06	63.21%	--	--	--
Total Radiological Risk Estimate						**--**	**3.01E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.43E-05**	**--**	**--**	**--**	**--**
300-49_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.92E+06	--	--	--	8.00E+07	8.65E-02	6.51%
300-49_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	1.76E+02	--	--	--	3.20E+04	5.50E-03	0.41%
300-49_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	4.43E+03	6.67E+02	6.65E-06	100.00%	2.40E+04	1.85E-01	13.90%
300-49_Shallow	non-Rad	Barium	7440-39-3	µg/kg	8.99E+04	--	--	--	1.60E+07	5.62E-03	0.42%
300-49_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	3.03E+02	--	--	--	1.60E+05	1.89E-03	0.14%
300-49_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	9.17E+03	--	--	--	1.20E+08	7.64E-05	0.01%
300-49_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	9.32E+03	--	--	--	2.40E+04	3.88E-01	29.24%
300-49_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.49E+04	--	--	--	3.20E+06	4.65E-03	0.35%
300-49_Shallow	non-Rad	Iron	7439-89-6	µg/kg	2.59E+07	--	--	--	5.60E+07	4.62E-01	34.76%
300-49_Shallow	non-Rad	Lead	7439-92-1	µg/kg	6.63E+03	--	--	--	--	--	--
300-49_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.62E+05	--	--	--	1.12E+07	3.23E-02	2.43%
300-49_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	1.07E+04	--	--	--	1.60E+06	6.67E-03	0.50%
300-49_Shallow	non-Rad	Silver	7440-22-4	µg/kg	6.21E+02	--	--	--	4.00E+05	1.55E-03	0.12%
300-49_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	5.87E+04	--	--	--	4.00E+05	1.47E-01	11.04%
300-49_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	5.47E+04	--	--	--	2.40E+07	2.28E-03	0.17%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.65E-06**	**--**	**--**	**1.33E+00**	**--**
300-49_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	1.51E-01	4.40E+00	3.43E-06	43.63%	--	--	--
300-49_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.32E+00	1.33E+02	9.90E-07	12.59%	--	--	--
300-49_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.40E-01	1.63E+01	1.47E-06	18.72%	--	--	--
300-49_Shallow	Rad	Uranium-238	U-238	pCi/g	1.06E+00	5.40E+01	1.97E-06	25.06%	--	--	--
Total Radiological Risk Estimate						**--**	**7.87E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.45E-05**	**--**	**--**	**--**	**--**
300-50_Overburden	non-Rad	Aluminum	7429-90-5	µg/kg	6.68E+06	--	--	--	8.00E+07	8.35E-02	6.32%
300-50_Overburden	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.34E+01	5.00E+02	6.69E-08	0.62%	1.60E+03	2.09E-02	1.58%
300-50_Overburden	non-Rad	Aroclor-1260	11096-82-5	µg/kg	2.29E+02	5.00E+02	4.58E-07	4.22%	--	--	--
300-50_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	6.90E+03	6.67E+02	1.03E-05	95.17%	2.40E+04	2.87E-01	21.74%
300-50_Overburden	non-Rad	Barium	7440-39-3	µg/kg	1.18E+05	--	--	--	1.60E+07	7.36E-03	0.56%
300-50_Overburden	non-Rad	Beryllium	7440-41-7	µg/kg	3.25E+02	--	--	--	1.60E+05	2.03E-03	0.15%
300-50_Overburden	non-Rad	Cadmium	7440-43-9	µg/kg	5.63E+02	--	--	--	4.00E+04	1.41E-02	1.06%
300-50_Overburden	non-Rad	Chromium	7440-47-3	µg/kg	1.22E+04	--	--	--	1.20E+08	1.02E-04	0.01%
300-50_Overburden	non-Rad	Cobalt	7440-48-4	µg/kg	9.39E+03	--	--	--	2.40E+04	3.91E-01	29.60%
300-50_Overburden	non-Rad	Copper	7440-50-8	µg/kg	6.45E+04	--	--	--	3.20E+06	2.02E-02	1.53%
300-50_Overburden	non-Rad	Iron	7439-89-6	µg/kg	1.90E+07	--	--	--	5.60E+07	3.39E-01	25.68%
300-50_Overburden	non-Rad	Lead	7439-92-1	µg/kg	5.90E+03	--	--	--	--	--	--
300-50_Overburden	non-Rad	Manganese	7439-96-5	µg/kg	3.14E+05	--	--	--	1.12E+07	2.81E-02	2.12%
300-50_Overburden	non-Rad	Nickel	7440-02-0	µg/kg	1.52E+04	--	--	--	1.60E+06	9.52E-03	0.72%
300-50_Overburden	non-Rad	Silver	7440-22-4	µg/kg	1.20E+03	--	--	--	4.00E+05	3.00E-03	0.23%

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-50_Overburden	non-Rad	Vanadium	7440-62-2	µg/kg	4.52E+04	--	--	--	4.00E+05	1.13E-01	8.56%
300-50_Overburden	non-Rad	Zinc	7440-66-6	µg/kg	4.59E+04	--	--	--	2.40E+07	1.91E-03	0.14%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.09E-05**	**--**	**--**	**1.32E+00**	**--**
300-50_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	5.60E-02	4.40E+00	1.27E-06	6.50%	--	--	--
300-50_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	6.03E+00	1.33E+02	4.53E-06	23.14%	--	--	--
300-50_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	4.49E-01	1.63E+01	2.75E-06	14.06%	--	--	--
300-50_Overburden	Rad	Uranium-238	U-238	pCi/g	5.95E+00	5.40E+01	1.10E-05	56.30%	--	--	--
Total Radiological Risk Estimate						**--**	**1.96E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.05E-05**	**--**	**--**	**--**	**--**
300-50_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.88E+06	--	--	--	8.00E+07	8.60E-02	5.96%
300-50_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.00E+03	--	--	--	3.20E+04	9.38E-02	6.50%
300-50_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.26E+02	5.00E+02	2.53E-07	2.56%	1.60E+03	7.90E-02	5.47%
300-50_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	6.40E+03	6.67E+02	9.60E-06	97.43%	2.40E+04	2.67E-01	18.50%
300-50_Shallow	non-Rad	Barium	7440-39-3	µg/kg	1.03E+05	--	--	--	1.60E+07	6.44E-03	0.45%
300-50_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.82E+02	--	--	--	1.60E+05	1.76E-03	0.12%
300-50_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.93E+01	7.14E+04	2.70E-10	0.00%	1.60E+06	1.21E-05	0.00%
300-50_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	4.63E+02	--	--	--	4.00E+04	1.16E-02	0.80%
300-50_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.68E+04	--	--	--	1.20E+08	1.40E-04	0.01%
300-50_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	9.11E+03	--	--	--	2.40E+04	3.80E-01	26.31%
300-50_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.68E+04	--	--	--	3.20E+06	5.26E-03	0.36%
300-50_Shallow	non-Rad	Iron	7439-89-6	µg/kg	1.96E+07	--	--	--	5.60E+07	3.49E-01	24.22%
300-50_Shallow	non-Rad	Lead	7439-92-1	µg/kg	6.38E+03	--	--	--	--	--	--
300-50_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.18E+05	--	--	--	1.12E+07	2.84E-02	1.97%
300-50_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	1.24E+04	--	--	--	1.60E+06	7.76E-03	0.54%
300-50_Shallow	non-Rad	Silver	7440-22-4	µg/kg	2.99E+03	--	--	--	4.00E+05	7.48E-03	0.52%
300-50_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	4.70E+04	--	--	--	4.00E+05	1.17E-01	8.14%
300-50_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.13E+04	--	--	--	2.40E+07	1.72E-03	0.12%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**9.86E-06**	**--**	**--**	**1.44E+00**	**--**
300-50_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	5.60E-02	4.40E+00	1.27E-06	4.74%	--	--	--
300-50_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	7.89E+00	1.33E+02	5.93E-06	22.09%	--	--	--
300-50_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	6.64E-01	1.63E+01	4.07E-06	15.16%	--	--	--
300-50_Shallow	Rad	Uranium-238	U-238	pCi/g	8.41E+00	5.40E+01	1.56E-05	58.01%	--	--	--
Total Radiological Risk Estimate						**--**	**2.69E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.67E-05**	**--**	**--**	**--**	**--**
300-8_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	5.74E+02	--	--	--	1.60E+05	3.59E-03	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**3.59E-03**	**--**
300-8_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	7.86E-01	1.33E+02	5.91E-07	27.99%	--	--	--
300-8_Shallow	Rad	Uranium-238	U-238	pCi/g	8.21E-01	5.40E+01	1.52E-06	72.01%	--	--	--
Total Radiological Risk Estimate						**--**	**2.11E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.11E-06**	**--**	**--**	**--**	**--**
316-1_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	1.01E-01	4.40E+00	2.30E-06	4.26%	--	--	--

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-1_Overburden	Rad	Cobalt-60	10198-40-0	pCi/g	3.18E-01	3.10E+00	1.03E-05	19.05%	--	--	--
316-1_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	1.30E+01	1.33E+02	9.74E-06	18.08%	--	--	--
316-1_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	1.08E+00	1.63E+01	6.63E-06	12.31%	--	--	--
316-1_Overburden	Rad	Uranium-238	U-238	pCi/g	1.35E+01	5.40E+01	2.49E-05	46.30%	--	--	--
Total Radiological Risk Estimate						--	**5.38E-05**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**5.38E-05**	--	--	--	--
316-1_Shallow_1	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.00E+03	5.00E+02	6.00E-06	17.38%	--	--	--
316-1_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	1.90E+04	6.67E+02	2.85E-05	82.62%	2.40E+04	7.92E-01	99.99%
316-1_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.86E+01	7.14E+04	9.60E-10	0.00%	1.60E+06	4.29E-05	0.01%
316-1_Shallow_1	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	9.77E+01	5.26E+05	1.86E-10	0.00%	1.60E+07	6.11E-06	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**3.45E-05**	--	--	**7.92E-01**	--
316-1_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	3.18E-02	4.40E+00	7.23E-07	1.22%	--	--	--
316-1_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.21E+00	1.63E+01	7.44E-06	12.51%	--	--	--
316-1_Shallow_1	Rad	Uranium-238	U-238	pCi/g	2.77E+01	5.40E+01	5.13E-05	86.27%	--	--	--
Total Radiological Risk Estimate						--	**5.95E-05**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**9.40E-05**	--	--	--	--
316-1_Shallow_3	non-Rad	Aluminum	7429-90-5	µg/kg	1.11E+07	--	--	--	8.00E+07	1.39E-01	6.79%
316-1_Shallow_3	non-Rad	Antimony	7440-36-0	µg/kg	4.90E+02	--	--	--	3.20E+04	1.53E-02	0.75%
316-1_Shallow_3	non-Rad	Aroclor-1254	11097-69-1	µg/kg	9.82E+01	5.00E+02	1.96E-07	2.47%	1.60E+03	6.14E-02	3.00%
316-1_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	5.14E+03	6.67E+02	7.71E-06	97.10%	2.40E+04	2.14E-01	10.47%
316-1_Shallow_3	non-Rad	Barium	7440-39-3	µg/kg	1.29E+05	--	--	--	1.60E+07	8.07E-03	0.39%
316-1_Shallow_3	non-Rad	Beryllium	7440-41-7	µg/kg	4.16E+02	--	--	--	1.60E+05	2.60E-03	0.13%
316-1_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	3.42E+02	7.14E+04	4.79E-09	0.06%	1.60E+06	2.14E-04	0.01%
316-1_Shallow_3	non-Rad	Cadmium	7440-43-9	µg/kg	4.74E+02	--	--	--	4.00E+04	1.19E-02	0.58%
316-1_Shallow_3	non-Rad	Chromium	7440-47-3	µg/kg	5.05E+04	--	--	--	1.20E+08	4.20E-04	0.02%
316-1_Shallow_3	non-Rad	Cobalt	7440-48-4	µg/kg	9.70E+03	--	--	--	2.40E+04	4.04E-01	19.77%
316-1_Shallow_3	non-Rad	Copper	7440-50-8	µg/kg	1.37E+06	--	--	--	3.20E+06	4.27E-01	20.88%
316-1_Shallow_3	non-Rad	Heptachlor epoxide	1024-57-3	µg/kg	3.20E+00	1.10E+02	2.91E-08	0.37%	1.04E+03	3.08E-03	0.15%
316-1_Shallow_3	non-Rad	Iron	7439-89-6	µg/kg	2.44E+07	--	--	--	5.60E+07	4.36E-01	21.32%
316-1_Shallow_3	non-Rad	Lead	7439-92-1	µg/kg	1.44E+04	--	--	--	--	--	--
316-1_Shallow_3	non-Rad	Manganese	7439-96-5	µg/kg	3.93E+05	--	--	--	1.12E+07	3.51E-02	1.72%
316-1_Shallow_3	non-Rad	Mercury	7439-97-6	µg/kg	1.11E+03	--	--	--	2.40E+04	4.61E-02	2.25%
316-1_Shallow_3	non-Rad	Nickel	7440-02-0	µg/kg	9.47E+04	--	--	--	1.60E+06	5.92E-02	2.89%
316-1_Shallow_3	non-Rad	Phenol	108-95-2	µg/kg	2.80E+01	--	--	--	2.40E+07	1.17E-06	0.00%
316-1_Shallow_3	non-Rad	Selenium	7782-49-2	µg/kg	1.44E+03	--	--	--	4.00E+05	3.61E-03	0.18%
316-1_Shallow_3	non-Rad	Silver	7440-22-4	µg/kg	1.32E+04	--	--	--	4.00E+05	3.30E-02	1.61%
316-1_Shallow_3	non-Rad	Vanadium	7440-62-2	µg/kg	5.67E+04	--	--	--	4.00E+05	1.42E-01	6.93%
316-1_Shallow_3	non-Rad	Zinc	7440-66-6	µg/kg	8.20E+04	--	--	--	2.40E+07	3.42E-03	0.17%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**7.94E-06**	--	--	**2.05E+00**	--
316-1_Shallow_3	Rad	Cesium-137	10045-97-3	pCi/g	3.75E-01	4.40E+00	8.51E-06	5.48%	--	--	--
316-1_Shallow_3	Rad	Cobalt-60	10198-40-0	pCi/g	2.32E+00	3.10E+00	7.50E-05	48.29%	--	--	--
316-1_Shallow_3	Rad	Uranium-233/234	U-233/234	pCi/g	2.27E+01	1.33E+02	1.71E-05	11.00%	--	--	--
316-1_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	2.64E+00	1.63E+01	1.62E-05	10.42%	--	--	--
316-1_Shallow_3	Rad	Uranium-238	U-238	pCi/g	2.08E+01	5.40E+01	3.85E-05	24.82%	--	--	--

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
Total Radiological Risk Estimate						--	**1.55E-04**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.63E-04**	--	--	--	--
316-1_Shallow_4	non-Rad	Aroclor-1254	11097-69-1	µg/kg	6.20E+01	5.00E+02	1.24E-07	100.00%	1.60E+03	3.88E-02	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**1.24E-07**	--	--	**3.88E-02**	--
316-1_Shallow_4	Rad	Cobalt-60	10198-40-0	pCi/g	1.20E-01	3.10E+00	3.87E-06	7.92%	--	--	--
316-1_Shallow_4	Rad	Uranium-233/234	U-233/234	pCi/g	1.61E+01	1.33E+02	1.21E-05	24.83%	--	--	--
316-1_Shallow_4	Rad	Uranium-235	15117-96-1	pCi/g	1.05E+00	1.63E+01	6.44E-06	13.18%	--	--	--
316-1_Shallow_4	Rad	Uranium-238	U-238	pCi/g	1.43E+01	5.40E+01	2.64E-05	54.07%	--	--	--
Total Radiological Risk Estimate						--	**4.89E-05**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**4.90E-05**	--	--	--	--
316-2_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	3.10E-02	4.40E+00	7.05E-07	0.26%	--	--	--
316-2_Shallow_1	Rad	Cobalt-60	10198-40-0	pCi/g	9.22E-02	3.10E+00	2.97E-06	1.10%	--	--	--
316-2_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	8.64E+01	1.33E+02	6.49E-05	23.96%	--	--	--
316-2_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.22E+01	1.63E+01	7.48E-05	27.62%	--	--	--
316-2_Shallow_1	Rad	Uranium-238	U-238	pCi/g	6.88E+01	5.40E+01	1.27E-04	47.06%	--	--	--
Total Radiological Risk Estimate						--	**2.71E-04**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**2.71E-04**	--	--	--	--
316-2_Shallow_2	non-Rad	Aroclor-1248	12672-29-6	µg/kg	6.97E+02	5.00E+02	1.39E-06	82.09%	--	--	--
316-2_Shallow_2	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.20E+01	5.00E+02	8.40E-08	4.95%	1.60E+03	2.63E-02	100.00%
316-2_Shallow_2	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.10E+02	5.00E+02	2.20E-07	12.96%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**1.70E-06**	--	--	**2.63E-02**	--
316-2_Shallow_2	Rad	Cesium-137	10045-97-3	pCi/g	4.48E-01	4.40E+00	1.02E-05	2.85%	--	--	--
316-2_Shallow_2	Rad	Cobalt-60	10198-40-0	pCi/g	4.53E-01	3.10E+00	1.46E-05	4.09%	--	--	--
316-2_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.15E+02	1.33E+02	8.62E-05	24.12%	--	--	--
316-2_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	1.11E+01	1.63E+01	6.81E-05	19.07%	--	--	--
316-2_Shallow_2	Rad	Uranium-238	U-238	pCi/g	9.62E+01	5.40E+01	1.78E-04	49.87%	--	--	--
Total Radiological Risk Estimate						--	**3.57E-04**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**3.59E-04**	--	--	--	--
316-2_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	8.00E+03	6.67E+02	1.20E-05	99.97%	2.40E+04	3.33E-01	99.95%
316-2_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.60E+02	7.14E+04	3.64E-09	0.03%	1.60E+06	1.63E-04	0.05%
316-2_Shallow_3	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	1.80E+02	5.26E+05	3.42E-10	0.00%	1.60E+07	1.13E-05	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**1.20E-05**	--	--	**3.34E-01**	--
316-2_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	9.09E-01	1.63E+01	5.58E-06	10.97%	--	--	--
316-2_Shallow_3	Rad	Uranium-238	U-238	pCi/g	2.44E+01	5.40E+01	4.53E-05	89.03%	--	--	--
Total Radiological Risk Estimate						--	**5.08E-05**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**6.28E-05**	--	--	--	--
316-5_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	3.07E+03	6.67E+02	4.60E-06	99.35%	2.40E+04	1.28E-01	99.92%

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-5_Shallow_1	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	3.80E+01	1.37E+03	2.77E-08	0.60%	--	--	--
316-5_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.46E+02	7.14E+04	2.04E-09	0.04%	1.60E+06	9.12E-05	0.07%
316-5_Shallow_1	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	1.00E+02	5.26E+05	1.90E-10	0.00%	1.60E+07	6.25E-06	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.63E-06**	**--**	**--**	**1.28E-01**	**--**
316-5_Shallow_1	Rad	Americium-241	14596-10-2	pCi/g	4.79E-01	1.55E+02	3.09E-07	0.09%	--	--	--
316-5_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	2.31E+00	4.40E+00	5.26E-05	15.83%	--	--	--
316-5_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.86E+01	1.63E+01	1.14E-04	34.35%	--	--	--
316-5_Shallow_1	Rad	Uranium-238	U-238	pCi/g	8.92E+01	5.40E+01	1.65E-04	49.73%	--	--	--
Total Radiological Risk Estimate						**--**	**3.32E-04**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.37E-04**	**--**	**--**	**--**	**--**
316-5_Shallow_2	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	1.40E+02	5.00E+03	2.80E-08	0.58%	3.20E+05	4.38E-04	0.30%
316-5_Shallow_2	non-Rad	2-Butoxyethanol	111-76-2	µg/kg	2.40E+02	--	--	--	8.00E+06	3.00E-05	0.02%
316-5_Shallow_2	non-Rad	Arsenic	7440-38-2	µg/kg	3.18E+03	6.67E+02	4.77E-06	99.30%	2.40E+04	1.33E-01	89.42%
316-5_Shallow_2	non-Rad	Barium	7440-39-3	µg/kg	7.67E+04	--	--	--	1.60E+07	4.79E-03	3.23%
316-5_Shallow_2	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.80E+02	7.14E+04	2.52E-09	0.05%	1.60E+06	1.13E-04	0.08%
316-5_Shallow_2	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	1.10E+02	5.26E+05	2.09E-10	0.00%	1.60E+07	6.88E-06	0.00%
316-5_Shallow_2	non-Rad	Chromium	7440-47-3	µg/kg	6.90E+03	--	--	--	1.20E+08	5.75E-05	0.04%
316-5_Shallow_2	non-Rad	Chrysene	218-01-9	µg/kg	3.80E+01	1.37E+04	2.77E-09	0.06%	--	--	--
316-5_Shallow_2	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	1.46E+02	--	--	--	8.00E+06	1.83E-05	0.01%
316-5_Shallow_2	non-Rad	Lead	7439-92-1	µg/kg	3.20E+03	--	--	--	--	--	--
316-5_Shallow_2	non-Rad	Selenium	7782-49-2	µg/kg	4.90E+02	--	--	--	4.00E+05	1.23E-03	0.83%
316-5_Shallow_2	non-Rad	Silver	7440-22-4	µg/kg	3.60E+03	--	--	--	4.00E+05	9.00E-03	6.07%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.80E-06**	**--**	**--**	**1.48E-01**	**--**
316-5_Shallow_2	Rad	Americium-241	14596-10-2	pCi/g	1.24E-01	1.55E+02	8.00E-08	0.04%	--	--	--
316-5_Shallow_2	Rad	Cesium-137	10045-97-3	pCi/g	1.71E+00	4.40E+00	3.90E-05	17.44%	--	--	--
316-5_Shallow_2	Rad	Cobalt-60	10198-40-0	pCi/g	1.18E-01	3.10E+00	3.81E-06	1.70%	--	--	--
316-5_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	9.04E+00	1.63E+01	5.55E-05	24.83%	--	--	--
316-5_Shallow_2	Rad	Uranium-238	U-238	pCi/g	6.75E+01	5.40E+01	1.25E-04	55.98%	--	--	--
Total Radiological Risk Estimate						**--**	**2.23E-04**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.28E-04**	**--**	**--**	**--**	**--**
316-5_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	5.70E+01	5.00E+02	1.14E-07	1.67%	--	--	--
316-5_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	7.00E+01	5.00E+02	1.40E-07	2.06%	1.60E+03	4.38E-02	19.60%
316-5_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.20E+01	5.00E+02	1.04E-07	1.53%	--	--	--
316-5_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	4.30E+03	6.67E+02	6.45E-06	94.70%	2.40E+04	1.79E-01	80.26%
316-5_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.90E+02	7.14E+04	2.66E-09	0.04%	1.60E+06	1.19E-04	0.05%
316-5_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	1.50E+03	--	--	--	8.00E+06	1.88E-04	0.08%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.81E-06**	**--**	**--**	**2.23E-01**	**--**
316-5_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.83E+00	4.40E+00	4.16E-05	24.13%	--	--	--
316-5_Shallow_Focused	Rad	Europium-155	14391-16-3	pCi/g	7.19E-02	3.27E+02	2.20E-08	0.01%	--	--	--
316-5_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	7.67E+00	1.63E+01	4.71E-05	27.30%	--	--	--
316-5_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.52E+01	5.40E+01	8.37E-05	48.56%	--	--	--
Total Radiological Risk Estimate						**--**	**1.72E-04**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.79E-04**	**--**	**--**	**--**	**--**

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
331 LSLDF_Shallow_Focused	non-Rad	4,4'-DDE (Dichlorodiphenyldichloroethylene)	72-55-9	µg/kg	2.50E+01	2.94E+03	8.50E-09	0.15%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	5.90E+02	--	--	--	7.20E+07	8.19E-06	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Aldrin	309-00-2	µg/kg	5.60E-01	5.88E+01	9.52E-09	0.17%	2.40E+03	2.33E-04	0.01%
331 LSLDF_Shallow_Focused	non-Rad	Alpha-BHC	319-84-6	µg/kg	3.90E-01	1.59E+02	2.46E-09	0.04%	6.40E+05	6.09E-07	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	6.90E+06	--	--	--	8.00E+07	8.63E-02	5.09%
331 LSLDF_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	3.60E+02	--	--	--	3.20E+04	1.13E-02	0.66%
331 LSLDF_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	8.50E+02	5.00E+02	1.70E-06	30.68%	1.60E+03	5.31E-01	31.33%
331 LSLDF_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	2.40E+03	6.67E+02	3.60E-06	64.96%	2.40E+04	1.00E-01	5.90%
331 LSLDF_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	7.86E+04	--	--	--	1.60E+07	4.91E-03	0.29%
331 LSLDF_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	5.70E+02	--	--	--	1.60E+05	3.56E-03	0.21%
331 LSLDF_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	9.10E+02	7.14E+04	1.27E-08	0.23%	1.60E+06	5.69E-04	0.03%
331 LSLDF_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	1.70E+03	--	--	--	1.60E+07	1.06E-04	0.01%
331 LSLDF_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	3.40E+02	5.26E+05	6.46E-10	0.01%	1.60E+07	2.13E-05	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	1.40E+02	--	--	--	4.00E+04	3.50E-03	0.21%
331 LSLDF_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	1.03E+04	--	--	--	1.20E+08	8.58E-05	0.01%
331 LSLDF_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	8.60E+03	--	--	--	2.40E+04	3.58E-01	21.14%
331 LSLDF_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	1.54E+04	--	--	--	3.20E+06	4.81E-03	0.28%
331 LSLDF_Shallow_Focused	non-Rad	Dieldrin	60-57-1	µg/kg	1.30E+01	6.25E+01	2.08E-07	3.75%	4.00E+03	3.25E-03	0.19%
331 LSLDF_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	9.80E+01	--	--	--	8.00E+06	1.23E-05	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Endosulfan I	959-98-8	µg/kg	1.90E+00	--	--	--	4.80E+05	3.96E-06	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Endosulfan II	33213-65-9	µg/kg	3.10E+00	--	--	--	4.80E+05	6.46E-06	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	2.20E+07	--	--	--	5.60E+07	3.93E-01	23.17%
331 LSLDF_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	9.00E+03	--	--	--	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	3.49E+05	--	--	--	1.12E+07	3.12E-02	1.84%
331 LSLDF_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	1.10E+02	--	--	--	2.40E+04	4.58E-03	0.27%
331 LSLDF_Shallow_Focused	non-Rad	Methoxychlor	72-43-5	µg/kg	3.30E+00	--	--	--	4.00E+05	8.25E-06	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	1.10E+01	1.33E+05	8.25E-11	0.00%	4.80E+06	2.29E-06	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	5.90E+02	--	--	--	4.00E+05	1.48E-03	0.09%
331 LSLDF_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.00E+04	--	--	--	1.60E+06	6.25E-03	0.37%
331 LSLDF_Shallow_Focused	non-Rad	Nitrate	14797-55-8	µg/kg	4.17E+04	--	--	--	5.68E+08	7.34E-05	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Nitrogen in Nitrite and Nitrate	NO2+NO3-N	µg/kg	9.50E+03	--	--	--	1.28E+08	7.42E-05	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Silver	7440-22-4	µg/kg	1.10E+03	--	--	--	4.00E+05	2.75E-03	0.16%
331 LSLDF_Shallow_Focused	non-Rad	Uranium	7440-61-1	µg/kg	2.30E+03	--	--	--	2.40E+05	9.58E-03	0.57%
331 LSLDF_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	5.31E+04	--	--	--	4.00E+05	1.33E-01	7.83%
331 LSLDF_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	1.37E+05	--	--	--	2.40E+07	5.71E-03	0.34%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.54E-06**	**--**	**--**	**1.70E+00**	**--**
331 LSLDF_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	5.40E-01	1.33E+02	4.06E-07	31.76%	--	--	--
331 LSLDF_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.71E-01	5.40E+01	8.72E-07	68.24%	--	--	--
Total Radiological Risk Estimate						**--**	**1.28E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.82E-06**	**--**	**--**	**--**	**--**

600-243_Shallow	non-Rad	2-Methylnaphthalene	91-57-6	µg/kg	2.79E+02	--	--	--	3.20E+05	8.71E-04	0.10%
600-243_Shallow	non-Rad	Anthracene	120-12-7	µg/kg	3.13E+01	--	--	--	2.40E+07	1.30E-06	0.00%
600-243_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	1.30E+03	--	--	--	3.20E+04	4.06E-02	4.87%
600-243_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.70E+01	5.00E+02	5.40E-08	0.55%	1.60E+03	1.69E-02	2.02%

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
600-243_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.84E+01	5.00E+02	3.68E-08	0.38%	--	--	--
600-243_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	6.16E+03	6.67E+02	9.24E-06	94.65%	2.40E+04	2.57E-01	30.75%
600-243_Shallow	non-Rad	Barium	7440-39-3	µg/kg	2.92E+05	--	--	--	1.60E+07	1.83E-02	2.19%
600-243_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	4.33E+01	1.37E+03	3.16E-08	0.32%	--	--	--
600-243_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	4.27E+01	1.37E+02	3.12E-07	3.19%	--	--	--
600-243_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	4.63E+01	1.37E+03	3.38E-08	0.35%	--	--	--
600-243_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	3.18E+01	1.37E+03	2.32E-08	0.24%	--	--	--
600-243_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.08E+03	--	--	--	1.60E+05	1.30E-02	1.56%
600-243_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	4.32E+02	7.14E+04	6.05E-09	0.06%	1.60E+06	2.70E-04	0.03%
600-243_Shallow	non-Rad	Boron	7440-42-8	µg/kg	2.94E+05	--	--	--	1.60E+07	1.84E-02	2.20%
600-243_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	7.93E+02	--	--	--	4.00E+04	1.98E-02	2.37%
600-243_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.80E+04	--	--	--	1.20E+08	1.50E-04	0.02%
600-243_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	6.26E+01	1.37E+04	4.57E-09	0.05%	--	--	--
600-243_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.21E+03	--	--	--	2.40E+04	2.59E-01	30.98%
600-243_Shallow	non-Rad	Copper	7440-50-8	µg/kg	5.40E+04	--	--	--	3.20E+06	1.69E-02	2.02%
600-243_Shallow	non-Rad	Dibenzofuran	132-64-9	µg/kg	7.85E+01	--	--	--	8.00E+04	9.81E-04	0.12%
600-243_Shallow	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	3.72E+01	--	--	--	8.00E+06	4.65E-06	0.00%
600-243_Shallow	non-Rad	Fluoranthene	206-44-0	µg/kg	7.91E+01	--	--	--	3.20E+06	2.47E-05	0.00%
600-243_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	2.80E+01	1.37E+03	2.04E-08	0.21%	--	--	--
600-243_Shallow	non-Rad	Lead	7439-92-1	µg/kg	4.01E+04	--	--	--	--	--	--
600-243_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	2.08E+05	--	--	--	1.12E+07	1.86E-02	2.23%
600-243_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	1.87E+03	--	--	--	4.00E+05	4.67E-03	0.56%
600-243_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	2.04E+02	--	--	--	1.60E+06	1.27E-04	0.02%
600-243_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	2.14E+04	--	--	--	1.60E+06	1.34E-02	1.60%
600-243_Shallow	non-Rad	Pyrene	129-00-0	µg/kg	7.00E+01	--	--	--	2.40E+06	2.92E-05	0.00%
600-243_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	5.71E+03	--	--	--	4.00E+05	1.43E-02	1.71%
600-243_Shallow	non-Rad	Silver	7440-22-4	µg/kg	5.00E+02	--	--	--	4.00E+05	1.25E-03	0.15%
600-243_Shallow	non-Rad	Total petroleum hydrocarbons - diesel range	TPHDIESEL	µg/kg	9.53E+04	--	--	--	--	--	--
600-243_Shallow	non-Rad	Total petroleum hydrocarbons - motor oil (high boiling)	TPH/OILH	µg/kg	3.35E+05	--	--	--	--	--	--
600-243_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	4.70E+04	--	--	--	4.00E+05	1.17E-01	14.07%
600-243_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	8.41E+04	--	--	--	2.40E+07	3.50E-03	0.42%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**9.76E-06**	**--**	**--**	**8.35E-01**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.76E-06**	**--**	**--**	**--**	**--**
600-259_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	3.40E-02	4.40E+00	7.73E-07	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**7.73E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.73E-07**	**--**	**--**	**--**	**--**
600-259_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	6.80E-02	4.40E+00	1.55E-06	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**1.55E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.55E-06**	**--**	**--**	**--**	**--**
600-259_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	3.80E-02	4.40E+00	8.64E-07	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**8.64E-07**	**--**	**--**	**--**	**--**

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.64E-07**	**--**	**--**	**--**	**--**
600-47_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.30E+03	6.67E+02	3.45E-06	100.00%	2.40E+04	9.58E-02	90.89%
600-47_Shallow	non-Rad	Barium	7440-39-3	µg/kg	6.70E+04	--	--	--	1.60E+07	4.19E-03	3.97%
600-47_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	5.00E+02	--	--	--	1.60E+05	3.13E-03	2.96%
600-47_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	9.00E+01	--	--	--	4.00E+04	2.25E-03	2.13%
600-47_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	5.50E+03	--	--	--	1.20E+08	4.58E-05	0.04%
600-47_Shallow	non-Rad	Lead	7439-92-1	µg/kg	3.50E+03	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.45E-06**	**--**	**--**	**1.05E-01**	**--**
600-47_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.36E+00	1.33E+02	1.02E-06	25.90%	--	--	--
600-47_Shallow	Rad	Uranium-238	U-238	pCi/g	1.58E+00	5.40E+01	2.93E-06	74.10%	--	--	--
Total Radiological Risk Estimate						**--**	**3.95E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.40E-06**	**--**	**--**	**--**	**--**
618-1_Deep	Rad	Cesium-137	10045-97-3	pCi/g	4.61E-01	4.40E+00	1.05E-05	9.40%	--	--	--
618-1_Deep	Rad	Uranium-233/234	U-233/234	pCi/g	3.31E+01	1.33E+02	2.49E-05	22.33%	--	--	--
618-1_Deep	Rad	Uranium-235	15117-96-1	pCi/g	2.74E+00	1.63E+01	1.68E-05	15.09%	--	--	--
618-1_Deep	Rad	Uranium-238	U-238	pCi/g	3.20E+01	5.40E+01	5.93E-05	53.18%	--	--	--
Total Radiological Risk Estimate						**--**	**1.11E-04**	**--**	**--**	**--**	**--**
618-1_Deep_Focused	Rad	Cesium-137	10045-97-3	pCi/g	6.52E+00	4.40E+00	1.48E-04	42.48%	--	--	--
618-1_Deep_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	6.99E+01	1.33E+02	5.26E-05	15.07%	--	--	--
618-1_Deep_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.46E+00	1.63E+01	2.74E-05	7.84%	--	--	--
618-1_Deep_Focused	Rad	Uranium-238	U-238	pCi/g	6.52E+01	5.40E+01	1.21E-04	34.61%	--	--	--
Total Radiological Risk Estimate						**--**	**3.49E-04**	**--**	**--**	**--**	**--**
618-1_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.21E+06	--	--	--	8.00E+07	7.76E-02	6.48%
618-1_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.64E+02	5.00E+02	5.28E-07	13.02%	1.60E+03	1.65E-01	13.77%
618-1_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.35E+01	5.00E+02	1.07E-07	2.64%	--	--	--
618-1_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.28E+03	6.67E+02	3.42E-06	84.34%	2.40E+04	9.50E-02	7.93%
618-1_Shallow	non-Rad	Barium	7440-39-3	µg/kg	9.72E+04	--	--	--	1.60E+07	6.08E-03	0.51%
618-1_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	1.88E+02	--	--	--	1.60E+05	1.18E-03	0.10%
618-1_Shallow	non-Rad	Boron	7440-42-8	µg/kg	1.19E+03	--	--	--	1.60E+07	7.44E-05	0.01%
618-1_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	6.80E+01	--	--	--	4.00E+04	1.70E-03	0.14%
618-1_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	7.93E+03	--	--	--	1.20E+08	6.61E-05	0.01%
618-1_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.36E+03	--	--	--	2.40E+04	2.65E-01	22.12%
618-1_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.14E+04	--	--	--	3.20E+06	3.56E-03	0.30%
618-1_Shallow	non-Rad	Fluoride	16984-48-8	µg/kg	4.00E+02	--	--	--	4.80E+06	8.33E-05	0.01%
618-1_Shallow	non-Rad	Iron	7439-89-6	µg/kg	2.05E+07	--	--	--	5.60E+07	3.66E-01	30.56%
618-1_Shallow	non-Rad	Lead	7439-92-1	µg/kg	3.10E+03	--	--	--	--	--	--
618-1_Shallow	non-Rad	Lithium	7439-93-2	µg/kg	6.38E+03	--	--	--	1.60E+05	3.99E-02	3.33%
618-1_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.00E+05	--	--	--	1.12E+07	2.68E-02	2.24%
618-1_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	3.10E+01	--	--	--	2.40E+04	1.29E-03	0.11%

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-1_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	3.36E+02	--	--	--	4.00E+05	8.40E-04	0.07%
618-1_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	8.15E+03	--	--	--	1.60E+06	5.09E-03	0.43%
618-1_Shallow	non-Rad	Nitrate	14797-55-8	µg/kg	1.60E+03	--	--	--	5.68E+08	2.82E-06	0.00%
618-1_Shallow	non-Rad	Nitrogen in Nitrite and Nitrate	NO2+NO3-N	µg/kg	3.00E+02	--	--	--	1.28E+08	2.34E-06	0.00%
618-1_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	5.63E+04	--	--	--	4.00E+05	1.41E-01	11.75%
618-1_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.21E+04	--	--	--	2.40E+07	1.75E-03	0.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.05E-06**	**--**	**--**	**1.20E+00**	**--**
618-1_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.93E+00	1.33E+02	1.45E-06	34.16%	--	--	--
618-1_Shallow	Rad	Uranium-238	U-238	pCi/g	1.51E+00	5.40E+01	2.80E-06	65.84%	--	--	--
Total Radiological Risk Estimate						**--**	**4.25E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.30E-06**	**--**	**--**	**--**	**--**
618-1_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	1.22E+07	--	--	--	8.00E+07	1.53E-01	7.07%
618-1_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	4.55E+02	--	--	--	3.20E+04	1.42E-02	0.66%
618-1_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.51E+01	5.00E+02	7.02E-08	0.62%	--	--	--
618-1_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	9.81E+02	5.00E+02	1.96E-06	17.39%	1.60E+03	6.13E-01	28.41%
618-1_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.60E+01	5.00E+02	1.12E-07	0.99%	--	--	--
618-1_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	6.09E+03	6.67E+02	9.13E-06	80.99%	2.40E+04	2.54E-01	11.76%
618-1_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	1.02E+05	--	--	--	1.60E+07	6.38E-03	0.30%
618-1_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	3.71E+02	--	--	--	1.60E+05	2.32E-03	0.11%
618-1_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	3.74E+03	--	--	--	1.60E+07	2.34E-04	0.01%
618-1_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	2.66E+02	--	--	--	4.00E+04	6.65E-03	0.31%
618-1_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	1.95E+04	--	--	--	1.20E+08	1.63E-04	0.01%
618-1_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	8.60E+03	--	--	--	2.40E+04	3.58E-01	16.60%
618-1_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	2.38E+04	--	--	--	3.20E+06	7.44E-03	0.34%
618-1_Shallow_Focused	non-Rad	Fluoride	16984-48-8	µg/kg	9.00E+02	--	--	--	4.80E+06	1.88E-04	0.01%
618-1_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	2.28E+07	--	--	--	5.60E+07	4.07E-01	18.87%
618-1_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	6.21E+03	--	--	--	--	--	--
618-1_Shallow_Focused	non-Rad	Lithium	7439-93-2	µg/kg	1.33E+04	--	--	--	1.60E+05	8.31E-02	3.85%
618-1_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	4.03E+05	--	--	--	1.12E+07	3.60E-02	1.67%
618-1_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	1.98E+02	--	--	--	2.40E+04	8.25E-03	0.38%
618-1_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	3.56E+02	--	--	--	4.00E+05	8.90E-04	0.04%
618-1_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.68E+04	--	--	--	1.60E+06	1.05E-02	0.49%
618-1_Shallow_Focused	non-Rad	Nitrate	14797-55-8	µg/kg	3.80E+03	--	--	--	5.68E+08	6.69E-06	0.00%
618-1_Shallow_Focused	non-Rad	Nitrogen in Nitrite and Nitrate	NO2+NO3-N	µg/kg	2.60E+02	--	--	--	1.28E+08	2.03E-06	0.00%
618-1_Shallow_Focused	non-Rad	Silver	7440-22-4	µg/kg	1.12E+03	--	--	--	4.00E+05	2.80E-03	0.13%
618-1_Shallow_Focused	non-Rad	Uranium	7440-61-1	µg/kg	7.08E+03	--	--	--	2.40E+05	2.95E-02	1.37%
618-1_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	6.47E+04	--	--	--	4.00E+05	1.62E-01	7.50%
618-1_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	6.81E+04	--	--	--	2.40E+07	2.84E-03	0.13%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.13E-05**	**--**	**--**	**2.16E+00**	**--**
618-1_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.13E+01	1.33E+02	8.50E-06	28.52%	--	--	--
618-1_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	9.87E-01	1.63E+01	6.06E-06	20.32%	--	--	--
618-1_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	8.23E+00	5.40E+01	1.52E-05	51.16%	--	--	--
Total Radiological Risk Estimate						**--**	**2.98E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.11E-05**	**--**	**--**	**--**	**--**

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-12_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	8.56E+03	6.67E+02	1.28E-05	99.99%	2.40E+04	3.57E-01	99.99%
618-12_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.30E+01	7.14E+04	8.82E-10	0.01%	1.60E+06	3.94E-05	0.01%
618-12_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	6.00E+01	5.26E+05	1.14E-10	0.00%	1.60E+07	3.75E-06	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**1.28E-05**	--	--	**3.57E-01**	--
618-12_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	4.71E-01	1.63E+01	2.89E-06	12.71%	--	--	--
618-12_Shallow	Rad	Uranium-238	U-238	pCi/g	1.07E+01	5.40E+01	1.98E-05	87.29%	--	--	--
Total Radiological Risk Estimate						--	**2.27E-05**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**3.56E-05**	--	--	--	--
618-13_Shallow	non-Rad	Acetone	67-64-1	µg/kg	8.64E+00	--	--	--	7.20E+07	1.20E-07	0.00%
618-13_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.34E+06	--	--	--	8.00E+07	7.93E-02	7.51%
618-13_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.12E+02	--	--	--	3.20E+04	9.75E-03	0.92%
618-13_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	3.50E+03	6.67E+02	5.25E-06	100.00%	2.40E+04	1.46E-01	13.82%
618-13_Shallow	non-Rad	Barium	7440-39-3	µg/kg	7.40E+04	--	--	--	1.60E+07	4.63E-03	0.44%
618-13_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.12E+02	--	--	--	1.60E+05	1.33E-03	0.13%
618-13_Shallow	non-Rad	Boron	7440-42-8	µg/kg	1.05E+03	--	--	--	1.60E+07	6.56E-05	0.01%
618-13_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	6.30E+01	--	--	--	4.00E+04	1.58E-03	0.15%
618-13_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.07E+04	--	--	--	1.20E+08	8.92E-05	0.01%
618-13_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.29E+03	--	--	--	2.40E+04	2.62E-01	24.84%
618-13_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.15E+04	--	--	--	3.20E+06	3.59E-03	0.34%
618-13_Shallow	non-Rad	Iron	7439-89-6	µg/kg	2.01E+07	--	--	--	5.60E+07	3.59E-01	34.02%
618-13_Shallow	non-Rad	Lead	7439-92-1	µg/kg	3.62E+03	--	--	--	--	--	--
618-13_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.44E+05	--	--	--	1.12E+07	3.07E-02	2.91%
618-13_Shallow	non-Rad	Methylene chloride	75-09-2	µg/kg	5.12E+00	1.33E+05	3.84E-11	0.00%	4.80E+06	1.07E-06	0.00%
618-13_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	4.20E+02	--	--	--	4.00E+05	1.05E-03	0.10%
618-13_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	1.24E+04	--	--	--	1.60E+06	7.75E-03	0.73%
618-13_Shallow	non-Rad	Tin	7440-31-5	µg/kg	1.05E+03	--	--	--	4.80E+07	2.19E-05	0.00%
618-13_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	1.75E+03	--	--	--	2.40E+05	7.29E-03	0.69%
618-13_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	5.58E+04	--	--	--	4.00E+05	1.40E-01	13.22%
618-13_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.14E+04	--	--	--	2.40E+07	1.73E-03	0.16%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**5.25E-06**	--	--	**1.06E+00**	--
618-13_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	3.80E-02	4.40E+00	8.64E-07	15.83%	--	--	--
618-13_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.92E+00	1.33E+02	1.44E-06	26.46%	--	--	--
618-13_Shallow	Rad	Uranium-238	U-238	pCi/g	1.70E+00	5.40E+01	3.15E-06	57.71%	--	--	--
Total Radiological Risk Estimate						--	**5.46E-06**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.07E-05**	--	--	--	--
618-13_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	5.90E+00	--	--	--	7.20E+07	8.19E-08	0.00%
618-13_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	5.22E+06	--	--	--	8.00E+07	6.53E-02	6.93%
618-13_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	2.33E+02	--	--	--	3.20E+04	7.28E-03	0.77%
618-13_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	3.39E+03	6.67E+02	5.08E-06	100.00%	2.40E+04	1.41E-01	15.00%
618-13_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	5.77E+04	--	--	--	1.60E+07	3.61E-03	0.38%
618-13_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	1.84E+02	--	--	--	1.60E+05	1.15E-03	0.12%
618-13_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	9.60E+02	--	--	--	1.60E+07	6.00E-05	0.01%
618-13_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	4.70E+01	--	--	--	4.00E+04	1.18E-03	0.12%
618-13_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	8.74E+03	--	--	--	1.20E+08	7.28E-05	0.01%

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-13_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	5.71E+03	--	--	--	2.40E+04	2.38E-01	25.27%
618-13_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	1.01E+04	--	--	--	3.20E+06	3.16E-03	0.34%
618-13_Shallow_Focused	non-Rad	Hexavalent Chromium	18540-29-9	µg/kg	1.50E+02	--	--	--	2.40E+05	6.25E-04	0.07%
618-13_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	1.79E+07	--	--	--	5.60E+07	3.20E-01	33.95%
618-13_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	4.94E+03	--	--	--	--	--	--
618-13_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	2.68E+05	--	--	--	1.12E+07	2.39E-02	2.54%
618-13_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	5.03E+00	1.33E+05	3.77E-11	0.00%	4.80E+06	1.05E-06	0.00%
618-13_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	2.97E+02	--	--	--	4.00E+05	7.43E-04	0.08%
618-13_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.00E+04	--	--	--	1.60E+06	6.25E-03	0.66%
618-13_Shallow_Focused	non-Rad	Tin	7440-31-5	µg/kg	7.45E+02	--	--	--	4.80E+07	1.55E-05	0.00%
618-13_Shallow_Focused	non-Rad	Uranium	7440-61-1	µg/kg	1.50E+03	--	--	--	2.40E+05	6.25E-03	0.66%
618-13_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	4.86E+04	--	--	--	4.00E+05	1.22E-01	12.91%
618-13_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	3.71E+04	--	--	--	2.40E+07	1.55E-03	0.16%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.09E-06**	**--**	**--**	**9.41E-01**	**--**
618-13_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.14E+00	1.33E+02	8.57E-07	32.55%	--	--	--
618-13_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	9.59E-01	5.40E+01	1.78E-06	67.45%	--	--	--
Total Radiological Risk Estimate						**--**	**2.63E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.72E-06**	**--**	**--**	**--**	**--**
618-2_Deep	Rad	Americium-241	14596-10-2	pCi/g	7.94E+00	1.55E+02	5.12E-06	0.50%	--	--	--
618-2_Deep	Rad	Cesium-137	10045-97-3	pCi/g	1.04E+00	4.40E+00	2.36E-05	2.33%	--	--	--
618-2_Deep	Rad	Plutonium-238	13981-16-3	pCi/g	1.50E+00	2.36E+02	6.36E-07	0.06%	--	--	--
618-2_Deep	Rad	Plutonium-239/240	PU-239/240	pCi/g	9.06E+01	2.03E+02	4.46E-05	4.39%	--	--	--
618-2_Deep	Rad	Total beta radiostrontium	SR-RAD	pCi/g	1.16E+01	2.27E+00	5.11E-04	50.28%	--	--	--
618-2_Deep	Rad	Uranium-233/234	U-233/234	pCi/g	1.61E+02	1.33E+02	1.21E-04	11.91%	--	--	--
618-2_Deep	Rad	Uranium-235	15117-96-1	pCi/g	7.76E-01	1.63E+01	4.76E-06	0.47%	--	--	--
618-2_Deep	Rad	Uranium-238	U-238	pCi/g	1.65E+02	5.40E+01	3.06E-04	30.06%	--	--	--
Total Radiological Risk Estimate						**--**	**1.02E-03**	**--**	**--**	**--**	**--**
618-2_Deep_Focused	Rad	Americium-241	14596-10-2	pCi/g	9.19E+00	1.55E+02	5.93E-06	1.10%	--	--	--
618-2_Deep_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.12E+00	4.40E+00	2.55E-05	4.73%	--	--	--
618-2_Deep_Focused	Rad	Plutonium-238	13981-16-3	pCi/g	1.57E+00	2.36E+02	6.65E-07	0.12%	--	--	--
618-2_Deep_Focused	Rad	Plutonium-239/240	PU-239/240	pCi/g	9.16E+01	2.03E+02	4.51E-05	8.39%	--	--	--
618-2_Deep_Focused	Rad	Total beta radiostrontium	SR-RAD	pCi/g	7.20E+00	2.27E+00	3.17E-04	58.96%	--	--	--
618-2_Deep_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	4.78E+01	1.33E+02	3.59E-05	6.68%	--	--	--
618-2_Deep_Focused	Rad	Uranium-235	15117-96-1	pCi/g	2.42E+00	1.63E+01	1.48E-05	2.76%	--	--	--
618-2_Deep_Focused	Rad	Uranium-238	U-238	pCi/g	5.01E+01	5.40E+01	9.28E-05	17.25%	--	--	--
Total Radiological Risk Estimate						**--**	**5.38E-04**	**--**	**--**	**--**	**--**
618-2_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	2.70E+03	6.67E+02	4.05E-06	100.00%	2.40E+04	1.13E-01	90.34%
618-2_Overburden	non-Rad	Barium	7440-39-3	µg/kg	7.47E+04	--	--	--	1.60E+07	4.67E-03	3.75%
618-2_Overburden	non-Rad	Chromium	7440-47-3	µg/kg	6.60E+03	--	--	--	1.20E+08	5.50E-05	0.04%
618-2_Overburden	non-Rad	Lead	7439-92-1	µg/kg	4.30E+03	--	--	--	--	--	--
618-2_Overburden	non-Rad	Selenium	7782-49-2	µg/kg	1.00E+03	--	--	--	4.00E+05	2.50E-03	2.01%

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-2_Overburden	non-Rad	Tin	7440-31-5	µg/kg	2.70E+03	--	--	--	4.80E+07	5.63E-05	0.05%
618-2_Overburden	non-Rad	Uranium	7440-61-1	µg/kg	1.14E+03	--	--	--	2.40E+05	4.75E-03	3.81%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.05E-06**	**--**	**--**	**1.25E-01**	**--**
618-2_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	5.80E-02	4.40E+00	1.32E-06	45.50%	--	--	--
618-2_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	6.44E-01	1.33E+02	4.84E-07	16.72%	--	--	--
618-2_Overburden	Rad	Uranium-238	U-238	pCi/g	5.91E-01	5.40E+01	1.09E-06	37.78%	--	--	--
Total Radiological Risk Estimate						**--**	**2.90E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.95E-06**	**--**	**--**	**--**	**--**
618-2_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	1.90E+03	6.67E+02	2.85E-06	100.00%	2.40E+04	7.92E-02	75.40%
618-2_Shallow	non-Rad	Barium	7440-39-3	µg/kg	7.91E+04	--	--	--	1.60E+07	4.94E-03	4.71%
618-2_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	7.10E+03	--	--	--	1.20E+08	5.92E-05	0.06%
618-2_Shallow	non-Rad	Lead	7439-92-1	µg/kg	5.60E+03	--	--	--	--	--	--
618-2_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	7.60E+02	--	--	--	4.00E+05	1.90E-03	1.81%
618-2_Shallow	non-Rad	Tin	7440-31-5	µg/kg	2.40E+03	--	--	--	4.80E+07	5.00E-05	0.05%
618-2_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	4.53E+03	--	--	--	2.40E+05	1.89E-02	17.98%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.85E-06**	**--**	**--**	**1.05E-01**	**--**
618-2_Shallow	Rad	Americium-241	14596-10-2	pCi/g	8.13E-01	1.55E+02	5.25E-07	0.84%	--	--	--
618-2_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	2.24E+00	4.40E+00	5.09E-05	81.78%	--	--	--
618-2_Shallow	Rad	Plutonium-239/240	PU-239/240	pCi/g	7.67E+00	2.03E+02	3.78E-06	6.07%	--	--	--
618-2_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	2.20E+00	1.33E+02	1.65E-06	2.66%	--	--	--
618-2_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.14E-01	1.63E+01	1.31E-06	2.11%	--	--	--
618-2_Shallow	Rad	Uranium-238	U-238	pCi/g	2.20E+00	5.40E+01	4.07E-06	6.54%	--	--	--
Total Radiological Risk Estimate						**--**	**6.23E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.51E-05**	**--**	**--**	**--**	**--**
618-2_Staging Pile	non-Rad	Arsenic	7440-38-2	µg/kg	3.06E+03	6.67E+02	4.59E-06	100.00%	2.40E+04	1.28E-01	83.50%
618-2_Staging Pile	non-Rad	Barium	7440-39-3	µg/kg	6.77E+04	--	--	--	1.60E+07	4.23E-03	2.77%
618-2_Staging Pile	non-Rad	Chromium	7440-47-3	µg/kg	6.42E+03	--	--	--	1.20E+08	5.35E-05	0.04%
618-2_Staging Pile	non-Rad	Lead	7439-92-1	µg/kg	4.01E+03	--	--	--	--	--	--
618-2_Staging Pile	non-Rad	Uranium	7440-61-1	µg/kg	5.02E+03	--	--	--	2.40E+05	2.09E-02	13.69%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.59E-06**	**--**	**--**	**1.53E-01**	**--**
618-2_Staging Pile	Rad	Americium-241	14596-10-2	pCi/g	8.18E-01	1.55E+02	5.28E-07	3.79%	--	--	--
618-2_Staging Pile	Rad	Cesium-137	10045-97-3	pCi/g	9.50E-02	4.40E+00	2.16E-06	15.51%	--	--	--
618-2_Staging Pile	Rad	Plutonium-239/240	PU-239/240	pCi/g	1.00E+01	2.03E+02	4.93E-06	35.39%	--	--	--
618-2_Staging Pile	Rad	Tritium	10028-17-8	pCi/g	2.33E+00	6.23E+02	3.74E-07	2.69%	--	--	--
618-2_Staging Pile	Rad	Uranium-233/234	U-233/234	pCi/g	2.04E+00	1.33E+02	1.53E-06	11.02%	--	--	--
618-2_Staging Pile	Rad	Uranium-235	15117-96-1	pCi/g	1.22E-01	1.63E+01	7.49E-07	5.38%	--	--	--
618-2_Staging Pile	Rad	Uranium-238	U-238	pCi/g	1.97E+00	5.40E+01	3.65E-06	26.23%	--	--	--
Total Radiological Risk Estimate						**--**	**1.39E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.85E-05**	**--**	**--**	**--**	**--**
618-3_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.80E+03	6.67E+02	4.20E-06	100.00%	2.40E+04	1.17E-01	89.82%
618-3_Shallow	non-Rad	Barium	7440-39-3	µg/kg	7.65E+04	--	--	--	1.60E+07	4.78E-03	3.68%

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-3_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	9.70E+03	--	--	--	1.20E+08	8.08E-05	0.06%
618-3_Shallow	non-Rad	Lead	7439-92-1	µg/kg	3.90E+03	--	--	--	--	--	--
618-3_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	6.59E+02	--	--	--	4.00E+05	1.65E-03	1.27%
618-3_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	1.61E+03	--	--	--	2.40E+05	6.71E-03	5.16%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.20E-06**	**--**	**--**	**1.30E-01**	**--**
618-3_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	6.77E-01	1.33E+02	5.09E-07	26.90%	--	--	--
618-3_Shallow	Rad	Uranium-238	U-238	pCi/g	7.47E-01	5.40E+01	1.38E-06	73.10%	--	--	--
Total Radiological Risk Estimate						**--**	**1.89E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.09E-06**	**--**	**--**	**--**	**--**
618-3_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	7.96E+01	1.33E+02	5.98E-05	25.33%	--	--	--
618-3_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.79E+00	1.63E+01	2.94E-05	12.44%	--	--	--
618-3_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	7.94E+01	5.40E+01	1.47E-04	62.23%	--	--	--
Total Radiological Risk Estimate						**--**	**2.36E-04**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.36E-04**	**--**	**--**	**--**	**--**
618-4_Deep	Rad	Uranium-233/234	U-233/234	pCi/g	2.02E+01	1.33E+02	1.52E-05	24.62%	--	--	--
618-4_Deep	Rad	Uranium-235	15117-96-1	pCi/g	1.09E+00	1.63E+01	6.69E-06	10.84%	--	--	--
618-4_Deep	Rad	Uranium-238	U-238	pCi/g	2.15E+01	5.40E+01	3.98E-05	64.54%	--	--	--
Total Radiological Risk Estimate						**--**	**6.17E-05**	**--**	**--**	**--**	**--**
618-4_Deep_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	7.18E+00	1.33E+02	5.40E-06	25.32%	--	--	--
618-4_Deep_Focused	Rad	Uranium-235	15117-96-1	pCi/g	5.12E-01	1.63E+01	3.14E-06	14.73%	--	--	--
618-4_Deep_Focused	Rad	Uranium-238	U-238	pCi/g	6.90E+00	5.40E+01	1.28E-05	59.94%	--	--	--
Total Radiological Risk Estimate						**--**	**2.13E-05**	**--**	**--**	**--**	**--**
618-4_Overburden_2	non-Rad	Arsenic	7440-38-2	µg/kg	2.50E+03	6.67E+02	3.75E-06	100.00%	2.40E+04	1.04E-01	100.00%
618-4_Overburden_2	non-Rad	Lead	7439-92-1	µg/kg	4.70E+03	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.75E-06**	**--**	**--**	**1.04E-01**	**--**
618-4_Overburden_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.30E+00	1.33E+02	9.77E-07	27.24%	--	--	--
618-4_Overburden_2	Rad	Uranium-238	U-238	pCi/g	1.41E+00	5.40E+01	2.61E-06	72.76%	--	--	--
Total Radiological Risk Estimate						**--**	**3.59E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.34E-06**	**--**	**--**	**--**	**--**
618-4_Overburden_3	non-Rad	Lead	7439-92-1	µg/kg	5.00E+03	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-4_Overburden_3	Rad	Uranium-233/234	U-233/234	pCi/g	4.24E-01	1.33E+02	3.19E-07	24.04%	--	--	--
618-4_Overburden_3	Rad	Uranium-235	15117-96-1	pCi/g	3.20E-02	1.63E+01	1.96E-07	14.80%	--	--	--
618-4_Overburden_3	Rad	Uranium-238	U-238	pCi/g	4.38E-01	5.40E+01	8.11E-07	61.16%	--	--	--
Total Radiological Risk Estimate						**--**	**1.33E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.33E-06**	**--**	**--**	**--**	**--**

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-4_Overburden_4	non-Rad	Lead	7439-92-1	µg/kg	4.80E+03	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**0.00E+00**	--	--	--	--
618-4_Overburden_4	Rad	Uranium-233/234	U-233/234	pCi/g	9.42E-01	1.33E+02	7.08E-07	28.88%	--	--	--
618-4_Overburden_4	Rad	Uranium-238	U-238	pCi/g	9.42E-01	5.40E+01	1.74E-06	71.12%	--	--	--
Total Radiological Risk Estimate						--	**2.45E-06**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**2.45E-06**	--	--	--	--
618-4_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	3.20E+03	6.67E+02	4.80E-06	100.00%	2.40E+04	1.33E-01	100.00%
618-4_Shallow	non-Rad	Lead	7439-92-1	µg/kg	4.90E+04	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**4.80E-06**	--	--	**1.33E-01**	--
618-4_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	3.22E+00	1.33E+02	2.42E-06	29.87%	--	--	--
618-4_Shallow	Rad	Uranium-238	U-238	pCi/g	3.07E+00	5.40E+01	5.69E-06	70.13%	--	--	--
Total Radiological Risk Estimate						--	**8.11E-06**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.29E-05**	--	--	--	--
618-5_Deep	Rad	Uranium-233/234	U-233/234	pCi/g	8.60E+00	1.33E+02	6.47E-06	25.13%	--	--	--
618-5_Deep	Rad	Uranium-235	15117-96-1	pCi/g	4.62E-01	1.63E+01	2.83E-06	11.02%	--	--	--
618-5_Deep	Rad	Uranium-238	U-238	pCi/g	8.87E+00	5.40E+01	1.64E-05	63.85%	--	--	--
Total Radiological Risk Estimate						--	**2.57E-05**	--	--	--	--
618-5_Deep_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.07E+01	1.33E+02	8.05E-06	23.95%	--	--	--
618-5_Deep_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.82E-01	1.63E+01	2.96E-06	8.80%	--	--	--
618-5_Deep_Focused	Rad	Uranium-238	U-238	pCi/g	1.22E+01	5.40E+01	2.26E-05	67.25%	--	--	--
Total Radiological Risk Estimate						--	**3.36E-05**	--	--	--	--
618-5_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	3.40E+03	6.67E+02	5.10E-06	100.00%	2.40E+04	1.42E-01	97.03%
618-5_Overburden	non-Rad	Cadmium	7440-43-9	µg/kg	1.70E+02	--	--	--	4.00E+04	4.25E-03	2.91%
618-5_Overburden	non-Rad	Chromium	7440-47-3	µg/kg	9.70E+03	--	--	--	1.20E+08	8.08E-05	0.06%
618-5_Overburden	non-Rad	Lead	7439-92-1	µg/kg	7.50E+03	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**5.10E-06**	--	--	**1.46E-01**	--
618-5_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	4.14E+00	1.33E+02	3.11E-06	26.93%	--	--	--
618-5_Overburden	Rad	Uranium-238	U-238	pCi/g	4.56E+00	5.40E+01	8.44E-06	73.07%	--	--	--
Total Radiological Risk Estimate						--	**1.16E-05**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.67E-05**	--	--	--	--
618-5_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	4.30E+03	6.67E+02	6.45E-06	100.00%	2.40E+04	1.79E-01	99.95%
618-5_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.13E+04	--	--	--	1.20E+08	9.42E-05	0.05%
618-5_Shallow	non-Rad	Lead	7439-92-1	µg/kg	6.10E+03	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**6.45E-06**	--	--	**1.79E-01**	--
618-5_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	9.38E-01	1.33E+02	7.05E-07	26.62%	--	--	--
618-5_Shallow	Rad	Uranium-238	U-238	pCi/g	1.05E+00	5.40E+01	1.94E-06	73.38%	--	--	--

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
Total Radiological Risk Estimate						**--**	**2.65E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.10E-06**	**--**	**--**	**--**	**--**
618-5_Staging Pile_4	non-Rad	Arsenic	7440-38-2	µg/kg	3.30E+03	6.67E+02	4.95E-06	100.00%	2.40E+04	1.38E-01	99.03%
618-5_Staging Pile_4	non-Rad	Cadmium	7440-43-9	µg/kg	5.00E+01	--	--	--	4.00E+04	1.25E-03	0.90%
618-5_Staging Pile_4	non-Rad	Chromium	7440-47-3	µg/kg	1.18E+04	--	--	--	1.20E+08	9.83E-05	0.07%
618-5_Staging Pile_4	non-Rad	Lead	7439-92-1	µg/kg	5.30E+03	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.95E-06**	**--**	**--**	**1.39E-01**	**--**
618-5_Staging Pile_4	Rad	Uranium-233/234	U-233/234	pCi/g	1.15E+00	1.33E+02	8.65E-07	29.24%	--	--	--
618-5_Staging Pile_4	Rad	Uranium-238	U-238	pCi/g	1.13E+00	5.40E+01	2.09E-06	70.76%	--	--	--
Total Radiological Risk Estimate						**--**	**2.96E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.91E-06**	**--**	**--**	**--**	**--**
618-5_Staging Pile_5	non-Rad	Arsenic	7440-38-2	µg/kg	2.70E+03	6.67E+02	4.05E-06	100.00%	2.40E+04	1.13E-01	99.92%
618-5_Staging Pile_5	non-Rad	Chromium	7440-47-3	µg/kg	1.03E+04	--	--	--	1.20E+08	8.58E-05	0.08%
618-5_Staging Pile_5	non-Rad	Lead	7439-92-1	µg/kg	3.90E+03	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.05E-06**	**--**	**--**	**1.13E-01**	**--**
618-5_Staging Pile_5	Rad	Uranium-233/234	U-233/234	pCi/g	1.52E+00	1.33E+02	1.14E-06	21.40%	--	--	--
618-5_Staging Pile_5	Rad	Uranium-235	15117-96-1	pCi/g	1.68E-01	1.63E+01	1.03E-06	19.30%	--	--	--
618-5_Staging Pile_5	Rad	Uranium-238	U-238	pCi/g	1.71E+00	5.40E+01	3.17E-06	59.30%	--	--	--
Total Radiological Risk Estimate						**--**	**5.34E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.39E-06**	**--**	**--**	**--**	**--**
618-7_Shallow_1	non-Rad	Aluminum	7429-90-5	µg/kg	5.25E+06	--	--	--	8.00E+07	6.56E-02	5.24%
618-7_Shallow_1	non-Rad	Antimony	7440-36-0	µg/kg	5.60E+02	--	--	--	3.20E+04	1.75E-02	1.40%
618-7_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	1.89E+03	6.67E+02	2.84E-06	100.00%	2.40E+04	7.88E-02	6.29%
618-7_Shallow_1	non-Rad	Barium	7440-39-3	µg/kg	6.89E+04	--	--	--	1.60E+07	4.30E-03	0.34%
618-7_Shallow_1	non-Rad	Beryllium	7440-41-7	µg/kg	2.78E+02	--	--	--	1.60E+05	1.74E-03	0.14%
618-7_Shallow_1	non-Rad	Cadmium	7440-43-9	µg/kg	6.52E+01	--	--	--	4.00E+04	1.63E-03	0.13%
618-7_Shallow_1	non-Rad	Chromium	7440-47-3	µg/kg	1.02E+04	--	--	--	1.20E+08	8.52E-05	0.01%
618-7_Shallow_1	non-Rad	Cobalt	7440-48-4	µg/kg	9.15E+03	--	--	--	2.40E+04	3.81E-01	30.45%
618-7_Shallow_1	non-Rad	Copper	7440-50-8	µg/kg	1.61E+04	--	--	--	3.20E+06	5.04E-03	0.40%
618-7_Shallow_1	non-Rad	Iron	7439-89-6	µg/kg	2.60E+07	--	--	--	5.60E+07	4.64E-01	37.02%
618-7_Shallow_1	non-Rad	Lead	7439-92-1	µg/kg	1.46E+04	--	--	--	--	--	--
618-7_Shallow_1	non-Rad	Manganese	7439-96-5	µg/kg	3.26E+05	--	--	--	1.12E+07	2.91E-02	2.32%
618-7_Shallow_1	non-Rad	Mercury	7439-97-6	µg/kg	4.43E+01	--	--	--	2.40E+04	1.85E-03	0.15%
618-7_Shallow_1	non-Rad	Nickel	7440-02-0	µg/kg	2.10E+04	--	--	--	1.60E+06	1.31E-02	1.05%
618-7_Shallow_1	non-Rad	Tin	7440-31-5	µg/kg	1.55E+03	--	--	--	4.80E+07	3.22E-05	0.00%
618-7_Shallow_1	non-Rad	Vanadium	7440-62-2	µg/kg	7.46E+04	--	--	--	4.00E+05	1.86E-01	14.89%
618-7_Shallow_1	non-Rad	Zinc	7440-66-6	µg/kg	4.92E+04	--	--	--	2.40E+07	2.05E-03	0.16%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.84E-06**	**--**	**--**	**1.25E+00**	**--**
618-7_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	6.70E-02	4.40E+00	1.52E-06	11.64%	--	--	--
618-7_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	3.61E+00	1.33E+02	2.72E-06	20.76%	--	--	--
618-7_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	3.64E-01	1.63E+01	2.23E-06	17.04%	--	--	--

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-7_Shallow_1	Rad	Uranium-238	U-238	pCi/g	3.57E+00	5.40E+01	6.62E-06	50.56%	--	--	--
Total Radiological Risk Estimate						**--**	**1.31E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.59E-05**	**--**	**--**	**--**	**--**
618-7_Shallow_2	non-Rad	Aluminum	7429-90-5	µg/kg	4.97E+06	--	--	--	8.00E+07	6.21E-02	4.86%
618-7_Shallow_2	non-Rad	Antimony	7440-36-0	µg/kg	6.60E+02	--	--	--	3.20E+04	2.06E-02	1.61%
618-7_Shallow_2	non-Rad	Arsenic	7440-38-2	µg/kg	2.50E+03	6.67E+02	3.75E-06	100.00%	2.40E+04	1.04E-01	8.15%
618-7_Shallow_2	non-Rad	Barium	7440-39-3	µg/kg	7.38E+04	--	--	--	1.60E+07	4.61E-03	0.36%
618-7_Shallow_2	non-Rad	Beryllium	7440-41-7	µg/kg	4.40E+02	--	--	--	1.60E+05	2.75E-03	0.22%
618-7_Shallow_2	non-Rad	Chromium	7440-47-3	µg/kg	6.80E+03	--	--	--	1.20E+08	5.67E-05	0.00%
618-7_Shallow_2	non-Rad	Cobalt	7440-48-4	µg/kg	9.30E+03	--	--	--	2.40E+04	3.88E-01	30.31%
618-7_Shallow_2	non-Rad	Copper	7440-50-8	µg/kg	1.36E+04	--	--	--	3.20E+06	4.25E-03	0.33%
618-7_Shallow_2	non-Rad	Iron	7439-89-6	µg/kg	2.60E+07	--	--	--	5.60E+07	4.64E-01	36.32%
618-7_Shallow_2	non-Rad	Lead	7439-92-1	µg/kg	2.80E+03	--	--	--	--	--	--
618-7_Shallow_2	non-Rad	Manganese	7439-96-5	µg/kg	3.64E+05	--	--	--	1.12E+07	3.25E-02	2.54%
618-7_Shallow_2	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	2.40E+04	8.33E-04	0.07%
618-7_Shallow_2	non-Rad	Nickel	7440-02-0	µg/kg	9.70E+03	--	--	--	1.60E+06	6.06E-03	0.47%
618-7_Shallow_2	non-Rad	Tin	7440-31-5	µg/kg	1.50E+03	--	--	--	4.80E+07	3.13E-05	0.00%
618-7_Shallow_2	non-Rad	Vanadium	7440-62-2	µg/kg	7.47E+04	--	--	--	4.00E+05	1.87E-01	14.61%
618-7_Shallow_2	non-Rad	Zinc	7440-66-6	µg/kg	4.62E+04	--	--	--	2.40E+07	1.93E-03	0.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.75E-06**	**--**	**--**	**1.28E+00**	**--**
618-7_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	5.66E-01	1.33E+02	4.26E-07	30.09%	--	--	--
618-7_Shallow_2	Rad	Uranium-238	U-238	pCi/g	5.34E-01	5.40E+01	9.89E-07	69.91%	--	--	--
Total Radiological Risk Estimate						**--**	**1.41E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.16E-06**	**--**	**--**	**--**	**--**
618-7_Shallow_3	non-Rad	Aluminum	7429-90-5	µg/kg	6.74E+06	--	--	--	8.00E+07	8.43E-02	6.82%
618-7_Shallow_3	non-Rad	Antimony	7440-36-0	µg/kg	4.50E+02	--	--	--	3.20E+04	1.41E-02	1.14%
618-7_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	2.80E+03	6.67E+02	4.20E-06	100.00%	2.40E+04	1.17E-01	9.45%
618-7_Shallow_3	non-Rad	Barium	7440-39-3	µg/kg	8.25E+04	--	--	--	1.60E+07	5.16E-03	0.42%
618-7_Shallow_3	non-Rad	Beryllium	7440-41-7	µg/kg	3.10E+02	--	--	--	1.60E+05	1.94E-03	0.16%
618-7_Shallow_3	non-Rad	Cadmium	7440-43-9	µg/kg	1.90E+02	--	--	--	4.00E+04	4.75E-03	0.38%
618-7_Shallow_3	non-Rad	Chromium	7440-47-3	µg/kg	1.01E+04	--	--	--	1.20E+08	8.42E-05	0.01%
618-7_Shallow_3	non-Rad	Cobalt	7440-48-4	µg/kg	8.60E+03	--	--	--	2.40E+04	3.58E-01	29.02%
618-7_Shallow_3	non-Rad	Copper	7440-50-8	µg/kg	1.36E+04	--	--	--	3.20E+06	4.25E-03	0.34%
618-7_Shallow_3	non-Rad	Iron	7439-89-6	µg/kg	2.43E+07	--	--	--	5.60E+07	4.34E-01	35.14%
618-7_Shallow_3	non-Rad	Lead	7439-92-1	µg/kg	4.30E+03	--	--	--	--	--	--
618-7_Shallow_3	non-Rad	Manganese	7439-96-5	µg/kg	3.57E+05	--	--	--	1.12E+07	3.19E-02	2.58%
618-7_Shallow_3	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	2.40E+04	8.33E-04	0.07%
618-7_Shallow_3	non-Rad	Nickel	7440-02-0	µg/kg	1.01E+04	--	--	--	1.60E+06	6.31E-03	0.51%
618-7_Shallow_3	non-Rad	Tin	7440-31-5	µg/kg	1.80E+03	--	--	--	4.80E+07	3.75E-05	0.00%
618-7_Shallow_3	non-Rad	Vanadium	7440-62-2	µg/kg	6.82E+04	--	--	--	4.00E+05	1.71E-01	13.81%
618-7_Shallow_3	non-Rad	Zinc	7440-66-6	µg/kg	4.45E+04	--	--	--	2.40E+07	1.85E-03	0.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.20E-06**	**--**	**--**	**1.23E+00**	**--**
618-7_Shallow_3	Rad	Uranium-233/234	U-233/234	pCi/g	1.07E+00	1.33E+02	8.05E-07	26.15%	--	--	--
618-7_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	8.50E-02	1.63E+01	5.21E-07	16.95%	--	--	--

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-7_Shallow_3	Rad	Uranium-238	U-238	pCi/g	9.45E-01	5.40E+01	1.75E-06	56.89%	--	--	--
Total Radiological Risk Estimate						**--**	**3.08E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.28E-06**	**--**	**--**	**--**	**--**
618-7_Shallow_4	non-Rad	Aluminum	7429-90-5	µg/kg	5.65E+06	--	--	--	8.00E+07	7.06E-02	6.21%
618-7_Shallow_4	non-Rad	Antimony	7440-36-0	µg/kg	2.50E+02	--	--	--	3.20E+04	7.81E-03	0.69%
618-7_Shallow_4	non-Rad	Arsenic	7440-38-2	µg/kg	5.20E+03	6.67E+02	7.80E-06	100.00%	2.40E+04	2.17E-01	19.07%
618-7_Shallow_4	non-Rad	Barium	7440-39-3	µg/kg	5.79E+04	--	--	--	1.60E+07	3.62E-03	0.32%
618-7_Shallow_4	non-Rad	Beryllium	7440-41-7	µg/kg	2.20E+02	--	--	--	1.60E+05	1.38E-03	0.12%
618-7_Shallow_4	non-Rad	Cadmium	7440-43-9	µg/kg	9.00E+01	--	--	--	4.00E+04	2.25E-03	0.20%
618-7_Shallow_4	non-Rad	Chromium	7440-47-3	µg/kg	1.14E+04	--	--	--	1.20E+08	9.50E-05	0.01%
618-7_Shallow_4	non-Rad	Cobalt	7440-48-4	µg/kg	6.70E+03	--	--	--	2.40E+04	2.79E-01	24.57%
618-7_Shallow_4	non-Rad	Copper	7440-50-8	µg/kg	1.32E+04	--	--	--	3.20E+06	4.13E-03	0.36%
618-7_Shallow_4	non-Rad	Iron	7439-89-6	µg/kg	2.12E+07	--	--	--	5.60E+07	3.79E-01	33.31%
618-7_Shallow_4	non-Rad	Lead	7439-92-1	µg/kg	3.00E+03	--	--	--	--	--	--
618-7_Shallow_4	non-Rad	Manganese	7439-96-5	µg/kg	2.85E+05	--	--	--	1.12E+07	2.54E-02	2.24%
618-7_Shallow_4	non-Rad	Nickel	7440-02-0	µg/kg	1.29E+04	--	--	--	1.60E+06	8.06E-03	0.71%
618-7_Shallow_4	non-Rad	Tin	7440-31-5	µg/kg	7.10E+02	--	--	--	4.80E+07	1.48E-05	0.00%
618-7_Shallow_4	non-Rad	Vanadium	7440-62-2	µg/kg	5.48E+04	--	--	--	4.00E+05	1.37E-01	12.06%
618-7_Shallow_4	non-Rad	Zinc	7440-66-6	µg/kg	3.70E+04	--	--	--	2.40E+07	1.54E-03	0.14%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**7.80E-06**	**--**	**--**	**1.14E+00**	**--**
618-7_Shallow_4	Rad	Uranium-233/234	U-233/234	pCi/g	6.89E-01	1.33E+02	5.18E-07	26.83%	--	--	--
618-7_Shallow_4	Rad	Uranium-238	U-238	pCi/g	7.63E-01	5.40E+01	1.41E-06	73.17%	--	--	--
Total Radiological Risk Estimate						**--**	**1.93E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.73E-06**	**--**	**--**	**--**	**--**
618-7_Shallow_Focused	non-Rad	Acenaphthene	83-32-9	µg/kg	1.50E+02	--	--	--	4.80E+06	3.13E-05	0.00%
618-7_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	7.61E+06	--	--	--	8.00E+07	9.51E-02	5.61%
618-7_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	9.80E+02	--	--	--	3.20E+04	3.06E-02	1.81%
618-7_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	6.70E+00	5.00E+02	1.34E-08	0.19%	--	--	--
618-7_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	4.20E+03	6.67E+02	6.30E-06	90.65%	2.40E+04	1.75E-01	10.31%
618-7_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	9.28E+04	--	--	--	1.60E+07	5.80E-03	0.34%
618-7_Shallow_Focused	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	8.80E+01	1.37E+03	6.42E-08	0.92%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	6.60E+01	1.37E+02	4.82E-07	6.93%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	5.20E+01	1.37E+03	3.80E-08	0.55%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	1.10E+01	1.37E+03	8.03E-09	0.12%	--	--	--
618-7_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	3.70E+02	--	--	--	1.60E+05	2.31E-03	0.14%
618-7_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	4.70E+02	7.14E+04	6.58E-09	0.09%	1.60E+06	2.94E-04	0.02%
618-7_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	6.20E+03	--	--	--	4.00E+04	1.55E-01	9.14%
618-7_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	6.59E+04	--	--	--	1.20E+08	5.49E-04	0.03%
618-7_Shallow_Focused	non-Rad	Chrysene	218-01-9	µg/kg	6.90E+01	1.37E+04	5.04E-09	0.07%	--	--	--
618-7_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	1.10E+04	--	--	--	2.40E+04	4.58E-01	27.02%
618-7_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	2.50E+04	--	--	--	3.20E+06	7.81E-03	0.46%
618-7_Shallow_Focused	non-Rad	Dibenz[a,h]anthracene	53-70-3	µg/kg	4.50E+01	1.37E+03	3.28E-08	0.47%	--	--	--
618-7_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	3.30E+01	--	--	--	8.00E+06	4.13E-06	0.00%
618-7_Shallow_Focused	non-Rad	Fluoranthene	206-44-0	µg/kg	4.80E+01	--	--	--	3.20E+06	1.50E-05	0.00%

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-7_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	2.87E+07	--	--	--	5.60E+07	5.13E-01	30.21%
618-7_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	6.50E+03	--	--	--	--	--	--
618-7_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	4.25E+05	--	--	--	1.12E+07	3.79E-02	2.24%
618-7_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	2.40E+04	8.33E-04	0.05%
618-7_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.72E+04	--	--	--	1.60E+06	1.08E-02	0.63%
618-7_Shallow_Focused	non-Rad	Pyrene	129-00-0	µg/kg	4.10E+02	--	--	--	2.40E+06	1.71E-04	0.01%
618-7_Shallow_Focused	non-Rad	Tin	7440-31-5	µg/kg	1.20E+03	--	--	--	4.80E+07	2.50E-05	0.00%
618-7_Shallow_Focused	non-Rad	Total petroleum hydrocarbons - motor oil (high boiling)	TPH/OILH	µg/kg	6.80E+05	--	--	--	--	--	--
618-7_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	8.05E+04	--	--	--	4.00E+05	2.01E-01	11.86%
618-7_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	5.24E+04	--	--	--	2.40E+07	2.18E-03	0.13%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.95E-06**	**--**	**--**	**1.70E+00**	**--**
618-7_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.00E-02	4.40E+00	2.27E-07	0.86%	--	--	--
618-7_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.09E+01	1.33E+02	8.20E-06	31.18%	--	--	--
618-7_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	9.74E-01	1.63E+01	5.98E-06	22.73%	--	--	--
618-7_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	6.42E+00	5.40E+01	1.19E-05	45.23%	--	--	--
Total Radiological Risk Estimate						**--**	**2.63E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.32E-05**	**--**	**--**	**--**	**--**
618-8_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	4.10E+03	6.67E+02	6.15E-06	100.00%	2.40E+04	1.71E-01	91.69%
618-8_Shallow	non-Rad	Barium	7440-39-3	µg/kg	9.76E+04	--	--	--	1.60E+07	6.10E-03	3.27%
618-8_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.24E+04	--	--	--	1.20E+08	1.03E-04	0.06%
618-8_Shallow	non-Rad	Lead	7439-92-1	µg/kg	5.10E+03	--	--	--	--	--	--
618-8_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	8.46E+02	--	--	--	4.00E+05	2.12E-03	1.14%
618-8_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	1.72E+03	--	--	--	2.40E+05	7.17E-03	3.85%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.15E-06**	**--**	**--**	**1.86E-01**	**--**
618-8_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.19E+00	1.33E+02	8.95E-07	39.70%	--	--	--
618-8_Shallow	Rad	Uranium-238	U-238	pCi/g	7.34E-01	5.40E+01	1.36E-06	60.30%	--	--	--
Total Radiological Risk Estimate						**--**	**2.25E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.40E-06**	**--**	**--**	**--**	**--**
618-9_Shallow_Focused	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	1.10E+02	5.00E+03	2.20E-08	0.04%	3.20E+05	3.44E-04	0.01%
618-9_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	6.80E+02	--	--	--	7.20E+07	9.44E-06	0.00%
618-9_Shallow_Focused	non-Rad	Aldrin	309-00-2	µg/kg	3.90E+02	5.88E+01	6.63E-06	11.78%	2.40E+03	1.63E-01	3.28%
618-9_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	8.57E+06	--	--	--	8.00E+07	1.07E-01	2.16%
618-9_Shallow_Focused	non-Rad	Aroclor-1016	12674-11-2	µg/kg	1.90E+03	1.43E+04	1.33E-07	0.24%	5.60E+03	3.39E-01	6.85%
618-9_Shallow_Focused	non-Rad	Aroclor-1221	11104-28-2	µg/kg	1.90E+03	5.00E+02	3.80E-06	6.75%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1232	11141-16-5	µg/kg	1.90E+03	5.00E+02	3.80E-06	6.75%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1242	53469-21-9	µg/kg	1.90E+03	5.00E+02	3.80E-06	6.75%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.90E+03	5.00E+02	3.80E-06	6.75%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.90E+03	5.00E+02	7.80E-06	13.85%	1.60E+03	2.44E+00	49.21%
618-9_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.90E+03	5.00E+02	7.80E-06	13.85%	--	--	--
618-9_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.16E+04	6.67E+02	1.74E-05	30.91%	2.40E+04	4.83E-01	9.76%
618-9_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	9.02E+04	--	--	--	1.60E+07	5.64E-03	0.11%
618-9_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	3.30E+02	--	--	--	1.60E+05	2.06E-03	0.04%
618-9_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	5.20E+03	7.14E+04	7.28E-08	0.13%	1.60E+06	3.25E-03	0.07%
618-9_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	2.70E+03	5.26E+05	5.13E-09	0.01%	1.60E+07	1.69E-04	0.00%

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-9_Shallow_Focused	non-Rad	Chlordane	57-74-9	µg/kg	6.90E+01	2.86E+03	2.42E-08	0.04%	4.00E+04	1.73E-03	0.03%
618-9_Shallow_Focused	non-Rad	Chloroform	67-66-3	µg/kg	9.00E+00	3.23E+04	2.79E-10	0.00%	8.00E+05	1.13E-05	0.00%
618-9_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	9.70E+03	--	--	--	1.20E+08	8.08E-05	0.00%
618-9_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	1.14E+04	--	--	--	2.40E+04	4.75E-01	9.59%
618-9_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	1.67E+04	--	--	--	3.20E+06	5.22E-03	0.11%
618-9_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	7.20E+03	--	--	--	8.00E+06	9.00E-04	0.02%
618-9_Shallow_Focused	non-Rad	Heptachlor epoxide	1024-57-3	µg/kg	4.40E+01	1.10E+02	4.00E-07	0.71%	1.04E+03	4.23E-02	0.85%
618-9_Shallow_Focused	non-Rad	Hexachlorobutadiene	87-68-3	µg/kg	7.60E+02	1.28E+04	5.93E-08	0.11%	8.00E+04	9.50E-03	0.19%
618-9_Shallow_Focused	non-Rad	Hexachloroethane	67-72-1	µg/kg	1.70E+04	7.14E+04	2.38E-07	0.42%	8.00E+04	2.13E-01	4.29%
618-9_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	2.49E+07	--	--	--	5.60E+07	4.45E-01	8.98%
618-9_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	7.70E+03	--	--	--	--	--	--
618-9_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	3.59E+05	--	--	--	1.12E+07	3.21E-02	0.65%
618-9_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	3.30E+02	--	--	--	2.40E+04	1.38E-02	0.28%
618-9_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	2.30E+03	1.33E+05	1.73E-08	0.03%	4.80E+06	4.79E-04	0.01%
618-9_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.06E+04	--	--	--	1.60E+06	6.63E-03	0.13%
618-9_Shallow_Focused	non-Rad	Nitrate	14797-55-8	µg/kg	1.67E+06	--	--	--	5.68E+08	2.94E-03	0.06%
618-9_Shallow_Focused	non-Rad	Tetrachloroethene	127-18-4	µg/kg	9.20E+02	1.85E+03	4.97E-07	0.88%	8.00E+05	1.15E-03	0.02%
618-9_Shallow_Focused	non-Rad	Toluene	108-88-3	µg/kg	9.00E+00	--	--	--	6.40E+06	1.41E-06	0.00%
618-9_Shallow_Focused	non-Rad	Trichloroethene	79-01-6	µg/kg	2.00E+00	1.12E+04	1.78E-10	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Uranium	7440-61-1	µg/kg	3.10E+03	--	--	--	2.40E+05	1.29E-02	0.26%
618-9_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	5.93E+04	--	--	--	4.00E+05	1.48E-01	2.99%
618-9_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	5.23E+04	--	--	--	2.40E+07	2.18E-03	0.04%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.63E-05**	**--**	**--**	**4.95E+00**	**--**
618-9_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	7.10E-02	1.63E+01	4.36E-07	7.27%	--	--	--
618-9_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	3.00E+00	5.40E+01	5.56E-06	92.73%	--	--	--
Total Radiological Risk Estimate						**--**	**5.99E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.23E-05**	**--**	**--**	**--**	**--**
628-4_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	3.37E+03	6.67E+02	5.06E-06	99.98%	2.40E+04	1.41E-01	99.97%
628-4_Overburden	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.09E+01	7.14E+04	8.53E-10	0.02%	1.60E+06	3.81E-05	0.03%
628-4_Overburden	non-Rad	Lead	7439-92-1	µg/kg	7.28E+03	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.06E-06**	**--**	**--**	**1.41E-01**	**--**
628-4_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	3.30E-02	4.40E+00	7.50E-07	26.41%	--	--	--
628-4_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	8.70E-01	1.33E+02	6.54E-07	23.04%	--	--	--
628-4_Overburden	Rad	Uranium-238	U-238	pCi/g	7.75E-01	5.40E+01	1.44E-06	50.55%	--	--	--
Total Radiological Risk Estimate						**--**	**2.84E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.90E-06**	**--**	**--**	**--**	**--**
628-4_Shallow	non-Rad	Aroclor-1242	53469-21-9	µg/kg	4.24E+01	5.00E+02	8.47E-08	0.98%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.12E+03	5.00E+02	2.23E-06	25.72%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.43E+02	5.00E+02	4.86E-07	5.60%	1.60E+03	1.52E-01	48.53%
628-4_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.78E+01	5.00E+02	7.55E-08	0.87%	--	--	--
628-4_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	3.86E+03	6.67E+02	5.80E-06	66.83%	2.40E+04	1.61E-01	51.47%
628-4_Shallow	non-Rad	Lead	7439-92-1	µg/kg	9.92E+04	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**8.67E-06**	**--**	**--**	**3.13E-01**	**--**
628-4_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.13E+00	1.33E+02	8.49E-07	24.41%	--	--	--

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
628-4_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	1.12E-01	1.63E+01	6.87E-07	19.75%	--	--	--
628-4_Shallow	Rad	Uranium-238	U-238	pCi/g	1.05E+00	5.40E+01	1.94E-06	55.84%	--	--	--
Total Radiological Risk Estimate						**--**	**3.48E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.21E-05**	**--**	**--**	**--**	**--**
UPR-300-17_Shallow	non-Rad	Acenaphthene	83-32-9	µg/kg	1.17E+02	--	--	--	4.80E+06	2.44E-05	0.00%
UPR-300-17_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.34E+06	--	--	--	8.00E+07	7.93E-02	4.86%
UPR-300-17_Shallow	non-Rad	Anthracene	120-12-7	µg/kg	7.01E+00	--	--	--	2.40E+07	2.92E-07	0.00%
UPR-300-17_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.59E+02	--	--	--	3.20E+04	1.12E-02	0.69%
UPR-300-17_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.97E+03	5.00E+02	3.94E-06	42.24%	--	--	--
UPR-300-17_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.50E+02	5.00E+02	9.00E-07	9.65%	1.60E+03	2.81E-01	17.23%
UPR-300-17_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.13E+02	5.00E+02	2.27E-07	2.43%	--	--	--
UPR-300-17_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.57E+03	6.67E+02	3.86E-06	41.38%	2.40E+04	1.07E-01	6.57%
UPR-300-17_Shallow	non-Rad	Barium	7440-39-3	µg/kg	8.10E+04	--	--	--	1.60E+07	5.06E-03	0.31%
UPR-300-17_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	5.92E+01	1.37E+03	4.32E-08	0.46%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	4.38E+01	1.37E+02	3.20E-07	3.43%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	3.27E+01	1.37E+03	2.39E-08	0.26%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	9.94E+00	1.37E+03	7.25E-09	0.08%	--	--	--
UPR-300-17_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.40E+02	--	--	--	1.60E+05	1.50E-03	0.09%
UPR-300-17_Shallow	non-Rad	Boron	7440-42-8	µg/kg	3.90E+03	--	--	--	1.60E+07	2.44E-04	0.01%
UPR-300-17_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	1.73E+02	--	--	--	4.00E+04	4.31E-03	0.26%
UPR-300-17_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.38E+04	--	--	--	1.20E+08	1.15E-04	0.01%
UPR-300-17_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	3.93E+01	1.37E+04	2.87E-09	0.03%	--	--	--
UPR-300-17_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.69E+03	--	--	--	2.40E+04	2.79E-01	17.07%
UPR-300-17_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.51E+04	--	--	--	3.20E+06	4.73E-03	0.29%
UPR-300-17_Shallow	non-Rad	Fluoranthene	206-44-0	µg/kg	3.53E+01	--	--	--	3.20E+06	1.10E-05	0.00%
UPR-300-17_Shallow	non-Rad	Fluorene	86-73-7	µg/kg	2.93E+00	--	--	--	3.20E+06	9.16E-07	0.00%
UPR-300-17_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	5.85E+00	1.37E+03	4.27E-09	0.05%	--	--	--
UPR-300-17_Shallow	non-Rad	Iron	7439-89-6	µg/kg	1.90E+07	--	--	--	5.60E+07	3.39E-01	20.77%
UPR-300-17_Shallow	non-Rad	Lead	7439-92-1	µg/kg	1.12E+04	--	--	--	--	--	--
UPR-300-17_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	2.85E+05	--	--	--	1.12E+07	2.55E-02	1.56%
UPR-300-17_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	6.90E+01	--	--	--	2.40E+04	2.88E-03	0.18%
UPR-300-17_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	4.12E+02	--	--	--	4.00E+05	1.03E-03	0.06%
UPR-300-17_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	4.79E+01	--	--	--	1.60E+06	2.99E-05	0.00%
UPR-300-17_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	5.64E+05	--	--	--	1.60E+06	3.52E-01	21.59%
UPR-300-17_Shallow	non-Rad	Pyrene	129-00-0	µg/kg	3.41E+01	--	--	--	2.40E+06	1.42E-05	0.00%
UPR-300-17_Shallow	non-Rad	Silver	7440-22-4	µg/kg	3.40E+02	--	--	--	4.00E+05	8.50E-04	0.05%
UPR-300-17_Shallow	non-Rad	Total petroleum hydrocarbons - diesel range	TPHDIESEL	µg/kg	2.95E+03	--	--	--	--	--	--
UPR-300-17_Shallow	non-Rad	Total petroleum hydrocarbons - motor oil (high boiling)	TPH/OILH	µg/kg	2.10E+05	--	--	--	--	--	--
UPR-300-17_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	5.21E+04	--	--	--	4.00E+05	1.30E-01	7.99%
UPR-300-17_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	1.57E+05	--	--	--	2.40E+07	6.55E-03	0.40%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**9.33E-06**	**--**	**--**	**1.63E+00**	**--**
UPR-300-17_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	6.15E+00	1.33E+02	4.62E-06	26.10%	--	--	--
UPR-300-17_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	9.14E-01	1.63E+01	5.61E-06	31.65%	--	--	--
UPR-300-17_Shallow	Rad	Uranium-238	U-238	pCi/g	4.04E+00	5.40E+01	7.48E-06	42.25%	--	--	--
Total Radiological Risk Estimate						**--**	**1.77E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.70E-05**	**--**	**--**	**--**	**--**

Table G-20. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
UPR-300-46_Shallow	non-Rad	Acenaphthene	83-32-9	µg/kg	1.31E+01	--	--	--	4.80E+06	2.72E-06	0.00%
UPR-300-46_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.80E+06	--	--	--	8.00E+07	8.50E-02	6.35%
UPR-300-46_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.81E+02	--	--	--	3.20E+04	1.19E-02	0.89%
UPR-300-46_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	8.79E+02	5.00E+02	1.76E-06	24.36%	--	--	--
UPR-300-46_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.90E+02	5.00E+02	9.79E-07	13.57%	1.60E+03	3.06E-01	22.86%
UPR-300-46_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	8.44E+01	5.00E+02	1.69E-07	2.34%	--	--	--
UPR-300-46_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.85E+03	6.67E+02	4.27E-06	59.16%	2.40E+04	1.19E-01	8.86%
UPR-300-46_Shallow	non-Rad	Barium	7440-39-3	µg/kg	8.21E+04	--	--	--	1.60E+07	5.13E-03	0.38%
UPR-300-46_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	3.88E+00	1.37E+03	2.83E-09	0.04%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	3.40E+00	1.37E+02	2.48E-08	0.34%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	5.40E+00	1.37E+03	3.94E-09	0.05%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	2.78E+00	1.37E+03	2.03E-09	0.03%	--	--	--
UPR-300-46_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.22E+02	--	--	--	1.60E+05	1.39E-03	0.10%
UPR-300-46_Shallow	non-Rad	Boron	7440-42-8	µg/kg	1.71E+03	--	--	--	1.60E+07	1.07E-04	0.01%
UPR-300-46_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	9.47E+01	--	--	--	4.00E+04	2.37E-03	0.18%
UPR-300-46_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.02E+04	--	--	--	1.20E+08	8.48E-05	0.01%
UPR-300-46_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	5.58E+00	1.37E+04	4.08E-10	0.01%	--	--	--
UPR-300-46_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.36E+03	--	--	--	2.40E+04	2.65E-01	19.80%
UPR-300-46_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.32E+04	--	--	--	3.20E+06	4.11E-03	0.31%
UPR-300-46_Shallow	non-Rad	Dibenz[a,h]anthracene	53-70-3	µg/kg	1.25E+00	1.37E+03	9.12E-10	0.01%	--	--	--
UPR-300-46_Shallow	non-Rad	Fluoranthene	206-44-0	µg/kg	9.55E+00	--	--	--	3.20E+06	2.99E-06	0.00%
UPR-300-46_Shallow	non-Rad	Fluorene	86-73-7	µg/kg	2.15E+00	--	--	--	3.20E+06	6.72E-07	0.00%
UPR-300-46_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	7.55E+00	1.37E+03	5.51E-09	0.08%	--	--	--
UPR-300-46_Shallow	non-Rad	Iron	7439-89-6	µg/kg	2.05E+07	--	--	--	5.60E+07	3.67E-01	27.39%
UPR-300-46_Shallow	non-Rad	Lead	7439-92-1	µg/kg	7.11E+03	--	--	--	--	--	--
UPR-300-46_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.11E+05	--	--	--	1.12E+07	2.78E-02	2.07%
UPR-300-46_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	2.92E+01	--	--	--	2.40E+04	1.22E-03	0.09%
UPR-300-46_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	4.56E+02	--	--	--	4.00E+05	1.14E-03	0.09%
UPR-300-46_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	3.57E+01	--	--	--	1.60E+06	2.23E-05	0.00%
UPR-300-46_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	9.23E+03	--	--	--	1.60E+06	5.77E-03	0.43%
UPR-300-46_Shallow	non-Rad	Pyrene	129-00-0	µg/kg	4.44E+00	--	--	--	2.40E+06	1.85E-06	0.00%
UPR-300-46_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	5.38E+04	--	--	--	4.00E+05	1.35E-01	10.05%
UPR-300-46_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.79E+04	--	--	--	2.40E+07	2.00E-03	0.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**7.22E-06**	**--**	**--**	**1.34E+00**	**--**
UPR-300-46_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	7.00E-02	4.40E+00	1.59E-06	20.90%	--	--	--
UPR-300-46_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.77E+00	1.33E+02	1.33E-06	17.50%	--	--	--
UPR-300-46_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.43E-01	1.63E+01	1.49E-06	19.59%	--	--	--
UPR-300-46_Shallow	Rad	Uranium-238	U-238	pCi/g	1.73E+00	5.40E+01	3.20E-06	42.01%	--	--	--
Total Radiological Risk Estimate						**--**	**7.61E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.48E-05**	**--**	**--**	**--**	**--**

Table G-21. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300 ASH PITS_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	5.20E+01	3.20E+08	1.63E-13	0.11%	--	--	--
300 ASH PITS_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	6.08E+03	4.24E+07	1.43E-10	99.89%	5.00E+08	1.21E-05	100.00%
300 ASH PITS_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	9.60E+01	7.60E+10	1.26E-15	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.43E-10**	**--**	**--**	**1.21E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.43E-10**	**--**	**--**	**--**	**--**
300-10_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.35E+04	4.24E+07	3.18E-10	100.00%	5.00E+08	2.70E-05	100.00%
300-10_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.00E+02	7.60E+10	2.63E-15	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.18E-10**	**--**	**--**	**2.70E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.18E-10**	**--**	**--**	**--**	**--**
300-109_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	5.62E+06	--	--	--	1.67E+11	3.37E-05	13.79%
300-109_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.22E+02	3.20E+08	3.81E-13	0.10%	--	--	--
300-109_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.97E+01	3.20E+08	1.24E-13	0.03%	--	--	--
300-109_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	2.42E+03	4.24E+07	5.71E-11	14.65%	5.00E+08	4.84E-06	1.98%
300-109_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	6.33E+04	--	--	--	1.67E+10	3.80E-06	1.55%
300-109_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	1.24E+00	1.66E+08	7.48E-15	0.00%	--	--	--
300-109_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	2.30E+00	1.66E+09	1.39E-15	0.00%	--	--	--
300-109_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	1.80E+02	7.60E+07	2.37E-12	0.61%	6.67E+08	2.70E-07	0.11%
300-109_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	6.32E+02	--	--	--	6.67E+11	9.48E-10	0.00%
300-109_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	5.90E+01	1.01E+08	5.82E-13	0.15%	3.33E+08	1.77E-07	0.07%
300-109_Shallow_Focused	non-Rad	Chrysene	218-01-9	µg/kg	1.77E+00	1.66E+10	1.07E-16	0.00%	--	--	--
300-109_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	6.42E+03	2.03E+07	3.17E-10	81.35%	2.00E+08	3.21E-05	13.13%
300-109_Shallow_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	1.40E+01	1.66E+09	8.44E-15	0.00%	--	--	--
300-109_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	2.78E+05	--	--	--	1.67E+09	1.67E-04	68.20%
300-109_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	2.20E+01	--	--	--	1.00E+09	2.20E-08	0.01%
300-109_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	8.49E+03	7.01E+08	1.21E-11	3.11%	3.00E+09	2.83E-06	1.16%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.89E-10**	**--**	**--**	**2.44E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.89E-10**	**--**	**--**	**--**	**--**
300-109_Staging Pile Area_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	5.78E+06	--	--	--	1.67E+11	3.47E-05	13.93%
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.68E+01	3.20E+08	1.15E-13	0.03%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.94E+01	3.20E+08	6.06E-14	0.02%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	2.58E+03	4.24E+07	6.08E-11	16.43%	5.00E+08	5.16E-06	2.07%
300-109_Staging Pile Area_Focused	non-Rad	Barium	7440-39-3	µg/kg	7.27E+04	--	--	--	1.67E+10	4.36E-06	1.75%
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	2.08E+00	1.66E+09	1.25E-15	0.00%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	3.30E+00	1.66E+08	1.99E-14	0.01%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	1.31E+00	1.66E+09	7.90E-16	0.00%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	2.03E+02	7.60E+07	2.67E-12	0.72%	6.67E+08	3.04E-07	0.12%
300-109_Staging Pile Area_Focused	non-Rad	Boron	7440-42-8	µg/kg	1.06E+03	--	--	--	6.67E+11	1.59E-09	0.00%
300-109_Staging Pile Area_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	6.60E+01	1.01E+08	6.51E-13	0.18%	3.33E+08	1.98E-07	0.08%
300-109_Staging Pile Area_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	5.95E+03	2.03E+07	2.94E-10	79.31%	2.00E+08	2.97E-05	11.95%

Table G-21. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-109_Staging Pile Area_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	2.92E+01	1.66E+09	1.76E-14	0.00%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Manganese	7439-96-5	µg/kg	2.86E+05	--	--	--	1.67E+09	1.72E-04	68.94%
300-109_Staging Pile Area_Focused	non-Rad	Nickel	7440-02-0	µg/kg	8.57E+03	7.01E+08	1.22E-11	3.30%	3.00E+09	2.86E-06	1.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.70E-10**	**--**	**--**	**2.49E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.70E-10**	**--**	**--**	**--**	**--**
300-18_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.20E+03	4.24E+07	5.19E-11	85.29%	5.00E+08	4.40E-06	47.32%
300-18_Shallow	non-Rad	Barium	7440-39-3	µg/kg	6.34E+04	--	--	--	1.67E+10	3.80E-06	40.91%
300-18_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	6.50E+02	7.60E+07	8.55E-12	14.06%	6.67E+08	9.75E-07	10.48%
300-18_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	4.00E+01	1.01E+08	3.95E-13	0.65%	3.33E+08	1.20E-07	1.29%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.08E-11**	**--**	**--**	**9.29E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.08E-11**	**--**	**--**	**--**	**--**
300-259_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	5.99E+06	--	--	--	1.67E+11	3.59E-05	13.36%
300-259_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.10E+03	4.24E+07	4.94E-11	13.92%	5.00E+08	4.19E-06	1.56%
300-259_Shallow	non-Rad	Barium	7440-39-3	µg/kg	7.52E+04	--	--	--	1.67E+10	4.51E-06	1.68%
300-259_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.26E+02	7.60E+07	2.97E-12	0.84%	6.67E+08	3.38E-07	0.13%
300-259_Shallow	non-Rad	Boron	7440-42-8	µg/kg	1.30E+03	--	--	--	6.67E+11	1.95E-09	0.00%
300-259_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	2.52E+02	1.01E+08	2.48E-12	0.70%	3.33E+08	7.54E-07	0.28%
300-259_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	5.83E+03	2.03E+07	2.88E-10	81.03%	2.00E+08	2.91E-05	10.83%
300-259_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.19E+05	--	--	--	1.67E+09	1.91E-04	71.08%
300-259_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	1.00E+01	--	--	--	1.00E+09	1.00E-08	0.00%
300-259_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	8.75E+03	7.01E+08	1.25E-11	3.51%	3.00E+09	2.92E-06	1.08%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.55E-10**	**--**	**--**	**2.69E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.55E-10**	**--**	**--**	**--**	**--**
300-260_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	8.17E+06	--	--	--	1.67E+11	4.90E-05	16.30%
300-260_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	3.16E+03	4.24E+07	7.45E-11	16.20%	5.00E+08	6.32E-06	2.10%
300-260_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	1.22E+05	--	--	--	1.67E+10	7.32E-06	2.43%
300-260_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	2.39E+02	7.60E+07	3.15E-12	0.68%	6.67E+08	3.58E-07	0.12%
300-260_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	8.36E+03	--	--	--	6.67E+11	1.25E-08	0.00%
300-260_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	1.10E+02	1.01E+08	1.09E-12	0.24%	3.33E+08	3.30E-07	0.11%
300-260_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	7.43E+03	2.03E+07	3.67E-10	79.72%	2.00E+08	3.71E-05	12.35%
300-260_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	3.28E+05	--	--	--	1.67E+09	1.97E-04	65.44%
300-260_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	1.20E+01	--	--	--	1.00E+09	1.20E-08	0.00%
300-260_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.02E+04	7.01E+08	1.45E-11	3.16%	3.00E+09	3.40E-06	1.13%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.60E-10**	**--**	**--**	**3.01E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.60E-10**	**--**	**--**	**--**	**--**
300-275_Shallow_1	non-Rad	Aluminum	7429-90-5	µg/kg	5.61E+06	--	--	--	1.67E+11	3.37E-05	13.90%
300-275_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	2.21E+03	4.24E+07	5.21E-11	14.44%	5.00E+08	4.42E-06	1.82%

Table G-21. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-275_Shallow_1	non-Rad	Barium	7440-39-3	µg/kg	7.53E+04	--	--	--	1.67E+10	4.51E-06	1.86%
300-275_Shallow_1	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	1.30E+00	1.66E+08	7.84E-15	0.00%	--	--	--
300-275_Shallow_1	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	1.87E+00	1.66E+09	1.13E-15	0.00%	--	--	--
300-275_Shallow_1	non-Rad	Beryllium	7440-41-7	µg/kg	4.52E+02	7.60E+07	5.94E-12	1.65%	6.67E+08	6.77E-07	0.28%
300-275_Shallow_1	non-Rad	Boron	7440-42-8	µg/kg	1.47E+03	--	--	--	6.67E+11	2.20E-09	0.00%
300-275_Shallow_1	non-Rad	Cadmium	7440-43-9	µg/kg	8.33E+01	1.01E+08	8.22E-13	0.23%	3.33E+08	2.50E-07	0.10%
300-275_Shallow_1	non-Rad	Chrysene	218-01-9	µg/kg	2.20E+00	1.66E+10	1.33E-16	0.00%	--	--	--
300-275_Shallow_1	non-Rad	Cobalt	7440-48-4	µg/kg	5.85E+03	2.03E+07	2.89E-10	79.94%	2.00E+08	2.92E-05	12.07%
300-275_Shallow_1	non-Rad	Manganese	7439-96-5	µg/kg	2.77E+05	--	--	--	1.67E+09	1.66E-04	68.55%
300-275_Shallow_1	non-Rad	Mercury	7439-97-6	µg/kg	1.67E+01	--	--	--	1.00E+09	1.67E-08	0.01%
300-275_Shallow_1	non-Rad	Nickel	7440-02-0	µg/kg	9.46E+03	7.01E+08	1.35E-11	3.74%	3.00E+09	3.15E-06	1.30%
300-275_Shallow_1	non-Rad	Uranium	7440-61-1	µg/kg	2.50E+03	--	--	--	1.00E+10	2.50E-07	0.10%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.61E-10**	**--**	**--**	**2.42E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.61E-10**	**--**	**--**	**--**	**--**
300-275_Shallow_2	non-Rad	Aluminum	7429-90-5	µg/kg	6.24E+06	--	--	--	1.67E+11	3.74E-05	14.58%
300-275_Shallow_2	non-Rad	Arsenic	7440-38-2	µg/kg	2.76E+03	4.24E+07	6.51E-11	17.20%	5.00E+08	5.52E-06	2.15%
300-275_Shallow_2	non-Rad	Barium	7440-39-3	µg/kg	6.86E+04	--	--	--	1.67E+10	4.11E-06	1.60%
300-275_Shallow_2	non-Rad	Beryllium	7440-41-7	µg/kg	2.54E+02	7.60E+07	3.34E-12	0.88%	6.67E+08	3.81E-07	0.15%
300-275_Shallow_2	non-Rad	Boron	7440-42-8	µg/kg	1.15E+03	--	--	--	6.67E+11	1.72E-09	0.00%
300-275_Shallow_2	non-Rad	Cadmium	7440-43-9	µg/kg	1.44E+02	1.01E+08	1.42E-12	0.38%	3.33E+08	4.32E-07	0.17%
300-275_Shallow_2	non-Rad	Cobalt	7440-48-4	µg/kg	5.98E+03	2.03E+07	2.95E-10	77.93%	2.00E+08	2.99E-05	11.64%
300-275_Shallow_2	non-Rad	Manganese	7439-96-5	µg/kg	2.93E+05	--	--	--	1.67E+09	1.76E-04	68.44%
300-275_Shallow_2	non-Rad	Mercury	7439-97-6	µg/kg	2.80E+01	--	--	--	1.00E+09	2.80E-08	0.01%
300-275_Shallow_2	non-Rad	Nickel	7440-02-0	µg/kg	9.59E+03	7.01E+08	1.37E-11	3.61%	3.00E+09	3.20E-06	1.25%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.78E-10**	**--**	**--**	**2.57E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.78E-10**	**--**	**--**	**--**	**--**
300-33, 300-41, 300-256_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.32E+06	--	--	--	1.67E+11	3.79E-05	13.78%
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1016	12674-11-2	µg/kg	1.03E+01	9.12E+09	1.13E-15	0.00%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1242	53469-21-9	µg/kg	1.64E+01	3.20E+08	5.13E-14	0.01%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.90E+02	3.20E+08	5.94E-13	0.09%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	8.44E+01	3.20E+08	2.64E-13	0.04%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.73E+01	3.20E+08	5.40E-14	0.01%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.64E+03	4.24E+07	6.22E-11	9.58%	5.00E+08	5.27E-06	1.92%
300-33, 300-41, 300-256_Shallow	non-Rad	Barium	7440-39-3	µg/kg	7.24E+04	--	--	--	1.67E+10	4.34E-06	1.58%
300-33, 300-41, 300-256_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.56E+02	7.60E+07	3.36E-12	0.52%	6.67E+08	3.83E-07	0.14%
300-33, 300-41, 300-256_Shallow	non-Rad	Boron	7440-42-8	µg/kg	1.48E+03	--	--	--	6.67E+11	2.22E-09	0.00%
300-33, 300-41, 300-256_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	9.39E+01	1.01E+08	9.27E-13	0.14%	3.33E+08	2.82E-07	0.10%
300-33, 300-41, 300-256_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.27E+03	2.03E+07	3.10E-10	47.68%	2.00E+08	3.13E-05	11.40%
300-33, 300-41, 300-256_Shallow	non-Rad	Fluoride	16984-48-8	µg/kg	1.65E+03	--	--	--	4.34E+11	3.81E-09	0.00%
300-33, 300-41, 300-256_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.15E+05	--	--	--	1.67E+09	1.89E-04	68.63%
300-33, 300-41, 300-256_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	1.60E+01	--	--	--	1.00E+09	1.60E-08	0.01%

Table G-21. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-33, 300-41, 300-256_Shallow	non-Rad	Methylene chloride	75-09-2	µg/kg	2.91E+00	1.12E+04	2.60E-10	39.98%	9.65E+05	3.02E-06	1.10%
300-33, 300-41, 300-256_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	8.88E+03	7.01E+08	1.27E-11	1.95%	3.00E+09	2.96E-06	1.08%
300-33, 300-41, 300-256_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	7.26E+03	--	--	--	1.00E+10	7.26E-07	0.26%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.49E-10**	**--**	**--**	**2.75E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.49E-10**	**--**	**--**	**--**	**--**
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	5.51E+06	--	--	--	1.67E+11	3.30E-05	14.22%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.30E+02	3.20E+08	1.03E-12	0.18%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.85E+02	3.20E+08	1.20E-12	0.21%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.20E+01	3.20E+08	1.63E-13	0.03%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	3.24E+03	4.24E+07	7.64E-11	13.43%	5.00E+08	6.48E-06	2.79%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	6.46E+04	--	--	--	1.67E+10	3.87E-06	1.67%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	1.69E+02	7.60E+07	2.22E-12	0.39%	6.67E+08	2.53E-07	0.11%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	1.03E+03	--	--	--	6.67E+11	1.54E-09	0.00%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	1.00E+02	1.01E+08	9.87E-13	0.17%	3.33E+08	3.00E-07	0.13%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	5.64E+03	2.03E+07	2.78E-10	48.95%	2.00E+08	2.82E-05	12.13%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Fluoride	16984-48-8	µg/kg	1.30E+03	--	--	--	4.34E+11	3.00E-09	0.00%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	2.59E+05	--	--	--	1.67E+09	1.55E-04	66.83%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	2.21E+00	1.12E+04	1.97E-10	34.62%	9.65E+05	2.29E-06	0.99%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	8.04E+03	7.01E+08	1.15E-11	2.02%	3.00E+09	2.68E-06	1.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.69E-10**	**--**	**--**	**2.32E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.69E-10**	**--**	**--**	**--**	**--**
300-37_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.00E+02	3.20E+08	3.13E-13	3.03%	--	--	--
300-37_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.20E+03	3.20E+08	1.00E-11	96.97%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.03E-11**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.03E-11**	**--**	**--**	**--**	**--**
300-44_Overburden_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	9.10E+03	4.24E+07	2.15E-10	100.00%	5.00E+08	1.82E-05	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.15E-10**	**--**	**--**	**1.82E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.15E-10**	**--**	**--**	**--**	**--**
300-44_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	6.71E+06	--	--	--	1.67E+11	4.02E-05	13.20%
300-44_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.69E+04	4.24E+07	3.98E-10	48.49%	5.00E+08	3.38E-05	11.08%
300-44_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	7.52E+04	--	--	--	1.67E+10	4.51E-06	1.48%
300-44_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	4.80E+02	7.60E+07	6.32E-12	0.77%	6.67E+08	7.20E-07	0.24%
300-44_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	8.20E+03	2.03E+07	4.05E-10	49.25%	2.00E+08	4.10E-05	13.44%
300-44_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	3.03E+05	--	--	--	1.67E+09	1.82E-04	59.61%
300-44_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	8.60E+03	7.01E+08	1.23E-11	1.49%	3.00E+09	2.87E-06	0.94%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**8.22E-10**	**--**	**--**	**3.05E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.22E-10**	**--**	**--**	**--**	**--**

Table G-21. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-45_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	8.60E+01	3.20E+08	2.69E-13	98.60%	--	--	--
300-45_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.90E+02	7.60E+10	3.82E-15	1.40%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.73E-13**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.73E-13**	**--**	**--**	**--**	**--**
300-49_Overburden	non-Rad	1,2,4-Trichlorobenzene	120-82-1	µg/kg	3.05E+01	--	--	--	1.42E+04	2.15E-03	87.90%
300-49_Overburden	non-Rad	1,4-Dichlorobenzene	106-46-7	µg/kg	2.88E+01	1.48E+03	1.95E-08	97.68%	2.37E+06	1.21E-05	0.49%
300-49_Overburden	non-Rad	2,4-Dinitrotoluene	121-14-2	µg/kg	1.89E+01	2.05E+09	9.24E-15	0.00%	--	--	--
300-49_Overburden	non-Rad	Aluminum	7429-90-5	µg/kg	6.30E+06	--	--	--	1.67E+11	3.78E-05	1.54%
300-49_Overburden	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.01E+03	3.20E+08	9.40E-12	0.05%	--	--	--
300-49_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	3.29E+03	4.24E+07	7.76E-11	0.39%	5.00E+08	6.58E-06	0.27%
300-49_Overburden	non-Rad	Barium	7440-39-3	µg/kg	7.61E+04	--	--	--	1.67E+10	4.56E-06	0.19%
300-49_Overburden	non-Rad	Beryllium	7440-41-7	µg/kg	2.01E+02	7.60E+07	2.65E-12	0.01%	6.67E+08	3.01E-07	0.01%
300-49_Overburden	non-Rad	Cadmium	7440-43-9	µg/kg	1.74E+02	1.01E+08	1.72E-12	0.01%	3.33E+08	5.22E-07	0.02%
300-49_Overburden	non-Rad	Cobalt	7440-48-4	µg/kg	7.13E+03	2.03E+07	3.52E-10	1.76%	2.00E+08	3.56E-05	1.46%
300-49_Overburden	non-Rad	Manganese	7439-96-5	µg/kg	3.17E+05	--	--	--	1.67E+09	1.90E-04	7.76%
300-49_Overburden	non-Rad	Nickel	7440-02-0	µg/kg	1.30E+04	7.01E+08	1.86E-11	0.09%	3.00E+09	4.34E-06	0.18%
300-49_Overburden	non-Rad	n-Nitrosodi-n-dipropylamine	621-64-7	µg/kg	3.97E+01	9.12E+07	4.36E-13	0.00%	--	--	--
300-49_Overburden	non-Rad	Pentachlorophenol	87-86-5	µg/kg	4.98E+01	3.58E+10	1.39E-15	0.00%	--	--	--
300-49_Overburden	non-Rad	Phenol	108-95-2	µg/kg	5.00E+01	--	--	--	1.16E+07	4.30E-06	0.18%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.00E-08**	**--**	**--**	**2.45E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.00E-08**	**--**	**--**	**--**	**--**
300-49_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.92E+06	--	--	--	1.67E+11	4.15E-05	12.84%
300-49_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	4.43E+03	4.24E+07	1.04E-10	17.90%	5.00E+08	8.86E-06	2.74%
300-49_Shallow	non-Rad	Barium	7440-39-3	µg/kg	8.99E+04	--	--	--	1.67E+10	5.39E-06	1.67%
300-49_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	3.03E+02	7.60E+07	3.98E-12	0.68%	6.67E+08	4.54E-07	0.14%
300-49_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	9.32E+03	2.03E+07	4.60E-10	78.82%	2.00E+08	4.66E-05	14.41%
300-49_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.62E+05	--	--	--	1.67E+09	2.17E-04	67.11%
300-49_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	1.07E+04	7.01E+08	1.52E-11	2.60%	3.00E+09	3.55E-06	1.10%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.84E-10**	**--**	**--**	**3.23E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.84E-10**	**--**	**--**	**--**	**--**
300-50_Overburden	non-Rad	Aluminum	7429-90-5	µg/kg	6.68E+06	--	--	--	1.67E+11	4.01E-05	13.20%
300-50_Overburden	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.34E+01	3.20E+08	1.05E-13	0.02%	--	--	--
300-50_Overburden	non-Rad	Aroclor-1260	11096-82-5	µg/kg	2.29E+02	3.20E+08	7.16E-13	0.11%	--	--	--
300-50_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	6.90E+03	4.24E+07	1.63E-10	24.70%	5.00E+08	1.38E-05	4.54%
300-50_Overburden	non-Rad	Barium	7440-39-3	µg/kg	1.18E+05	--	--	--	1.67E+10	7.06E-06	2.33%
300-50_Overburden	non-Rad	Beryllium	7440-41-7	µg/kg	3.25E+02	7.60E+07	4.28E-12	0.65%	6.67E+08	4.87E-07	0.16%
300-50_Overburden	non-Rad	Cadmium	7440-43-9	µg/kg	5.63E+02	1.01E+08	5.56E-12	0.84%	3.33E+08	1.69E-06	0.56%

Table G-21. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-50_Overburden	non-Rad	Cobalt	7440-48-4	µg/kg	9.39E+03	2.03E+07	4.63E-10	70.38%	2.00E+08	4.69E-05	15.46%
300-50_Overburden	non-Rad	Manganese	7439-96-5	µg/kg	3.14E+05	--	--	--	1.67E+09	1.88E-04	62.09%
300-50_Overburden	non-Rad	Nickel	7440-02-0	µg/kg	1.52E+04	7.01E+08	2.17E-11	3.30%	3.00E+09	5.07E-06	1.67%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.58E-10**	**--**	**--**	**3.04E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.58E-10**	**--**	**--**	**--**	**--**
300-50_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.88E+06	--	--	--	1.67E+11	4.13E-05	13.64%
300-50_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.26E+02	3.20E+08	3.95E-13	0.06%	--	--	--
300-50_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	6.40E+03	4.24E+07	1.51E-10	24.08%	5.00E+08	1.28E-05	4.23%
300-50_Shallow	non-Rad	Barium	7440-39-3	µg/kg	1.03E+05	--	--	--	1.67E+10	6.18E-06	2.04%
300-50_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.82E+02	7.60E+07	3.71E-12	0.59%	6.67E+08	4.22E-07	0.14%
300-50_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.93E+01	7.60E+10	2.54E-16	0.00%	--	--	--
300-50_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	4.63E+02	1.01E+08	4.57E-12	0.73%	3.33E+08	1.39E-06	0.46%
300-50_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	9.11E+03	2.03E+07	4.50E-10	71.71%	2.00E+08	4.55E-05	15.05%
300-50_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.18E+05	--	--	--	1.67E+09	1.91E-04	63.07%
300-50_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	1.24E+04	7.01E+08	1.77E-11	2.82%	3.00E+09	4.14E-06	1.37%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.27E-10**	**--**	**--**	**3.02E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.27E-10**	**--**	**--**	**--**	**--**
300-8_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	5.74E+02	7.60E+07	7.55E-12	100.00%	6.67E+08	8.61E-07	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**7.55E-12**	**--**	**--**	**8.61E-07**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.55E-12**	**--**	**--**	**--**	**--**
316-1_Shallow_1	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.00E+03	3.20E+08	9.38E-12	2.05%	--	--	--
316-1_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	1.90E+04	4.24E+07	4.48E-10	97.95%	5.00E+08	3.80E-05	100.00%
316-1_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.86E+01	7.60E+10	9.02E-16	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.58E-10**	**--**	**--**	**3.80E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.58E-10**	**--**	**--**	**--**	**--**
316-1_Shallow_3	non-Rad	Aluminum	7429-90-5	µg/kg	1.11E+07	--	--	--	1.67E+11	6.66E-05	16.41%
316-1_Shallow_3	non-Rad	Aroclor-1254	11097-69-1	µg/kg	9.82E+01	3.20E+08	3.07E-13	0.04%	--	--	--
316-1_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	5.14E+03	4.24E+07	1.21E-10	16.25%	5.00E+08	1.03E-05	2.53%
316-1_Shallow_3	non-Rad	Barium	7440-39-3	µg/kg	1.29E+05	--	--	--	1.67E+10	7.74E-06	1.91%
316-1_Shallow_3	non-Rad	Beryllium	7440-41-7	µg/kg	4.16E+02	7.60E+07	5.47E-12	0.73%	6.67E+08	6.24E-07	0.15%
316-1_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	3.42E+02	7.60E+10	4.50E-15	0.00%	--	--	--
316-1_Shallow_3	non-Rad	Cadmium	7440-43-9	µg/kg	4.74E+02	1.01E+08	4.68E-12	0.63%	3.33E+08	1.42E-06	0.35%
316-1_Shallow_3	non-Rad	Cobalt	7440-48-4	µg/kg	9.70E+03	2.03E+07	4.79E-10	64.24%	2.00E+08	4.85E-05	11.95%
316-1_Shallow_3	non-Rad	Heptachlor epoxide	1024-57-3	µg/kg	3.20E+00	7.01E+07	4.56E-14	0.01%	--	--	--
316-1_Shallow_3	non-Rad	Manganese	7439-96-5	µg/kg	3.93E+05	--	--	--	1.67E+09	2.36E-04	58.06%
316-1_Shallow_3	non-Rad	Mercury	7439-97-6	µg/kg	1.11E+03	--	--	--	1.00E+09	1.10E-06	0.27%
316-1_Shallow_3	non-Rad	Nickel	7440-02-0	µg/kg	9.47E+04	7.01E+08	1.35E-10	18.10%	3.00E+09	3.15E-05	7.77%

Table G-21. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-1_Shallow_3	non-Rad	Phenol	108-95-2	µg/kg	2.80E+01	--	--	--	1.16E+07	2.41E-06	0.59%
316-1_Shallow_3	non-Rad	Selenium	7782-49-2	µg/kg	1.44E+03	--	--	--	6.67E+11	2.17E-09	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**7.45E-10**	**--**	**--**	**4.06E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.45E-10**	**--**	**--**	**--**	**--**
316-1_Shallow_4	non-Rad	Aroclor-1254	11097-69-1	µg/kg	6.20E+01	3.20E+08	1.94E-13	100.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.94E-13**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.94E-13**	**--**	**--**	**--**	**--**
316-2_Shallow_2	non-Rad	Aroclor-1248	12672-29-6	µg/kg	6.97E+02	3.20E+08	2.18E-12	82.09%	--	--	--
316-2_Shallow_2	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.20E+01	3.20E+08	1.31E-13	4.95%	--	--	--
316-2_Shallow_2	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.10E+02	3.20E+08	3.44E-13	12.96%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.65E-12**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.65E-12**	**--**	**--**	**--**	**--**
316-2_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	8.00E+03	4.24E+07	1.89E-10	100.00%	5.00E+08	1.60E-05	100.00%
316-2_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.60E+02	7.60E+10	3.42E-15	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.89E-10**	**--**	**--**	**1.60E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.89E-10**	**--**	**--**	**--**	**--**
316-5_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	3.07E+03	4.24E+07	7.24E-11	99.97%	5.00E+08	6.14E-06	100.00%
316-5_Shallow_1	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	3.80E+01	1.66E+09	2.29E-14	0.03%	--	--	--
316-5_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.46E+02	7.60E+10	1.92E-15	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**7.24E-11**	**--**	**--**	**6.14E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.24E-11**	**--**	**--**	**--**	**--**
316-5_Shallow_2	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	1.40E+02	3.94E+02	3.56E-07	99.98%	--	--	--
316-5_Shallow_2	non-Rad	2-Butoxyethanol	111-76-2	µg/kg	2.40E+02	--	--	--	4.76E+08	5.04E-07	4.40%
316-5_Shallow_2	non-Rad	Arsenic	7440-38-2	µg/kg	3.18E+03	4.24E+07	7.50E-11	0.02%	5.00E+08	6.36E-06	55.46%
316-5_Shallow_2	non-Rad	Barium	7440-39-3	µg/kg	7.67E+04	--	--	--	1.67E+10	4.60E-06	40.13%
316-5_Shallow_2	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.80E+02	7.60E+10	2.37E-15	0.00%	--	--	--
316-5_Shallow_2	non-Rad	Chrysene	218-01-9	µg/kg	3.80E+01	1.66E+10	2.29E-15	0.00%	--	--	--
316-5_Shallow_2	non-Rad	Selenium	7782-49-2	µg/kg	4.90E+02	--	--	--	6.67E+11	7.35E-10	0.01%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.56E-07**	**--**	**--**	**1.15E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.56E-07**	**--**	**--**	**--**	**--**
316-5_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	5.70E+01	3.20E+08	1.78E-13	0.17%	--	--	--
316-5_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	7.00E+01	3.20E+08	2.19E-13	0.21%	--	--	--
316-5_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.20E+01	3.20E+08	1.63E-13	0.16%	--	--	--

Table G-21. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-5_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	4.30E+03	4.24E+07	1.01E-10	99.45%	5.00E+08	8.60E-06	100.00%
316-5_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.90E+02	7.60E+10	2.50E-15	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.02E-10**	**--**	**--**	**8.60E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.02E-10**	**--**	**--**	**--**	**--**
331 LSLDF_Shallow_Focused	non-Rad	4,4'-DDE (Dichlorodiphenyldichloroethylene)	72-55-9	µg/kg	2.50E+01	1.88E+09	1.33E-14	0.00%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	5.90E+02	--	--	--	1.90E+08	3.11E-06	0.96%
331 LSLDF_Shallow_Focused	non-Rad	Aldrin	309-00-2	µg/kg	5.60E-01	3.72E+07	1.50E-14	0.00%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Alpha-BHC	319-84-6	µg/kg	3.90E-01	1.01E+08	3.85E-15	0.00%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	6.90E+06	--	--	--	1.67E+11	4.14E-05	12.83%
331 LSLDF_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	8.50E+02	3.20E+08	2.66E-12	0.18%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	2.40E+03	4.24E+07	5.66E-11	3.81%	5.00E+08	4.80E-06	1.49%
331 LSLDF_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	7.86E+04	--	--	--	1.67E+10	4.71E-06	1.46%
331 LSLDF_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	5.70E+02	7.60E+07	7.50E-12	0.50%	6.67E+08	8.55E-07	0.26%
331 LSLDF_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	9.10E+02	7.60E+10	1.20E-14	0.00%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	1.70E+03	--	--	--	6.67E+11	2.55E-09	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	1.40E+02	1.01E+08	1.38E-12	0.09%	3.33E+08	4.20E-07	0.13%
331 LSLDF_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	8.60E+03	2.03E+07	4.24E-10	28.54%	2.00E+08	4.30E-05	13.32%
331 LSLDF_Shallow_Focused	non-Rad	Dieldrin	60-57-1	µg/kg	1.30E+01	3.96E+07	3.28E-13	0.02%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	3.49E+05	--	--	--	1.67E+09	2.09E-04	64.87%
331 LSLDF_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	1.10E+02	--	--	--	1.00E+09	1.10E-07	0.03%
331 LSLDF_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	1.10E+01	1.12E+04	9.80E-10	65.89%	9.65E+05	1.14E-05	3.53%
331 LSLDF_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.00E+04	7.01E+08	1.43E-11	0.96%	3.00E+09	3.33E-06	1.03%
331 LSLDF_Shallow_Focused	non-Rad	Uranium	7440-61-1	µg/kg	2.30E+03	--	--	--	1.00E+10	2.30E-07	0.07%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.49E-09**	**--**	**--**	**3.23E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.49E-09**	**--**	**--**	**--**	**--**
600-243_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.70E+01	3.20E+08	8.43E-14	0.00%	--	--	--
600-243_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.84E+01	3.20E+08	5.75E-14	0.00%	--	--	--
600-243_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	6.16E+03	4.24E+07	1.45E-10	0.10%	5.00E+08	1.23E-05	0.15%
600-243_Shallow	non-Rad	Barium	7440-39-3	µg/kg	2.92E+05	--	--	--	1.67E+10	1.75E-05	0.21%
600-243_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	4.33E+01	1.66E+09	2.61E-14	0.00%	--	--	--
600-243_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	4.27E+01	1.66E+08	2.58E-13	0.00%	--	--	--
600-243_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	4.63E+01	1.66E+09	2.79E-14	0.00%	--	--	--
600-243_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	3.18E+01	1.66E+09	1.92E-14	0.00%	--	--	--
600-243_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.08E+03	7.60E+07	2.74E-11	0.02%	6.67E+08	3.12E-06	0.04%
600-243_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	4.32E+02	7.60E+10	5.69E-15	0.00%	--	--	--
600-243_Shallow	non-Rad	Boron	7440-42-8	µg/kg	2.94E+05	--	--	--	6.67E+11	4.41E-07	0.01%
600-243_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	7.93E+02	1.01E+08	7.82E-12	0.01%	3.33E+08	2.38E-06	0.03%
600-243_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	6.26E+01	1.66E+10	3.78E-15	0.00%	--	--	--
600-243_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.21E+03	2.03E+07	3.06E-10	0.20%	2.00E+08	3.10E-05	0.38%
600-243_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	2.80E+01	1.66E+09	1.69E-14	0.00%	--	--	--
600-243_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	2.08E+05	--	--	--	1.67E+09	1.25E-04	1.51%

Table G-21. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
600-243_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	2.04E+02	1.36E+03	1.50E-07	99.66%	2.53E+04	8.05E-03	97.59%
600-243_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	2.14E+04	7.01E+08	3.05E-11	0.02%	3.00E+09	7.13E-06	0.09%
600-243_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	5.71E+03	--	--	--	6.67E+11	8.56E-09	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.51E-07**	**--**	**--**	**8.25E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.51E-07**	**--**	**--**	**--**	**--**
600-47_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.30E+03	4.24E+07	5.42E-11	87.90%	5.00E+08	4.60E-06	47.72%
600-47_Shallow	non-Rad	Barium	7440-39-3	µg/kg	6.70E+04	--	--	--	1.67E+10	4.02E-06	41.70%
600-47_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	5.00E+02	7.60E+07	6.58E-12	10.66%	6.67E+08	7.50E-07	7.78%
600-47_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	9.00E+01	1.01E+08	8.88E-13	1.44%	3.33E+08	2.70E-07	2.80%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.17E-11**	**--**	**--**	**9.64E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.17E-11**	**--**	**--**	**--**	**--**
618-1_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.21E+06	--	--	--	1.67E+11	3.72E-05	14.18%
618-1_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.64E+02	3.20E+08	8.25E-13	0.22%	--	--	--
618-1_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.35E+01	3.20E+08	1.67E-13	0.04%	--	--	--
618-1_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.28E+03	4.24E+07	5.38E-11	14.02%	5.00E+08	4.56E-06	1.74%
618-1_Shallow	non-Rad	Barium	7440-39-3	µg/kg	9.72E+04	--	--	--	1.67E+10	5.83E-06	2.22%
618-1_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	1.88E+02	7.60E+07	2.47E-12	0.65%	6.67E+08	2.82E-07	0.11%
618-1_Shallow	non-Rad	Boron	7440-42-8	µg/kg	1.19E+03	--	--	--	6.67E+11	1.78E-09	0.00%
618-1_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	6.80E+01	1.01E+08	6.71E-13	0.18%	3.33E+08	2.04E-07	0.08%
618-1_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.36E+03	2.03E+07	3.14E-10	81.87%	2.00E+08	3.18E-05	12.11%
618-1_Shallow	non-Rad	Fluoride	16984-48-8	µg/kg	4.00E+02	--	--	--	4.34E+11	9.23E-10	0.00%
618-1_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.00E+05	--	--	--	1.67E+09	1.80E-04	68.52%
618-1_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	3.10E+01	--	--	--	1.00E+09	3.10E-08	0.01%
618-1_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	8.15E+03	7.01E+08	1.16E-11	3.03%	3.00E+09	2.72E-06	1.03%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.83E-10**	**--**	**--**	**2.63E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.83E-10**	**--**	**--**	**--**	**--**
618-1_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	1.22E+07	--	--	--	1.67E+11	7.32E-05	19.05%
618-1_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.51E+01	3.20E+08	1.10E-13	0.02%	--	--	--
618-1_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	9.81E+02	3.20E+08	3.07E-12	0.51%	--	--	--
618-1_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.60E+01	3.20E+08	1.75E-13	0.03%	--	--	--
618-1_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	6.09E+03	4.24E+07	1.44E-10	23.82%	5.00E+08	1.22E-05	3.17%
618-1_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	1.02E+05	--	--	--	1.67E+10	6.12E-06	1.59%
618-1_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	3.71E+02	7.60E+07	4.88E-12	0.81%	6.67E+08	5.56E-07	0.14%
618-1_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	3.74E+03	--	--	--	6.67E+11	5.61E-09	0.00%
618-1_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	2.66E+02	1.01E+08	2.63E-12	0.44%	3.33E+08	7.98E-07	0.21%
618-1_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	8.60E+03	2.03E+07	4.24E-10	70.41%	2.00E+08	4.30E-05	11.19%
618-1_Shallow_Focused	non-Rad	Fluoride	16984-48-8	µg/kg	9.00E+02	--	--	--	4.34E+11	2.08E-09	0.00%
618-1_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	4.03E+05	--	--	--	1.67E+09	2.42E-04	62.94%
618-1_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	1.98E+02	--	--	--	1.00E+09	1.98E-07	0.05%

Table G-21. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-1_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.68E+04	7.01E+08	2.40E-11	3.97%	3.00E+09	5.60E-06	1.46%
618-1_Shallow_Focused	non-Rad	Uranium	7440-61-1	µg/kg	7.08E+03	--	--	--	1.00E+10	7.08E-07	0.18%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.03E-10**	**--**	**--**	**3.84E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.03E-10**	**--**	**--**	**--**	**--**
618-12_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	8.56E+03	4.24E+07	2.02E-10	100.00%	5.00E+08	1.71E-05	100.00%
618-12_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.30E+01	7.60E+10	8.29E-16	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.02E-10**	**--**	**--**	**1.71E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.02E-10**	**--**	**--**	**--**	**--**
618-13_Shallow	non-Rad	Acetone	67-64-1	µg/kg	8.64E+00	--	--	--	1.90E+08	4.55E-08	0.02%
618-13_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.34E+06	--	--	--	1.67E+11	3.80E-05	12.79%
618-13_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	3.50E+03	4.24E+07	8.25E-11	9.48%	5.00E+08	7.00E-06	2.35%
618-13_Shallow	non-Rad	Barium	7440-39-3	µg/kg	7.40E+04	--	--	--	1.67E+10	4.44E-06	1.49%
618-13_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.12E+02	7.60E+07	2.79E-12	0.32%	6.67E+08	3.18E-07	0.11%
618-13_Shallow	non-Rad	Boron	7440-42-8	µg/kg	1.05E+03	--	--	--	6.67E+11	1.57E-09	0.00%
618-13_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	6.30E+01	1.01E+08	6.22E-13	0.07%	3.33E+08	1.89E-07	0.06%
618-13_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.29E+03	2.03E+07	3.10E-10	35.67%	2.00E+08	3.14E-05	10.57%
618-13_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.44E+05	--	--	--	1.67E+09	2.06E-04	69.38%
618-13_Shallow	non-Rad	Methylene chloride	75-09-2	µg/kg	5.12E+00	1.12E+04	4.56E-10	52.42%	9.65E+05	5.31E-06	1.78%
618-13_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	1.24E+04	7.01E+08	1.77E-11	2.03%	3.00E+09	4.13E-06	1.39%
618-13_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	1.75E+03	--	--	--	1.00E+10	1.75E-07	0.06%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**8.70E-10**	**--**	**--**	**2.97E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.70E-10**	**--**	**--**	**--**	**--**
618-13_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	5.90E+00	--	--	--	1.90E+08	3.11E-08	0.01%
618-13_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	5.22E+06	--	--	--	1.67E+11	3.13E-05	13.04%
618-13_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	3.39E+03	4.24E+07	7.99E-11	8.92%	5.00E+08	6.78E-06	2.82%
618-13_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	5.77E+04	--	--	--	1.67E+10	3.46E-06	1.44%
618-13_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	1.84E+02	7.60E+07	2.42E-12	0.27%	6.67E+08	2.76E-07	0.11%
618-13_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	9.60E+02	--	--	--	6.67E+11	1.44E-09	0.00%
618-13_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	4.70E+01	1.01E+08	4.64E-13	0.05%	3.33E+08	1.41E-07	0.06%
618-13_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	5.71E+03	2.03E+07	2.82E-10	31.45%	2.00E+08	2.85E-05	11.89%
618-13_Shallow_Focused	non-Rad	Hexavalent Chromium	18540-29-9	µg/kg	1.50E+02	2.17E+06	6.91E-11	7.71%	3.33E+09	4.50E-08	0.02%
618-13_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	2.68E+05	--	--	--	1.67E+09	1.61E-04	66.97%
618-13_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	5.03E+00	1.12E+04	4.48E-10	50.01%	9.65E+05	5.21E-06	2.17%
618-13_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.00E+04	7.01E+08	1.43E-11	1.59%	3.00E+09	3.33E-06	1.39%
618-13_Shallow_Focused	non-Rad	Uranium	7440-61-1	µg/kg	1.50E+03	--	--	--	1.00E+10	1.50E-07	0.06%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**8.96E-10**	**--**	**--**	**2.40E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.96E-10**	**--**	**--**	**--**	**--**

Table G-21. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-2_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	2.70E+03	4.24E+07	6.37E-11	100.00%	5.00E+08	5.40E-06	54.01%
618-2_Overburden	non-Rad	Barium	7440-39-3	µg/kg	7.47E+04	--	--	--	1.67E+10	4.48E-06	44.83%
618-2_Overburden	non-Rad	Selenium	7782-49-2	µg/kg	1.00E+03	--	--	--	6.67E+11	1.50E-09	0.02%
618-2_Overburden	non-Rad	Uranium	7440-61-1	µg/kg	1.14E+03	--	--	--	1.00E+10	1.14E-07	1.14%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.37E-11**	**--**	**--**	**9.99E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.37E-11**	**--**	**--**	**--**	**--**
618-2_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	1.90E+03	4.24E+07	4.48E-11	100.00%	5.00E+08	3.80E-06	42.22%
618-2_Shallow	non-Rad	Barium	7440-39-3	µg/kg	7.91E+04	--	--	--	1.67E+10	4.74E-06	52.73%
618-2_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	7.60E+02	--	--	--	6.67E+11	1.14E-09	0.01%
618-2_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	4.53E+03	--	--	--	1.00E+10	4.53E-07	5.03%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.48E-11**	**--**	**--**	**9.00E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.48E-11**	**--**	**--**	**--**	**--**
618-2_Staging Pile	non-Rad	Arsenic	7440-38-2	µg/kg	3.06E+03	4.24E+07	7.22E-11	100.00%	5.00E+08	6.12E-06	57.30%
618-2_Staging Pile	non-Rad	Barium	7440-39-3	µg/kg	6.77E+04	--	--	--	1.67E+10	4.06E-06	38.00%
618-2_Staging Pile	non-Rad	Uranium	7440-61-1	µg/kg	5.02E+03	--	--	--	1.00E+10	5.02E-07	4.70%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**7.22E-11**	**--**	**--**	**1.07E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.22E-11**	**--**	**--**	**--**	**--**
618-3_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.80E+03	4.24E+07	6.60E-11	100.00%	5.00E+08	5.60E-06	54.10%
618-3_Shallow	non-Rad	Barium	7440-39-3	µg/kg	7.65E+04	--	--	--	1.67E+10	4.59E-06	44.34%
618-3_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	6.59E+02	--	--	--	6.67E+11	9.88E-10	0.01%
618-3_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	1.61E+03	--	--	--	1.00E+10	1.61E-07	1.56%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.60E-11**	**--**	**--**	**1.03E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.60E-11**	**--**	**--**	**--**	**--**
618-4_Overburden_2	non-Rad	Arsenic	7440-38-2	µg/kg	2.50E+03	4.24E+07	5.89E-11	100.00%	5.00E+08	5.00E-06	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.89E-11**	**--**	**--**	**5.00E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.89E-11**	**--**	**--**	**--**	**--**
618-4_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	3.20E+03	4.24E+07	7.54E-11	100.00%	5.00E+08	6.40E-06	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**7.54E-11**	**--**	**--**	**6.40E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.54E-11**	**--**	**--**	**--**	**--**
618-5_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	3.40E+03	4.24E+07	8.02E-11	97.95%	5.00E+08	6.80E-06	93.02%
618-5_Overburden	non-Rad	Cadmium	7440-43-9	µg/kg	1.70E+02	1.01E+08	1.68E-12	2.05%	3.33E+08	5.10E-07	6.98%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**8.18E-11**	**--**	**--**	**7.31E-06**	**--**

Table G-21. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
Total Non-Radiological and Radiological Risk Estimate						--	**8.18E-11**	--	--	--	--
618-5_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	4.30E+03	4.24E+07	1.01E-10	100.00%	5.00E+08	8.60E-06	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**1.01E-10**	--	--	**8.60E-06**	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.01E-10**	--	--	--	--
618-5_Staging Pile_4	non-Rad	Arsenic	7440-38-2	µg/kg	3.30E+03	4.24E+07	7.78E-11	99.37%	5.00E+08	6.60E-06	97.78%
618-5_Staging Pile_4	non-Rad	Cadmium	7440-43-9	µg/kg	5.00E+01	1.01E+08	4.93E-13	0.63%	3.33E+08	1.50E-07	2.22%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**7.83E-11**	--	--	**6.75E-06**	--
Total Non-Radiological and Radiological Risk Estimate						--	**7.83E-11**	--	--	--	--
618-5_Staging Pile_5	non-Rad	Arsenic	7440-38-2	µg/kg	2.70E+03	4.24E+07	6.37E-11	100.00%	5.00E+08	5.40E-06	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**6.37E-11**	--	--	**5.40E-06**	--
Total Non-Radiological and Radiological Risk Estimate						--	**6.37E-11**	--	--	--	--
618-7_Shallow_1	non-Rad	Aluminum	7429-90-5	µg/kg	5.25E+06	--	--	--	1.67E+11	3.15E-05	10.92%
618-7_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	1.89E+03	4.24E+07	4.46E-11	8.41%	5.00E+08	3.78E-06	1.31%
618-7_Shallow_1	non-Rad	Barium	7440-39-3	µg/kg	6.89E+04	--	--	--	1.67E+10	4.13E-06	1.43%
618-7_Shallow_1	non-Rad	Beryllium	7440-41-7	µg/kg	2.78E+02	7.60E+07	3.66E-12	0.69%	6.67E+08	4.17E-07	0.14%
618-7_Shallow_1	non-Rad	Cadmium	7440-43-9	µg/kg	6.52E+01	1.01E+08	6.44E-13	0.12%	3.33E+08	1.96E-07	0.07%
618-7_Shallow_1	non-Rad	Cobalt	7440-48-4	µg/kg	9.15E+03	2.03E+07	4.52E-10	85.15%	2.00E+08	4.57E-05	15.86%
618-7_Shallow_1	non-Rad	Manganese	7439-96-5	µg/kg	3.26E+05	--	--	--	1.67E+09	1.96E-04	67.82%
618-7_Shallow_1	non-Rad	Mercury	7439-97-6	µg/kg	4.43E+01	--	--	--	1.00E+09	4.43E-08	0.02%
618-7_Shallow_1	non-Rad	Nickel	7440-02-0	µg/kg	2.10E+04	7.01E+08	2.99E-11	5.64%	3.00E+09	6.99E-06	2.42%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**5.30E-10**	--	--	**2.88E-04**	--
Total Non-Radiological and Radiological Risk Estimate						--	**5.30E-10**	--	--	--	--
618-7_Shallow_2	non-Rad	Aluminum	7429-90-5	µg/kg	4.97E+06	--	--	--	1.67E+11	2.98E-05	9.68%
618-7_Shallow_2	non-Rad	Arsenic	7440-38-2	µg/kg	2.50E+03	4.24E+07	5.89E-11	10.97%	5.00E+08	5.00E-06	1.62%
618-7_Shallow_2	non-Rad	Barium	7440-39-3	µg/kg	7.38E+04	--	--	--	1.67E+10	4.43E-06	1.44%
618-7_Shallow_2	non-Rad	Beryllium	7440-41-7	µg/kg	4.40E+02	7.60E+07	5.79E-12	1.08%	6.67E+08	6.60E-07	0.21%
618-7_Shallow_2	non-Rad	Cobalt	7440-48-4	µg/kg	9.30E+03	2.03E+07	4.59E-10	85.38%	2.00E+08	4.65E-05	15.09%
618-7_Shallow_2	non-Rad	Manganese	7439-96-5	µg/kg	3.64E+05	--	--	--	1.67E+09	2.18E-04	70.89%
618-7_Shallow_2	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	1.00E+09	2.00E-08	0.01%
618-7_Shallow_2	non-Rad	Nickel	7440-02-0	µg/kg	9.70E+03	7.01E+08	1.38E-11	2.57%	3.00E+09	3.23E-06	1.05%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**5.37E-10**	--	--	**3.08E-04**	--
Total Non-Radiological and Radiological Risk Estimate						--	**5.37E-10**	--	--	--	--
618-7_Shallow_3	non-Rad	Aluminum	7429-90-5	µg/kg	6.74E+06	--	--	--	1.67E+11	4.04E-05	12.94%

Table G-21. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-7_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	2.80E+03	4.24E+07	6.60E-11	12.93%	5.00E+08	5.60E-06	1.79%
618-7_Shallow_3	non-Rad	Barium	7440-39-3	µg/kg	8.25E+04	--	--	--	1.67E+10	4.95E-06	1.58%
618-7_Shallow_3	non-Rad	Beryllium	7440-41-7	µg/kg	3.10E+02	7.60E+07	4.08E-12	0.80%	6.67E+08	4.65E-07	0.15%
618-7_Shallow_3	non-Rad	Cadmium	7440-43-9	µg/kg	1.90E+02	1.01E+08	1.88E-12	0.37%	3.33E+08	5.70E-07	0.18%
618-7_Shallow_3	non-Rad	Cobalt	7440-48-4	µg/kg	8.60E+03	2.03E+07	4.24E-10	83.09%	2.00E+08	4.30E-05	13.76%
618-7_Shallow_3	non-Rad	Manganese	7439-96-5	µg/kg	3.57E+05	--	--	--	1.67E+09	2.14E-04	68.52%
618-7_Shallow_3	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	1.00E+09	2.00E-08	0.01%
618-7_Shallow_3	non-Rad	Nickel	7440-02-0	µg/kg	1.01E+04	7.01E+08	1.44E-11	2.82%	3.00E+09	3.37E-06	1.08%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.11E-10**	**--**	**--**	**3.12E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.11E-10**	**--**	**--**	**--**	**--**
618-7_Shallow_4	non-Rad	Aluminum	7429-90-5	µg/kg	5.65E+06	--	--	--	1.67E+11	3.39E-05	13.18%
618-7_Shallow_4	non-Rad	Arsenic	7440-38-2	µg/kg	5.20E+03	4.24E+07	1.23E-10	25.79%	5.00E+08	1.04E-05	4.04%
618-7_Shallow_4	non-Rad	Barium	7440-39-3	µg/kg	5.79E+04	--	--	--	1.67E+10	3.47E-06	1.35%
618-7_Shallow_4	non-Rad	Beryllium	7440-41-7	µg/kg	2.20E+02	7.60E+07	2.90E-12	0.61%	6.67E+08	3.30E-07	0.13%
618-7_Shallow_4	non-Rad	Cadmium	7440-43-9	µg/kg	9.00E+01	1.01E+08	8.88E-13	0.19%	3.33E+08	2.70E-07	0.10%
618-7_Shallow_4	non-Rad	Cobalt	7440-48-4	µg/kg	6.70E+03	2.03E+07	3.31E-10	69.55%	2.00E+08	3.35E-05	13.03%
618-7_Shallow_4	non-Rad	Manganese	7439-96-5	µg/kg	2.85E+05	--	--	--	1.67E+09	1.71E-04	66.49%
618-7_Shallow_4	non-Rad	Nickel	7440-02-0	µg/kg	1.29E+04	7.01E+08	1.84E-11	3.87%	3.00E+09	4.30E-06	1.67%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.75E-10**	**--**	**--**	**2.57E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.75E-10**	**--**	**--**	**--**	**--**
618-7_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	7.61E+06	--	--	--	1.67E+11	4.56E-05	11.57%
618-7_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	6.70E+00	3.20E+08	2.09E-14	0.00%	--	--	--
618-7_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	4.20E+03	4.24E+07	9.90E-11	13.51%	5.00E+08	8.40E-06	2.13%
618-7_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	9.28E+04	--	--	--	1.67E+10	5.57E-06	1.41%
618-7_Shallow_Focused	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	8.80E+01	1.66E+09	5.31E-14	0.01%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	6.60E+01	1.66E+08	3.98E-13	0.05%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	5.20E+01	1.66E+09	3.14E-14	0.00%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	1.10E+01	1.66E+09	6.63E-15	0.00%	--	--	--
618-7_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	3.70E+02	7.60E+07	4.87E-12	0.66%	6.67E+08	5.55E-07	0.14%
618-7_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	4.70E+02	7.60E+10	6.18E-15	0.00%	--	--	--
618-7_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	6.20E+03	1.01E+08	6.12E-11	8.35%	3.33E+08	1.86E-05	4.71%
618-7_Shallow_Focused	non-Rad	Chrysene	218-01-9	µg/kg	6.90E+01	1.66E+10	4.16E-15	0.00%	--	--	--
618-7_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	1.10E+04	2.03E+07	5.43E-10	74.06%	2.00E+08	5.50E-05	13.94%
618-7_Shallow_Focused	non-Rad	Dibenz[a,h]anthracene	53-70-3	µg/kg	4.50E+01	1.66E+09	2.71E-14	0.00%	--	--	--
618-7_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	4.25E+05	--	--	--	1.67E+09	2.55E-04	64.63%
618-7_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	1.00E+09	2.00E-08	0.01%
618-7_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.72E+04	7.01E+08	2.45E-11	3.35%	3.00E+09	5.73E-06	1.45%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**7.33E-10**	**--**	**--**	**3.94E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.33E-10**	**--**	**--**	**--**	**--**

Table G-21. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-8_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	4.10E+03	4.24E+07	9.67E-11	100.00%	5.00E+08	8.20E-06	57.63%
618-8_Shallow	non-Rad	Barium	7440-39-3	µg/kg	9.76E+04	--	--	--	1.67E+10	5.85E-06	41.15%
618-8_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	8.46E+02	--	--	--	6.67E+11	1.27E-09	0.01%
618-8_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	1.72E+03	--	--	--	1.00E+10	1.72E-07	1.21%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**9.67E-11**	**--**	**--**	**1.42E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.67E-11**	**--**	**--**	**--**	**--**
618-9_Shallow_Focused	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	1.10E+02	3.94E+02	2.79E-07	17.68%	--	--	--
618-9_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	6.80E+02	--	--	--	1.90E+08	3.58E-06	0.06%
618-9_Shallow_Focused	non-Rad	Aldrin	309-00-2	µg/kg	3.90E+02	3.72E+07	1.05E-11	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	8.57E+06	--	--	--	1.67E+11	5.14E-05	0.79%
618-9_Shallow_Focused	non-Rad	Aroclor-1016	12674-11-2	µg/kg	1.90E+03	9.12E+09	2.08E-13	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1221	11104-28-2	µg/kg	1.90E+03	3.20E+08	5.94E-12	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1232	11141-16-5	µg/kg	1.90E+03	3.20E+08	5.94E-12	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1242	53469-21-9	µg/kg	1.90E+03	3.20E+08	5.94E-12	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.90E+03	3.20E+08	5.94E-12	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.90E+03	3.20E+08	1.22E-11	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.90E+03	3.20E+08	1.22E-11	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.16E+04	4.24E+07	2.73E-10	0.02%	5.00E+08	2.32E-05	0.36%
618-9_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	9.02E+04	--	--	--	1.67E+10	5.41E-06	0.08%
618-9_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	3.30E+02	7.60E+07	4.34E-12	0.00%	6.67E+08	4.95E-07	0.01%
618-9_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	5.20E+03	7.60E+10	6.84E-14	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Chlordane	57-74-9	µg/kg	6.90E+01	1.82E+09	3.78E-14	0.00%	2.33E+10	2.96E-09	0.00%
618-9_Shallow_Focused	non-Rad	Chloroform	67-66-3	µg/kg	9.00E+00	2.42E+02	3.72E-08	2.35%	9.97E+04	9.02E-05	1.39%
618-9_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	1.14E+04	2.03E+07	5.63E-10	0.04%	2.00E+08	5.70E-05	0.88%
618-9_Shallow_Focused	non-Rad	Heptachlor epoxide	1024-57-3	µg/kg	4.40E+01	7.01E+07	6.27E-13	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Hexachlorobutadiene	87-68-3	µg/kg	7.60E+02	8.29E+09	9.17E-14	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Hexachloroethane	67-72-1	µg/kg	1.70E+04	4.56E+10	3.73E-13	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	3.59E+05	--	--	--	1.67E+09	2.15E-04	3.31%
618-9_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	3.30E+02	--	--	--	1.00E+09	3.30E-07	0.01%
618-9_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	2.30E+03	1.12E+04	2.05E-07	12.97%	9.65E+05	2.38E-03	36.68%
618-9_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.06E+04	7.01E+08	1.51E-11	0.00%	3.00E+09	3.53E-06	0.05%
618-9_Shallow_Focused	non-Rad	Tetrachloroethene	127-18-4	µg/kg	9.20E+02	8.80E+02	1.05E-06	66.20%	2.56E+05	3.59E-03	55.24%
618-9_Shallow_Focused	non-Rad	Toluene	108-88-3	µg/kg	9.00E+00	--	--	--	4.77E+06	1.89E-06	0.03%
618-9_Shallow_Focused	non-Rad	Trichloroethene	79-01-6	µg/kg	2.00E+00	1.73E+02	1.16E-08	0.73%	2.76E+04	7.24E-05	1.11%
618-9_Shallow_Focused	non-Rad	Uranium	7440-61-1	µg/kg	3.10E+03	--	--	--	1.00E+10	3.10E-07	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.58E-06**	**--**	**--**	**6.50E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.58E-06**	**--**	**--**	**--**	**--**
628-4_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	3.37E+03	4.24E+07	7.96E-11	100.00%	5.00E+08	6.75E-06	100.00%
628-4_Overburden	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.09E+01	7.60E+10	8.02E-16	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**7.96E-11**	**--**	**--**	**6.75E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.96E-11**	**--**	**--**	**--**	**--**

Table G-21. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
628-4_Shallow	non-Rad	Aroclor-1242	53469-21-9	µg/kg	4.24E+01	3.20E+08	1.32E-13	0.14%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.12E+03	3.20E+08	3.49E-12	3.65%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.43E+02	3.20E+08	7.59E-13	0.79%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.78E+01	3.20E+08	1.18E-13	0.12%	--	--	--
628-4_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	3.86E+03	4.24E+07	9.11E-11	95.30%	5.00E+08	7.72E-06	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**9.56E-11**	**--**	**--**	**7.72E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.56E-11**	**--**	**--**	**--**	**--**
UPR-300-17_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.34E+06	--	--	--	1.67E+11	3.80E-05	1.63%
UPR-300-17_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.97E+03	3.20E+08	6.16E-12	0.02%	--	--	--
UPR-300-17_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.50E+02	3.20E+08	1.41E-12	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.13E+02	3.20E+08	3.54E-13	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.57E+03	4.24E+07	6.07E-11	0.17%	5.00E+08	5.14E-06	0.22%
UPR-300-17_Shallow	non-Rad	Barium	7440-39-3	µg/kg	8.10E+04	--	--	--	1.67E+10	4.86E-06	0.21%
UPR-300-17_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	5.92E+01	1.66E+09	3.57E-14	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	4.38E+01	1.66E+08	2.64E-13	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	3.27E+01	1.66E+09	1.97E-14	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	9.94E+00	1.66E+09	5.99E-15	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.40E+02	7.60E+07	3.16E-12	0.01%	6.67E+08	3.60E-07	0.02%
UPR-300-17_Shallow	non-Rad	Boron	7440-42-8	µg/kg	3.90E+03	--	--	--	6.67E+11	5.85E-09	0.00%
UPR-300-17_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	1.73E+02	1.01E+08	1.70E-12	0.00%	3.33E+08	5.17E-07	0.02%
UPR-300-17_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	3.93E+01	1.66E+10	2.37E-15	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.69E+03	2.03E+07	3.30E-10	0.90%	2.00E+08	3.34E-05	1.43%
UPR-300-17_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	5.85E+00	1.66E+09	3.53E-15	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	2.85E+05	--	--	--	1.67E+09	1.71E-04	7.32%
UPR-300-17_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	6.90E+01	--	--	--	1.00E+09	6.90E-08	0.00%
UPR-300-17_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	4.79E+01	1.36E+03	3.53E-08	96.70%	2.53E+04	1.89E-03	81.11%
UPR-300-17_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	5.64E+05	7.01E+08	8.04E-10	2.20%	3.00E+09	1.88E-04	8.04%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.65E-08**	**--**	**--**	**2.34E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.65E-08**	**--**	**--**	**--**	**--**
UPR-300-46_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.80E+06	--	--	--	1.67E+11	4.08E-05	2.42%
UPR-300-46_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	8.79E+02	3.20E+08	2.75E-12	0.01%	--	--	--
UPR-300-46_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.90E+02	3.20E+08	1.53E-12	0.01%	--	--	--
UPR-300-46_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	8.44E+01	3.20E+08	2.64E-13	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.85E+03	4.24E+07	6.71E-11	0.25%	5.00E+08	5.69E-06	0.34%
UPR-300-46_Shallow	non-Rad	Barium	7440-39-3	µg/kg	8.21E+04	--	--	--	1.67E+10	4.93E-06	0.29%
UPR-300-46_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	3.88E+00	1.66E+09	2.34E-15	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	3.40E+00	1.66E+08	2.05E-14	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	5.40E+00	1.66E+09	3.25E-15	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	2.78E+00	1.66E+09	1.68E-15	0.00%	--	--	--

Table G-21. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
UPR-300-46_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.22E+02	7.60E+07	2.92E-12	0.01%	6.67E+08	3.33E-07	0.02%
UPR-300-46_Shallow	non-Rad	Boron	7440-42-8	µg/kg	1.71E+03	--	--	--	6.67E+11	2.57E-09	0.00%
UPR-300-46_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	9.47E+01	1.01E+08	9.35E-13	0.00%	3.33E+08	2.84E-07	0.02%
UPR-300-46_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	5.58E+00	1.66E+10	3.37E-16	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.36E+03	2.03E+07	3.14E-10	1.17%	2.00E+08	3.18E-05	1.88%
UPR-300-46_Shallow	non-Rad	Dibenz[a,h]anthracene	53-70-3	µg/kg	1.25E+00	1.66E+09	7.54E-16	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	7.55E+00	1.66E+09	4.55E-15	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.11E+05	--	--	--	1.67E+09	1.87E-04	11.06%
UPR-300-46_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	2.92E+01	--	--	--	1.00E+09	2.92E-08	0.00%
UPR-300-46_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	3.57E+01	1.36E+03	2.64E-08	98.50%	2.53E+04	1.41E-03	83.79%
UPR-300-46_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	9.23E+03	7.01E+08	1.32E-11	0.05%	3.00E+09	3.08E-06	0.18%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.68E-08**	**--**	**--**	**1.69E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.68E-08**	**--**	**--**	**--**	**--**

Table G-22. Summary of Residential Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Shallow Zone Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
300 ASH PITS_Shallow	9.22E-06	Arsenic (9.12e-06)	1.76E-06	--	1.10E-05	2.53E-01	--
300 VTS_Shallow	0.00E+00	--	6.59E-07	--	6.59E-07	0.00E+00	--
300-10_Shallow_Focused	2.03E-05	Arsenic (2.02e-05)	6.31E-06	--	2.66E-05	5.63E-01	--
300-109_Shallow_Focused	3.97E-06	Arsenic (3.63e-06)	3.61E-06	--	7.58E-06	9.90E-01	--
300-18_Shallow	3.30E-06	Arsenic (3.30e-06)	1.25E-06	--	4.55E-06	1.01E-01	--
300-223_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-23_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-259_Shallow	3.14E-06	Arsenic (3.14e-06)	3.69E-06	--	6.84E-06	9.43E-01	--
300-260_Shallow_Focused	4.74E-06	Arsenic (4.74e-06)	9.50E-06	--	1.42E-05	1.16E+00	--
300-272_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-275_Shallow_1	3.33E-06	Arsenic (3.32e-06)	2.67E-05	--	3.00E-05	9.58E-01	--
300-275_Shallow_2	4.14E-06	Arsenic (4.14e-06)	4.74E-06	--	8.88E-06	1.01E+00	--
300-33, 300-41, 300-256_Shallow	4.57E-06	Arsenic (3.96e-06)	7.49E-06	--	1.21E-05	1.11E+00	--
300-33, 300-41, 300-256_Shallow_Focused	6.39E-06	Arsenic (4.86e-06)	6.29E-06	--	1.27E-05	1.22E+00	--
300-37_Shallow_Focused	6.60E-06	Aroclor-1260 (6.40e-06)	0.00E+00	--	6.60E-06	6.25E-02	--
300-44_Shallow_Focused	2.53E-05	Arsenic (2.53e-05)	5.43E-07	--	2.59E-05	1.76E+00	--
300-45_Shallow_Focused	1.76E-07	--	3.11E-06	--	3.29E-06	1.81E-04	--
300-49_Shallow	6.65E-06	Arsenic (6.65e-06)	7.87E-06	--	1.45E-05	1.33E+00	--
300-50_Shallow	9.86E-06	Arsenic (9.60e-06)	2.69E-05	--	3.67E-05	1.44E+00	--
300-8_Shallow	0.00E+00	--	2.11E-06	--	2.11E-06	3.59E-03	--
316-1_Shallow_1	3.45E-05	Aroclor-1248 (6.00e-06) Arsenic (2.85e-05)	5.95E-05	--	9.40E-05	7.92E-01	--
316-1_Shallow_3	7.94E-06	Arsenic (7.71e-06)	1.55E-04	--	1.63E-04	2.05E+00	--
316-1_Shallow_4	1.24E-07	--	4.89E-05	--	4.90E-05	3.88E-02	--
316-2_Shallow_1	0.00E+00	--	2.71E-04	Uranium-238 (1.27e-04)	2.71E-04	0.00E+00	--
316-2_Shallow_2	1.70E-06	Aroclor-1248 (1.39e-06)	3.57E-04	Uranium-238 (1.78e-04)	3.59E-04	2.63E-02	--
316-2_Shallow_3	1.20E-05	Arsenic (1.20e-05)	5.08E-05	--	6.28E-05	3.34E-01	--
316-5_Shallow_1	4.63E-06	Arsenic (4.60e-06)	3.32E-04	Uranium-235 (1.14e-04) Uranium-238 (1.65e-04)	3.37E-04	1.28E-01	--
316-5_Shallow_2	4.80E-06	Arsenic (4.77e-06)	2.23E-04	Uranium-238 (1.25e-04)	2.28E-04	1.48E-01	--
316-5_Shallow_Focused	6.81E-06	Arsenic (6.45e-06)	1.72E-04	--	1.79E-04	2.23E-01	--
331 LSLDF_Shallow_Focused	5.54E-06	Aroclor-1254 (1.70e-06) Arsenic (3.60e-06)	1.28E-06	--	6.82E-06	1.70E+00	--
600-243_Shallow	9.76E-06	Arsenic (9.24e-06)	0.00E+00	--	9.76E-06	8.35E-01	--
600-259_Shallow	0.00E+00	--	1.55E-06	--	1.55E-06	0.00E+00	--
600-259_Shallow_Focused	0.00E+00	--	8.64E-07	--	8.64E-07	0.00E+00	--
600-47_Shallow	3.45E-06	Arsenic (3.45e-06)	3.95E-06	--	7.40E-06	1.05E-01	--
618-1_Shallow	4.05E-06	Arsenic (3.42e-06)	4.25E-06	--	8.30E-06	1.20E+00	--
618-1_Shallow_Focused	1.13E-05	Aroclor-1254 (1.96e-06) Arsenic (9.13e-06)	2.98E-05	--	4.11E-05	2.16E+00	--
618-12_Shallow	1.28E-05	Arsenic (1.28e-05)	2.27E-05	--	3.56E-05	3.57E-01	--
618-13_Shallow	5.25E-06	Arsenic (5.25e-06)	5.46E-06	--	1.07E-05	1.06E+00	--

Table G-22. Summary of Residential Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Shallow Zone Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
618-13_Shallow_Focused	5.09E-06	Arsenic (5.08e-06)	2.63E-06	--	7.72E-06	9.41E-01	--
618-2_Shallow	2.85E-06	Arsenic (2.85e-06)	6.23E-05	--	6.51E-05	1.05E-01	--
618-3_Shallow	4.20E-06	Arsenic (4.20e-06)	1.89E-06	--	6.09E-06	1.30E-01	--
618-3_Shallow_Focused	0.00E+00	--	2.36E-04	Uranium-238 (1.47e-04)	2.36E-04	0.00E+00	--
618-4_Shallow	4.80E-06	Arsenic (4.80e-06)	8.11E-06	--	1.29E-05	1.33E-01	--
618-5_Shallow	6.45E-06	Arsenic (6.45e-06)	2.65E-06	--	9.10E-06	1.79E-01	--
618-7_Shallow_1	2.84E-06	Arsenic (2.84e-06)	1.31E-05	--	1.59E-05	1.25E+00	--
618-7_Shallow_2	3.75E-06	Arsenic (3.75e-06)	1.41E-06	--	5.16E-06	1.28E+00	--
618-7_Shallow_3	4.20E-06	Arsenic (4.20e-06)	3.08E-06	--	7.28E-06	1.23E+00	--
618-7_Shallow_4	7.80E-06	Arsenic (7.80e-06)	1.93E-06	--	9.73E-06	1.14E+00	--
618-7_Shallow_Focused	6.95E-06	Arsenic (6.30e-06)	2.63E-05	--	3.32E-05	1.70E+00	--
618-8_Shallow	6.15E-06	Arsenic (6.15e-06)	2.25E-06	--	8.40E-06	1.86E-01	--
618-9_Shallow_Focused	5.63E-05	Aldrin (6.63e-06) Aroclor-1221 (3.80e-06) Aroclor-1232 (3.80e-06) Aroclor-1242 (3.80e-06) Aroclor-1248 (3.80e-06) Aroclor-1254 (7.80e-06) Aroclor-1260 (7.80e-06) Arsenic (1.74e-05)	5.99E-06	--	6.23E-05	4.95E+00	Aroclor-1254 (2.44e00)
628-4_Shallow	8.67E-06	Aroclor-1248 (2.23e-06) Arsenic (5.80e-06)	3.48E-06	--	1.21E-05	3.13E-01	--
UPR-300-17_Shallow	9.33E-06	Aroclor-1248 (3.94e-06) Arsenic (3.86e-06)	1.77E-05	--	2.70E-05	1.63E+00	--
UPR-300-46_Shallow	7.22E-06	Aroclor-1248 (1.76e-06) Arsenic (4.27e-06)	7.61E-06	--	1.48E-05	1.34E+00	--

Table G-23. Summary of MTCA Method B Inhalation Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Shallow Zone Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Non-Cancer Hazard Index	Hazard Drivers
300 ASH PITS_Shallow	1.43E-10	--	1.21E-05	--
300 VTS_Shallow	0.00E+00	--	0.00E+00	--
300-10_Shallow_Focused	3.18E-10	--	2.70E-05	--
300-109_Shallow_Focused	3.89E-10	--	2.44E-04	--
300-18_Shallow	6.08E-11	--	9.29E-06	--
300-223_Shallow_Focused	0.00E+00	--	0.00E+00	--
300-23_Shallow_Focused	0.00E+00	--	0.00E+00	--
300-259_Shallow	3.55E-10	--	2.69E-04	--
300-260_Shallow_Focused	4.60E-10	--	3.01E-04	--
300-272_Shallow_Focused	0.00E+00	--	0.00E+00	--
300-275_Shallow_1	3.61E-10	--	2.42E-04	--
300-275_Shallow_2	3.78E-10	--	2.57E-04	--
300-33, 300-41, 300-256_Shallow	6.49E-10	--	2.75E-04	--
300-33, 300-41, 300-256_Shallow_Focused	5.69E-10	--	2.32E-04	--
300-37_Shallow_Focused	1.03E-11	--	0.00E+00	--
300-44_Shallow_Focused	8.22E-10	--	3.05E-04	--
300-45_Shallow_Focused	2.73E-13	--	0.00E+00	--
300-49_Shallow	5.84E-10	--	3.23E-04	--
300-50_Shallow	6.27E-10	--	3.02E-04	--
300-8_Shallow	7.55E-12	--	8.61E-07	--
316-1_Shallow_1	4.58E-10	--	3.80E-05	--
316-1_Shallow_3	7.45E-10	--	4.06E-04	--
316-1_Shallow_4	1.94E-13	--	0.00E+00	--
316-2_Shallow_1	0.00E+00	--	0.00E+00	--
316-2_Shallow_2	2.65E-12	--	0.00E+00	--
316-2_Shallow_3	1.89E-10	--	1.60E-05	--
316-5_Shallow_1	7.24E-11	--	6.14E-06	--
316-5_Shallow_2	3.56E-07	--	1.15E-05	--
316-5_Shallow_Focused	1.02E-10	--	8.60E-06	--
331 LSLDF_Shallow_Focused	1.49E-09	--	3.23E-04	--
600-243_Shallow	1.51E-07	--	8.25E-03	--

Table G-23. Summary of MTCA Method B Inhalation Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Shallow Zone Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Non-Cancer Hazard Index	Hazard Drivers
600-259_Shallow	0.00E+00	--	0.00E+00	--
600-259_Shallow_Focused	0.00E+00	--	0.00E+00	--
600-47_Shallow	6.17E-11	--	9.64E-06	--
618-1_Shallow	3.83E-10	--	2.63E-04	--
618-1_Shallow_Focused	6.03E-10	--	3.84E-04	--
618-12_Shallow	2.02E-10	--	1.71E-05	--
618-13_Shallow	8.70E-10	--	2.97E-04	--
618-13_Shallow_Focused	8.96E-10	--	2.40E-04	--
618-2_Shallow	4.48E-11	--	9.00E-06	--
618-3_Shallow	6.60E-11	--	1.03E-05	--
618-3_Shallow_Focused	0.00E+00	--	0.00E+00	--
618-4_Shallow	7.54E-11	--	6.40E-06	--
618-5_Shallow	1.01E-10	--	8.60E-06	--
618-7_Shallow_1	5.30E-10	--	2.88E-04	--
618-7_Shallow_2	5.37E-10	--	3.08E-04	--
618-7_Shallow_3	5.11E-10	--	3.12E-04	--
618-7_Shallow_4	4.75E-10	--	2.57E-04	--
618-7_Shallow_Focused	7.33E-10	--	3.94E-04	--
618-8_Shallow	9.67E-11	--	1.42E-05	--
618-9_Shallow_Focused	1.58E-06	Tetrachloroethene (1.05e-06)	6.50E-03	--
628-4_Shallow	9.56E-11	--	7.72E-06	--
UPR-300-17_Shallow	3.65E-08	--	2.34E-03	--
UPR-300-46_Shallow	2.68E-08	--	1.69E-03	--

Table G-24. Summary of Residential Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Overburden Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
300-272_Overburden_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-44_Overburden_Focused	1.36E-05	Arsenic (1.36e-05)	6.39E-07	--	1.43E-05	3.79E-01	--
300-49_Overburden	1.12E-05	Aroclor-1254 (6.02e-06) Arsenic (4.94e-06)	3.01E-06	--	1.43E-05	3.12E+00	Aroclor-1254 (1.88e00)
300-50_Overburden	1.09E-05	Arsenic (1.03e-05)	1.96E-05	--	3.05E-05	1.32E+00	--
316-1_Overburden	0.00E+00	--	5.38E-05	--	5.38E-05	0.00E+00	--
600-259_Overburden	0.00E+00	--	7.73E-07	--	7.73E-07	0.00E+00	--
618-2_Overburden	4.05E-06	Arsenic (4.05e-06)	2.90E-06	--	6.95E-06	1.25E-01	--
618-4_Overburden_2	3.75E-06	Arsenic (3.75e-06)	3.59E-06	--	7.34E-06	1.04E-01	--
618-4_Overburden_3	0.00E+00	--	1.33E-06	--	1.33E-06	0.00E+00	--
618-4_Overburden_4	0.00E+00	--	2.45E-06	--	2.45E-06	0.00E+00	--
618-5_Overburden	5.10E-06	Arsenic (5.10e-06)	1.16E-05	--	1.67E-05	1.46E-01	--
628-4_Overburden	5.06E-06	Arsenic (5.06e-06)	2.84E-06	--	7.90E-06	1.41E-01	--

Table G-25. Summary of MTCA Method B Inhalation Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Overburden Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Non-Cancer Hazard Index	Hazard Drivers
300-272_Overburden_Focused	0.00E+00	--	0.00E+00	--
300-44_Overburden_Focused	2.15E-10	--	1.82E-05	--
300-49_Overburden	2.00E-08	--	2.45E-03	--
300-50_Overburden	6.58E-10	--	3.04E-04	--
316-1_Overburden	0.00E+00	--	0.00E+00	--
600-259_Overburden	0.00E+00	--	0.00E+00	--
618-2_Overburden	6.37E-11	--	9.99E-06	--
618-4_Overburden_2	5.89E-11	--	5.00E-06	--
618-4_Overburden_3	0.00E+00	--	0.00E+00	--
618-4_Overburden_4	0.00E+00	--	0.00E+00	--
618-5_Overburden	8.18E-11	--	7.31E-06	--
628-4_Overburden	7.96E-11	--	6.75E-06	--

Table G-26. Summary of Residential Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Staging Pile Area Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
300-109_Staging Pile Area_Focused	4.03E-06	Arsenic (3.87e-06)	6.19E-06	--	1.02E-05	9.37E-01	--
618-2_Staging Pile	4.59E-06	Arsenic (4.59e-06)	1.39E-05	--	1.85E-05	1.53E-01	--
618-5_Staging Pile_4	4.95E-06	Arsenic (4.95e-06)	2.96E-06	--	7.91E-06	1.39E-01	--
618-5_Staging Pile_5	4.05E-06	Arsenic (4.05e-06)	5.34E-06	--	9.39E-06	1.13E-01	--

Table G-27. Summary of MTCA Method B Inhalation Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Staging Pile Area Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Non-Cancer Hazard Index	Hazard Drivers
300-109_Staging Pile Area_Focused	3.70E-10	--	2.49E-04	--
618-2_Staging Pile	7.22E-11	--	1.07E-05	--
618-5_Staging Pile_4	7.83E-11	--	6.75E-06	--
618-5_Staging Pile_5	6.37E-11	--	5.40E-06	--

Table G-28. Summary of Residential Scenario Risk Estimates and Primary Contributors to Risk For Deep Zone Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Radiological Cancer Risk	Radiological Risk Drivers
618-1_Deep	1.11E-04	--
618-1_Deep_Focused	3.49E-04	Cesium-137 (1.48e-04) Uranium-238 (1.21e-04)
618-2_Deep	1.02E-03	Total beta radiostrontium (5.11e-04) Uranium-233/234 (1.21e-04) Uranium-238 (3.06e-04)
618-2_Deep_Focused	5.38E-04	Total beta radiostrontium (3.17e-04)
618-4_Deep	6.17E-05	--
618-4_Deep_Focused	2.13E-05	--
618-5_Deep	2.57E-05	--
618-5_Deep_Focused	3.36E-05	--

Table G-29. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300 ASH PITS_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	5.20E+01	5.00E+02	1.04E-07	98.59%	--	--	--
300 ASH PITS_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	9.60E+01	7.14E+04	1.34E-09	1.27%	1.60E+06	6.00E-05	92.66%
300 ASH PITS_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	7.60E+01	5.26E+05	1.44E-10	0.14%	1.60E+07	4.75E-06	7.34%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.05E-07**	**--**	**--**	**6.48E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.05E-07**	**--**	**--**	**--**	**--**
300-10_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.35E+04	6.67E+02	2.02E-05	99.98%	2.40E+04	5.63E-01	99.98%
300-10_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.00E+02	7.14E+04	2.80E-09	0.01%	1.60E+06	1.25E-04	0.02%
300-10_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	2.30E+02	5.26E+05	4.37E-10	0.00%	1.60E+07	1.44E-05	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.03E-05**	**--**	**--**	**5.63E-01**	**--**
300-10_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.37E+00	5.40E+01	2.54E-06	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**2.54E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.28E-05**	**--**	**--**	**--**	**--**
300-109_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.22E+02	5.00E+02	2.44E-07	70.83%	1.60E+03	7.63E-02	98.81%
300-109_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.97E+01	5.00E+02	7.94E-08	23.05%	--	--	--
300-109_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	1.24E+00	1.37E+02	9.05E-09	2.63%	--	--	--
300-109_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	2.30E+00	1.37E+03	1.68E-09	0.49%	--	--	--
300-109_Shallow_Focused	non-Rad	Chrysene	218-01-9	µg/kg	1.77E+00	1.37E+04	1.29E-10	0.04%	--	--	--
300-109_Shallow_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	1.40E+01	1.37E+03	1.02E-08	2.97%	--	--	--
300-109_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	2.20E+01	--	--	--	2.40E+04	9.17E-04	1.19%
300-109_Shallow_Focused	non-Rad	Pyrene	129-00-0	µg/kg	1.56E+00	--	--	--	2.40E+06	6.50E-07	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.44E-07**	**--**	**--**	**7.72E-02**	**--**
300-109_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.40E+00	1.33E+02	1.05E-06	29.17%	--	--	--
300-109_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.38E+00	5.40E+01	2.56E-06	70.83%	--	--	--
Total Radiological Risk Estimate						**--**	**3.61E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.95E-06**	**--**	**--**	**--**	**--**
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.68E+01	5.00E+02	7.36E-08	45.92%	1.60E+03	2.30E-02	99.85%
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.94E+01	5.00E+02	3.88E-08	24.21%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	2.08E+00	1.37E+03	1.52E-09	0.95%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	3.30E+00	1.37E+02	2.41E-08	15.03%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	1.31E+00	1.37E+03	9.56E-10	0.60%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Fluoranthene	206-44-0	µg/kg	5.14E+00	--	--	--	3.20E+06	1.61E-06	0.01%
300-109_Staging Pile Area_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	2.92E+01	1.37E+03	2.13E-08	13.30%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Pyrene	129-00-0	µg/kg	6.96E+00	--	--	--	2.40E+06	2.90E-06	0.01%
300-109_Staging Pile Area_Focused	non-Rad	Tin	7440-31-5	µg/kg	1.45E+03	--	--	--	4.80E+07	3.02E-05	0.13%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.60E-07**	**--**	**--**	**2.30E-02**	**--**
300-109_Staging Pile Area_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	2.54E+00	1.33E+02	1.91E-06	30.86%	--	--	--
300-109_Staging Pile Area_Focused	Rad	Uranium-238	U-238	pCi/g	2.31E+00	5.40E+01	4.28E-06	69.14%	--	--	--
Total Radiological Risk Estimate						**--**	**6.19E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.35E-06**	**--**	**--**	**--**	**--**

Table G-29. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-223_Shallow_Focused	non-Rad	Total petroleum hydrocarbons - diesel range	TPHDIESEL	µg/kg	1.20E+05	--	--	--	--	--	--
300-223_Shallow_Focused	non-Rad	Total petroleum hydrocarbons - motor oil (high boiling)	TPH/OILH	µg/kg	2.30E+05	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
300-23_Shallow_Focused	non-Rad	Total petroleum hydrocarbons - motor oil (high boiling)	TPH/OILH	µg/kg	5.20E+04	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
300-259_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.22E+02	--	--	--	3.20E+04	1.01E-02	33.52%
300-259_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.80E+05	--	--	--	2.40E+07	2.00E-02	66.48%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**3.01E-02**	**--**
300-259_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.59E+00	1.33E+02	1.20E-06	32.44%	--	--	--
300-259_Shallow	Rad	Uranium-238	U-238	pCi/g	1.35E+00	5.40E+01	2.50E-06	67.56%	--	--	--
Total Radiological Risk Estimate						**--**	**3.69E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.69E-06**	**--**	**--**	**--**	**--**
300-260_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	9.22E+02	--	--	--	3.20E+04	2.88E-02	50.26%
300-260_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	8.36E+03	--	--	--	1.60E+07	5.23E-04	0.91%
300-260_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	7.33E+04	--	--	--	3.20E+06	2.29E-02	39.96%
300-260_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	1.83E+04	--	--	--	--	--	--
300-260_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	5.37E+02	--	--	--	4.00E+05	1.34E-03	2.34%
300-260_Shallow_Focused	non-Rad	Silver	7440-22-4	µg/kg	2.06E+02	--	--	--	4.00E+05	5.15E-04	0.90%
300-260_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	7.74E+04	--	--	--	2.40E+07	3.23E-03	5.63%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**5.73E-02**	**--**
300-260_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	2.51E-01	1.63E+01	1.54E-06	16.20%	--	--	--
300-260_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.30E+00	5.40E+01	7.96E-06	83.80%	--	--	--
Total Radiological Risk Estimate						**--**	**9.50E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.50E-06**	**--**	**--**	**--**	**--**
300-272_Overburden_Focused	non-Rad	Total petroleum hydrocarbons - diesel range	TPHDIESEL	µg/kg	1.31E+04	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
300-272_Shallow_Focused	non-Rad	Total petroleum hydrocarbons - diesel range	TPHDIESEL	µg/kg	4.31E+04	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
300-275_Shallow_1	non-Rad	Acenaphthene	83-32-9	µg/kg	9.60E+02	--	--	--	4.80E+06	2.00E-04	0.85%
300-275_Shallow_1	non-Rad	Antimony	7440-36-0	µg/kg	2.60E+02	--	--	--	3.20E+04	8.13E-03	34.39%
300-275_Shallow_1	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	1.30E+00	1.37E+02	9.49E-09	86.15%	--	--	--

Table G-29. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-275_Shallow_1	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	1.87E+00	1.37E+03	1.37E-09	12.39%	--	--	--
300-275_Shallow_1	non-Rad	Chrysene	218-01-9	µg/kg	2.20E+00	1.37E+04	1.61E-10	1.46%	--	--	--
300-275_Shallow_1	non-Rad	Copper	7440-50-8	µg/kg	4.29E+04	--	--	--	3.20E+06	1.34E-02	56.77%
300-275_Shallow_1	non-Rad	Fluoranthene	206-44-0	µg/kg	2.30E+03	--	--	--	3.20E+06	7.19E-04	3.04%
300-275_Shallow_1	non-Rad	Fluorene	86-73-7	µg/kg	8.11E+01	--	--	--	3.20E+06	2.54E-05	0.11%
300-275_Shallow_1	non-Rad	Mercury	7439-97-6	µg/kg	1.67E+01	--	--	--	2.40E+04	6.94E-04	2.94%
300-275_Shallow_1	non-Rad	Strontium	7440-24-6	µg/kg	2.02E+04	--	--	--	4.80E+07	4.21E-04	1.78%
300-275_Shallow_1	non-Rad	Tin	7440-31-5	µg/kg	1.48E+03	--	--	--	4.80E+07	3.09E-05	0.13%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.10E-08**	**--**	**--**	**2.36E-02**	**--**
300-275_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	7.72E+00	1.33E+02	5.80E-06	22.62%	--	--	--
300-275_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.00E+00	1.63E+01	6.13E-06	23.92%	--	--	--
300-275_Shallow_1	Rad	Uranium-238	U-238	pCi/g	7.41E+00	5.40E+01	1.37E-05	53.47%	--	--	--
Total Radiological Risk Estimate						**--**	**2.57E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.57E-05**	**--**	**--**	**--**	**--**
300-275_Shallow_2	non-Rad	Acenaphthene	83-32-9	µg/kg	3.60E+00	--	--	--	4.80E+06	7.50E-07	0.04%
300-275_Shallow_2	non-Rad	Fluoranthene	206-44-0	µg/kg	5.60E+01	--	--	--	3.20E+06	1.75E-05	0.99%
300-275_Shallow_2	non-Rad	Fluorene	86-73-7	µg/kg	2.60E+00	--	--	--	3.20E+06	8.13E-07	0.05%
300-275_Shallow_2	non-Rad	Mercury	7439-97-6	µg/kg	2.80E+01	--	--	--	2.40E+04	1.17E-03	65.77%
300-275_Shallow_2	non-Rad	Strontium	7440-24-6	µg/kg	2.71E+04	--	--	--	4.80E+07	5.64E-04	31.81%
300-275_Shallow_2	non-Rad	Tin	7440-31-5	µg/kg	1.15E+03	--	--	--	4.80E+07	2.39E-05	1.35%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**1.77E-03**	**--**
300-275_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.31E+00	1.33E+02	9.82E-07	20.71%	--	--	--
300-275_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	2.37E-01	1.63E+01	1.45E-06	30.67%	--	--	--
300-275_Shallow_2	Rad	Uranium-238	U-238	pCi/g	1.24E+00	5.40E+01	2.30E-06	48.62%	--	--	--
Total Radiological Risk Estimate						**--**	**4.74E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.74E-06**	**--**	**--**	**--**	**--**
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1016	12674-11-2	µg/kg	1.03E+01	1.43E+04	7.21E-10	0.12%	5.60E+03	1.84E-03	2.07%
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1242	53469-21-9	µg/kg	1.64E+01	5.00E+02	3.28E-08	5.31%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.90E+02	5.00E+02	3.80E-07	61.55%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	8.44E+01	5.00E+02	1.69E-07	27.35%	1.60E+03	5.28E-02	59.48%
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.73E+01	5.00E+02	3.46E-08	5.60%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	2.28E+02	5.26E+05	4.33E-10	0.07%	1.60E+07	1.43E-05	0.02%
300-33, 300-41, 300-256_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	1.60E+01	--	--	--	2.40E+04	6.67E-04	0.75%
300-33, 300-41, 300-256_Shallow	non-Rad	Methylene chloride	75-09-2	µg/kg	2.91E+00	1.33E+05	2.19E-11	0.00%	4.80E+06	6.07E-07	0.00%
300-33, 300-41, 300-256_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	4.86E+02	--	--	--	4.00E+05	1.21E-03	1.37%
300-33, 300-41, 300-256_Shallow	non-Rad	Silver	7440-22-4	µg/kg	7.82E+02	--	--	--	4.00E+05	1.96E-03	2.20%
300-33, 300-41, 300-256_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	7.26E+03	--	--	--	2.40E+05	3.03E-02	34.10%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.17E-07**	**--**	**--**	**8.87E-02**	**--**
300-33, 300-41, 300-256_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	2.14E+00	1.33E+02	1.61E-06	21.45%	--	--	--
300-33, 300-41, 300-256_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	3.38E-01	1.63E+01	2.07E-06	27.68%	--	--	--
300-33, 300-41, 300-256_Shallow	Rad	Uranium-238	U-238	pCi/g	2.06E+00	5.40E+01	3.81E-06	50.87%	--	--	--
Total Radiological Risk Estimate						**--**	**7.49E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.11E-06**	**--**	**--**	**--**	**--**

Table G-29. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.30E+02	5.00E+02	6.60E-07	43.02%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.85E+02	5.00E+02	7.70E-07	50.20%	1.60E+03	2.41E-01	100.00%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.20E+01	5.00E+02	1.04E-07	6.78%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	2.21E+00	1.33E+05	1.66E-11	0.00%	4.80E+06	4.60E-07	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.53E-06**	**--**	**--**	**2.41E-01**	**--**
300-33, 300-41, 300-256_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	3.02E+00	1.33E+02	2.27E-06	36.10%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	2.17E+00	5.40E+01	4.02E-06	63.90%	--	--	--
Total Radiological Risk Estimate						**--**	**6.29E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.82E-06**	**--**	**--**	**--**	**--**
300-37_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.00E+02	5.00E+02	2.00E-07	3.03%	1.60E+03	6.25E-02	100.00%
300-37_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.20E+03	5.00E+02	6.40E-06	96.97%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.60E-06**	**--**	**--**	**6.25E-02**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.60E-06**	**--**	**--**	**--**	**--**
300-44_Overburden_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	9.10E+03	6.67E+02	1.36E-05	100.00%	2.40E+04	3.79E-01	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.36E-05**	**--**	**--**	**3.79E-01**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.36E-05**	**--**	**--**	**--**	**--**
300-44_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	4.10E+03	--	--	--	3.20E+04	1.28E-01	15.39%
300-44_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.69E+04	6.67E+02	2.53E-05	100.00%	2.40E+04	7.04E-01	84.61%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.53E-05**	**--**	**--**	**8.32E-01**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.53E-05**	**--**	**--**	**--**	**--**
300-45_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	8.60E+01	5.00E+02	1.72E-07	97.69%	--	--	--
300-45_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.90E+02	7.14E+04	4.06E-09	2.31%	1.60E+06	1.81E-04	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.76E-07**	**--**	**--**	**1.81E-04**	**--**
300-45_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.20E+00	5.40E+01	2.22E-06	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**2.22E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.40E-06**	**--**	**--**	**--**	**--**
300-49_Overburden	non-Rad	1,2,4-Trichlorobenzene	120-82-1	µg/kg	3.05E+01	3.45E+04	8.85E-10	0.01%	8.00E+05	3.82E-05	0.00%
300-49_Overburden	non-Rad	1,4-Dichlorobenzene	106-46-7	µg/kg	2.88E+01	1.85E+05	1.55E-10	0.00%	5.60E+06	5.14E-06	0.00%
300-49_Overburden	non-Rad	2,4-Dinitrotoluene	121-14-2	µg/kg	1.89E+01	3.23E+03	5.87E-09	0.09%	1.60E+05	1.18E-04	0.01%
300-49_Overburden	non-Rad	2-Chlorophenol	95-57-8	µg/kg	5.13E+01	--	--	--	4.00E+05	1.28E-04	0.01%
300-49_Overburden	non-Rad	4-Chloro-3-methylphenol	59-50-7	µg/kg	4.60E+01	--	--	--	8.00E+06	5.74E-06	0.00%
300-49_Overburden	non-Rad	Acenaphthene	83-32-9	µg/kg	3.07E+01	--	--	--	4.80E+06	6.40E-06	0.00%
300-49_Overburden	non-Rad	Antimony	7440-36-0	µg/kg	2.32E+02	--	--	--	3.20E+04	7.25E-03	0.35%
300-49_Overburden	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.01E+03	5.00E+02	6.02E-06	95.39%	1.60E+03	1.88E+00	91.14%
300-49_Overburden	non-Rad	Copper	7440-50-8	µg/kg	5.36E+05	--	--	--	3.20E+06	1.68E-01	8.12%

Table G-29. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-49_Overburden	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	5.16E+01	--	--	--	8.00E+06	6.45E-06	0.00%
300-49_Overburden	non-Rad	Lead	7439-92-1	µg/kg	3.70E+04	--	--	--	--	--	--
300-49_Overburden	non-Rad	n-Nitrosodi-n-dipropylamine	621-64-7	µg/kg	3.97E+01	1.43E+02	2.78E-07	4.41%	--	--	--
300-49_Overburden	non-Rad	Pentachlorophenol	87-86-5	µg/kg	4.98E+01	8.33E+03	5.98E-09	0.09%	2.40E+06	2.08E-05	0.00%
300-49_Overburden	non-Rad	Phenol	108-95-2	µg/kg	5.00E+01	--	--	--	2.40E+07	2.08E-06	0.00%
300-49_Overburden	non-Rad	Pyrene	129-00-0	µg/kg	4.01E+01	--	--	--	2.40E+06	1.67E-05	0.00%
300-49_Overburden	non-Rad	Silver	7440-22-4	µg/kg	7.03E+02	--	--	--	4.00E+05	1.76E-03	0.09%
300-49_Overburden	non-Rad	Zinc	7440-66-6	µg/kg	1.42E+05	--	--	--	2.40E+07	5.92E-03	0.29%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.31E-06**	**--**	**--**	**2.06E+00**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.31E-06**	**--**	**--**	**--**	**--**
300-49_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	1.76E+02	--	--	--	3.20E+04	5.50E-03	77.99%
300-49_Shallow	non-Rad	Silver	7440-22-4	µg/kg	6.21E+02	--	--	--	4.00E+05	1.55E-03	22.01%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**7.05E-03**	**--**
300-49_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.32E+00	1.33E+02	9.90E-07	22.33%	--	--	--
300-49_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.40E-01	1.63E+01	1.47E-06	33.21%	--	--	--
300-49_Shallow	Rad	Uranium-238	U-238	pCi/g	1.06E+00	5.40E+01	1.97E-06	44.46%	--	--	--
Total Radiological Risk Estimate						**--**	**4.43E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.43E-06**	**--**	**--**	**--**	**--**
300-50_Overburden	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.34E+01	5.00E+02	6.69E-08	0.62%	1.60E+03	2.09E-02	6.31%
300-50_Overburden	non-Rad	Aroclor-1260	11096-82-5	µg/kg	2.29E+02	5.00E+02	4.58E-07	4.22%	--	--	--
300-50_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	6.90E+03	6.67E+02	1.03E-05	95.17%	2.40E+04	2.87E-01	86.70%
300-50_Overburden	non-Rad	Copper	7440-50-8	µg/kg	6.45E+04	--	--	--	3.20E+06	2.02E-02	6.08%
300-50_Overburden	non-Rad	Silver	7440-22-4	µg/kg	1.20E+03	--	--	--	4.00E+05	3.00E-03	0.91%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.09E-05**	**--**	**--**	**3.31E-01**	**--**
300-50_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	6.03E+00	1.33E+02	4.53E-06	24.75%	--	--	--
300-50_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	4.49E-01	1.63E+01	2.75E-06	15.04%	--	--	--
300-50_Overburden	Rad	Uranium-238	U-238	pCi/g	5.95E+00	5.40E+01	1.10E-05	60.21%	--	--	--
Total Radiological Risk Estimate						**--**	**1.83E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.92E-05**	**--**	**--**	**--**	**--**
300-50_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.00E+03	--	--	--	3.20E+04	9.38E-02	52.03%
300-50_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.26E+02	5.00E+02	2.53E-07	99.89%	1.60E+03	7.90E-02	43.82%
300-50_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.93E+01	7.14E+04	2.70E-10	0.11%	1.60E+06	1.21E-05	0.01%
300-50_Shallow	non-Rad	Silver	7440-22-4	µg/kg	2.99E+03	--	--	--	4.00E+05	7.48E-03	4.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.53E-07**	**--**	**--**	**1.80E-01**	**--**
300-50_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	7.89E+00	1.33E+02	5.93E-06	23.19%	--	--	--
300-50_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	6.64E-01	1.63E+01	4.07E-06	15.92%	--	--	--
300-50_Shallow	Rad	Uranium-238	U-238	pCi/g	8.41E+00	5.40E+01	1.56E-05	60.90%	--	--	--
Total Radiological Risk Estimate						**--**	**2.56E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.58E-05**	**--**	**--**	**--**	**--**

Table G-29. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-1_Overburden	Rad	Cobalt-60	10198-40-0	pCi/g	3.18E-01	3.10E+00	1.03E-05	19.90%	--	--	--
316-1_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	1.30E+01	1.33E+02	9.74E-06	18.89%	--	--	--
316-1_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	1.08E+00	1.63E+01	6.63E-06	12.85%	--	--	--
316-1_Overburden	Rad	Uranium-238	U-238	pCi/g	1.35E+01	5.40E+01	2.49E-05	48.36%	--	--	--
Total Radiological Risk Estimate						**--**	**5.16E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.16E-05**	**--**	**--**	**--**	**--**
316-1_Shallow_1	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.00E+03	5.00E+02	6.00E-06	17.38%	--	--	--
316-1_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	1.90E+04	6.67E+02	2.85E-05	82.62%	2.40E+04	7.92E-01	99.99%
316-1_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.86E+01	7.14E+04	9.60E-10	0.00%	1.60E+06	4.29E-05	0.01%
316-1_Shallow_1	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	9.77E+01	5.26E+05	1.86E-10	0.00%	1.60E+07	6.11E-06	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.45E-05**	**--**	**--**	**7.92E-01**	**--**
316-1_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.21E+00	1.63E+01	7.44E-06	12.67%	--	--	--
316-1_Shallow_1	Rad	Uranium-238	U-238	pCi/g	2.77E+01	5.40E+01	5.13E-05	87.33%	--	--	--
Total Radiological Risk Estimate						**--**	**5.87E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.33E-05**	**--**	**--**	**--**	**--**
316-1_Shallow_3	non-Rad	Antimony	7440-36-0	µg/kg	4.90E+02	--	--	--	3.20E+04	1.53E-02	2.35%
316-1_Shallow_3	non-Rad	Aroclor-1254	11097-69-1	µg/kg	9.82E+01	5.00E+02	1.96E-07	85.28%	1.60E+03	6.14E-02	9.41%
316-1_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	3.42E+02	7.14E+04	4.79E-09	2.08%	1.60E+06	2.14E-04	0.03%
316-1_Shallow_3	non-Rad	Chromium	7440-47-3	µg/kg	5.05E+04	--	--	--	1.20E+08	4.20E-04	0.06%
316-1_Shallow_3	non-Rad	Copper	7440-50-8	µg/kg	1.37E+06	--	--	--	3.20E+06	4.27E-01	65.43%
316-1_Shallow_3	non-Rad	Heptachlor epoxide	1024-57-3	µg/kg	3.20E+00	1.10E+02	2.91E-08	12.64%	1.04E+03	3.08E-03	0.47%
316-1_Shallow_3	non-Rad	Lead	7439-92-1	µg/kg	1.44E+04	--	--	--	--	--	--
316-1_Shallow_3	non-Rad	Mercury	7439-97-6	µg/kg	1.11E+03	--	--	--	2.40E+04	4.61E-02	7.06%
316-1_Shallow_3	non-Rad	Nickel	7440-02-0	µg/kg	9.47E+04	--	--	--	1.60E+06	5.92E-02	9.06%
316-1_Shallow_3	non-Rad	Phenol	108-95-2	µg/kg	2.80E+01	--	--	--	2.40E+07	1.17E-06	0.00%
316-1_Shallow_3	non-Rad	Selenium	7782-49-2	µg/kg	1.44E+03	--	--	--	4.00E+05	3.61E-03	0.55%
316-1_Shallow_3	non-Rad	Silver	7440-22-4	µg/kg	1.32E+04	--	--	--	4.00E+05	3.30E-02	5.05%
316-1_Shallow_3	non-Rad	Zinc	7440-66-6	µg/kg	8.20E+04	--	--	--	2.40E+07	3.42E-03	0.52%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.30E-07**	**--**	**--**	**6.53E-01**	**--**
316-1_Shallow_3	Rad	Cobalt-60	10198-40-0	pCi/g	2.32E+00	3.10E+00	7.50E-05	51.09%	--	--	--
316-1_Shallow_3	Rad	Uranium-233/234	U-233/234	pCi/g	2.27E+01	1.33E+02	1.71E-05	11.63%	--	--	--
316-1_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	2.64E+00	1.63E+01	1.62E-05	11.02%	--	--	--
316-1_Shallow_3	Rad	Uranium-238	U-238	pCi/g	2.08E+01	5.40E+01	3.85E-05	26.26%	--	--	--
Total Radiological Risk Estimate						**--**	**1.47E-04**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.47E-04**	**--**	**--**	**--**	**--**
316-1_Shallow_4	non-Rad	Aroclor-1254	11097-69-1	µg/kg	6.20E+01	5.00E+02	1.24E-07	100.00%	1.60E+03	3.88E-02	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.24E-07**	**--**	**--**	**3.88E-02**	**--**
316-1_Shallow_4	Rad	Cobalt-60	10198-40-0	pCi/g	1.20E-01	3.10E+00	3.87E-06	7.92%	--	--	--
316-1_Shallow_4	Rad	Uranium-233/234	U-233/234	pCi/g	1.61E+01	1.33E+02	1.21E-05	24.83%	--	--	--
316-1_Shallow_4	Rad	Uranium-235	15117-96-1	pCi/g	1.05E+00	1.63E+01	6.44E-06	13.18%	--	--	--
316-1_Shallow_4	Rad	Uranium-238	U-238	pCi/g	1.43E+01	5.40E+01	2.64E-05	54.07%	--	--	--

Table G-29. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
Total Radiological Risk Estimate						--	**4.89E-05**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**4.90E-05**	--	--	--	--
316-2_Shallow_1	Rad	Cobalt-60	10198-40-0	pCi/g	9.22E-02	3.10E+00	2.97E-06	1.10%	--	--	--
316-2_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	8.64E+01	1.33E+02	6.49E-05	24.03%	--	--	--
316-2_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.22E+01	1.63E+01	7.48E-05	27.70%	--	--	--
316-2_Shallow_1	Rad	Uranium-238	U-238	pCi/g	6.88E+01	5.40E+01	1.27E-04	47.18%	--	--	--
Total Radiological Risk Estimate						--	**2.70E-04**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**2.70E-04**	--	--	--	--
316-2_Shallow_2	non-Rad	Aroclor-1248	12672-29-6	µg/kg	6.97E+02	5.00E+02	1.39E-06	82.09%	--	--	--
316-2_Shallow_2	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.20E+01	5.00E+02	8.40E-08	4.95%	1.60E+03	2.63E-02	100.00%
316-2_Shallow_2	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.10E+02	5.00E+02	2.20E-07	12.96%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**1.70E-06**	--	--	**2.63E-02**	--
316-2_Shallow_2	Rad	Cobalt-60	10198-40-0	pCi/g	4.53E-01	3.10E+00	1.46E-05	4.21%	--	--	--
316-2_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.15E+02	1.33E+02	8.62E-05	24.83%	--	--	--
316-2_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	1.11E+01	1.63E+01	6.81E-05	19.63%	--	--	--
316-2_Shallow_2	Rad	Uranium-238	U-238	pCi/g	9.62E+01	5.40E+01	1.78E-04	51.34%	--	--	--
Total Radiological Risk Estimate						--	**3.47E-04**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**3.49E-04**	--	--	--	--
316-2_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	8.00E+03	6.67E+02	1.20E-05	99.97%	2.40E+04	3.33E-01	99.95%
316-2_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.60E+02	7.14E+04	3.64E-09	0.03%	1.60E+06	1.63E-04	0.05%
316-2_Shallow_3	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	1.80E+02	5.26E+05	3.42E-10	0.00%	1.60E+07	1.13E-05	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**1.20E-05**	--	--	**3.34E-01**	--
316-2_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	9.09E-01	1.63E+01	5.58E-06	10.97%	--	--	--
316-2_Shallow_3	Rad	Uranium-238	U-238	pCi/g	2.44E+01	5.40E+01	4.53E-05	89.03%	--	--	--
Total Radiological Risk Estimate						--	**5.08E-05**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**6.28E-05**	--	--	--	--
316-5_Shallow_1	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	3.80E+01	1.37E+03	2.77E-08	92.55%	--	--	--
316-5_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.46E+02	7.14E+04	2.04E-09	6.82%	1.60E+06	9.12E-05	93.59%
316-5_Shallow_1	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	1.00E+02	5.26E+05	1.90E-10	0.63%	1.60E+07	6.25E-06	6.41%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**3.00E-08**	--	--	**9.75E-05**	--
316-5_Shallow_1	Rad	Americium-241	14596-10-2	pCi/g	4.79E-01	1.55E+02	3.09E-07	0.09%	--	--	--
316-5_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	2.31E+00	4.40E+00	5.26E-05	15.83%	--	--	--
316-5_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.86E+01	1.63E+01	1.14E-04	34.35%	--	--	--
316-5_Shallow_1	Rad	Uranium-238	U-238	pCi/g	8.92E+01	5.40E+01	1.65E-04	49.73%	--	--	--
Total Radiological Risk Estimate						--	**3.32E-04**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**3.32E-04**	--	--	--	--
316-5_Shallow_2	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	1.40E+02	5.00E+03	2.80E-08	83.57%	3.20E+05	4.38E-04	4.55%

Table G-29. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-5_Shallow_2	non-Rad	2-Butoxyethanol	111-76-2	µg/kg	2.40E+02	--	--	--	8.00E+06	3.00E-05	0.31%
316-5_Shallow_2	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.80E+02	7.14E+04	2.52E-09	7.53%	1.60E+06	1.13E-04	1.17%
316-5_Shallow_2	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	1.10E+02	5.26E+05	2.09E-10	0.62%	1.60E+07	6.88E-06	0.07%
316-5_Shallow_2	non-Rad	Chrysene	218-01-9	µg/kg	3.80E+01	1.37E+04	2.77E-09	8.28%	--	--	--
316-5_Shallow_2	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	1.46E+02	--	--	--	8.00E+06	1.83E-05	0.19%
316-5_Shallow_2	non-Rad	Silver	7440-22-4	µg/kg	3.60E+03	--	--	--	4.00E+05	9.00E-03	93.70%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.35E-08**	**--**	**--**	**9.61E-03**	**--**
316-5_Shallow_2	Rad	Americium-241	14596-10-2	pCi/g	1.24E-01	1.55E+02	8.00E-08	0.04%	--	--	--
316-5_Shallow_2	Rad	Cesium-137	10045-97-3	pCi/g	1.71E+00	4.40E+00	3.90E-05	17.44%	--	--	--
316-5_Shallow_2	Rad	Cobalt-60	10198-40-0	pCi/g	1.18E-01	3.10E+00	3.81E-06	1.70%	--	--	--
316-5_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	9.04E+00	1.63E+01	5.55E-05	24.83%	--	--	--
316-5_Shallow_2	Rad	Uranium-238	U-238	pCi/g	6.75E+01	5.40E+01	1.25E-04	55.98%	--	--	--
Total Radiological Risk Estimate						**--**	**2.23E-04**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.23E-04**	**--**	**--**	**--**	**--**
316-5_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	5.70E+01	5.00E+02	1.14E-07	31.61%	--	--	--
316-5_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	7.00E+01	5.00E+02	1.40E-07	38.82%	1.60E+03	4.38E-02	99.30%
316-5_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.20E+01	5.00E+02	1.04E-07	28.84%	--	--	--
316-5_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.90E+02	7.14E+04	2.66E-09	0.74%	1.60E+06	1.19E-04	0.27%
316-5_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	1.50E+03	--	--	--	8.00E+06	1.88E-04	0.43%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.61E-07**	**--**	**--**	**4.41E-02**	**--**
316-5_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.83E+00	4.40E+00	4.16E-05	24.13%	--	--	--
316-5_Shallow_Focused	Rad	Europium-155	14391-16-3	pCi/g	7.19E-02	3.27E+02	2.20E-08	0.01%	--	--	--
316-5_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	7.67E+00	1.63E+01	4.71E-05	27.30%	--	--	--
316-5_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.52E+01	5.40E+01	8.37E-05	48.56%	--	--	--
Total Radiological Risk Estimate						**--**	**1.72E-04**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.73E-04**	**--**	**--**	**--**	**--**
331 LSLDF_Shallow_Focused	non-Rad	4,4'-DDE (Dichlorodiphenyldichloroethylene)	72-55-9	µg/kg	2.50E+01	2.94E+03	8.50E-09	0.44%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	5.90E+02	--	--	--	7.20E+07	8.19E-06	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Aldrin	309-00-2	µg/kg	5.60E-01	5.88E+01	9.52E-09	0.49%	2.40E+03	2.33E-04	0.04%
331 LSLDF_Shallow_Focused	non-Rad	Alpha-BHC	319-84-6	µg/kg	3.90E-01	1.59E+02	2.46E-09	0.13%	6.40E+05	6.09E-07	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	3.60E+02	--	--	--	3.20E+04	1.13E-02	2.00%
331 LSLDF_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	8.50E+02	5.00E+02	1.70E-06	87.54%	1.60E+03	5.31E-01	94.66%
331 LSLDF_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	9.10E+02	7.14E+04	1.27E-08	0.66%	1.60E+06	5.69E-04	0.10%
331 LSLDF_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	3.40E+02	5.26E+05	6.46E-10	0.03%	1.60E+07	2.13E-05	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Dieldrin	60-57-1	µg/kg	1.30E+01	6.25E+01	2.08E-07	10.71%	4.00E+03	3.25E-03	0.58%
331 LSLDF_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	9.80E+01	--	--	--	8.00E+06	1.23E-05	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Endosulfan I	959-98-8	µg/kg	1.90E+00	--	--	--	4.80E+05	3.96E-06	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Endosulfan II	33213-65-9	µg/kg	3.10E+00	--	--	--	4.80E+05	6.46E-06	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	1.10E+02	--	--	--	2.40E+04	4.58E-03	0.82%
331 LSLDF_Shallow_Focused	non-Rad	Methoxychlor	72-43-5	µg/kg	3.30E+00	--	--	--	4.00E+05	8.25E-06	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	1.10E+01	1.33E+05	8.25E-11	0.00%	4.80E+06	2.29E-06	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	5.90E+02	--	--	--	4.00E+05	1.48E-03	0.26%
331 LSLDF_Shallow_Focused	non-Rad	Nitrogen in Nitrite and Nitrate	NO2-N	µg/kg	9.50E+03	--	--	--	1.28E+08	7.42E-05	0.01%

Table G-29. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
331 LSLDF_Shallow_Focused	non-Rad	Silver	7440-22-4	µg/kg	1.10E+03	--	--	--	4.00E+05	2.75E-03	0.49%
331 LSLDF_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	1.37E+05	--	--	--	2.40E+07	5.71E-03	1.02%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.94E-06**	**--**	**--**	**5.61E-01**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.94E-06**	**--**	**--**	**--**	**--**
600-243_Shallow	non-Rad	2-Methylnaphthalene	91-57-6	µg/kg	2.79E+02	--	--	--	3.20E+05	8.71E-04	0.48%
600-243_Shallow	non-Rad	Anthracene	120-12-7	µg/kg	3.13E+01	--	--	--	2.40E+07	1.30E-06	0.00%
600-243_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	1.30E+03	--	--	--	3.20E+04	4.06E-02	22.17%
600-243_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.70E+01	5.00E+02	5.40E-08	10.34%	1.60E+03	1.69E-02	9.21%
600-243_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.84E+01	5.00E+02	3.68E-08	7.05%	--	--	--
600-243_Shallow	non-Rad	Barium	7440-39-3	µg/kg	2.92E+05	--	--	--	1.60E+07	1.83E-02	9.96%
600-243_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	4.33E+01	1.37E+03	3.16E-08	6.05%	--	--	--
600-243_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	4.27E+01	1.37E+02	3.12E-07	59.70%	--	--	--
600-243_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	4.63E+01	1.37E+03	3.38E-08	6.48%	--	--	--
600-243_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	3.18E+01	1.37E+03	2.32E-08	4.44%	--	--	--
600-243_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.08E+03	--	--	--	1.60E+05	1.30E-02	7.09%
600-243_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	4.32E+02	7.14E+04	6.05E-09	1.16%	1.60E+06	2.70E-04	0.15%
600-243_Shallow	non-Rad	Boron	7440-42-8	µg/kg	2.94E+05	--	--	--	1.60E+07	1.84E-02	10.05%
600-243_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	7.93E+02	--	--	--	4.00E+04	1.98E-02	10.81%
600-243_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	6.26E+01	1.37E+04	4.57E-09	0.88%	--	--	--
600-243_Shallow	non-Rad	Copper	7440-50-8	µg/kg	5.40E+04	--	--	--	3.20E+06	1.69E-02	9.21%
600-243_Shallow	non-Rad	Dibenzofuran	132-64-9	µg/kg	7.85E+01	--	--	--	8.00E+04	9.81E-04	0.54%
600-243_Shallow	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	3.72E+01	--	--	--	8.00E+06	4.65E-06	0.00%
600-243_Shallow	non-Rad	Fluoranthene	206-44-0	µg/kg	7.91E+01	--	--	--	3.20E+06	2.47E-05	0.01%
600-243_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	2.80E+01	1.37E+03	2.04E-08	3.91%	--	--	--
600-243_Shallow	non-Rad	Lead	7439-92-1	µg/kg	4.01E+04	--	--	--	--	--	--
600-243_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	1.87E+03	--	--	--	4.00E+05	4.67E-03	2.55%
600-243_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	2.04E+02	--	--	--	1.60E+06	1.27E-04	0.07%
600-243_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	2.14E+04	--	--	--	1.60E+06	1.34E-02	7.30%
600-243_Shallow	non-Rad	Pyrene	129-00-0	µg/kg	7.00E+01	--	--	--	2.40E+06	2.92E-05	0.02%
600-243_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	5.71E+03	--	--	--	4.00E+05	1.43E-02	7.79%
600-243_Shallow	non-Rad	Silver	7440-22-4	µg/kg	5.00E+02	--	--	--	4.00E+05	1.25E-03	0.68%
600-243_Shallow	non-Rad	Total petroleum hydrocarbons - diesel range	TPHDIESEL	µg/kg	9.53E+04	--	--	--	--	--	--
600-243_Shallow	non-Rad	Total petroleum hydrocarbons - motor oil (high boiling)	TPH/OILH	µg/kg	3.35E+05	--	--	--	--	--	--
600-243_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	8.41E+04	--	--	--	2.40E+07	3.50E-03	1.91%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.22E-07**	**--**	**--**	**1.83E-01**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.22E-07**	**--**	**--**	**--**	**--**
600-47_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.36E+00	1.33E+02	1.02E-06	25.90%	--	--	--
600-47_Shallow	Rad	Uranium-238	U-238	pCi/g	1.58E+00	5.40E+01	2.93E-06	74.10%	--	--	--
Total Radiological Risk Estimate						**--**	**3.95E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.95E-06**	**--**	**--**	**--**	**--**
618-1_Deep	Rad	Uranium-233/234	U-233/234	pCi/g	3.31E+01	1.33E+02	2.49E-05	24.65%	--	--	--

Table G-29. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-1_Deep	Rad	Uranium-235	15117-96-1	pCi/g	2.74E+00	1.63E+01	1.68E-05	16.65%	--	--	--
618-1_Deep	Rad	Uranium-238	U-238	pCi/g	3.20E+01	5.40E+01	5.93E-05	58.70%	--	--	--
Total Radiological Risk Estimate						**--**	**1.01E-04**	**--**	**--**	**--**	**--**
618-1_Deep_Focused	Rad	Cesium-137	10045-97-3	pCi/g	6.52E+00	4.40E+00	1.48E-04	42.48%	--	--	--
618-1_Deep_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	6.99E+01	1.33E+02	5.26E-05	15.07%	--	--	--
618-1_Deep_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.46E+00	1.63E+01	2.74E-05	7.84%	--	--	--
618-1_Deep_Focused	Rad	Uranium-238	U-238	pCi/g	6.52E+01	5.40E+01	1.21E-04	34.61%	--	--	--
Total Radiological Risk Estimate						**--**	**3.49E-04**	**--**	**--**	**--**	**--**
618-1_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.64E+02	5.00E+02	5.28E-07	83.15%	1.60E+03	1.65E-01	99.22%
618-1_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.35E+01	5.00E+02	1.07E-07	16.85%	--	--	--
618-1_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	3.10E+01	--	--	--	2.40E+04	1.29E-03	0.78%
618-1_Shallow	non-Rad	Nitrogen in Nitrite and Nitrate	NO2-N	µg/kg	3.00E+02	--	--	--	1.28E+08	2.34E-06	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.35E-07**	**--**	**--**	**1.66E-01**	**--**
618-1_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.93E+00	1.33E+02	1.45E-06	34.16%	--	--	--
618-1_Shallow	Rad	Uranium-238	U-238	pCi/g	1.51E+00	5.40E+01	2.80E-06	65.84%	--	--	--
Total Radiological Risk Estimate						**--**	**4.25E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.88E-06**	**--**	**--**	**--**	**--**
618-1_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	1.22E+07	--	--	--	8.00E+07	1.53E-01	18.36%
618-1_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	4.55E+02	--	--	--	3.20E+04	1.42E-02	1.71%
618-1_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.51E+01	5.00E+02	7.02E-08	3.27%	--	--	--
618-1_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	9.81E+02	5.00E+02	1.96E-06	91.50%	1.60E+03	6.13E-01	73.80%
618-1_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.60E+01	5.00E+02	1.12E-07	5.22%	--	--	--
618-1_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	1.95E+04	--	--	--	1.20E+08	1.63E-04	0.02%
618-1_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	2.38E+04	--	--	--	3.20E+06	7.44E-03	0.90%
618-1_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	1.98E+02	--	--	--	2.40E+04	8.25E-03	0.99%
618-1_Shallow_Focused	non-Rad	Nitrogen in Nitrite and Nitrate	NO2-N	µg/kg	2.60E+02	--	--	--	1.28E+08	2.03E-06	0.00%
618-1_Shallow_Focused	non-Rad	Silver	7440-22-4	µg/kg	1.12E+03	--	--	--	4.00E+05	2.80E-03	0.34%
618-1_Shallow_Focused	non-Rad	Uranium	7440-61-1	µg/kg	7.08E+03	--	--	--	2.40E+05	2.95E-02	3.55%
618-1_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	6.81E+04	--	--	--	2.40E+07	2.84E-03	0.34%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.14E-06**	**--**	**--**	**8.31E-01**	**--**
618-1_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.13E+01	1.33E+02	8.50E-06	28.52%	--	--	--
618-1_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	9.87E-01	1.63E+01	6.06E-06	20.32%	--	--	--
618-1_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	8.23E+00	5.40E+01	1.52E-05	51.16%	--	--	--
Total Radiological Risk Estimate						**--**	**2.98E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.19E-05**	**--**	**--**	**--**	**--**
618-12_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	8.56E+03	6.67E+02	1.28E-05	99.99%	2.40E+04	3.57E-01	99.99%
618-12_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.30E+01	7.14E+04	8.82E-10	0.01%	1.60E+06	3.94E-05	0.01%
618-12_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	6.00E+01	5.26E+05	1.14E-10	0.00%	1.60E+07	3.75E-06	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.28E-05**	**--**	**--**	**3.57E-01**	**--**

Table G-29. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-12_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	4.71E-01	1.63E+01	2.89E-06	12.71%	--	--	--
618-12_Shallow	Rad	Uranium-238	U-238	pCi/g	1.07E+01	5.40E+01	1.98E-05	87.29%	--	--	--
Total Radiological Risk Estimate						**--**	**2.27E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.56E-05**	**--**	**--**	**--**	**--**
618-13_Shallow	non-Rad	Acetone	67-64-1	µg/kg	8.64E+00	--	--	--	7.20E+07	1.20E-07	0.00%
618-13_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.12E+02	--	--	--	3.20E+04	9.75E-03	99.76%
618-13_Shallow	non-Rad	Methylene chloride	75-09-2	µg/kg	5.12E+00	1.33E+05	3.84E-11	100.00%	4.80E+06	1.07E-06	0.01%
618-13_Shallow	non-Rad	Tin	7440-31-5	µg/kg	1.05E+03	--	--	--	4.80E+07	2.19E-05	0.22%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.84E-11**	**--**	**--**	**9.77E-03**	**--**
618-13_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.92E+00	1.33E+02	1.44E-06	31.44%	--	--	--
618-13_Shallow	Rad	Uranium-238	U-238	pCi/g	1.70E+00	5.40E+01	3.15E-06	68.56%	--	--	--
Total Radiological Risk Estimate						**--**	**4.59E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.59E-06**	**--**	**--**	**--**	**--**
618-13_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	5.90E+00	--	--	--	7.20E+07	8.19E-08	0.00%
618-13_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	2.33E+02	--	--	--	3.20E+04	7.28E-03	91.90%
618-13_Shallow_Focused	non-Rad	Hexavalent Chromium	18540-29-9	µg/kg	1.50E+02	--	--	--	2.40E+05	6.25E-04	7.89%
618-13_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	5.03E+00	1.33E+05	3.77E-11	100.00%	4.80E+06	1.05E-06	0.01%
618-13_Shallow_Focused	non-Rad	Tin	7440-31-5	µg/kg	7.45E+02	--	--	--	4.80E+07	1.55E-05	0.20%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.77E-11**	**--**	**--**	**7.92E-03**	**--**
618-13_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.14E+00	1.33E+02	8.57E-07	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**8.57E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.57E-07**	**--**	**--**	**--**	**--**
618-2_Deep	Rad	Americium-241	14596-10-2	pCi/g	7.94E+00	1.55E+02	5.12E-06	0.52%	--	--	--
618-2_Deep	Rad	Plutonium-238	13981-16-3	pCi/g	1.50E+00	2.36E+02	6.36E-07	0.06%	--	--	--
618-2_Deep	Rad	Plutonium-239/240	PU-239/240	pCi/g	9.06E+01	2.03E+02	4.46E-05	4.50%	--	--	--
618-2_Deep	Rad	Total beta radiostrontium	SR-RAD	pCi/g	1.16E+01	2.27E+00	5.11E-04	51.47%	--	--	--
618-2_Deep	Rad	Uranium-233/234	U-233/234	pCi/g	1.61E+02	1.33E+02	1.21E-04	12.19%	--	--	--
618-2_Deep	Rad	Uranium-235	15117-96-1	pCi/g	7.76E-01	1.63E+01	4.76E-06	0.48%	--	--	--
618-2_Deep	Rad	Uranium-238	U-238	pCi/g	1.65E+02	5.40E+01	3.06E-04	30.78%	--	--	--
Total Radiological Risk Estimate						**--**	**9.93E-04**	**--**	**--**	**--**	**--**
618-2_Deep_Focused	Rad	Americium-241	14596-10-2	pCi/g	9.19E+00	1.55E+02	5.93E-06	1.10%	--	--	--
618-2_Deep_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.12E+00	4.40E+00	2.55E-05	4.73%	--	--	--
618-2_Deep_Focused	Rad	Plutonium-238	13981-16-3	pCi/g	1.57E+00	2.36E+02	6.65E-07	0.12%	--	--	--
618-2_Deep_Focused	Rad	Plutonium-239/240	PU-239/240	pCi/g	9.16E+01	2.03E+02	4.51E-05	8.39%	--	--	--
618-2_Deep_Focused	Rad	Total beta radiostrontium	SR-RAD	pCi/g	7.20E+00	2.27E+00	3.17E-04	58.96%	--	--	--
618-2_Deep_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	4.78E+01	1.33E+02	3.59E-05	6.68%	--	--	--
618-2_Deep_Focused	Rad	Uranium-235	15117-96-1	pCi/g	2.42E+00	1.63E+01	1.48E-05	2.76%	--	--	--
618-2_Deep_Focused	Rad	Uranium-238	U-238	pCi/g	5.01E+01	5.40E+01	9.28E-05	17.25%	--	--	--
Total Radiological Risk Estimate						**--**	**5.38E-04**	**--**	**--**	**--**	**--**

Table G-29. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-2_Overburden	non-Rad	Selenium	7782-49-2	µg/kg	1.00E+03	--	--	--	4.00E+05	2.50E-03	97.80%
618-2_Overburden	non-Rad	Tin	7440-31-5	µg/kg	2.70E+03	--	--	--	4.80E+07	5.63E-05	2.20%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**2.56E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-2_Shallow	non-Rad	Tin	7440-31-5	µg/kg	2.40E+03	--	--	--	4.80E+07	5.00E-05	0.26%
618-2_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	4.53E+03	--	--	--	2.40E+05	1.89E-02	99.74%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**1.89E-02**	**--**
618-2_Shallow	Rad	Americium-241	14596-10-2	pCi/g	8.13E-01	1.55E+02	5.25E-07	0.84%	--	--	--
618-2_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	2.24E+00	4.40E+00	5.09E-05	81.78%	--	--	--
618-2_Shallow	Rad	Plutonium-239/240	PU-239/240	pCi/g	7.67E+00	2.03E+02	3.78E-06	6.07%	--	--	--
618-2_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	2.20E+00	1.33E+02	1.65E-06	2.66%	--	--	--
618-2_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.14E-01	1.63E+01	1.31E-06	2.11%	--	--	--
618-2_Shallow	Rad	Uranium-238	U-238	pCi/g	2.20E+00	5.40E+01	4.07E-06	6.54%	--	--	--
Total Radiological Risk Estimate						**--**	**6.23E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.23E-05**	**--**	**--**	**--**	**--**
618-2_Staging Pile	non-Rad	Uranium	7440-61-1	µg/kg	5.02E+03	--	--	--	2.40E+05	2.09E-02	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**2.09E-02**	**--**
618-2_Staging Pile	Rad	Americium-241	14596-10-2	pCi/g	8.18E-01	1.55E+02	5.28E-07	4.49%	--	--	--
618-2_Staging Pile	Rad	Plutonium-239/240	PU-239/240	pCi/g	1.00E+01	2.03E+02	4.93E-06	41.88%	--	--	--
618-2_Staging Pile	Rad	Tritium	10028-17-8	pCi/g	2.33E+00	6.23E+02	3.74E-07	3.18%	--	--	--
618-2_Staging Pile	Rad	Uranium-233/234	U-233/234	pCi/g	2.04E+00	1.33E+02	1.53E-06	13.04%	--	--	--
618-2_Staging Pile	Rad	Uranium-235	15117-96-1	pCi/g	1.22E-01	1.63E+01	7.49E-07	6.37%	--	--	--
618-2_Staging Pile	Rad	Uranium-238	U-238	pCi/g	1.97E+00	5.40E+01	3.65E-06	31.04%	--	--	--
Total Radiological Risk Estimate						**--**	**1.18E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.18E-05**	**--**	**--**	**--**	**--**
618-3_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	7.96E+01	1.33E+02	5.98E-05	25.33%	--	--	--
618-3_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.79E+00	1.63E+01	2.94E-05	12.44%	--	--	--
618-3_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	7.94E+01	5.40E+01	1.47E-04	62.23%	--	--	--
Total Radiological Risk Estimate						**--**	**2.36E-04**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.36E-04**	**--**	**--**	**--**	**--**
618-4_Deep	Rad	Uranium-233/234	U-233/234	pCi/g	2.02E+01	1.33E+02	1.52E-05	24.62%	--	--	--
618-4_Deep	Rad	Uranium-235	15117-96-1	pCi/g	1.09E+00	1.63E+01	6.69E-06	10.84%	--	--	--
618-4_Deep	Rad	Uranium-238	U-238	pCi/g	2.15E+01	5.40E+01	3.98E-05	64.54%	--	--	--
Total Radiological Risk Estimate						**--**	**6.17E-05**	**--**	**--**	**--**	**--**
618-4_Deep_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	7.18E+00	1.33E+02	5.40E-06	25.32%	--	--	--

Table G-29. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-4_Deep_Focused	Rad	Uranium-235	15117-96-1	pCi/g	5.12E-01	1.63E+01	3.14E-06	14.73%	--	--	--
618-4_Deep_Focused	Rad	Uranium-238	U-238	pCi/g	6.90E+00	5.40E+01	1.28E-05	59.94%	--	--	--
Total Radiological Risk Estimate						**--**	**2.13E-05**	**--**	**--**	**--**	**--**
618-4_Overburden_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.30E+00	1.33E+02	9.77E-07	27.24%	--	--	--
618-4_Overburden_2	Rad	Uranium-238	U-238	pCi/g	1.41E+00	5.40E+01	2.61E-06	72.76%	--	--	--
Total Radiological Risk Estimate						**--**	**3.59E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.59E-06**	**--**	**--**	**--**	**--**
618-4_Shallow	non-Rad	Lead	7439-92-1	µg/kg	4.90E+04	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-4_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	3.22E+00	1.33E+02	2.42E-06	29.87%	--	--	--
618-4_Shallow	Rad	Uranium-238	U-238	pCi/g	3.07E+00	5.40E+01	5.69E-06	70.13%	--	--	--
Total Radiological Risk Estimate						**--**	**8.11E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.11E-06**	**--**	**--**	**--**	**--**
618-5_Deep	Rad	Uranium-233/234	U-233/234	pCi/g	8.60E+00	1.33E+02	6.47E-06	25.13%	--	--	--
618-5_Deep	Rad	Uranium-235	15117-96-1	pCi/g	4.62E-01	1.63E+01	2.83E-06	11.02%	--	--	--
618-5_Deep	Rad	Uranium-238	U-238	pCi/g	8.87E+00	5.40E+01	1.64E-05	63.85%	--	--	--
Total Radiological Risk Estimate						**--**	**2.57E-05**	**--**	**--**	**--**	**--**
618-5_Deep_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.07E+01	1.33E+02	8.05E-06	23.95%	--	--	--
618-5_Deep_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.82E-01	1.63E+01	2.96E-06	8.80%	--	--	--
618-5_Deep_Focused	Rad	Uranium-238	U-238	pCi/g	1.22E+01	5.40E+01	2.26E-05	67.25%	--	--	--
Total Radiological Risk Estimate						**--**	**3.36E-05**	**--**	**--**	**--**	**--**
618-5_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	4.14E+00	1.33E+02	3.11E-06	26.93%	--	--	--
618-5_Overburden	Rad	Uranium-238	U-238	pCi/g	4.56E+00	5.40E+01	8.44E-06	73.07%	--	--	--
Total Radiological Risk Estimate						**--**	**1.16E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.16E-05**	**--**	**--**	**--**	**--**
618-5_Staging Pile_4	Rad	Uranium-233/234	U-233/234	pCi/g	1.15E+00	1.33E+02	8.65E-07	29.24%	--	--	--
618-5_Staging Pile_4	Rad	Uranium-238	U-238	pCi/g	1.13E+00	5.40E+01	2.09E-06	70.76%	--	--	--
Total Radiological Risk Estimate						**--**	**2.96E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.96E-06**	**--**	**--**	**--**	**--**
618-5_Staging Pile_5	Rad	Uranium-233/234	U-233/234	pCi/g	1.52E+00	1.33E+02	1.14E-06	21.40%	--	--	--
618-5_Staging Pile_5	Rad	Uranium-235	15117-96-1	pCi/g	1.68E-01	1.63E+01	1.03E-06	19.30%	--	--	--
618-5_Staging Pile_5	Rad	Uranium-238	U-238	pCi/g	1.71E+00	5.40E+01	3.17E-06	59.30%	--	--	--
Total Radiological Risk Estimate						**--**	**5.34E-06**	**--**	**--**	**--**	**--**

Table G-29. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.34E-06**	**--**	**--**	**--**	**--**
618-7_Shallow_1	non-Rad	Antimony	7440-36-0	µg/kg	5.60E+02	--	--	--	3.20E+04	1.75E-02	53.86%
618-7_Shallow_1	non-Rad	Lead	7439-92-1	µg/kg	1.46E+04	--	--	--	--	--	--
618-7_Shallow_1	non-Rad	Mercury	7439-97-6	µg/kg	4.43E+01	--	--	--	2.40E+04	1.85E-03	5.68%
618-7_Shallow_1	non-Rad	Nickel	7440-02-0	µg/kg	2.10E+04	--	--	--	1.60E+06	1.31E-02	40.36%
618-7_Shallow_1	non-Rad	Tin	7440-31-5	µg/kg	1.55E+03	--	--	--	4.80E+07	3.22E-05	0.10%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**3.25E-02**	**--**
618-7_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	3.61E+00	1.33E+02	2.72E-06	23.49%	--	--	--
618-7_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	3.64E-01	1.63E+01	2.23E-06	19.28%	--	--	--
618-7_Shallow_1	Rad	Uranium-238	U-238	pCi/g	3.57E+00	5.40E+01	6.62E-06	57.22%	--	--	--
Total Radiological Risk Estimate						**--**	**1.16E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.16E-05**	**--**	**--**	**--**	**--**
618-7_Shallow_2	non-Rad	Antimony	7440-36-0	µg/kg	6.60E+02	--	--	--	3.20E+04	2.06E-02	95.98%
618-7_Shallow_2	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	2.40E+04	8.33E-04	3.88%
618-7_Shallow_2	non-Rad	Tin	7440-31-5	µg/kg	1.50E+03	--	--	--	4.80E+07	3.13E-05	0.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**2.15E-02**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-7_Shallow_3	non-Rad	Antimony	7440-36-0	µg/kg	4.50E+02	--	--	--	3.20E+04	1.41E-02	94.17%
618-7_Shallow_3	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	2.40E+04	8.33E-04	5.58%
618-7_Shallow_3	non-Rad	Tin	7440-31-5	µg/kg	1.80E+03	--	--	--	4.80E+07	3.75E-05	0.25%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**1.49E-02**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-7_Shallow_4	non-Rad	Antimony	7440-36-0	µg/kg	2.50E+02	--	--	--	3.20E+04	7.81E-03	99.81%
618-7_Shallow_4	non-Rad	Tin	7440-31-5	µg/kg	7.10E+02	--	--	--	4.80E+07	1.48E-05	0.19%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**7.83E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-7_Shallow_Focused	non-Rad	Acenaphthene	83-32-9	µg/kg	1.50E+02	--	--	--	4.80E+06	3.13E-05	0.02%
618-7_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	9.80E+02	--	--	--	3.20E+04	3.06E-02	15.68%
618-7_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	6.70E+00	5.00E+02	1.34E-08	2.06%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	8.80E+01	1.37E+03	6.42E-08	9.88%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	6.60E+01	1.37E+02	4.82E-07	74.13%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	5.20E+01	1.37E+03	3.80E-08	5.84%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	1.10E+01	1.37E+03	8.03E-09	1.24%	--	--	--
618-7_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	4.70E+02	7.14E+04	6.58E-09	1.01%	1.60E+06	2.94E-04	0.15%
618-7_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	6.20E+03	--	--	--	4.00E+04	1.55E-01	79.34%
618-7_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	6.59E+04	--	--	--	1.20E+08	5.49E-04	0.28%
618-7_Shallow_Focused	non-Rad	Chrysene	218-01-9	µg/kg	6.90E+01	1.37E+04	5.04E-09	0.78%	--	--	--

Table G-29. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-7_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	2.50E+04	--	--	--	3.20E+06	7.81E-03	4.00%
618-7_Shallow_Focused	non-Rad	Dibenz[a,h]anthracene	53-70-3	µg/kg	4.50E+01	1.37E+03	3.28E-08	5.05%	--	--	--
618-7_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	3.30E+01	--	--	--	8.00E+06	4.13E-06	0.00%
618-7_Shallow_Focused	non-Rad	Fluoranthene	206-44-0	µg/kg	4.80E+01	--	--	--	3.20E+06	1.50E-05	0.01%
618-7_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	2.40E+04	8.33E-04	0.43%
618-7_Shallow_Focused	non-Rad	Pyrene	129-00-0	µg/kg	4.10E+02	--	--	--	2.40E+06	1.71E-04	0.09%
618-7_Shallow_Focused	non-Rad	Tin	7440-31-5	µg/kg	1.20E+03	--	--	--	4.80E+07	2.50E-05	0.01%
618-7_Shallow_Focused	non-Rad	Total petroleum hydrocarbons - motor oil (high boiling)	TPH/OILH	µg/kg	6.80E+05	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.50E-07**	**--**	**--**	**1.95E-01**	**--**
618-7_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.09E+01	1.33E+02	8.20E-06	31.45%	--	--	--
618-7_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	9.74E-01	1.63E+01	5.98E-06	22.93%	--	--	--
618-7_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	6.42E+00	5.40E+01	1.19E-05	45.62%	--	--	--
Total Radiological Risk Estimate						**--**	**2.61E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.67E-05**	**--**	**--**	**--**	**--**
618-8_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	8.46E+02	--	--	--	4.00E+05	2.12E-03	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**2.12E-03**	**--**
618-8_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.19E+00	1.33E+02	8.95E-07	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**8.95E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.95E-07**	**--**	**--**	**--**	**--**
618-9_Shallow_Focused	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	1.10E+02	5.00E+03	2.20E-08	0.04%	3.20E+05	3.44E-04	0.01%
618-9_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	6.80E+02	--	--	--	7.20E+07	9.44E-06	0.00%
618-9_Shallow_Focused	non-Rad	Aldrin	309-00-2	µg/kg	3.90E+02	5.88E+01	6.63E-06	11.78%	2.40E+03	1.63E-01	4.38%
618-9_Shallow_Focused	non-Rad	Aroclor-1016	12674-11-2	µg/kg	1.90E+03	1.43E+04	1.33E-07	0.24%	5.60E+03	3.39E-01	9.14%
618-9_Shallow_Focused	non-Rad	Aroclor-1221	11104-28-2	µg/kg	1.90E+03	5.00E+02	3.80E-06	6.75%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1232	11141-16-5	µg/kg	1.90E+03	5.00E+02	3.80E-06	6.75%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1242	53469-21-9	µg/kg	1.90E+03	5.00E+02	3.80E-06	6.75%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.90E+03	5.00E+02	3.80E-06	6.75%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.90E+03	5.00E+02	7.80E-06	13.85%	1.60E+03	2.44E+00	65.67%
618-9_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.90E+03	5.00E+02	7.80E-06	13.85%	--	--	--
618-9_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.16E+04	6.67E+02	1.74E-05	30.91%	2.40E+04	4.83E-01	13.02%
618-9_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	5.20E+03	7.14E+04	7.28E-08	0.13%	1.60E+06	3.25E-03	0.09%
618-9_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	2.70E+03	5.26E+05	5.13E-09	0.01%	1.60E+07	1.69E-04	0.00%
618-9_Shallow_Focused	non-Rad	Chlordane	57-74-9	µg/kg	6.90E+01	2.86E+03	2.42E-08	0.04%	4.00E+04	1.73E-03	0.05%
618-9_Shallow_Focused	non-Rad	Chloroform	67-66-3	µg/kg	9.00E+00	3.23E+04	2.79E-10	0.00%	8.00E+05	1.13E-05	0.00%
618-9_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	7.20E+03	--	--	--	8.00E+06	9.00E-04	0.02%
618-9_Shallow_Focused	non-Rad	Heptachlor epoxide	1024-57-3	µg/kg	4.40E+01	1.10E+02	4.00E-07	0.71%	1.04E+03	4.23E-02	1.14%
618-9_Shallow_Focused	non-Rad	Hexachlorobutadiene	87-68-3	µg/kg	7.60E+02	1.28E+04	5.93E-08	0.11%	8.00E+04	9.50E-03	0.26%
618-9_Shallow_Focused	non-Rad	Hexachloroethane	67-72-1	µg/kg	1.70E+04	7.14E+04	2.38E-07	0.42%	8.00E+04	2.13E-01	5.73%
618-9_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	3.30E+02	--	--	--	2.40E+04	1.38E-02	0.37%
618-9_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	2.30E+03	1.33E+05	1.73E-08	0.03%	4.80E+06	4.79E-04	0.01%
618-9_Shallow_Focused	non-Rad	Nitrate	14797-55-8	µg/kg	1.67E+06	--	--	--	5.68E+08	2.94E-03	0.08%
618-9_Shallow_Focused	non-Rad	Tetrachloroethene	127-18-4	µg/kg	9.20E+02	1.85E+03	4.97E-07	0.88%	8.00E+05	1.15E-03	0.03%
618-9_Shallow_Focused	non-Rad	Toluene	108-88-3	µg/kg	9.00E+00	--	--	--	6.40E+06	1.41E-06	0.00%

Table G-29. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-9_Shallow_Focused	non-Rad	Trichloroethene	79-01-6	µg/kg	2.00E+00	1.12E+04	1.78E-10	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.63E-05**	**--**	**--**	**3.71E+00**	**--**
618-9_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	3.00E+00	5.40E+01	5.56E-06	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**5.56E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.19E-05**	**--**	**--**	**--**	**--**
628-4_Overburden	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.09E+01	7.14E+04	8.53E-10	100.00%	1.60E+06	3.81E-05	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**8.53E-10**	**--**	**--**	**3.81E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.53E-10**	**--**	**--**	**--**	**--**
628-4_Shallow	non-Rad	Aroclor-1242	53469-21-9	µg/kg	4.24E+01	5.00E+02	8.47E-08	2.94%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.12E+03	5.00E+02	2.23E-06	77.55%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.43E+02	5.00E+02	4.86E-07	16.88%	1.60E+03	1.52E-01	100.00%
628-4_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.78E+01	5.00E+02	7.55E-08	2.63%	--	--	--
628-4_Shallow	non-Rad	Lead	7439-92-1	µg/kg	9.92E+04	--	--	--	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.88E-06**	**--**	**--**	**1.52E-01**	**--**
628-4_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.13E+00	1.33E+02	8.49E-07	55.28%	--	--	--
628-4_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	1.12E-01	1.63E+01	6.87E-07	44.72%	--	--	--
Total Radiological Risk Estimate						**--**	**1.54E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.41E-06**	**--**	**--**	**--**	**--**
UPR-300-17_Shallow	non-Rad	Acenaphthene	83-32-9	µg/kg	1.17E+02	--	--	--	4.80E+06	2.44E-05	0.00%
UPR-300-17_Shallow	non-Rad	Anthracene	120-12-7	µg/kg	7.01E+00	--	--	--	2.40E+07	2.92E-07	0.00%
UPR-300-17_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.59E+02	--	--	--	3.20E+04	1.12E-02	1.71%
UPR-300-17_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.97E+03	5.00E+02	3.94E-06	72.06%	--	--	--
UPR-300-17_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.50E+02	5.00E+02	9.00E-07	16.46%	1.60E+03	2.81E-01	42.92%
UPR-300-17_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.13E+02	5.00E+02	2.27E-07	4.14%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	5.92E+01	1.37E+03	4.32E-08	0.79%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	4.38E+01	1.37E+02	3.20E-07	5.85%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	3.27E+01	1.37E+03	2.39E-08	0.44%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	9.94E+00	1.37E+03	7.25E-09	0.13%	--	--	--
UPR-300-17_Shallow	non-Rad	Boron	7440-42-8	µg/kg	3.90E+03	--	--	--	1.60E+07	2.44E-04	0.04%
UPR-300-17_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	3.93E+01	1.37E+04	2.87E-09	0.05%	--	--	--
UPR-300-17_Shallow	non-Rad	Fluoranthene	206-44-0	µg/kg	3.53E+01	--	--	--	3.20E+06	1.10E-05	0.00%
UPR-300-17_Shallow	non-Rad	Fluorene	86-73-7	µg/kg	2.93E+00	--	--	--	3.20E+06	9.16E-07	0.00%
UPR-300-17_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	5.85E+00	1.37E+03	4.27E-09	0.08%	--	--	--
UPR-300-17_Shallow	non-Rad	Lead	7439-92-1	µg/kg	1.12E+04	--	--	--	--	--	--
UPR-300-17_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	6.90E+01	--	--	--	2.40E+04	2.88E-03	0.44%
UPR-300-17_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	4.79E+01	--	--	--	1.60E+06	2.99E-05	0.00%
UPR-300-17_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	5.64E+05	--	--	--	1.60E+06	3.52E-01	53.76%
UPR-300-17_Shallow	non-Rad	Pyrene	129-00-0	µg/kg	3.41E+01	--	--	--	2.40E+06	1.42E-05	0.00%
UPR-300-17_Shallow	non-Rad	Silver	7440-22-4	µg/kg	3.40E+02	--	--	--	4.00E+05	8.50E-04	0.13%
UPR-300-17_Shallow	non-Rad	Total petroleum hydrocarbons - diesel range	TPHDIESEL	µg/kg	2.95E+03	--	--	--	--	--	--
UPR-300-17_Shallow	non-Rad	Total petroleum hydrocarbons - motor oil (high boiling)	TPH/OILH	µg/kg	2.10E+05	--	--	--	--	--	--

Table G-29. Residential Scenario Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
UPR-300-17_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	1.57E+05	--	--	--	2.40E+07	6.55E-03	1.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.47E-06**	**--**	**--**	**6.55E-01**	**--**
UPR-300-17_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	6.15E+00	1.33E+02	4.62E-06	26.10%	--	--	--
UPR-300-17_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	9.14E-01	1.63E+01	5.61E-06	31.65%	--	--	--
UPR-300-17_Shallow	Rad	Uranium-238	U-238	pCi/g	4.04E+00	5.40E+01	7.48E-06	42.25%	--	--	--
Total Radiological Risk Estimate						**--**	**1.77E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.32E-05**	**--**	**--**	**--**	**--**
UPR-300-46_Shallow	non-Rad	Acenaphthene	83-32-9	µg/kg	1.31E+01	--	--	--	4.80E+06	2.72E-06	0.00%
UPR-300-46_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.81E+02	--	--	--	3.20E+04	1.19E-02	3.73%
UPR-300-46_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	8.79E+02	5.00E+02	1.76E-06	59.66%	--	--	--
UPR-300-46_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.90E+02	5.00E+02	9.79E-07	33.23%	1.60E+03	3.06E-01	95.88%
UPR-300-46_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	8.44E+01	5.00E+02	1.69E-07	5.73%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	3.88E+00	1.37E+03	2.83E-09	0.10%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	3.40E+00	1.37E+02	2.48E-08	0.84%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	5.40E+00	1.37E+03	3.94E-09	0.13%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	2.78E+00	1.37E+03	2.03E-09	0.07%	--	--	--
UPR-300-46_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	5.58E+00	1.37E+04	4.08E-10	0.01%	--	--	--
UPR-300-46_Shallow	non-Rad	Dibenz[a,h]anthracene	53-70-3	µg/kg	1.25E+00	1.37E+03	9.12E-10	0.03%	--	--	--
UPR-300-46_Shallow	non-Rad	Fluoranthene	206-44-0	µg/kg	9.55E+00	--	--	--	3.20E+06	2.99E-06	0.00%
UPR-300-46_Shallow	non-Rad	Fluorene	86-73-7	µg/kg	2.15E+00	--	--	--	3.20E+06	6.72E-07	0.00%
UPR-300-46_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	7.55E+00	1.37E+03	5.51E-09	0.19%	--	--	--
UPR-300-46_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	2.92E+01	--	--	--	2.40E+04	1.22E-03	0.38%
UPR-300-46_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	3.57E+01	--	--	--	1.60E+06	2.23E-05	0.01%
UPR-300-46_Shallow	non-Rad	Pyrene	129-00-0	µg/kg	4.44E+00	--	--	--	2.40E+06	1.85E-06	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.95E-06**	**--**	**--**	**3.19E-01**	**--**
UPR-300-46_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.77E+00	1.33E+02	1.33E-06	22.13%	--	--	--
UPR-300-46_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.43E-01	1.63E+01	1.49E-06	24.76%	--	--	--
UPR-300-46_Shallow	Rad	Uranium-238	U-238	pCi/g	1.73E+00	5.40E+01	3.20E-06	53.11%	--	--	--
Total Radiological Risk Estimate						**--**	**6.02E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.97E-06**	**--**	**--**	**--**	**--**

Table G-30. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300 ASH PITS_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	5.20E+01	3.20E+08	1.63E-13	99.23%	--	--	--
300 ASH PITS_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	9.60E+01	7.60E+10	1.26E-15	0.77%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.64E-13**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.64E-13**	**--**	**--**	**--**	**--**
300-10_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.35E+04	4.24E+07	3.18E-10	100.00%	5.00E+08	2.70E-05	100.00%
300-10_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.00E+02	7.60E+10	2.63E-15	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.18E-10**	**--**	**--**	**2.70E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.18E-10**	**--**	**--**	**--**	**--**
300-109_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.22E+02	3.20E+08	3.81E-13	72.93%	--	--	--
300-109_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.97E+01	3.20E+08	1.24E-13	23.73%	--	--	--
300-109_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	1.24E+00	1.66E+08	7.48E-15	1.43%	--	--	--
300-109_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	2.30E+00	1.66E+09	1.39E-15	0.27%	--	--	--
300-109_Shallow_Focused	non-Rad	Chrysene	218-01-9	µg/kg	1.77E+00	1.66E+10	1.07E-16	0.02%	--	--	--
300-109_Shallow_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	1.40E+01	1.66E+09	8.44E-15	1.62%	--	--	--
300-109_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	2.20E+01	--	--	--	1.00E+09	2.20E-08	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.23E-13**	**--**	**--**	**2.20E-08**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.23E-13**	**--**	**--**	**--**	**--**
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.68E+01	3.20E+08	1.15E-13	53.44%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.94E+01	3.20E+08	6.06E-14	28.17%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	2.08E+00	1.66E+09	1.25E-15	0.58%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	3.30E+00	1.66E+08	1.99E-14	9.25%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	1.31E+00	1.66E+09	7.90E-16	0.37%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	2.92E+01	1.66E+09	1.76E-14	8.18%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.15E-13**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.15E-13**	**--**	**--**	**--**	**--**
300-260_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	8.36E+03	--	--	--	6.67E+11	1.25E-08	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**1.25E-08**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
300-275_Shallow_1	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	1.30E+00	1.66E+08	7.84E-15	86.15%	--	--	--
300-275_Shallow_1	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	1.87E+00	1.66E+09	1.13E-15	12.39%	--	--	--
300-275_Shallow_1	non-Rad	Chrysene	218-01-9	µg/kg	2.20E+00	1.66E+10	1.33E-16	1.46%	--	--	--
300-275_Shallow_1	non-Rad	Mercury	7439-97-6	µg/kg	1.67E+01	--	--	--	1.00E+09	1.67E-08	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**9.10E-15**	**--**	**--**	**1.67E-08**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.10E-15**	**--**	**--**	**--**	**--**

Table G-30. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-275_Shallow_2	non-Rad	Mercury	7439-97-6	µg/kg	2.80E+01	--	--	--	1.00E+09	2.80E-08	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**2.80E-08**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1016	12674-11-2	µg/kg	1.03E+01	9.12E+09	1.13E-15	0.00%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1242	53469-21-9	µg/kg	1.64E+01	3.20E+08	5.13E-14	0.02%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.90E+02	3.20E+08	5.94E-13	0.23%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	8.44E+01	3.20E+08	2.64E-13	0.10%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.73E+01	3.20E+08	5.40E-14	0.02%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	1.60E+01	--	--	--	1.00E+09	1.60E-08	0.43%
300-33, 300-41, 300-256_Shallow	non-Rad	Methylene chloride	75-09-2	µg/kg	2.91E+00	1.12E+04	2.60E-10	99.63%	9.65E+05	3.02E-06	80.28%
300-33, 300-41, 300-256_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	7.26E+03	--	--	--	1.00E+10	7.26E-07	19.29%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.60E-10**	**--**	**--**	**3.76E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.60E-10**	**--**	**--**	**--**	**--**
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.30E+02	3.20E+08	1.03E-12	0.52%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.85E+02	3.20E+08	1.20E-12	0.60%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.20E+01	3.20E+08	1.63E-13	0.08%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	2.21E+00	1.12E+04	1.97E-10	98.80%	9.65E+05	2.29E-06	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.99E-10**	**--**	**--**	**2.29E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.99E-10**	**--**	**--**	**--**	**--**
300-37_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.00E+02	3.20E+08	3.13E-13	3.03%	--	--	--
300-37_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.20E+03	3.20E+08	1.00E-11	96.97%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.03E-11**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.03E-11**	**--**	**--**	**--**	**--**
300-44_Overburden_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	9.10E+03	4.24E+07	2.15E-10	100.00%	5.00E+08	1.82E-05	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.15E-10**	**--**	**--**	**1.82E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.15E-10**	**--**	**--**	**--**	**--**
300-44_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.69E+04	4.24E+07	3.98E-10	100.00%	5.00E+08	3.38E-05	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.98E-10**	**--**	**--**	**3.38E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.98E-10**	**--**	**--**	**--**	**--**
300-45_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	8.60E+01	3.20E+08	2.69E-13	98.60%	--	--	--
300-45_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.90E+02	7.60E+10	3.82E-15	1.40%	--	--	--

Table G-30. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**2.73E-13**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**2.73E-13**	--	--	--	--
300-49_Overburden	non-Rad	1,2,4-Trichlorobenzene	120-82-1	µg/kg	3.05E+01	--	--	--	1.42E+04	2.15E-03	99.24%
300-49_Overburden	non-Rad	1,4-Dichlorobenzene	106-46-7	µg/kg	2.88E+01	1.48E+03	1.95E-08	99.95%	2.37E+06	1.21E-05	0.56%
300-49_Overburden	non-Rad	2,4-Dinitrotoluene	121-14-2	µg/kg	1.89E+01	2.05E+09	9.24E-15	0.00%	--	--	--
300-49_Overburden	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.01E+03	3.20E+08	9.40E-12	0.05%	--	--	--
300-49_Overburden	non-Rad	n-Nitrosodi-n-dipropylamine	621-64-7	µg/kg	3.97E+01	9.12E+07	4.36E-13	0.00%	--	--	--
300-49_Overburden	non-Rad	Pentachlorophenol	87-86-5	µg/kg	4.98E+01	3.58E+10	1.39E-15	0.00%	--	--	--
300-49_Overburden	non-Rad	Phenol	108-95-2	µg/kg	5.00E+01	--	--	--	1.16E+07	4.30E-06	0.20%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**1.95E-08**	--	--	**2.17E-03**	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.95E-08**	--	--	--	--
300-50_Overburden	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.34E+01	3.20E+08	1.05E-13	0.06%	--	--	--
300-50_Overburden	non-Rad	Aroclor-1260	11096-82-5	µg/kg	2.29E+02	3.20E+08	7.16E-13	0.44%	--	--	--
300-50_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	6.90E+03	4.24E+07	1.63E-10	99.50%	5.00E+08	1.38E-05	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**1.63E-10**	--	--	**1.38E-05**	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.63E-10**	--	--	--	--
300-50_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.26E+02	3.20E+08	3.95E-13	99.94%	--	--	--
300-50_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.93E+01	7.60E+10	2.54E-16	0.06%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**3.95E-13**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**3.95E-13**	--	--	--	--
316-1_Shallow_1	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.00E+03	3.20E+08	9.38E-12	2.05%	--	--	--
316-1_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	1.90E+04	4.24E+07	4.48E-10	97.95%	5.00E+08	3.80E-05	100.00%
316-1_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.86E+01	7.60E+10	9.02E-16	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**4.58E-10**	--	--	**3.80E-05**	--
Total Non-Radiological and Radiological Risk Estimate						--	**4.58E-10**	--	--	--	--
316-1_Shallow_3	non-Rad	Aroclor-1254	11097-69-1	µg/kg	9.82E+01	3.20E+08	3.07E-13	0.23%	--	--	--
316-1_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	3.42E+02	7.60E+10	4.50E-15	0.00%	--	--	--
316-1_Shallow_3	non-Rad	Heptachlor epoxide	1024-57-3	µg/kg	3.20E+00	7.01E+07	4.56E-14	0.03%	--	--	--
316-1_Shallow_3	non-Rad	Mercury	7439-97-6	µg/kg	1.11E+03	--	--	--	1.00E+09	1.10E-06	3.15%
316-1_Shallow_3	non-Rad	Nickel	7440-02-0	µg/kg	9.47E+04	7.01E+08	1.35E-10	99.74%	3.00E+09	3.15E-05	89.96%
316-1_Shallow_3	non-Rad	Phenol	108-95-2	µg/kg	2.80E+01	--	--	--	1.16E+07	2.41E-06	6.88%
316-1_Shallow_3	non-Rad	Selenium	7782-49-2	µg/kg	1.44E+03	--	--	--	6.67E+11	2.17E-09	0.01%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**1.35E-10**	--	--	**3.51E-05**	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.35E-10**	--	--	--	--

Table G-30. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-1_Shallow_4	non-Rad	Aroclor-1254	11097-69-1	µg/kg	6.20E+01	3.20E+08	1.94E-13	100.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**1.94E-13**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.94E-13**	--	--	--	--
316-2_Shallow_2	non-Rad	Aroclor-1248	12672-29-6	µg/kg	6.97E+02	3.20E+08	2.18E-12	82.09%	--	--	--
316-2_Shallow_2	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.20E+01	3.20E+08	1.31E-13	4.95%	--	--	--
316-2_Shallow_2	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.10E+02	3.20E+08	3.44E-13	12.96%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**2.65E-12**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**2.65E-12**	--	--	--	--
316-2_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	8.00E+03	4.24E+07	1.89E-10	100.00%	5.00E+08	1.60E-05	100.00%
316-2_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.60E+02	7.60E+10	3.42E-15	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**1.89E-10**	--	--	**1.60E-05**	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.89E-10**	--	--	--	--
316-5_Shallow_1	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	3.80E+01	1.66E+09	2.29E-14	92.27%	--	--	--
316-5_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.46E+02	7.60E+10	1.92E-15	7.73%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**2.48E-14**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**2.48E-14**	--	--	--	--
316-5_Shallow_2	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	1.40E+02	3.94E+02	3.56E-07	100.00%	--	--	--
316-5_Shallow_2	non-Rad	2-Butoxyethanol	111-76-2	µg/kg	2.40E+02	--	--	--	4.76E+08	5.04E-07	100.00%
316-5_Shallow_2	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.80E+02	7.60E+10	2.37E-15	0.00%	--	--	--
316-5_Shallow_2	non-Rad	Chrysene	218-01-9	µg/kg	3.80E+01	1.66E+10	2.29E-15	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**3.56E-07**	--	--	**5.04E-07**	--
Total Non-Radiological and Radiological Risk Estimate						--	**3.56E-07**	--	--	--	--
316-5_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	5.70E+01	3.20E+08	1.78E-13	31.70%	--	--	--
316-5_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	7.00E+01	3.20E+08	2.19E-13	38.93%	--	--	--
316-5_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.20E+01	3.20E+08	1.63E-13	28.92%	--	--	--
316-5_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.90E+02	7.60E+10	2.50E-15	0.44%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**5.62E-13**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**5.62E-13**	--	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	4,4'-DDE (Dichlorodiphenyldichloroethylene)	72-55-9	µg/kg	2.50E+01	1.88E+09	1.33E-14	0.00%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	5.90E+02	--	--	--	1.90E+08	3.11E-06	21.25%
331 LSLDF_Shallow_Focused	non-Rad	Aldrin	309-00-2	µg/kg	5.60E-01	3.72E+07	1.50E-14	0.00%	--	--	--

Table G-30. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
331 LSLDF_Shallow_Focused	non-Rad	Alpha-BHC	319-84-6	µg/kg	3.90E-01	1.01E+08	3.85E-15	0.00%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	8.50E+02	3.20E+08	2.66E-12	0.27%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	9.10E+02	7.60E+10	1.20E-14	0.00%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Dieldrin	60-57-1	µg/kg	1.30E+01	3.96E+07	3.28E-13	0.03%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	1.10E+02	--	--	--	1.00E+09	1.10E-07	0.75%
331 LSLDF_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	1.10E+01	1.12E+04	9.80E-10	99.69%	9.65E+05	1.14E-05	78.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**9.83E-10**	**--**	**--**	**1.46E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.83E-10**	**--**	**--**	**--**	**--**
600-243_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.70E+01	3.20E+08	8.43E-14	0.00%	--	--	--
600-243_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.84E+01	3.20E+08	5.75E-14	0.00%	--	--	--
600-243_Shallow	non-Rad	Barium	7440-39-3	µg/kg	2.92E+05	--	--	--	1.67E+10	1.75E-05	0.22%
600-243_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	4.33E+01	1.66E+09	2.61E-14	0.00%	--	--	--
600-243_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	4.27E+01	1.66E+08	2.58E-13	0.00%	--	--	--
600-243_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	4.63E+01	1.66E+09	2.79E-14	0.00%	--	--	--
600-243_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	3.18E+01	1.66E+09	1.92E-14	0.00%	--	--	--
600-243_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.08E+03	7.60E+07	2.74E-11	0.02%	6.67E+08	3.12E-06	0.04%
600-243_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	4.32E+02	7.60E+10	5.69E-15	0.00%	--	--	--
600-243_Shallow	non-Rad	Boron	7440-42-8	µg/kg	2.94E+05	--	--	--	6.67E+11	4.41E-07	0.01%
600-243_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	7.93E+02	1.01E+08	7.82E-12	0.01%	3.33E+08	2.38E-06	0.03%
600-243_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	6.26E+01	1.66E+10	3.78E-15	0.00%	--	--	--
600-243_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	2.80E+01	1.66E+09	1.69E-14	0.00%	--	--	--
600-243_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	2.04E+02	1.36E+03	1.50E-07	99.96%	2.53E+04	8.05E-03	99.62%
600-243_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	2.14E+04	7.01E+08	3.05E-11	0.02%	3.00E+09	7.13E-06	0.09%
600-243_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	5.71E+03	--	--	--	6.67E+11	8.56E-09	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.50E-07**	**--**	**--**	**8.08E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.50E-07**	**--**	**--**	**--**	**--**
618-1_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.64E+02	3.20E+08	8.25E-13	83.15%	--	--	--
618-1_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.35E+01	3.20E+08	1.67E-13	16.85%	--	--	--
618-1_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	3.10E+01	--	--	--	1.00E+09	3.10E-08	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**9.92E-13**	**--**	**--**	**3.10E-08**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.92E-13**	**--**	**--**	**--**	**--**
618-1_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	1.22E+07	--	--	--	1.67E+11	7.32E-05	98.78%
618-1_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.51E+01	3.20E+08	1.10E-13	3.27%	--	--	--
618-1_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	9.81E+02	3.20E+08	3.07E-12	91.50%	--	--	--
618-1_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.60E+01	3.20E+08	1.75E-13	5.22%	--	--	--
618-1_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	1.98E+02	--	--	--	1.00E+09	1.98E-07	0.27%
618-1_Shallow_Focused	non-Rad	Uranium	7440-61-1	µg/kg	7.08E+03	--	--	--	1.00E+10	7.08E-07	0.96%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.35E-12**	**--**	**--**	**7.41E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.35E-12**	**--**	**--**	**--**	**--**

Table G-30. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-12_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	8.56E+03	4.24E+07	2.02E-10	100.00%	5.00E+08	1.71E-05	100.00%
618-12_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.30E+01	7.60E+10	8.29E-16	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.02E-10**	**--**	**--**	**1.71E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.02E-10**	**--**	**--**	**--**	**--**
618-13_Shallow	non-Rad	Acetone	67-64-1	µg/kg	8.64E+00	--	--	--	1.90E+08	4.55E-08	0.85%
618-13_Shallow	non-Rad	Methylene chloride	75-09-2	µg/kg	5.12E+00	1.12E+04	4.56E-10	100.00%	9.65E+05	5.31E-06	99.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.56E-10**	**--**	**--**	**5.35E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.56E-10**	**--**	**--**	**--**	**--**
618-13_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	5.90E+00	--	--	--	1.90E+08	3.11E-08	0.59%
618-13_Shallow_Focused	non-Rad	Hexavalent Chromium	18540-29-9	µg/kg	1.50E+02	2.17E+06	6.91E-11	13.36%	3.33E+09	4.50E-08	0.85%
618-13_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	5.03E+00	1.12E+04	4.48E-10	86.64%	9.65E+05	5.21E-06	98.56%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.17E-10**	**--**	**--**	**5.29E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.17E-10**	**--**	**--**	**--**	**--**
618-2_Overburden	non-Rad	Selenium	7782-49-2	µg/kg	1.00E+03	--	--	--	6.67E+11	1.50E-09	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**1.50E-09**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-2_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	4.53E+03	--	--	--	1.00E+10	4.53E-07	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**4.53E-07**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-2_Staging Pile	non-Rad	Uranium	7440-61-1	µg/kg	5.02E+03	--	--	--	1.00E+10	5.02E-07	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**5.02E-07**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-7_Shallow_1	non-Rad	Mercury	7439-97-6	µg/kg	4.43E+01	--	--	--	1.00E+09	4.43E-08	0.63%
618-7_Shallow_1	non-Rad	Nickel	7440-02-0	µg/kg	2.10E+04	7.01E+08	2.99E-11	100.00%	3.00E+09	6.99E-06	99.37%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.99E-11**	**--**	**--**	**7.03E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.99E-11**	**--**	**--**	**--**	**--**
618-7_Shallow_2	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	1.00E+09	2.00E-08	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**2.00E-08**	**--**

Table G-30. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-7_Shallow_3	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	1.00E+09	2.00E-08	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**2.00E-08**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-7_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	6.70E+00	3.20E+08	2.09E-14	0.03%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	8.80E+01	1.66E+09	5.31E-14	0.09%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	6.60E+01	1.66E+08	3.98E-13	0.64%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	5.20E+01	1.66E+09	3.14E-14	0.05%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	1.10E+01	1.66E+09	6.63E-15	0.01%	--	--	--
618-7_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	4.70E+02	7.60E+10	6.18E-15	0.01%	--	--	--
618-7_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	6.20E+03	1.01E+08	6.12E-11	99.11%	3.33E+08	1.86E-05	99.89%
618-7_Shallow_Focused	non-Rad	Chrysene	218-01-9	µg/kg	6.90E+01	1.66E+10	4.16E-15	0.01%	--	--	--
618-7_Shallow_Focused	non-Rad	Dibenz[a,h]anthracene	53-70-3	µg/kg	4.50E+01	1.66E+09	2.71E-14	0.04%	--	--	--
618-7_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	1.00E+09	2.00E-08	0.11%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.17E-11**	**--**	**--**	**1.86E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.17E-11**	**--**	**--**	**--**	**--**
618-8_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	8.46E+02	--	--	--	6.67E+11	1.27E-09	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**1.27E-09**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-9_Shallow_Focused	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	1.10E+02	3.94E+02	2.79E-07	17.69%	--	--	--
618-9_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	6.80E+02	--	--	--	1.90E+08	3.58E-06	0.06%
618-9_Shallow_Focused	non-Rad	Aldrin	309-00-2	µg/kg	3.90E+02	3.72E+07	1.05E-11	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1016	12674-11-2	µg/kg	1.90E+03	9.12E+09	2.08E-13	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1221	11104-28-2	µg/kg	1.90E+03	3.20E+08	5.94E-12	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1232	11141-16-5	µg/kg	1.90E+03	3.20E+08	5.94E-12	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1242	53469-21-9	µg/kg	1.90E+03	3.20E+08	5.94E-12	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.90E+03	3.20E+08	5.94E-12	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.90E+03	3.20E+08	1.22E-11	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.90E+03	3.20E+08	1.22E-11	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.16E+04	4.24E+07	2.73E-10	0.02%	5.00E+08	2.32E-05	0.38%
618-9_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	5.20E+03	7.60E+10	6.84E-14	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Chlordane	57-74-9	µg/kg	6.90E+01	1.82E+09	3.78E-14	0.00%	2.33E+10	2.96E-09	0.00%
618-9_Shallow_Focused	non-Rad	Chloroform	67-66-3	µg/kg	9.00E+00	2.42E+02	3.72E-08	2.35%	9.97E+04	9.02E-05	1.46%
618-9_Shallow_Focused	non-Rad	Heptachlor epoxide	1024-57-3	µg/kg	4.40E+01	7.01E+07	6.27E-13	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Hexachlorobutadiene	87-68-3	µg/kg	7.60E+02	8.29E+09	9.17E-14	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Hexachloroethane	67-72-1	µg/kg	1.70E+04	4.56E+10	3.73E-13	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	3.30E+02	--	--	--	1.00E+09	3.30E-07	0.01%

Table G-30. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-9_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	2.30E+03	1.12E+04	2.05E-07	12.97%	9.65E+05	2.38E-03	38.66%
618-9_Shallow_Focused	non-Rad	Tetrachloroethene	127-18-4	µg/kg	9.20E+02	8.80E+02	1.05E-06	66.23%	2.56E+05	3.59E-03	58.23%
618-9_Shallow_Focused	non-Rad	Toluene	108-88-3	µg/kg	9.00E+00	--	--	--	4.77E+06	1.89E-06	0.03%
618-9_Shallow_Focused	non-Rad	Trichloroethene	79-01-6	µg/kg	2.00E+00	1.73E+02	1.16E-08	0.73%	2.76E+04	7.24E-05	1.17%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.58E-06**	**--**	**--**	**6.17E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.58E-06**	**--**	**--**	**--**	**--**
628-4_Overburden	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.09E+01	7.60E+10	8.02E-16	100.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**8.02E-16**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.02E-16**	**--**	**--**	**--**	**--**
628-4_Shallow	non-Rad	Aroclor-1242	53469-21-9	µg/kg	4.24E+01	3.20E+08	1.32E-13	2.94%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.12E+03	3.20E+08	3.49E-12	77.55%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.43E+02	3.20E+08	7.59E-13	16.88%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.78E+01	3.20E+08	1.18E-13	2.63%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.50E-12**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.50E-12**	**--**	**--**	**--**	**--**
UPR-300-17_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.97E+03	3.20E+08	6.16E-12	0.02%	--	--	--
UPR-300-17_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.50E+02	3.20E+08	1.41E-12	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.13E+02	3.20E+08	3.54E-13	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	5.92E+01	1.66E+09	3.57E-14	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	4.38E+01	1.66E+08	2.64E-13	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	3.27E+01	1.66E+09	1.97E-14	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	9.94E+00	1.66E+09	5.99E-15	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Boron	7440-42-8	µg/kg	3.90E+03	--	--	--	6.67E+11	5.85E-09	0.00%
UPR-300-17_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	3.93E+01	1.66E+10	2.37E-15	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	5.85E+00	1.66E+09	3.53E-15	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	6.90E+01	--	--	--	1.00E+09	6.90E-08	0.00%
UPR-300-17_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	4.79E+01	1.36E+03	3.53E-08	97.75%	2.53E+04	1.89E-03	90.98%
UPR-300-17_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	5.64E+05	7.01E+08	8.04E-10	2.22%	3.00E+09	1.88E-04	9.02%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.61E-08**	**--**	**--**	**2.08E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.61E-08**	**--**	**--**	**--**	**--**
UPR-300-46_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	8.79E+02	3.20E+08	2.75E-12	0.01%	--	--	--
UPR-300-46_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.90E+02	3.20E+08	1.53E-12	0.01%	--	--	--
UPR-300-46_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	8.44E+01	3.20E+08	2.64E-13	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	3.88E+00	1.66E+09	2.34E-15	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	3.40E+00	1.66E+08	2.05E-14	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	5.40E+00	1.66E+09	3.25E-15	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	2.78E+00	1.66E+09	1.68E-15	0.00%	--	--	--

Table G-30. MTCA Method B Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
UPR-300-46_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	5.58E+00	1.66E+10	3.37E-16	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Dibenz[a,h]anthracene	53-70-3	µg/kg	1.25E+00	1.66E+09	7.54E-16	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	7.55E+00	1.66E+09	4.55E-15	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	2.92E+01	--	--	--	1.00E+09	2.92E-08	0.00%
UPR-300-46_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	3.57E+01	1.36E+03	2.64E-08	99.98%	2.53E+04	1.41E-03	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.64E-08**	**--**	**--**	**1.41E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.64E-08**	**--**	**--**	**--**	**--**

Table G-31. Comparison of EPCs for the 300 Area Source OU WasteSite Decision Units to MTCA-A Values for Arsenic and Lead

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	MTCA Method A Cleanup Level	EPC Exceeds Cleanup Level (Yes/No)?
300 ASH PITS_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	6,078	2.00E+04	No
300-10_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	13,500	2.00E+04	No
300-109_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	2,420	2.00E+04	No
300-109_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	2,890	2.50E+05	No
300-109_Staging Pile Area_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	2,580	2.00E+04	No
300-109_Staging Pile Area_Focused	non-Rad	Lead	7439-92-1	µg/kg	5,030	2.50E+05	No
300-18_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2,200	2.00E+04	No
300-18_Shallow	non-Rad	Lead	7439-92-1	µg/kg	3,600	2.50E+05	No
300-259_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2,096	2.00E+04	No
300-259_Shallow	non-Rad	Lead	7439-92-1	µg/kg	4,625	2.50E+05	No
300-260_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	3,160	2.00E+04	No
300-260_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	18,300	2.50E+05	No
300-275_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	2,211	2.00E+04	No
300-275_Shallow_1	non-Rad	Lead	7439-92-1	µg/kg	7,189	2.50E+05	No
300-275_Shallow_2	non-Rad	Arsenic	7440-38-2	µg/kg	2,761	2.00E+04	No
300-275_Shallow_2	non-Rad	Lead	7439-92-1	µg/kg	4,099	2.50E+05	No
300-33, 300-41, 300-256_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2,638	2.00E+04	No
300-33, 300-41, 300-256_Shallow	non-Rad	Lead	7439-92-1	µg/kg	4,268	2.50E+05	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	3,240	2.00E+04	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	3,160	2.50E+05	No
300-44_Overburden_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	9,100	2.00E+04	No
300-44_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	16,900	2.00E+04	No
300-49_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	3,291	2.00E+04	No
300-49_Overburden	non-Rad	Lead	7439-92-1	µg/kg	36,964	2.50E+05	No
300-49_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	4,431	2.00E+04	No
300-49_Shallow	non-Rad	Lead	7439-92-1	µg/kg	6,629	2.50E+05	No
300-50_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	6,897	2.00E+04	No
300-50_Overburden	non-Rad	Lead	7439-92-1	µg/kg	5,905	2.50E+05	No
300-50_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	6,403	2.00E+04	No
300-50_Shallow	non-Rad	Lead	7439-92-1	µg/kg	6,381	2.50E+05	No
316-1_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	19,014	2.00E+04	No
316-1_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	5,138	2.00E+04	No
316-1_Shallow_3	non-Rad	Lead	7439-92-1	µg/kg	14,409	2.50E+05	No
316-2_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	8,000	2.00E+04	No

Table G-31. Comparison of EPCs for the 300 Area Source OU WasteSite Decision Units to MTCA-A Values for Arsenic and Lead

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	MTCA Method A Cleanup Level	EPC Exceeds Cleanup Level (Yes/No)?
316-5_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	3,070	2.00E+04	No
316-5_Shallow_2	non-Rad	Arsenic	7440-38-2	µg/kg	3,180	2.00E+04	No
316-5_Shallow_2	non-Rad	Lead	7439-92-1	µg/kg	3,200	2.50E+05	No
316-5_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	4,300	2.00E+04	No
331 LSLDF_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	2,400	2.00E+04	No
331 LSLDF_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	9,000	2.50E+05	No
600-243_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	6,159	2.00E+04	No
600-243_Shallow	non-Rad	Lead	7439-92-1	µg/kg	40,139	2.50E+05	No
600-47_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2,300	2.00E+04	No
600-47_Shallow	non-Rad	Lead	7439-92-1	µg/kg	3,500	2.50E+05	No
618-1_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2,280	2.00E+04	No
618-1_Shallow	non-Rad	Lead	7439-92-1	µg/kg	3,100	2.50E+05	No
618-1_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	6,090	2.00E+04	No
618-1_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	6,210	2.50E+05	No
618-12_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	8,557	2.00E+04	No
618-13_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	3,500	2.00E+04	No
618-13_Shallow	non-Rad	Lead	7439-92-1	µg/kg	3,620	2.50E+05	No
618-13_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	3,390	2.00E+04	No
618-13_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	4,940	2.50E+05	No
618-2_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	2,700	2.00E+04	No
618-2_Overburden	non-Rad	Lead	7439-92-1	µg/kg	4,300	2.50E+05	No
618-2_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	1,900	2.00E+04	No
618-2_Shallow	non-Rad	Lead	7439-92-1	µg/kg	5,600	2.50E+05	No
618-2_Staging Pile	non-Rad	Arsenic	7440-38-2	µg/kg	3,063	2.00E+04	No
618-2_Staging Pile	non-Rad	Lead	7439-92-1	µg/kg	4,011	2.50E+05	No
618-3_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2,800	2.00E+04	No
618-3_Shallow	non-Rad	Lead	7439-92-1	µg/kg	3,900	2.50E+05	No
618-4_Overburden_2	non-Rad	Arsenic	7440-38-2	µg/kg	2,500	2.00E+04	No
618-4_Overburden_2	non-Rad	Lead	7439-92-1	µg/kg	4,700	2.50E+05	No
618-4_Overburden_3	non-Rad	Lead	7439-92-1	µg/kg	5,000	2.50E+05	No
618-4_Overburden_4	non-Rad	Lead	7439-92-1	µg/kg	4,800	2.50E+05	No
618-4_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	3,200	2.00E+04	No
618-4_Shallow	non-Rad	Lead	7439-92-1	µg/kg	49,000	2.50E+05	No
618-5_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	3,400	2.00E+04	No

Table G-31. Comparison of EPCs for the 300 Area Source OU WasteSite Decision Units to MTCA-A Values for Arsenic and Lead

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	MTCA Method A Cleanup Level	EPC Exceeds Cleanup Level (Yes/No)?
618-5_Overburden	non-Rad	Lead	7439-92-1	µg/kg	7,500	2.50E+05	No
618-5_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	4,300	2.00E+04	No
618-5_Shallow	non-Rad	Lead	7439-92-1	µg/kg	6,100	2.50E+05	No
618-5_Staging Pile_4	non-Rad	Arsenic	7440-38-2	µg/kg	3,300	2.00E+04	No
618-5_Staging Pile_4	non-Rad	Lead	7439-92-1	µg/kg	5,300	2.50E+05	No
618-5_Staging Pile_5	non-Rad	Arsenic	7440-38-2	µg/kg	2,700	2.00E+04	No
618-5_Staging Pile_5	non-Rad	Lead	7439-92-1	µg/kg	3,900	2.50E+05	No
618-7_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	1,891	2.00E+04	No
618-7_Shallow_1	non-Rad	Lead	7439-92-1	µg/kg	14,567	2.50E+05	No
618-7_Shallow_2	non-Rad	Arsenic	7440-38-2	µg/kg	2,500	2.00E+04	No
618-7_Shallow_2	non-Rad	Lead	7439-92-1	µg/kg	2,800	2.50E+05	No
618-7_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	2,800	2.00E+04	No
618-7_Shallow_3	non-Rad	Lead	7439-92-1	µg/kg	4,300	2.50E+05	No
618-7_Shallow_4	non-Rad	Arsenic	7440-38-2	µg/kg	5,200	2.00E+04	No
618-7_Shallow_4	non-Rad	Lead	7439-92-1	µg/kg	3,000	2.50E+05	No
618-7_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	4,200	2.00E+04	No
618-7_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	6,500	2.50E+05	No
618-8_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	4,100	2.00E+04	No
618-8_Shallow	non-Rad	Lead	7439-92-1	µg/kg	5,100	2.50E+05	No
618-9_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	11,600	2.00E+04	No
618-9_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	7,700	2.50E+05	No
628-4_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	3,374	2.00E+04	No
628-4_Overburden	non-Rad	Lead	7439-92-1	µg/kg	7,284	2.50E+05	No
628-4_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	3,864	2.00E+04	No
628-4_Shallow	non-Rad	Lead	7439-92-1	µg/kg	99,167	2.50E+05	No
UPR-300-17_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2,573	2.00E+04	No
UPR-300-17_Shallow	non-Rad	Lead	7439-92-1	µg/kg	11,240	2.50E+05	No
UPR-300-46_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2,846	2.00E+04	No
UPR-300-46_Shallow	non-Rad	Lead	7439-92-1	µg/kg	7,105	2.50E+05	No

Table G-32. Summary of Residential Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Shallow Zone Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
300 ASH PITS_Shallow	1.05E-07	--	0.00E+00	--	1.05E-07	6.48E-05	--
300 VTS_Shallow	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-10_Shallow_Focused	2.03E-05	Arsenic (2.02e-05)	2.54E-06	--	2.28E-05	5.63E-01	--
300-109_Shallow_Focused	3.44E-07	--	3.61E-06	--	3.95E-06	7.72E-02	--
300-18_Shallow	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-223_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-23_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-259_Shallow	0.00E+00	--	3.69E-06	--	3.69E-06	3.01E-02	--
300-260_Shallow_Focused	0.00E+00	--	9.50E-06	--	9.50E-06	5.73E-02	--
300-272_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-275_Shallow_1	1.10E-08	--	2.57E-05	--	2.57E-05	2.36E-02	--
300-275_Shallow_2	0.00E+00	--	4.74E-06	--	4.74E-06	1.77E-03	--
300-33, 300-41, 300-256_Shallow	6.17E-07	--	7.49E-06	--	8.11E-06	8.87E-02	--
300-33, 300-41, 300-256_Shallow_Focused	1.53E-06	--	6.29E-06	--	7.82E-06	2.41E-01	--
300-37_Shallow_Focused	6.60E-06	Aroclor-1260 (6.40e-06)	0.00E+00	--	6.60E-06	6.25E-02	--
300-44_Shallow_Focused	2.53E-05	Arsenic (2.53e-05)	0.00E+00	--	2.53E-05	8.32E-01	--
300-45_Shallow_Focused	1.76E-07	--	2.22E-06	--	2.40E-06	1.81E-04	--
300-49_Shallow	0.00E+00	--	4.43E-06	--	4.43E-06	7.05E-03	--
300-50_Shallow	2.53E-07	--	2.56E-05	--	2.58E-05	1.80E-01	--
300-8_Shallow	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
316-1_Shallow_1	3.45E-05	Aroclor-1248 (6.00e-06) Arsenic (2.85e-05)	5.87E-05	--	9.33E-05	7.92E-01	--
316-1_Shallow_3	2.30E-07	--	1.47E-04	--	1.47E-04	6.53E-01	--
316-1_Shallow_4	1.24E-07	--	4.89E-05	--	4.90E-05	3.88E-02	--
316-2_Shallow_1	0.00E+00	--	2.70E-04	Uranium-238 (1.27e-04)	2.70E-04	0.00E+00	--
316-2_Shallow_2	1.70E-06	Aroclor-1248 (1.39e-06)	3.47E-04	Uranium-238 (1.78e-04)	3.49E-04	2.63E-02	--
316-2_Shallow_3	1.20E-05	Arsenic (1.20e-05)	5.08E-05	--	6.28E-05	3.34E-01	--
316-5_Shallow_1	3.00E-08	--	3.32E-04	Uranium-235 (1.14e-04) Uranium-238 (1.65e-04)	3.32E-04	9.75E-05	--
316-5_Shallow_2	3.35E-08	--	2.23E-04	Uranium-238 (1.25e-04)	2.23E-04	9.61E-03	--
316-5_Shallow_Focused	3.61E-07	--	1.72E-04	--	1.73E-04	4.41E-02	--
331 LSLDF_Shallow_Focused	1.94E-06	Aroclor-1254 (1.70e-06)	0.00E+00	--	1.94E-06	5.61E-01	--
600-243_Shallow	5.22E-07	--	0.00E+00	--	5.22E-07	1.83E-01	--
600-259_Shallow	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
600-259_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
600-47_Shallow	0.00E+00	--	3.95E-06	--	3.95E-06	0.00E+00	--

Table G-32. Summary of Residential Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Shallow Zone Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
618-1_Shallow	6.35E-07	--	4.25E-06	--	4.88E-06	1.66E-01	--
618-1_Shallow_Focused	2.14E-06	Aroclor-1254 (1.96e-06)	2.98E-05	--	3.19E-05	8.31E-01	--
618-12_Shallow	1.28E-05	Arsenic (1.28e-05)	2.27E-05	--	3.56E-05	3.57E-01	--
618-13_Shallow	3.84E-11	--	4.59E-06	--	4.59E-06	9.77E-03	--
618-13_Shallow_Focused	3.77E-11	--	8.57E-07	--	8.57E-07	7.92E-03	--
618-2_Shallow	0.00E+00	--	6.23E-05	--	6.23E-05	1.89E-02	--
618-3_Shallow	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
618-3_Shallow_Focused	0.00E+00	--	2.36E-04	Uranium-238 (1.47e-04)	2.36E-04	0.00E+00	--
618-4_Shallow	0.00E+00	--	8.11E-06	--	8.11E-06	0.00E+00	--
618-5_Shallow	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
618-7_Shallow_1	0.00E+00	--	1.16E-05	--	1.16E-05	3.25E-02	--
618-7_Shallow_2	0.00E+00	--	0.00E+00	--	0.00E+00	2.15E-02	--
618-7_Shallow_3	0.00E+00	--	0.00E+00	--	0.00E+00	1.49E-02	--
618-7_Shallow_4	0.00E+00	--	0.00E+00	--	0.00E+00	7.83E-03	--
618-7_Shallow_Focused	6.50E-07	--	2.61E-05	--	2.67E-05	1.95E-01	--
618-8_Shallow	0.00E+00	--	8.95E-07	--	8.95E-07	2.12E-03	--
618-9_Shallow_Focused	5.63E-05	Aldrin (6.63e-06) Aroclor-1221 (3.80e-06) Aroclor-1232 (3.80e-06) Aroclor-1242 (3.80e-06) Aroclor-1248 (3.80e-06) Aroclor-1254 (7.80e-06) Aroclor-1260 (7.80e-06) Arsenic (1.74e-05)	5.56E-06	--	6.19E-05	3.71E+00	Aroclor-1254 (2.44e00)
628-4_Shallow	2.88E-06	Aroclor-1248 (2.23e-06)	1.54E-06	--	4.41E-06	1.52E-01	--
UPR-300-17_Shallow	5.47E-06	Aroclor-1248 (3.94e-06)	1.77E-05	--	2.32E-05	6.55E-01	--
UPR-300-46_Shallow	2.95E-06	Aroclor-1248 (1.76e-06)	6.02E-06	--	8.97E-06	3.19E-01	--

Table G-33. Summary of MTCA Method B Inhalation Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Shallow Zone Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Non-Cancer Hazard Index	Hazard Drivers
300 ASH PITS_Shallow	1.64E-13	--	0.00E+00	--
300 VTS_Shallow	0.00E+00	--	0.00E+00	--
300-10_Shallow_Focused	3.18E-10	--	2.70E-05	--
300-109_Shallow_Focused	5.23E-13	--	2.20E-08	--
300-18_Shallow	0.00E+00	--	0.00E+00	--
300-223_Shallow_Focused	0.00E+00	--	0.00E+00	--
300-23_Shallow_Focused	0.00E+00	--	0.00E+00	--
300-259_Shallow	0.00E+00	--	0.00E+00	--
300-260_Shallow_Focused	0.00E+00	--	1.25E-08	--
300-272_Shallow_Focused	0.00E+00	--	0.00E+00	--
300-275_Shallow_1	9.10E-15	--	1.67E-08	--
300-275_Shallow_2	0.00E+00	--	2.80E-08	--
300-33, 300-41, 300-256_Shallow	2.60E-10	--	3.76E-06	--
300-33, 300-41, 300-256_Shallow_Focused	1.99E-10	--	2.29E-06	--
300-37_Shallow_Focused	1.03E-11	--	0.00E+00	--
300-44_Shallow_Focused	3.98E-10	--	3.38E-05	--
300-45_Shallow_Focused	2.73E-13	--	0.00E+00	--
300-49_Shallow	0.00E+00	--	0.00E+00	--
300-50_Shallow	3.95E-13	--	0.00E+00	--
300-8_Shallow	0.00E+00	--	0.00E+00	--
316-1_Shallow_1	4.58E-10	--	3.80E-05	--
316-1_Shallow_3	1.35E-10	--	3.51E-05	--
316-1_Shallow_4	1.94E-13	--	0.00E+00	--
316-2_Shallow_1	0.00E+00	--	0.00E+00	--
316-2_Shallow_2	2.65E-12	--	0.00E+00	--
316-2_Shallow_3	1.89E-10	--	1.60E-05	--
316-5_Shallow_1	2.48E-14	--	0.00E+00	--
316-5_Shallow_2	3.56E-07	--	5.04E-07	--
316-5_Shallow_Focused	5.62E-13	--	0.00E+00	--
331 LSLDF_Shallow_Focused	9.83E-10	--	1.46E-05	--
600-243_Shallow	1.50E-07	--	8.08E-03	--

Table G-33. Summary of MTCA Method B Inhalation Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Shallow Zone Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Non-Cancer Hazard Index	Hazard Drivers
600-259_Shallow	0.00E+00	--	0.00E+00	--
600-259_Shallow_Focused	0.00E+00	--	0.00E+00	--
600-47_Shallow	0.00E+00	--	0.00E+00	--
618-1_Shallow	9.92E-13	--	3.10E-08	--
618-1_Shallow_Focused	3.35E-12	--	7.41E-05	--
618-12_Shallow	2.02E-10	--	1.71E-05	--
618-13_Shallow	4.56E-10	--	5.35E-06	--
618-13_Shallow_Focused	5.17E-10	--	5.29E-06	--
618-2_Shallow	0.00E+00	--	4.53E-07	--
618-3_Shallow	0.00E+00	--	0.00E+00	--
618-3_Shallow_Focused	0.00E+00	--	0.00E+00	--
618-4_Shallow	0.00E+00	--	0.00E+00	--
618-5_Shallow	0.00E+00	--	0.00E+00	--
618-7_Shallow_1	2.99E-11	--	7.03E-06	--
618-7_Shallow_2	0.00E+00	--	2.00E-08	--
618-7_Shallow_3	0.00E+00	--	2.00E-08	--
618-7_Shallow_4	0.00E+00	--	0.00E+00	--
618-7_Shallow_Focused	6.17E-11	--	1.86E-05	--
618-8_Shallow	0.00E+00	--	1.27E-09	--
618-9_Shallow_Focused	1.58E-06	Tetrachloroethene (1.05e-06)	6.17E-03	--
628-4_Shallow	4.50E-12	--	0.00E+00	--
UPR-300-17_Shallow	3.61E-08	--	2.08E-03	--
UPR-300-46_Shallow	2.64E-08	--	1.41E-03	--

Table G-34. Summary of Residential Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Overburden Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
300-272_Overburden_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-44_Overburden_Focused	1.36E-05	Arsenic (1.36e-05)	0.00E+00	--	1.36E-05	3.79E-01	--
300-49_Overburden	6.31E-06	Aroclor-1254 (6.02e-06)	0.00E+00	--	6.31E-06	2.06E+00	Aroclor-1254 (1.88e00)
300-50_Overburden	1.09E-05	Arsenic (1.03e-05)	1.83E-05	--	2.92E-05	3.31E-01	--
316-1_Overburden	0.00E+00	--	5.16E-05	--	5.16E-05	0.00E+00	--
600-259_Overburden	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
618-2_Overburden	0.00E+00	--	0.00E+00	--	0.00E+00	2.56E-03	--
618-4_Overburden_2	0.00E+00	--	3.59E-06	--	3.59E-06	0.00E+00	--
618-4_Overburden_3	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
618-4_Overburden_4	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
618-5_Overburden	0.00E+00	--	1.16E-05	--	1.16E-05	0.00E+00	--
628-4_Overburden	8.53E-10	--	0.00E+00	--	8.53E-10	3.81E-05	--

Table G-35. Summary of MTCA Method B Inhalation Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Overburden Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Non-Cancer Hazard Index	Hazard Drivers
300-272_Overburden_Focused	0.00E+00	--	0.00E+00	--
300-44_Overburden_Focused	2.15E-10	--	1.82E-05	--
300-49_Overburden	1.95E-08	--	2.17E-03	--
300-50_Overburden	1.63E-10	--	1.38E-05	--
316-1_Overburden	0.00E+00	--	0.00E+00	--
600-259_Overburden	0.00E+00	--	0.00E+00	--
618-2_Overburden	0.00E+00	--	1.50E-09	--
618-4_Overburden_2	0.00E+00	--	0.00E+00	--
618-4_Overburden_3	0.00E+00	--	0.00E+00	--
618-4_Overburden_4	0.00E+00	--	0.00E+00	--
618-5_Overburden	0.00E+00	--	0.00E+00	--
628-4_Overburden	8.02E-16	--	0.00E+00	--

Table G-36. Summary of Residential Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Staging Pile Area Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
300-109_Staging Pile Area_Focused	1.60E-07	--	6.19E-06	--	6.35E-06	2.30E-02	--
618-2_Staging Pile	0.00E+00	--	1.18E-05	--	1.18E-05	2.09E-02	--
618-5_Staging Pile_4	0.00E+00	--	2.96E-06	--	2.96E-06	0.00E+00	--
618-5_Staging Pile_5	0.00E+00	--	5.34E-06	--	5.34E-06	0.00E+00	--

Table G-37. Summary of MTCA Method B Inhalation Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Staging Pile Area Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Non-Cancer Hazard Index	Hazard Drivers
300-109_Staging Pile Area_Focused	2.15E-13	--	0.00E+00	--
618-2_Staging Pile	0.00E+00	--	5.02E-07	--
618-5_Staging Pile_4	0.00E+00	--	0.00E+00	--
618-5_Staging Pile_5	0.00E+00	--	0.00E+00	--

Table G-38. Summary of Residential Scenario Risk Estimates and Primary Contributors to Risk For Deep Zone Decision Units in the 300 Area Source Operable Unit With Background Contribution

Waste Site/Decision Unit	Radiological Cancer Risk	Radiological Risk Drivers
618-1_Deep wo background	1.01E-04	--
618-1_Deep_Focused	3.49E-04	Cesium-137 (1.48e-04) Uranium-238 (1.21e-04)
618-2_Deep	9.93E-04	Total beta radiostrontium (5.11e-04) Uranium-233/234 (1.21e-04) Uranium-238 (3.06e-04)
618-2_Deep_Focused	5.38E-04	Total beta radiostrontium (3.17e-04)
618-4_Deep wo background	6.17E-05	--
618-4_Deep_Focused wo background	2.13E-05	--
618-5_Deep wo background	2.57E-05	--
618-5_Deep_Focused wo background	3.36E-05	--

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300 ASH PITS_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	5.20E+01	6.56E+04	7.92E-10	1.13%	--	--	--
300 ASH PITS_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	6.08E+03	8.75E+04	6.95E-08	98.86%	1.05E+06	5.79E-03	99.97%
300 ASH PITS_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	9.60E+01	9.38E+06	1.02E-11	0.01%	7.00E+07	1.37E-06	0.02%
300 ASH PITS_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	7.60E+01	6.91E+07	1.10E-12	0.00%	7.00E+08	1.09E-07	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**7.03E-08**	**--**	**--**	**5.79E-03**	**--**
300 ASH PITS_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	3.88E-02	6.14E+01	6.32E-08	17.84%	--	--	--
300 ASH PITS_Shallow	Rad	Uranium-238	U-238	pCi/g	8.23E-01	2.83E+02	2.91E-07	82.16%	--	--	--
Total Radiological Risk Estimate						**--**	**3.54E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.24E-07**	**--**	**--**	**--**	**--**
300 VTS_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	2.90E-02	1.77E+01	1.64E-07	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**1.64E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.64E-07**	**--**	**--**	**--**	**--**
300-10_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.35E+04	8.75E+04	1.54E-07	99.98%	1.05E+06	1.29E-02	99.98%
300-10_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.00E+02	9.38E+06	2.13E-11	0.01%	7.00E+07	2.86E-06	0.02%
300-10_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	2.30E+02	6.91E+07	3.33E-12	0.00%	7.00E+08	3.29E-07	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.54E-07**	**--**	**--**	**1.29E-02**	**--**
300-10_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.55E-01	1.77E+01	8.76E-07	61.41%	--	--	--
300-10_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.06E-02	6.14E+01	6.61E-08	4.64%	--	--	--
300-10_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.37E+00	2.83E+02	4.84E-07	33.95%	--	--	--
Total Radiological Risk Estimate						**--**	**1.43E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.58E-06**	**--**	**--**	**--**	**--**
300-109_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	5.62E+06	--	--	--	3.50E+09	1.61E-03	7.10%
300-109_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.22E+02	6.56E+04	1.86E-09	6.14%	7.00E+04	1.74E-03	7.71%
300-109_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.97E+01	6.56E+04	6.05E-10	2.00%	--	--	--
300-109_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	2.42E+03	8.75E+04	2.77E-08	91.33%	1.05E+06	2.30E-03	10.20%
300-109_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	6.33E+04	--	--	--	7.00E+08	9.04E-05	0.40%
300-109_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	1.24E+00	1.80E+04	6.90E-11	0.23%	--	--	--
300-109_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	2.30E+00	1.80E+05	1.28E-11	0.04%	--	--	--
300-109_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	1.80E+02	--	--	--	7.00E+06	2.57E-05	0.11%
300-109_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	6.32E+02	--	--	--	7.00E+08	9.03E-07	0.00%
300-109_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	5.90E+01	--	--	--	3.50E+06	1.69E-05	0.07%
300-109_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	6.95E+03	--	--	--	5.25E+09	1.32E-06	0.01%
300-109_Shallow_Focused	non-Rad	Chrysene	218-01-9	µg/kg	1.77E+00	1.80E+06	9.84E-13	0.00%	--	--	--
300-109_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	6.42E+03	--	--	--	1.05E+06	6.11E-03	27.05%
300-109_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	1.08E+04	--	--	--	1.40E+08	7.71E-05	0.34%
300-109_Shallow_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	1.40E+01	1.80E+05	7.79E-11	0.26%	--	--	--
300-109_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	1.75E+07	--	--	--	2.45E+09	7.14E-03	31.60%
300-109_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	2.78E+05	--	--	--	4.90E+08	5.67E-04	2.51%
300-109_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	2.20E+01	--	--	--	1.05E+06	2.10E-05	0.09%

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-109_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	3.41E+02	--	--	--	1.75E+07	1.95E-05	0.09%
300-109_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	8.49E+03	--	--	--	7.00E+07	1.21E-04	0.54%
300-109_Shallow_Focused	non-Rad	Pyrene	129-00-0	µg/kg	1.56E+00	--	--	--	1.05E+08	1.49E-08	0.00%
300-109_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	4.76E+04	--	--	--	1.75E+07	2.72E-03	12.03%
300-109_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	3.47E+04	--	--	--	1.05E+09	3.30E-05	0.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.03E-08**	**--**	**--**	**2.26E-02**	**--**
300-109_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.40E+00	1.76E+03	7.97E-08	14.05%	--	--	--
300-109_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.38E+00	2.83E+02	4.88E-07	85.95%	--	--	--
Total Radiological Risk Estimate						**--**	**5.67E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.98E-07**	**--**	**--**	**--**	**--**
300-109_Staging Pile Area_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	5.78E+06	--	--	--	3.50E+09	1.65E-03	7.72%
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.68E+01	6.56E+04	5.61E-10	1.83%	7.00E+04	5.26E-04	2.46%
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.94E+01	6.56E+04	2.96E-10	0.96%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	2.58E+03	8.75E+04	2.95E-08	96.02%	1.05E+06	2.46E-03	11.48%
300-109_Staging Pile Area_Focused	non-Rad	Barium	7440-39-3	µg/kg	7.27E+04	--	--	--	7.00E+08	1.04E-04	0.49%
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	2.08E+00	1.80E+05	1.16E-11	0.04%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	3.30E+00	1.80E+04	1.84E-10	0.60%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	1.31E+00	1.80E+05	7.29E-12	0.02%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	2.03E+02	--	--	--	7.00E+06	2.90E-05	0.14%
300-109_Staging Pile Area_Focused	non-Rad	Boron	7440-42-8	µg/kg	1.06E+03	--	--	--	7.00E+08	1.51E-06	0.01%
300-109_Staging Pile Area_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	6.60E+01	--	--	--	3.50E+06	1.89E-05	0.09%
300-109_Staging Pile Area_Focused	non-Rad	Chromium	7440-47-3	µg/kg	8.17E+03	--	--	--	5.25E+09	1.56E-06	0.01%
300-109_Staging Pile Area_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	5.95E+03	--	--	--	1.05E+06	5.67E-03	26.48%
300-109_Staging Pile Area_Focused	non-Rad	Copper	7440-50-8	µg/kg	1.16E+04	--	--	--	1.40E+08	8.29E-05	0.39%
300-109_Staging Pile Area_Focused	non-Rad	Fluoranthene	206-44-0	µg/kg	5.14E+00	--	--	--	1.40E+08	3.67E-08	0.00%
300-109_Staging Pile Area_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	2.92E+01	1.80E+05	1.62E-10	0.53%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Iron	7439-89-6	µg/kg	1.84E+07	--	--	--	2.45E+09	7.51E-03	35.09%
300-109_Staging Pile Area_Focused	non-Rad	Manganese	7439-96-5	µg/kg	2.86E+05	--	--	--	4.90E+08	5.84E-04	2.73%
300-109_Staging Pile Area_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	4.08E+02	--	--	--	1.75E+07	2.33E-05	0.11%
300-109_Staging Pile Area_Focused	non-Rad	Nickel	7440-02-0	µg/kg	8.57E+03	--	--	--	7.00E+07	1.22E-04	0.57%
300-109_Staging Pile Area_Focused	non-Rad	Pyrene	129-00-0	µg/kg	6.96E+00	--	--	--	1.05E+08	6.63E-08	0.00%
300-109_Staging Pile Area_Focused	non-Rad	Tin	7440-31-5	µg/kg	1.45E+03	--	--	--	2.10E+09	6.90E-07	0.00%
300-109_Staging Pile Area_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	4.51E+04	--	--	--	1.75E+07	2.58E-03	12.04%
300-109_Staging Pile Area_Focused	non-Rad	Zinc	7440-66-6	µg/kg	4.88E+04	--	--	--	1.05E+09	4.65E-05	0.22%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.07E-08**	**--**	**--**	**2.14E-02**	**--**
300-109_Staging Pile Area_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	2.54E+00	1.76E+03	1.45E-07	15.05%	--	--	--
300-109_Staging Pile Area_Focused	Rad	Uranium-238	U-238	pCi/g	2.31E+00	2.83E+02	8.16E-07	84.95%	--	--	--
Total Radiological Risk Estimate						**--**	**9.61E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.92E-07**	**--**	**--**	**--**	**--**
300-18_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.20E+03	8.75E+04	2.51E-08	100.00%	1.05E+06	2.10E-03	91.44%
300-18_Shallow	non-Rad	Barium	7440-39-3	µg/kg	6.34E+04	--	--	--	7.00E+08	9.06E-05	3.95%

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-18_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	6.50E+02	--	--	--	7.00E+06	9.29E-05	4.05%
300-18_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	4.00E+01	--	--	--	3.50E+06	1.14E-05	0.50%
300-18_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	6.90E+03	--	--	--	5.25E+09	1.31E-06	0.06%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.51E-08**	**--**	**--**	**2.29E-03**	**--**
300-18_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	6.49E-01	1.76E+03	3.69E-08	20.28%	--	--	--
300-18_Shallow	Rad	Uranium-238	U-238	pCi/g	4.11E-01	2.83E+02	1.45E-07	79.72%	--	--	--
Total Radiological Risk Estimate						**--**	**1.82E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.07E-07**	**--**	**--**	**--**	**--**
300-259_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	5.99E+06	--	--	--	3.50E+09	1.71E-03	7.97%
300-259_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.22E+02	--	--	--	1.40E+06	2.30E-04	1.07%
300-259_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.10E+03	8.75E+04	2.40E-08	100.00%	1.05E+06	2.00E-03	9.29%
300-259_Shallow	non-Rad	Barium	7440-39-3	µg/kg	7.52E+04	--	--	--	7.00E+08	1.07E-04	0.50%
300-259_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.26E+02	--	--	--	7.00E+06	3.22E-05	0.15%
300-259_Shallow	non-Rad	Boron	7440-42-8	µg/kg	1.30E+03	--	--	--	7.00E+08	1.86E-06	0.01%
300-259_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	2.52E+02	--	--	--	3.50E+06	7.19E-05	0.33%
300-259_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	7.90E+03	--	--	--	5.25E+09	1.50E-06	0.01%
300-259_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	5.83E+03	--	--	--	1.05E+06	5.55E-03	25.85%
300-259_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.07E+04	--	--	--	1.40E+08	7.64E-05	0.36%
300-259_Shallow	non-Rad	Iron	7439-89-6	µg/kg	1.96E+07	--	--	--	2.45E+09	8.00E-03	37.25%
300-259_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.19E+05	--	--	--	4.90E+08	6.51E-04	3.03%
300-259_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	1.00E+01	--	--	--	1.05E+06	9.52E-06	0.04%
300-259_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	3.03E+02	--	--	--	1.75E+07	1.73E-05	0.08%
300-259_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	8.75E+03	--	--	--	7.00E+07	1.25E-04	0.58%
300-259_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	4.26E+04	--	--	--	1.75E+07	2.44E-03	11.34%
300-259_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.80E+05	--	--	--	1.05E+09	4.57E-04	2.13%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.40E-08**	**--**	**--**	**2.15E-02**	**--**
300-259_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.59E+00	1.76E+03	9.07E-08	16.00%	--	--	--
300-259_Shallow	Rad	Uranium-238	U-238	pCi/g	1.35E+00	2.83E+02	4.76E-07	84.00%	--	--	--
Total Radiological Risk Estimate						**--**	**5.67E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.91E-07**	**--**	**--**	**--**	**--**
300-260_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	8.17E+06	--	--	--	3.50E+09	2.33E-03	8.81%
300-260_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	9.22E+02	--	--	--	1.40E+06	6.59E-04	2.49%
300-260_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	3.16E+03	8.75E+04	3.61E-08	100.00%	1.05E+06	3.01E-03	11.36%
300-260_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	1.22E+05	--	--	--	7.00E+08	1.74E-04	0.66%
300-260_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	2.39E+02	--	--	--	7.00E+06	3.41E-05	0.13%
300-260_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	8.36E+03	--	--	--	7.00E+08	1.19E-05	0.05%
300-260_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	1.10E+02	--	--	--	3.50E+06	3.14E-05	0.12%
300-260_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	9.89E+03	--	--	--	5.25E+09	1.88E-06	0.01%
300-260_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	7.43E+03	--	--	--	1.05E+06	7.08E-03	26.71%
300-260_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	7.33E+04	--	--	--	1.40E+08	5.24E-04	1.98%
300-260_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	2.04E+07	--	--	--	2.45E+09	8.33E-03	31.43%

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-260_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	3.28E+05	--	--	--	4.90E+08	6.69E-04	2.53%
300-260_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	1.20E+01	--	--	--	1.05E+06	1.14E-05	0.04%
300-260_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	5.37E+02	--	--	--	1.75E+07	3.07E-05	0.12%
300-260_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.02E+04	--	--	--	7.00E+07	1.46E-04	0.55%
300-260_Shallow_Focused	non-Rad	Silver	7440-22-4	µg/kg	2.06E+02	--	--	--	1.75E+07	1.18E-05	0.04%
300-260_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	5.90E+04	--	--	--	1.75E+07	3.37E-03	12.72%
300-260_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	7.74E+04	--	--	--	1.05E+09	7.37E-05	0.28%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.61E-08**	**--**	**--**	**2.65E-02**	**--**
300-260_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	2.51E-01	6.14E+01	4.09E-07	21.20%	--	--	--
300-260_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.30E+00	2.83E+02	1.52E-06	78.80%	--	--	--
Total Radiological Risk Estimate						**--**	**1.93E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.96E-06**	**--**	**--**	**--**	**--**
300-275_Shallow_1	non-Rad	Acenaphthene	83-32-9	µg/kg	9.60E+02	--	--	--	2.10E+08	4.57E-06	0.02%
300-275_Shallow_1	non-Rad	Aluminum	7429-90-5	µg/kg	5.61E+06	--	--	--	3.50E+09	1.60E-03	7.34%
300-275_Shallow_1	non-Rad	Antimony	7440-36-0	µg/kg	2.60E+02	--	--	--	1.40E+06	1.86E-04	0.85%
300-275_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	2.21E+03	8.75E+04	2.53E-08	99.67%	1.05E+06	2.11E-03	9.63%
300-275_Shallow_1	non-Rad	Barium	7440-39-3	µg/kg	7.53E+04	--	--	--	7.00E+08	1.08E-04	0.49%
300-275_Shallow_1	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	1.30E+00	1.80E+04	7.23E-11	0.29%	--	--	--
300-275_Shallow_1	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	1.87E+00	1.80E+05	1.04E-11	0.04%	--	--	--
300-275_Shallow_1	non-Rad	Beryllium	7440-41-7	µg/kg	4.52E+02	--	--	--	7.00E+06	6.45E-05	0.30%
300-275_Shallow_1	non-Rad	Boron	7440-42-8	µg/kg	1.47E+03	--	--	--	7.00E+08	2.09E-06	0.01%
300-275_Shallow_1	non-Rad	Cadmium	7440-43-9	µg/kg	8.33E+01	--	--	--	3.50E+06	2.38E-05	0.11%
300-275_Shallow_1	non-Rad	Chromium	7440-47-3	µg/kg	8.02E+03	--	--	--	5.25E+09	1.53E-06	0.01%
300-275_Shallow_1	non-Rad	Chrysene	218-01-9	µg/kg	2.20E+00	1.80E+06	1.22E-12	0.00%	--	--	--
300-275_Shallow_1	non-Rad	Cobalt	7440-48-4	µg/kg	5.85E+03	--	--	--	1.05E+06	5.57E-03	25.47%
300-275_Shallow_1	non-Rad	Copper	7440-50-8	µg/kg	4.29E+04	--	--	--	1.40E+08	3.07E-04	1.40%
300-275_Shallow_1	non-Rad	Fluoranthene	206-44-0	µg/kg	2.30E+03	--	--	--	1.40E+08	1.64E-05	0.08%
300-275_Shallow_1	non-Rad	Fluorene	86-73-7	µg/kg	8.11E+01	--	--	--	1.40E+08	5.80E-07	0.00%
300-275_Shallow_1	non-Rad	Iron	7439-89-6	µg/kg	1.79E+07	--	--	--	2.45E+09	7.31E-03	33.42%
300-275_Shallow_1	non-Rad	Lithium	7439-93-2	µg/kg	6.69E+03	--	--	--	7.00E+06	9.55E-04	4.37%
300-275_Shallow_1	non-Rad	Manganese	7439-96-5	µg/kg	2.77E+05	--	--	--	4.90E+08	5.65E-04	2.58%
300-275_Shallow_1	non-Rad	Mercury	7439-97-6	µg/kg	1.67E+01	--	--	--	1.05E+06	1.59E-05	0.07%
300-275_Shallow_1	non-Rad	Molybdenum	7439-98-7	µg/kg	3.78E+02	--	--	--	1.75E+07	2.16E-05	0.10%
300-275_Shallow_1	non-Rad	Nickel	7440-02-0	µg/kg	9.46E+03	--	--	--	7.00E+07	1.35E-04	0.62%
300-275_Shallow_1	non-Rad	Silver	7440-22-4	µg/kg	1.21E+02	--	--	--	1.75E+07	6.91E-06	0.03%
300-275_Shallow_1	non-Rad	Strontium	7440-24-6	µg/kg	2.02E+04	--	--	--	2.10E+09	9.62E-06	0.04%
300-275_Shallow_1	non-Rad	Tin	7440-31-5	µg/kg	1.48E+03	--	--	--	2.10E+09	7.06E-07	0.00%
300-275_Shallow_1	non-Rad	Uranium	7440-61-1	µg/kg	2.50E+03	--	--	--	1.05E+07	2.38E-04	1.09%
300-275_Shallow_1	non-Rad	Vanadium	7440-62-2	µg/kg	4.51E+04	--	--	--	1.75E+07	2.58E-03	11.79%
300-275_Shallow_1	non-Rad	Zinc	7440-66-6	µg/kg	4.10E+04	--	--	--	1.05E+09	3.91E-05	0.18%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.53E-08**	**--**	**--**	**2.19E-02**	**--**
300-275_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	4.65E-02	1.77E+01	2.63E-07	5.31%	--	--	--
300-275_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	7.72E+00	1.76E+03	4.39E-07	8.88%	--	--	--

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-275_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.00E+00	6.14E+01	1.63E-06	32.92%	--	--	--
300-275_Shallow_1	Rad	Uranium-238	U-238	pCi/g	7.41E+00	2.83E+02	2.62E-06	52.89%	--	--	--
Total Radiological Risk Estimate						**--**	**4.95E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.97E-06**	**--**	**--**	**--**	**--**
300-275_Shallow_2	non-Rad	Acenaphthene	83-32-9	µg/kg	3.60E+00	--	--	--	2.10E+08	1.71E-08	0.00%
300-275_Shallow_2	non-Rad	Aluminum	7429-90-5	µg/kg	6.24E+06	--	--	--	3.50E+09	1.78E-03	7.70%
300-275_Shallow_2	non-Rad	Arsenic	7440-38-2	µg/kg	2.76E+03	8.75E+04	3.16E-08	100.00%	1.05E+06	2.63E-03	11.36%
300-275_Shallow_2	non-Rad	Barium	7440-39-3	µg/kg	6.86E+04	--	--	--	7.00E+08	9.80E-05	0.42%
300-275_Shallow_2	non-Rad	Beryllium	7440-41-7	µg/kg	2.54E+02	--	--	--	7.00E+06	3.63E-05	0.16%
300-275_Shallow_2	non-Rad	Boron	7440-42-8	µg/kg	1.15E+03	--	--	--	7.00E+08	1.64E-06	0.01%
300-275_Shallow_2	non-Rad	Cadmium	7440-43-9	µg/kg	1.44E+02	--	--	--	3.50E+06	4.11E-05	0.18%
300-275_Shallow_2	non-Rad	Chromium	7440-47-3	µg/kg	8.99E+03	--	--	--	5.25E+09	1.71E-06	0.01%
300-275_Shallow_2	non-Rad	Cobalt	7440-48-4	µg/kg	5.98E+03	--	--	--	1.05E+06	5.69E-03	24.59%
300-275_Shallow_2	non-Rad	Copper	7440-50-8	µg/kg	1.16E+04	--	--	--	1.40E+08	8.28E-05	0.36%
300-275_Shallow_2	non-Rad	Fluoranthene	206-44-0	µg/kg	5.60E+01	--	--	--	1.40E+08	4.00E-07	0.00%
300-275_Shallow_2	non-Rad	Fluorene	86-73-7	µg/kg	2.60E+00	--	--	--	1.40E+08	1.86E-08	0.00%
300-275_Shallow_2	non-Rad	Iron	7439-89-6	µg/kg	1.96E+07	--	--	--	2.45E+09	7.99E-03	34.50%
300-275_Shallow_2	non-Rad	Lithium	7439-93-2	µg/kg	7.07E+03	--	--	--	7.00E+06	1.01E-03	4.36%
300-275_Shallow_2	non-Rad	Manganese	7439-96-5	µg/kg	2.93E+05	--	--	--	4.90E+08	5.97E-04	2.58%
300-275_Shallow_2	non-Rad	Mercury	7439-97-6	µg/kg	2.80E+01	--	--	--	1.05E+06	2.67E-05	0.12%
300-275_Shallow_2	non-Rad	Molybdenum	7439-98-7	µg/kg	4.04E+02	--	--	--	1.75E+07	2.31E-05	0.10%
300-275_Shallow_2	non-Rad	Nickel	7440-02-0	µg/kg	9.59E+03	--	--	--	7.00E+07	1.37E-04	0.59%
300-275_Shallow_2	non-Rad	Strontium	7440-24-6	µg/kg	2.71E+04	--	--	--	2.10E+09	1.29E-05	0.06%
300-275_Shallow_2	non-Rad	Tin	7440-31-5	µg/kg	1.15E+03	--	--	--	2.10E+09	5.47E-07	0.00%
300-275_Shallow_2	non-Rad	Vanadium	7440-62-2	µg/kg	5.16E+04	--	--	--	1.75E+07	2.95E-03	12.74%
300-275_Shallow_2	non-Rad	Zinc	7440-66-6	µg/kg	4.12E+04	--	--	--	1.05E+09	3.93E-05	0.17%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.16E-08**	**--**	**--**	**2.32E-02**	**--**
300-275_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.31E+00	1.76E+03	7.43E-08	8.26%	--	--	--
300-275_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	2.37E-01	6.14E+01	3.86E-07	42.89%	--	--	--
300-275_Shallow_2	Rad	Uranium-238	U-238	pCi/g	1.24E+00	2.83E+02	4.40E-07	48.86%	--	--	--
Total Radiological Risk Estimate						**--**	**9.00E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.32E-07**	**--**	**--**	**--**	**--**
300-33, 300-41, 300-256_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.32E+06	--	--	--	3.50E+09	1.81E-03	7.12%
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1016	12674-11-2	µg/kg	1.03E+01	1.88E+06	5.49E-12	0.02%	2.45E+05	4.20E-05	0.17%
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1242	53469-21-9	µg/kg	1.64E+01	6.56E+04	2.50E-10	0.72%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.90E+02	6.56E+04	2.90E-09	8.31%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	8.44E+01	6.56E+04	1.29E-09	3.69%	7.00E+04	1.21E-03	4.75%
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.73E+01	6.56E+04	2.63E-10	0.76%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.64E+03	8.75E+04	3.01E-08	86.50%	1.05E+06	2.51E-03	9.90%
300-33, 300-41, 300-256_Shallow	non-Rad	Barium	7440-39-3	µg/kg	7.24E+04	--	--	--	7.00E+08	1.03E-04	0.41%
300-33, 300-41, 300-256_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.56E+02	--	--	--	7.00E+06	3.65E-05	0.14%

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-33, 300-41, 300-256_Shallow	non-Rad	Boron	7440-42-8	µg/kg	1.48E+03	--	--	--	7.00E+08	2.12E-06	0.01%
300-33, 300-41, 300-256_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	2.28E+02	6.91E+07	3.30E-12	0.01%	7.00E+08	3.26E-07	0.00%
300-33, 300-41, 300-256_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	9.39E+01	--	--	--	3.50E+06	2.68E-05	0.11%
300-33, 300-41, 300-256_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	8.78E+03	--	--	--	5.25E+09	1.67E-06	0.01%
300-33, 300-41, 300-256_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.27E+03	--	--	--	1.05E+06	5.97E-03	23.55%
300-33, 300-41, 300-256_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.37E+04	--	--	--	1.40E+08	9.76E-05	0.38%
300-33, 300-41, 300-256_Shallow	non-Rad	Fluoride	16984-48-8	µg/kg	1.65E+03	--	--	--	2.10E+08	7.86E-06	0.03%
300-33, 300-41, 300-256_Shallow	non-Rad	Iron	7439-89-6	µg/kg	2.00E+07	--	--	--	2.45E+09	8.17E-03	32.21%
300-33, 300-41, 300-256_Shallow	non-Rad	Lithium	7439-93-2	µg/kg	5.50E+03	--	--	--	7.00E+06	7.85E-04	3.09%
300-33, 300-41, 300-256_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.15E+05	--	--	--	4.90E+08	6.42E-04	2.53%
300-33, 300-41, 300-256_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	1.60E+01	--	--	--	1.05E+06	1.52E-05	0.06%
300-33, 300-41, 300-256_Shallow	non-Rad	Methylene chloride	75-09-2	µg/kg	2.91E+00	1.75E+07	1.66E-13	0.00%	2.10E+08	1.39E-08	0.00%
300-33, 300-41, 300-256_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	4.86E+02	--	--	--	1.75E+07	2.78E-05	0.11%
300-33, 300-41, 300-256_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	8.88E+03	--	--	--	7.00E+07	1.27E-04	0.50%
300-33, 300-41, 300-256_Shallow	non-Rad	Nitrate	14797-55-8	µg/kg	8.62E+03	--	--	--	2.49E+10	3.47E-07	0.00%
300-33, 300-41, 300-256_Shallow	non-Rad	Silver	7440-22-4	µg/kg	7.82E+02	--	--	--	1.75E+07	4.47E-05	0.18%
300-33, 300-41, 300-256_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	7.26E+03	--	--	--	1.05E+07	6.91E-04	2.73%
300-33, 300-41, 300-256_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	5.27E+04	--	--	--	1.75E+07	3.01E-03	11.87%
300-33, 300-41, 300-256_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.15E+04	--	--	--	1.05E+09	3.95E-05	0.16%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.49E-08**	**--**	**--**	**2.54E-02**	**--**
300-33, 300-41, 300-256_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	2.14E+00	1.76E+03	1.22E-07	8.69%	--	--	--
300-33, 300-41, 300-256_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	3.38E-01	6.14E+01	5.50E-07	39.34%	--	--	--
300-33, 300-41, 300-256_Shallow	Rad	Uranium-238	U-238	pCi/g	2.06E+00	2.83E+02	7.27E-07	51.97%	--	--	--
Total Radiological Risk Estimate						**--**	**1.40E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.43E-06**	**--**	**--**	**--**	**--**

300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	5.51E+06	--	--	--	3.50E+09	1.57E-03	5.64%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.30E+02	6.56E+04	5.03E-09	10.32%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.85E+02	6.56E+04	5.87E-09	12.04%	7.00E+04	5.50E-03	19.70%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.20E+01	6.56E+04	7.92E-10	1.63%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	3.24E+03	8.75E+04	3.70E-08	76.01%	1.05E+06	3.09E-03	11.05%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	6.46E+04	--	--	--	7.00E+08	9.23E-05	0.33%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	1.69E+02	--	--	--	7.00E+06	2.41E-05	0.09%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	1.03E+03	--	--	--	7.00E+08	1.47E-06	0.01%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	1.00E+02	--	--	--	3.50E+06	2.86E-05	0.10%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	8.08E+03	--	--	--	5.25E+09	1.54E-06	0.01%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	5.64E+03	--	--	--	1.05E+06	5.37E-03	19.23%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	1.04E+04	--	--	--	1.40E+08	7.43E-05	0.27%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Fluoride	16984-48-8	µg/kg	1.30E+03	--	--	--	2.10E+08	6.19E-06	0.02%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	1.86E+07	--	--	--	2.45E+09	7.59E-03	27.19%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Lithium	7439-93-2	µg/kg	6.58E+03	--	--	--	7.00E+06	9.40E-04	3.37%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	2.59E+05	--	--	--	4.90E+08	5.29E-04	1.89%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	2.21E+00	1.75E+07	1.26E-13	0.00%	2.10E+08	1.05E-08	0.00%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	2.75E+02	--	--	--	1.75E+07	1.57E-05	0.06%

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	8.04E+03	--	--	--	7.00E+07	1.15E-04	0.41%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Nitrate	14797-55-8	µg/kg	1.79E+04	--	--	--	2.49E+10	7.20E-07	0.00%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	5.14E+04	--	--	--	1.75E+07	2.94E-03	10.52%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	3.89E+04	--	--	--	1.05E+09	3.70E-05	0.13%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.87E-08**	**--**	**--**	**2.79E-02**	**--**
300-33, 300-41, 300-256_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	3.02E+00	1.76E+03	1.72E-07	18.31%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	2.17E+00	2.83E+02	7.67E-07	81.69%	--	--	--
Total Radiological Risk Estimate						**--**	**9.39E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.87E-07**	**--**	**--**	**--**	**--**
300-37_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.00E+02	6.56E+04	1.52E-09	3.03%	7.00E+04	1.43E-03	100.00%
300-37_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.20E+03	6.56E+04	4.88E-08	96.97%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.03E-08**	**--**	**--**	**1.43E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.03E-08**	**--**	**--**	**--**	**--**
300-44_Overburden_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	9.10E+03	8.75E+04	1.04E-07	100.00%	1.05E+06	8.67E-03	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.04E-07**	**--**	**--**	**8.67E-03**	**--**
300-44_Overburden_Focused	Rad	Uranium-238	U-238	pCi/g	3.45E-01	2.83E+02	1.22E-07	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**1.22E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.26E-07**	**--**	**--**	**--**	**--**
300-44_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	6.71E+06	--	--	--	3.50E+09	1.92E-03	4.78%
300-44_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	4.10E+03	--	--	--	1.40E+06	2.93E-03	7.29%
300-44_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.69E+04	8.75E+04	1.93E-07	100.00%	1.05E+06	1.61E-02	40.09%
300-44_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	7.52E+04	--	--	--	7.00E+08	1.07E-04	0.27%
300-44_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	4.80E+02	--	--	--	7.00E+06	6.86E-05	0.17%
300-44_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	9.30E+03	--	--	--	5.25E+09	1.77E-06	0.00%
300-44_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	8.20E+03	--	--	--	1.05E+06	7.81E-03	19.45%
300-44_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	7.80E+03	--	--	--	1.40E+08	5.57E-05	0.14%
300-44_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	1.94E+07	--	--	--	2.45E+09	7.92E-03	19.72%
300-44_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	3.03E+05	--	--	--	4.90E+08	6.18E-04	1.54%
300-44_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	8.60E+03	--	--	--	7.00E+07	1.23E-04	0.31%
300-44_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	4.32E+04	--	--	--	1.75E+07	2.47E-03	6.15%
300-44_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	3.78E+04	--	--	--	1.05E+09	3.60E-05	0.09%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.93E-07**	**--**	**--**	**4.01E-02**	**--**
300-44_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	2.93E-01	2.83E+02	1.04E-07	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**1.04E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.97E-07**	**--**	**--**	**--**	**--**
300-45_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	8.60E+01	6.56E+04	1.31E-09	97.69%	--	--	--
300-45_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.90E+02	9.38E+06	3.09E-11	2.31%	7.00E+07	4.14E-06	100.00%

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**1.34E-09**	--	--	**4.14E-06**	--
300-45_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	2.28E-02	1.77E+01	1.29E-07	19.77%	--	--	--
300-45_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	6.06E-02	6.14E+01	9.87E-08	15.15%	--	--	--
300-45_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.20E+00	2.83E+02	4.24E-07	65.08%	--	--	--
Total Radiological Risk Estimate						--	**6.52E-07**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**6.53E-07**	--	--	--	--
300-49_Overburden	non-Rad	1,2,4-Trichlorobenzene	120-82-1	µg/kg	3.05E+01	4.53E+06	6.74E-12	0.01%	3.50E+07	8.72E-07	0.00%
300-49_Overburden	non-Rad	1,4-Dichlorobenzene	106-46-7	µg/kg	2.88E+01	2.43E+07	1.18E-12	0.00%	2.45E+08	1.17E-07	0.00%
300-49_Overburden	non-Rad	2,4-Dinitrotoluene	121-14-2	µg/kg	1.89E+01	4.23E+05	4.47E-11	0.05%	7.00E+06	2.70E-06	0.00%
300-49_Overburden	non-Rad	2-Chlorophenol	95-57-8	µg/kg	5.13E+01	--	--	--	1.75E+07	2.93E-06	0.00%
300-49_Overburden	non-Rad	4-Chloro-3-methylphenol	59-50-7	µg/kg	4.60E+01	--	--	--	3.50E+08	1.31E-07	0.00%
300-49_Overburden	non-Rad	Acenaphthene	83-32-9	µg/kg	3.07E+01	--	--	--	2.10E+08	1.46E-07	0.00%
300-49_Overburden	non-Rad	Aluminum	7429-90-5	µg/kg	6.30E+06	--	--	--	3.50E+09	1.80E-03	2.53%
300-49_Overburden	non-Rad	Antimony	7440-36-0	µg/kg	2.32E+02	--	--	--	1.40E+06	1.66E-04	0.23%
300-49_Overburden	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.01E+03	6.56E+04	4.58E-08	53.50%	7.00E+04	4.30E-02	60.30%
300-49_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	3.29E+03	8.75E+04	3.76E-08	43.91%	1.05E+06	3.13E-03	4.40%
300-49_Overburden	non-Rad	Barium	7440-39-3	µg/kg	7.61E+04	--	--	--	7.00E+08	1.09E-04	0.15%
300-49_Overburden	non-Rad	Beryllium	7440-41-7	µg/kg	2.01E+02	--	--	--	7.00E+06	2.87E-05	0.04%
300-49_Overburden	non-Rad	Cadmium	7440-43-9	µg/kg	1.74E+02	--	--	--	3.50E+06	4.98E-05	0.07%
300-49_Overburden	non-Rad	Chromium	7440-47-3	µg/kg	1.81E+04	--	--	--	5.25E+09	3.45E-06	0.00%
300-49_Overburden	non-Rad	Cobalt	7440-48-4	µg/kg	7.13E+03	--	--	--	1.05E+06	6.79E-03	9.53%
300-49_Overburden	non-Rad	Copper	7440-50-8	µg/kg	5.36E+05	--	--	--	1.40E+08	3.83E-03	5.37%
300-49_Overburden	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	5.16E+01	--	--	--	3.50E+08	1.47E-07	0.00%
300-49_Overburden	non-Rad	Iron	7439-89-6	µg/kg	2.08E+07	--	--	--	2.45E+09	8.48E-03	11.91%
300-49_Overburden	non-Rad	Manganese	7439-96-5	µg/kg	3.17E+05	--	--	--	4.90E+08	6.46E-04	0.91%
300-49_Overburden	non-Rad	Nickel	7440-02-0	µg/kg	1.30E+04	--	--	--	7.00E+07	1.86E-04	0.26%
300-49_Overburden	non-Rad	n-Nitrosodi-n-dipropylamine	621-64-7	µg/kg	3.97E+01	1.88E+04	2.12E-09	2.47%	--	--	--
300-49_Overburden	non-Rad	Pentachlorophenol	87-86-5	µg/kg	4.98E+01	1.09E+06	4.56E-11	0.05%	1.05E+08	4.75E-07	0.00%
300-49_Overburden	non-Rad	Phenol	108-95-2	µg/kg	5.00E+01	--	--	--	1.05E+09	4.76E-08	0.00%
300-49_Overburden	non-Rad	Pyrene	129-00-0	µg/kg	4.01E+01	--	--	--	1.05E+08	3.82E-07	0.00%
300-49_Overburden	non-Rad	Silver	7440-22-4	µg/kg	7.03E+02	--	--	--	1.75E+07	4.01E-05	0.06%
300-49_Overburden	non-Rad	Vanadium	7440-62-2	µg/kg	5.04E+04	--	--	--	1.75E+07	2.88E-03	4.04%
300-49_Overburden	non-Rad	Zinc	7440-66-6	µg/kg	1.42E+05	--	--	--	1.05E+09	1.35E-04	0.19%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**8.57E-08**	--	--	**7.13E-02**	--
300-49_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	1.01E+00	1.76E+03	5.73E-08	11.17%	--	--	--
300-49_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	5.70E-02	6.14E+01	9.28E-08	18.09%	--	--	--
300-49_Overburden	Rad	Uranium-238	U-238	pCi/g	1.03E+00	2.83E+02	3.63E-07	70.73%	--	--	--
Total Radiological Risk Estimate						--	**5.13E-07**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**5.99E-07**	--	--	--	--
300-49_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.92E+06	--	--	--	3.50E+09	1.98E-03	6.51%
300-49_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	1.76E+02	--	--	--	1.40E+06	1.26E-04	0.41%

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-49_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	4.43E+03	8.75E+04	5.06E-08	100.00%	1.05E+06	4.22E-03	13.90%
300-49_Shallow	non-Rad	Barium	7440-39-3	µg/kg	8.99E+04	--	--	--	7.00E+08	1.28E-04	0.42%
300-49_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	3.03E+02	--	--	--	7.00E+06	4.33E-05	0.14%
300-49_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	9.17E+03	--	--	--	5.25E+09	1.75E-06	0.01%
300-49_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	9.32E+03	--	--	--	1.05E+06	8.88E-03	29.24%
300-49_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.49E+04	--	--	--	1.40E+08	1.06E-04	0.35%
300-49_Shallow	non-Rad	Iron	7439-89-6	µg/kg	2.59E+07	--	--	--	2.45E+09	1.06E-02	34.76%
300-49_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.62E+05	--	--	--	4.90E+08	7.38E-04	2.43%
300-49_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	1.07E+04	--	--	--	7.00E+07	1.52E-04	0.50%
300-49_Shallow	non-Rad	Silver	7440-22-4	µg/kg	6.21E+02	--	--	--	1.75E+07	3.55E-05	0.12%
300-49_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	5.87E+04	--	--	--	1.75E+07	3.35E-03	11.04%
300-49_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	5.47E+04	--	--	--	1.05E+09	5.20E-05	0.17%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.06E-08**	**--**	**--**	**3.04E-02**	**--**
300-49_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	1.51E-01	1.77E+01	8.53E-07	50.33%	--	--	--
300-49_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.32E+00	1.76E+03	7.50E-08	4.42%	--	--	--
300-49_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.40E-01	6.14E+01	3.91E-07	23.06%	--	--	--
300-49_Shallow	Rad	Uranium-238	U-238	pCi/g	1.06E+00	2.83E+02	3.76E-07	22.19%	--	--	--
Total Radiological Risk Estimate						**--**	**1.70E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.75E-06**	**--**	**--**	**--**	**--**
300-50_Overburden	non-Rad	Aluminum	7429-90-5	µg/kg	6.68E+06	--	--	--	3.50E+09	1.91E-03	6.35%
300-50_Overburden	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.34E+01	6.56E+04	5.10E-10	0.62%	7.00E+04	4.78E-04	1.59%
300-50_Overburden	non-Rad	Aroclor-1260	11096-82-5	µg/kg	2.29E+02	6.56E+04	3.49E-09	4.22%	--	--	--
300-50_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	6.90E+03	8.75E+04	7.88E-08	95.17%	1.05E+06	6.57E-03	21.86%
300-50_Overburden	non-Rad	Barium	7440-39-3	µg/kg	1.18E+05	--	--	--	7.00E+08	1.68E-04	0.56%
300-50_Overburden	non-Rad	Beryllium	7440-41-7	µg/kg	3.25E+02	--	--	--	7.00E+06	4.64E-05	0.15%
300-50_Overburden	non-Rad	Cadmium	7440-43-9	µg/kg	5.63E+02	--	--	--	3.50E+06	1.61E-04	0.54%
300-50_Overburden	non-Rad	Chromium	7440-47-3	µg/kg	1.22E+04	--	--	--	5.25E+09	2.32E-06	0.01%
300-50_Overburden	non-Rad	Cobalt	7440-48-4	µg/kg	9.39E+03	--	--	--	1.05E+06	8.94E-03	29.75%
300-50_Overburden	non-Rad	Copper	7440-50-8	µg/kg	6.45E+04	--	--	--	1.40E+08	4.61E-04	1.53%
300-50_Overburden	non-Rad	Iron	7439-89-6	µg/kg	1.90E+07	--	--	--	2.45E+09	7.76E-03	25.82%
300-50_Overburden	non-Rad	Manganese	7439-96-5	µg/kg	3.14E+05	--	--	--	4.90E+08	6.41E-04	2.13%
300-50_Overburden	non-Rad	Nickel	7440-02-0	µg/kg	1.52E+04	--	--	--	7.00E+07	2.18E-04	0.72%
300-50_Overburden	non-Rad	Silver	7440-22-4	µg/kg	1.20E+03	--	--	--	1.75E+07	6.87E-05	0.23%
300-50_Overburden	non-Rad	Vanadium	7440-62-2	µg/kg	4.52E+04	--	--	--	1.75E+07	2.59E-03	8.60%
300-50_Overburden	non-Rad	Zinc	7440-66-6	µg/kg	4.59E+04	--	--	--	1.05E+09	4.37E-05	0.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**8.28E-08**	**--**	**--**	**3.01E-02**	**--**
300-50_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	5.60E-02	1.77E+01	3.16E-07	9.05%	--	--	--
300-50_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	6.03E+00	1.76E+03	3.43E-07	9.82%	--	--	--
300-50_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	4.49E-01	6.14E+01	7.31E-07	20.92%	--	--	--
300-50_Overburden	Rad	Uranium-238	U-238	pCi/g	5.95E+00	2.83E+02	2.10E-06	60.21%	--	--	--
Total Radiological Risk Estimate						**--**	**3.49E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.58E-06**	**--**	**--**	**--**	**--**

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-50_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.88E+06	--	--	--	3.50E+09	1.97E-03	5.99%
300-50_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.00E+03	--	--	--	1.40E+06	2.14E-03	6.53%
300-50_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.26E+02	6.56E+04	1.93E-09	2.56%	7.00E+04	1.80E-03	5.50%
300-50_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	6.40E+03	8.75E+04	7.32E-08	97.43%	1.05E+06	6.10E-03	18.57%
300-50_Shallow	non-Rad	Barium	7440-39-3	µg/kg	1.03E+05	--	--	--	7.00E+08	1.47E-04	0.45%
300-50_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.82E+02	--	--	--	7.00E+06	4.02E-05	0.12%
300-50_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.93E+01	9.38E+06	2.06E-12	0.00%	7.00E+07	2.75E-07	0.00%
300-50_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	4.63E+02	--	--	--	3.50E+06	1.32E-04	0.40%
300-50_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.68E+04	--	--	--	5.25E+09	3.21E-06	0.01%
300-50_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	9.11E+03	--	--	--	1.05E+06	8.68E-03	26.42%
300-50_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.68E+04	--	--	--	1.40E+08	1.20E-04	0.37%
300-50_Shallow	non-Rad	Iron	7439-89-6	µg/kg	1.96E+07	--	--	--	2.45E+09	7.99E-03	24.32%
300-50_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.18E+05	--	--	--	4.90E+08	6.49E-04	1.98%
300-50_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	1.24E+04	--	--	--	7.00E+07	1.77E-04	0.54%
300-50_Shallow	non-Rad	Silver	7440-22-4	µg/kg	2.99E+03	--	--	--	1.75E+07	1.71E-04	0.52%
300-50_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	4.70E+04	--	--	--	1.75E+07	2.68E-03	8.17%
300-50_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.13E+04	--	--	--	1.05E+09	3.94E-05	0.12%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**7.51E-08**	**--**	**--**	**3.28E-02**	**--**
300-50_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	5.60E-02	1.77E+01	3.16E-07	6.56%	--	--	--
300-50_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	7.89E+00	1.76E+03	4.49E-07	9.32%	--	--	--
300-50_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	6.64E-01	6.14E+01	1.08E-06	22.43%	--	--	--
300-50_Shallow	Rad	Uranium-238	U-238	pCi/g	8.41E+00	2.83E+02	2.97E-06	61.69%	--	--	--
Total Radiological Risk Estimate						**--**	**4.82E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.90E-06**	**--**	**--**	**--**	**--**
300-8_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	5.74E+02	--	--	--	7.00E+06	8.20E-05	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**8.20E-05**	**--**
300-8_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	7.86E-01	1.76E+03	4.48E-08	13.36%	--	--	--
300-8_Shallow	Rad	Uranium-238	U-238	pCi/g	8.21E-01	2.83E+02	2.90E-07	86.64%	--	--	--
Total Radiological Risk Estimate						**--**	**3.35E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.35E-07**	**--**	**--**	**--**	**--**
316-1_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	1.01E-01	1.77E+01	5.71E-07	5.09%	--	--	--
316-1_Overburden	Rad	Cobalt-60	10198-40-0	pCi/g	3.18E-01	9.40E+00	3.38E-06	30.19%	--	--	--
316-1_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	1.30E+01	1.76E+03	7.37E-07	6.58%	--	--	--
316-1_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	1.08E+00	6.14E+01	1.76E-06	15.70%	--	--	--
316-1_Overburden	Rad	Uranium-238	U-238	pCi/g	1.35E+01	2.83E+02	4.76E-06	42.45%	--	--	--
Total Radiological Risk Estimate						**--**	**1.12E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.12E-05**	**--**	**--**	**--**	**--**
316-1_Shallow_1	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.00E+03	6.56E+04	4.57E-08	17.38%	--	--	--

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-1_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	1.90E+04	8.75E+04	2.17E-07	82.62%	1.05E+06	1.81E-02	99.99%
316-1_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.86E+01	9.38E+06	7.31E-12	0.00%	7.00E+07	9.80E-07	0.01%
316-1_Shallow_1	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	9.77E+01	6.91E+07	1.41E-12	0.00%	7.00E+08	1.40E-07	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**2.63E-07**	--	--	**1.81E-02**	--
316-1_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	3.18E-02	1.77E+01	1.80E-07	1.50%	--	--	--
316-1_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.21E+00	6.14E+01	1.98E-06	16.54%	--	--	--
316-1_Shallow_1	Rad	Uranium-238	U-238	pCi/g	2.77E+01	2.83E+02	9.79E-06	81.96%	--	--	--
Total Radiological Risk Estimate						--	**1.19E-05**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.22E-05**	--	--	--	--
316-1_Shallow_3	non-Rad	Aluminum	7429-90-5	µg/kg	1.11E+07	--	--	--	3.50E+09	3.17E-03	6.80%
316-1_Shallow_3	non-Rad	Antimony	7440-36-0	µg/kg	4.90E+02	--	--	--	1.40E+06	3.50E-04	0.75%
316-1_Shallow_3	non-Rad	Aroclor-1254	11097-69-1	µg/kg	9.82E+01	6.56E+04	1.50E-09	2.47%	7.00E+04	1.40E-03	3.01%
316-1_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	5.14E+03	8.75E+04	5.87E-08	97.10%	1.05E+06	4.89E-03	10.50%
316-1_Shallow_3	non-Rad	Barium	7440-39-3	µg/kg	1.29E+05	--	--	--	7.00E+08	1.84E-04	0.40%
316-1_Shallow_3	non-Rad	Beryllium	7440-41-7	µg/kg	4.16E+02	--	--	--	7.00E+06	5.94E-05	0.13%
316-1_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	3.42E+02	9.38E+06	3.65E-11	0.06%	7.00E+07	4.89E-06	0.01%
316-1_Shallow_3	non-Rad	Cadmium	7440-43-9	µg/kg	4.74E+02	--	--	--	3.50E+06	1.36E-04	0.29%
316-1_Shallow_3	non-Rad	Chromium	7440-47-3	µg/kg	5.05E+04	--	--	--	5.25E+09	9.61E-06	0.02%
316-1_Shallow_3	non-Rad	Cobalt	7440-48-4	µg/kg	9.70E+03	--	--	--	1.05E+06	9.24E-03	19.83%
316-1_Shallow_3	non-Rad	Copper	7440-50-8	µg/kg	1.37E+06	--	--	--	1.40E+08	9.76E-03	20.94%
316-1_Shallow_3	non-Rad	Heptachlor epoxide	1024-57-3	µg/kg	3.20E+00	1.44E+04	2.22E-10	0.37%	4.55E+04	7.03E-05	0.15%
316-1_Shallow_3	non-Rad	Iron	7439-89-6	µg/kg	2.44E+07	--	--	--	2.45E+09	9.96E-03	21.38%
316-1_Shallow_3	non-Rad	Manganese	7439-96-5	µg/kg	3.93E+05	--	--	--	4.90E+08	8.02E-04	1.72%
316-1_Shallow_3	non-Rad	Mercury	7439-97-6	µg/kg	1.11E+03	--	--	--	1.05E+06	1.05E-03	2.26%
316-1_Shallow_3	non-Rad	Nickel	7440-02-0	µg/kg	9.47E+04	--	--	--	7.00E+07	1.35E-03	2.90%
316-1_Shallow_3	non-Rad	Phenol	108-95-2	µg/kg	2.80E+01	--	--	--	1.05E+09	2.67E-08	0.00%
316-1_Shallow_3	non-Rad	Selenium	7782-49-2	µg/kg	1.44E+03	--	--	--	1.75E+07	8.25E-05	0.18%
316-1_Shallow_3	non-Rad	Silver	7440-22-4	µg/kg	1.32E+04	--	--	--	1.75E+07	7.54E-04	1.62%
316-1_Shallow_3	non-Rad	Vanadium	7440-62-2	µg/kg	5.67E+04	--	--	--	1.75E+07	3.24E-03	6.95%
316-1_Shallow_3	non-Rad	Zinc	7440-66-6	µg/kg	8.20E+04	--	--	--	1.05E+09	7.81E-05	0.17%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**6.05E-08**	--	--	**4.66E-02**	--
316-1_Shallow_3	Rad	Cesium-137	10045-97-3	pCi/g	3.75E-01	1.77E+01	2.12E-06	5.32%	--	--	--
316-1_Shallow_3	Rad	Cobalt-60	10198-40-0	pCi/g	2.32E+00	9.40E+00	2.47E-05	62.16%	--	--	--
316-1_Shallow_3	Rad	Uranium-233/234	U-233/234	pCi/g	2.27E+01	1.76E+03	1.29E-06	3.25%	--	--	--
316-1_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	2.64E+00	6.14E+01	4.29E-06	10.79%	--	--	--
316-1_Shallow_3	Rad	Uranium-238	U-238	pCi/g	2.08E+01	2.83E+02	7.36E-06	18.49%	--	--	--
Total Radiological Risk Estimate						--	**3.98E-05**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**3.99E-05**	--	--	--	--
316-1_Shallow_4	non-Rad	Aroclor-1254	11097-69-1	µg/kg	6.20E+01	6.56E+04	9.45E-10	100.00%	7.00E+04	8.86E-04	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**9.45E-10**	--	--	**8.86E-04**	--
316-1_Shallow_4	Rad	Cobalt-60	10198-40-0	pCi/g	1.20E-01	9.40E+00	1.28E-06	14.26%	--	--	--

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-1_Shallow_4	Rad	Uranium-233/234	U-233/234	pCi/g	1.61E+01	1.76E+03	9.19E-07	10.27%	--	--	--
316-1_Shallow_4	Rad	Uranium-235	15117-96-1	pCi/g	1.05E+00	6.14E+01	1.71E-06	19.11%	--	--	--
316-1_Shallow_4	Rad	Uranium-238	U-238	pCi/g	1.43E+01	2.83E+02	5.04E-06	56.36%	--	--	--
Total Radiological Risk Estimate						**--**	**8.95E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.95E-06**	**--**	**--**	**--**	**--**
316-2_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	3.10E-02	1.77E+01	1.75E-07	0.35%	--	--	--
316-2_Shallow_1	Rad	Cobalt-60	10198-40-0	pCi/g	9.22E-02	9.40E+00	9.80E-07	1.95%	--	--	--
316-2_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	8.64E+01	1.76E+03	4.92E-06	9.78%	--	--	--
316-2_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.22E+01	6.14E+01	1.99E-05	39.53%	--	--	--
316-2_Shallow_1	Rad	Uranium-238	U-238	pCi/g	6.88E+01	2.83E+02	2.43E-05	48.40%	--	--	--
Total Radiological Risk Estimate						**--**	**5.03E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.03E-05**	**--**	**--**	**--**	**--**
316-2_Shallow_2	non-Rad	Aroclor-1248	12672-29-6	µg/kg	6.97E+02	6.56E+04	1.06E-08	82.09%	--	--	--
316-2_Shallow_2	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.20E+01	6.56E+04	6.40E-10	4.95%	7.00E+04	6.00E-04	100.00%
316-2_Shallow_2	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.10E+02	6.56E+04	1.68E-09	12.96%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.29E-08**	**--**	**--**	**6.00E-04**	**--**
316-2_Shallow_2	Rad	Cesium-137	10045-97-3	pCi/g	4.48E-01	1.77E+01	2.53E-06	3.84%	--	--	--
316-2_Shallow_2	Rad	Cobalt-60	10198-40-0	pCi/g	4.53E-01	9.40E+00	4.82E-06	7.30%	--	--	--
316-2_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.15E+02	1.76E+03	6.52E-06	9.89%	--	--	--
316-2_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	1.11E+01	6.14E+01	1.81E-05	27.42%	--	--	--
316-2_Shallow_2	Rad	Uranium-238	U-238	pCi/g	9.62E+01	2.83E+02	3.40E-05	51.55%	--	--	--
Total Radiological Risk Estimate						**--**	**6.59E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.59E-05**	**--**	**--**	**--**	**--**
316-2_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	8.00E+03	8.75E+04	9.14E-08	99.97%	1.05E+06	7.62E-03	99.95%
316-2_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.60E+02	9.38E+06	2.77E-11	0.03%	7.00E+07	3.71E-06	0.05%
316-2_Shallow_3	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	1.80E+02	6.91E+07	2.61E-12	0.00%	7.00E+08	2.57E-07	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**9.15E-08**	**--**	**--**	**7.62E-03**	**--**
316-2_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	9.09E-01	6.14E+01	1.48E-06	14.63%	--	--	--
316-2_Shallow_3	Rad	Uranium-238	U-238	pCi/g	2.44E+01	2.83E+02	8.64E-06	85.37%	--	--	--
Total Radiological Risk Estimate						**--**	**1.01E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.02E-05**	**--**	**--**	**--**	**--**
316-5_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	3.07E+03	8.75E+04	3.51E-08	99.35%	1.05E+06	2.92E-03	99.92%
316-5_Shallow_1	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	3.80E+01	1.80E+05	2.11E-10	0.60%	--	--	--
316-5_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.46E+02	9.38E+06	1.56E-11	0.04%	7.00E+07	2.08E-06	0.07%
316-5_Shallow_1	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	1.00E+02	6.91E+07	1.45E-12	0.00%	7.00E+08	1.43E-07	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.53E-08**	**--**	**--**	**2.93E-03**	**--**
316-5_Shallow_1	Rad	Americium-241	14596-10-2	pCi/g	4.79E-01	9.42E+02	5.08E-08	0.07%	--	--	--

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-5_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	2.31E+00	1.77E+01	1.31E-05	17.44%	--	--	--
316-5_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.86E+01	6.14E+01	3.03E-05	40.43%	--	--	--
316-5_Shallow_1	Rad	Uranium-238	U-238	pCi/g	8.92E+01	2.83E+02	3.15E-05	42.06%	--	--	--
Total Radiological Risk Estimate						**--**	**7.49E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.50E-05**	**--**	**--**	**--**	**--**
316-5_Shallow_2	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	1.40E+02	6.56E+05	2.13E-10	0.58%	1.40E+07	1.00E-05	0.30%
316-5_Shallow_2	non-Rad	2-Butoxyethanol	111-76-2	µg/kg	2.40E+02	--	--	--	1.75E+09	1.37E-07	0.00%
316-5_Shallow_2	non-Rad	Arsenic	7440-38-2	µg/kg	3.18E+03	8.75E+04	3.63E-08	99.30%	1.05E+06	3.03E-03	89.43%
316-5_Shallow_2	non-Rad	Barium	7440-39-3	µg/kg	7.67E+04	--	--	--	7.00E+08	1.10E-04	3.24%
316-5_Shallow_2	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.80E+02	9.38E+06	1.92E-11	0.05%	7.00E+07	2.57E-06	0.08%
316-5_Shallow_2	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	1.10E+02	6.91E+07	1.59E-12	0.00%	7.00E+08	1.57E-07	0.00%
316-5_Shallow_2	non-Rad	Chromium	7440-47-3	µg/kg	6.90E+03	--	--	--	5.25E+09	1.31E-06	0.04%
316-5_Shallow_2	non-Rad	Chrysene	218-01-9	µg/kg	3.80E+01	1.80E+06	2.11E-11	0.06%	--	--	--
316-5_Shallow_2	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	1.46E+02	--	--	--	3.50E+08	4.18E-07	0.01%
316-5_Shallow_2	non-Rad	Selenium	7782-49-2	µg/kg	4.90E+02	--	--	--	1.75E+07	2.80E-05	0.83%
316-5_Shallow_2	non-Rad	Silver	7440-22-4	µg/kg	3.60E+03	--	--	--	1.75E+07	2.06E-04	6.07%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.66E-08**	**--**	**--**	**3.39E-03**	**--**
316-5_Shallow_2	Rad	Americium-241	14596-10-2	pCi/g	1.24E-01	9.42E+02	1.32E-08	0.03%	--	--	--
316-5_Shallow_2	Rad	Cesium-137	10045-97-3	pCi/g	1.71E+00	1.77E+01	9.68E-06	19.55%	--	--	--
316-5_Shallow_2	Rad	Cobalt-60	10198-40-0	pCi/g	1.18E-01	9.40E+00	1.26E-06	2.53%	--	--	--
316-5_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	9.04E+00	6.14E+01	1.47E-05	29.73%	--	--	--
316-5_Shallow_2	Rad	Uranium-238	U-238	pCi/g	6.75E+01	2.83E+02	2.39E-05	48.16%	--	--	--
Total Radiological Risk Estimate						**--**	**4.95E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.96E-05**	**--**	**--**	**--**	**--**
316-5_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	5.70E+01	6.56E+04	8.69E-10	1.67%	--	--	--
316-5_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	7.00E+01	6.56E+04	1.07E-09	2.06%	7.00E+04	1.00E-03	19.60%
316-5_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.20E+01	6.56E+04	7.92E-10	1.53%	--	--	--
316-5_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	4.30E+03	8.75E+04	4.91E-08	94.70%	1.05E+06	4.10E-03	80.26%
316-5_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.90E+02	9.38E+06	2.03E-11	0.04%	7.00E+07	2.71E-06	0.05%
316-5_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	1.50E+03	--	--	--	3.50E+08	4.29E-06	0.08%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.19E-08**	**--**	**--**	**5.10E-03**	**--**
316-5_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.83E+00	1.77E+01	1.03E-05	26.64%	--	--	--
316-5_Shallow_Focused	Rad	Europium-155	14391-16-3	pCi/g	7.19E-02	9.66E+02	7.44E-09	0.02%	--	--	--
316-5_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	7.67E+00	6.14E+01	1.25E-05	32.19%	--	--	--
316-5_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.52E+01	2.83E+02	1.60E-05	41.15%	--	--	--
Total Radiological Risk Estimate						**--**	**3.88E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.89E-05**	**--**	**--**	**--**	**--**
331 LSLDF_Shallow_Focused	non-Rad	4,4'-DDE (Dichlorodiphenyldichloroethylene)	72-55-9	µg/kg	2.50E+01	3.86E+05	6.48E-11	0.15%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	5.90E+02	--	--	--	3.15E+09	1.87E-07	0.00%

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
331 LSLDF_Shallow_Focused	non-Rad	Aldrin	309-00-2	µg/kg	5.60E-01	7.72E+03	7.25E-11	0.17%	1.05E+05	5.33E-06	0.01%
331 LSLDF_Shallow_Focused	non-Rad	Alpha-BHC	319-84-6	µg/kg	3.90E-01	2.08E+04	1.87E-11	0.04%	2.80E+07	1.39E-08	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	6.90E+06	--	--	--	3.50E+09	1.97E-03	5.09%
331 LSLDF_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	3.60E+02	--	--	--	1.40E+06	2.57E-04	0.66%
331 LSLDF_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	8.50E+02	6.56E+04	1.30E-08	30.68%	7.00E+04	1.21E-02	31.37%
331 LSLDF_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	2.40E+03	8.75E+04	2.74E-08	64.96%	1.05E+06	2.29E-03	5.90%
331 LSLDF_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	7.86E+04	--	--	--	7.00E+08	1.12E-04	0.29%
331 LSLDF_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	5.70E+02	--	--	--	7.00E+06	8.14E-05	0.21%
331 LSLDF_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	9.10E+02	9.38E+06	9.71E-11	0.23%	7.00E+07	1.30E-05	0.03%
331 LSLDF_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	1.70E+03	--	--	--	7.00E+08	2.43E-06	0.01%
331 LSLDF_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	3.40E+02	6.91E+07	4.92E-12	0.01%	7.00E+08	4.86E-07	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	1.40E+02	--	--	--	3.50E+06	4.00E-05	0.10%
331 LSLDF_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	1.03E+04	--	--	--	5.25E+09	1.96E-06	0.01%
331 LSLDF_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	8.60E+03	--	--	--	1.05E+06	8.19E-03	21.16%
331 LSLDF_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	1.54E+04	--	--	--	1.40E+08	1.10E-04	0.28%
331 LSLDF_Shallow_Focused	non-Rad	Dieldrin	60-57-1	µg/kg	1.30E+01	8.20E+03	1.58E-09	3.75%	1.75E+05	7.43E-05	0.19%
331 LSLDF_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	9.80E+01	--	--	--	3.50E+08	2.80E-07	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Endosulfan I	959-98-8	µg/kg	1.90E+00	--	--	--	2.10E+07	9.05E-08	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Endosulfan II	33213-65-9	µg/kg	3.10E+00	--	--	--	2.10E+07	1.48E-07	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	2.20E+07	--	--	--	2.45E+09	8.98E-03	23.20%
331 LSLDF_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	3.49E+05	--	--	--	4.90E+08	7.12E-04	1.84%
331 LSLDF_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	1.10E+02	--	--	--	1.05E+06	1.05E-04	0.27%
331 LSLDF_Shallow_Focused	non-Rad	Methoxychlor	72-43-5	µg/kg	3.30E+00	--	--	--	1.75E+07	1.89E-07	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	1.10E+01	1.75E+07	6.29E-13	0.00%	2.10E+08	5.24E-08	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	5.90E+02	--	--	--	1.75E+07	3.37E-05	0.09%
331 LSLDF_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.00E+04	--	--	--	7.00E+07	1.43E-04	0.37%
331 LSLDF_Shallow_Focused	non-Rad	Nitrate	14797-55-8	µg/kg	4.17E+04	--	--	--	2.49E+10	1.68E-06	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Nitrogen in Nitrite and Nitrate	NO2+NO3-N	µg/kg	9.50E+03	--	--	--	5.60E+09	1.70E-06	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Silver	7440-22-4	µg/kg	1.10E+03	--	--	--	1.75E+07	6.29E-05	0.16%
331 LSLDF_Shallow_Focused	non-Rad	Uranium	7440-61-1	µg/kg	2.30E+03	--	--	--	1.05E+07	2.19E-04	0.57%
331 LSLDF_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	5.31E+04	--	--	--	1.75E+07	3.03E-03	7.84%
331 LSLDF_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	1.37E+05	--	--	--	1.05E+09	1.30E-04	0.34%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.22E-08**	**--**	**--**	**3.87E-02**	**--**
331 LSLDF_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	5.40E-01	1.76E+03	3.07E-08	15.59%	--	--	--
331 LSLDF_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.71E-01	2.83E+02	1.66E-07	84.41%	--	--	--
Total Radiological Risk Estimate						**--**	**1.97E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.39E-07**	**--**	**--**	**--**	**--**

600-243_Shallow	non-Rad	2-Methylnaphthalene	91-57-6	µg/kg	2.79E+02	--	--	--	1.40E+07	1.99E-05	0.11%
600-243_Shallow	non-Rad	Anthracene	120-12-7	µg/kg	3.13E+01	--	--	--	1.05E+09	2.98E-08	0.00%
600-243_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	1.30E+03	--	--	--	1.40E+06	9.29E-04	4.93%
600-243_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.70E+01	6.56E+04	4.11E-10	0.55%	7.00E+04	3.86E-04	2.05%
600-243_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.84E+01	6.56E+04	2.80E-10	0.38%	--	--	--
600-243_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	6.16E+03	8.75E+04	7.04E-08	94.65%	1.05E+06	5.87E-03	31.13%

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
600-243_Shallow	non-Rad	Barium	7440-39-3	µg/kg	2.92E+05	--	--	--	7.00E+08	4.17E-04	2.21%
600-243_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	4.33E+01	1.80E+05	2.41E-10	0.32%	--	--	--
600-243_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	4.27E+01	1.80E+04	2.37E-09	3.19%	--	--	--
600-243_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	4.63E+01	1.80E+05	2.58E-10	0.35%	--	--	--
600-243_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	3.18E+01	1.80E+05	1.77E-10	0.24%	--	--	--
600-243_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.08E+03	--	--	--	7.00E+06	2.97E-04	1.58%
600-243_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	4.32E+02	9.38E+06	4.61E-11	0.06%	7.00E+07	6.17E-06	0.03%
600-243_Shallow	non-Rad	Boron	7440-42-8	µg/kg	2.94E+05	--	--	--	7.00E+08	4.21E-04	2.23%
600-243_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	7.93E+02	--	--	--	3.50E+06	2.26E-04	1.20%
600-243_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.80E+04	--	--	--	5.25E+09	3.43E-06	0.02%
600-243_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	6.26E+01	1.80E+06	3.48E-11	0.05%	--	--	--
600-243_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.21E+03	--	--	--	1.05E+06	5.91E-03	31.37%
600-243_Shallow	non-Rad	Copper	7440-50-8	µg/kg	5.40E+04	--	--	--	1.40E+08	3.86E-04	2.05%
600-243_Shallow	non-Rad	Dibenzofuran	132-64-9	µg/kg	7.85E+01	--	--	--	5.83E+06	1.35E-05	0.07%
600-243_Shallow	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	3.72E+01	--	--	--	3.50E+08	1.06E-07	0.00%
600-243_Shallow	non-Rad	Fluoranthene	206-44-0	µg/kg	7.91E+01	--	--	--	1.40E+08	5.65E-07	0.00%
600-243_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	2.80E+01	1.80E+05	1.56E-10	0.21%	--	--	--
600-243_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	2.08E+05	--	--	--	4.90E+08	4.25E-04	2.26%
600-243_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	1.87E+03	--	--	--	1.75E+07	1.07E-04	0.57%
600-243_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	2.04E+02	--	--	--	7.00E+07	2.91E-06	0.02%
600-243_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	2.14E+04	--	--	--	7.00E+07	3.06E-04	1.62%
600-243_Shallow	non-Rad	Pyrene	129-00-0	µg/kg	7.00E+01	--	--	--	1.05E+08	6.66E-07	0.00%
600-243_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	5.71E+03	--	--	--	1.75E+07	3.26E-04	1.73%
600-243_Shallow	non-Rad	Silver	7440-22-4	µg/kg	5.00E+02	--	--	--	1.75E+07	2.86E-05	0.15%
600-243_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	4.70E+04	--	--	--	1.75E+07	2.68E-03	14.25%
600-243_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	8.41E+04	--	--	--	1.05E+09	8.01E-05	0.43%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**7.44E-08**	**--**	**--**	**1.88E-02**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.44E-08**	**--**	**--**	**--**	**--**
600-259_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	3.40E-02	1.77E+01	1.92E-07	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**1.92E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.92E-07**	**--**	**--**	**--**	**--**
600-259_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	6.80E-02	1.77E+01	3.84E-07	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**3.84E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.84E-07**	**--**	**--**	**--**	**--**
600-259_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	3.80E-02	1.77E+01	2.15E-07	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**2.15E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.15E-07**	**--**	**--**	**--**	**--**

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
600-47_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.30E+03	8.75E+04	2.63E-08	100.00%	1.05E+06	2.19E-03	91.87%
600-47_Shallow	non-Rad	Barium	7440-39-3	µg/kg	6.70E+04	--	--	--	7.00E+08	9.57E-05	4.01%
600-47_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	5.00E+02	--	--	--	7.00E+06	7.14E-05	3.00%
600-47_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	9.00E+01	--	--	--	3.50E+06	2.57E-05	1.08%
600-47_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	5.50E+03	--	--	--	5.25E+09	1.05E-06	0.04%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.63E-08**	**--**	**--**	**2.38E-03**	**--**
600-47_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.36E+00	1.76E+03	7.74E-08	12.18%	--	--	--
600-47_Shallow	Rad	Uranium-238	U-238	pCi/g	1.58E+00	2.83E+02	5.58E-07	87.82%	--	--	--
Total Radiological Risk Estimate						**--**	**6.36E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.62E-07**	**--**	**--**	**--**	**--**
618-1_Deep	Rad	Cesium-137	10045-97-3	pCi/g	4.61E-01	1.77E+01	2.60E-06	12.86%	--	--	--
618-1_Deep	Rad	Uranium-233/234	U-233/234	pCi/g	3.31E+01	1.76E+03	1.88E-06	9.30%	--	--	--
618-1_Deep	Rad	Uranium-235	15117-96-1	pCi/g	2.74E+00	6.14E+01	4.46E-06	22.03%	--	--	--
618-1_Deep	Rad	Uranium-238	U-238	pCi/g	3.20E+01	2.83E+02	1.13E-05	55.82%	--	--	--
Total Radiological Risk Estimate						**--**	**2.03E-05**	**--**	**--**	**--**	**--**
618-1_Deep_Focused	Rad	Cesium-137	10045-97-3	pCi/g	6.52E+00	1.77E+01	3.68E-05	51.80%	--	--	--
618-1_Deep_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	6.99E+01	1.76E+03	3.98E-06	5.59%	--	--	--
618-1_Deep_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.46E+00	6.14E+01	7.26E-06	10.21%	--	--	--
618-1_Deep_Focused	Rad	Uranium-238	U-238	pCi/g	6.52E+01	2.83E+02	2.30E-05	32.40%	--	--	--
Total Radiological Risk Estimate						**--**	**7.11E-05**	**--**	**--**	**--**	**--**
618-1_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.21E+06	--	--	--	3.50E+09	1.77E-03	6.49%
618-1_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.64E+02	6.56E+04	4.02E-09	13.02%	7.00E+04	3.77E-03	13.78%
618-1_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.35E+01	6.56E+04	8.15E-10	2.64%	--	--	--
618-1_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.28E+03	8.75E+04	2.61E-08	84.34%	1.05E+06	2.17E-03	7.94%
618-1_Shallow	non-Rad	Barium	7440-39-3	µg/kg	9.72E+04	--	--	--	7.00E+08	1.39E-04	0.51%
618-1_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	1.88E+02	--	--	--	7.00E+06	2.69E-05	0.10%
618-1_Shallow	non-Rad	Boron	7440-42-8	µg/kg	1.19E+03	--	--	--	7.00E+08	1.70E-06	0.01%
618-1_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	6.80E+01	--	--	--	3.50E+06	1.94E-05	0.07%
618-1_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	7.93E+03	--	--	--	5.25E+09	1.51E-06	0.01%
618-1_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.36E+03	--	--	--	1.05E+06	6.06E-03	22.14%
618-1_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.14E+04	--	--	--	1.40E+08	8.14E-05	0.30%
618-1_Shallow	non-Rad	Fluoride	16984-48-8	µg/kg	4.00E+02	--	--	--	2.10E+08	1.90E-06	0.01%
618-1_Shallow	non-Rad	Iron	7439-89-6	µg/kg	2.05E+07	--	--	--	2.45E+09	8.37E-03	30.58%
618-1_Shallow	non-Rad	Lithium	7439-93-2	µg/kg	6.38E+03	--	--	--	7.00E+06	9.11E-04	3.33%
618-1_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.00E+05	--	--	--	4.90E+08	6.12E-04	2.24%
618-1_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	3.10E+01	--	--	--	1.05E+06	2.95E-05	0.11%
618-1_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	3.36E+02	--	--	--	1.75E+07	1.92E-05	0.07%
618-1_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	8.15E+03	--	--	--	7.00E+07	1.16E-04	0.43%
618-1_Shallow	non-Rad	Nitrate	14797-55-8	µg/kg	1.60E+03	--	--	--	2.49E+10	6.44E-08	0.00%

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-1_Shallow	non-Rad	Nitrogen in Nitrite and Nitrate	NO2+NO3-N	µg/kg	3.00E+02	--	--	--	5.60E+09	5.36E-08	0.00%
618-1_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	5.63E+04	--	--	--	1.75E+07	3.22E-03	11.76%
618-1_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.21E+04	--	--	--	1.05E+09	4.01E-05	0.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.09E-08**	**--**	**--**	**2.74E-02**	**--**
618-1_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.93E+00	1.76E+03	1.10E-07	17.07%	--	--	--
618-1_Shallow	Rad	Uranium-238	U-238	pCi/g	1.51E+00	2.83E+02	5.34E-07	82.93%	--	--	--
Total Radiological Risk Estimate						**--**	**6.43E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.74E-07**	**--**	**--**	**--**	**--**
618-1_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	1.22E+07	--	--	--	3.50E+09	3.49E-03	7.08%
618-1_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	4.55E+02	--	--	--	1.40E+06	3.25E-04	0.66%
618-1_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.51E+01	6.56E+04	5.35E-10	0.62%	--	--	--
618-1_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	9.81E+02	6.56E+04	1.49E-08	17.39%	7.00E+04	1.40E-02	28.45%
618-1_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.60E+01	6.56E+04	8.53E-10	0.99%	--	--	--
618-1_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	6.09E+03	8.75E+04	6.96E-08	80.99%	1.05E+06	5.80E-03	11.78%
618-1_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	1.02E+05	--	--	--	7.00E+08	1.46E-04	0.30%
618-1_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	3.71E+02	--	--	--	7.00E+06	5.30E-05	0.11%
618-1_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	3.74E+03	--	--	--	7.00E+08	5.34E-06	0.01%
618-1_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	2.66E+02	--	--	--	3.50E+06	7.60E-05	0.15%
618-1_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	1.95E+04	--	--	--	5.25E+09	3.71E-06	0.01%
618-1_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	8.60E+03	--	--	--	1.05E+06	8.19E-03	16.63%
618-1_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	2.38E+04	--	--	--	1.40E+08	1.70E-04	0.35%
618-1_Shallow_Focused	non-Rad	Fluoride	16984-48-8	µg/kg	9.00E+02	--	--	--	2.10E+08	4.29E-06	0.01%
618-1_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	2.28E+07	--	--	--	2.45E+09	9.31E-03	18.90%
618-1_Shallow_Focused	non-Rad	Lithium	7439-93-2	µg/kg	1.33E+04	--	--	--	7.00E+06	1.90E-03	3.86%
618-1_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	4.03E+05	--	--	--	4.90E+08	8.22E-04	1.67%
618-1_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	1.98E+02	--	--	--	1.05E+06	1.89E-04	0.38%
618-1_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	3.56E+02	--	--	--	1.75E+07	2.03E-05	0.04%
618-1_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.68E+04	--	--	--	7.00E+07	2.40E-04	0.49%
618-1_Shallow_Focused	non-Rad	Nitrate	14797-55-8	µg/kg	3.80E+03	--	--	--	2.49E+10	1.53E-07	0.00%
618-1_Shallow_Focused	non-Rad	Nitrogen in Nitrite and Nitrate	NO2+NO3-N	µg/kg	2.60E+02	--	--	--	5.60E+09	4.64E-08	0.00%
618-1_Shallow_Focused	non-Rad	Silver	7440-22-4	µg/kg	1.12E+03	--	--	--	1.75E+07	6.40E-05	0.13%
618-1_Shallow_Focused	non-Rad	Uranium	7440-61-1	µg/kg	7.08E+03	--	--	--	1.05E+07	6.74E-04	1.37%
618-1_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	6.47E+04	--	--	--	1.75E+07	3.70E-03	7.51%
618-1_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	6.81E+04	--	--	--	1.05E+09	6.49E-05	0.13%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**8.59E-08**	**--**	**--**	**4.93E-02**	**--**
618-1_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.13E+01	1.76E+03	6.43E-07	12.47%	--	--	--
618-1_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	9.87E-01	6.14E+01	1.61E-06	31.16%	--	--	--
618-1_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	8.23E+00	2.83E+02	2.91E-06	56.37%	--	--	--
Total Radiological Risk Estimate						**--**	**5.16E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.24E-06**	**--**	**--**	**--**	**--**
618-12_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	8.56E+03	8.75E+04	9.78E-08	99.99%	1.05E+06	8.15E-03	99.99%

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-12_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.30E+01	9.38E+06	6.72E-12	0.01%	7.00E+07	9.00E-07	0.01%
618-12_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	6.00E+01	6.91E+07	8.69E-13	0.00%	7.00E+08	8.57E-08	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**9.78E-08**	--	--	**8.15E-03**	--
618-12_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	4.71E-01	6.14E+01	7.66E-07	16.84%	--	--	--
618-12_Shallow	Rad	Uranium-238	U-238	pCi/g	1.07E+01	2.83E+02	3.78E-06	83.16%	--	--	--
Total Radiological Risk Estimate						--	**4.55E-06**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**4.65E-06**	--	--	--	--
618-13_Shallow	non-Rad	Acetone	67-64-1	µg/kg	8.64E+00	--	--	--	3.15E+09	2.74E-09	0.00%
618-13_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.34E+06	--	--	--	3.50E+09	1.81E-03	7.52%
618-13_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.12E+02	--	--	--	1.40E+06	2.23E-04	0.92%
618-13_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	3.50E+03	8.75E+04	4.00E-08	100.00%	1.05E+06	3.33E-03	13.83%
618-13_Shallow	non-Rad	Barium	7440-39-3	µg/kg	7.40E+04	--	--	--	7.00E+08	1.06E-04	0.44%
618-13_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.12E+02	--	--	--	7.00E+06	3.03E-05	0.13%
618-13_Shallow	non-Rad	Boron	7440-42-8	µg/kg	1.05E+03	--	--	--	7.00E+08	1.50E-06	0.01%
618-13_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	6.30E+01	--	--	--	3.50E+06	1.80E-05	0.07%
618-13_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.07E+04	--	--	--	5.25E+09	2.04E-06	0.01%
618-13_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.29E+03	--	--	--	1.05E+06	5.99E-03	24.86%
618-13_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.15E+04	--	--	--	1.40E+08	8.21E-05	0.34%
618-13_Shallow	non-Rad	Iron	7439-89-6	µg/kg	2.01E+07	--	--	--	2.45E+09	8.20E-03	34.04%
618-13_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.44E+05	--	--	--	4.90E+08	7.02E-04	2.91%
618-13_Shallow	non-Rad	Methylene chloride	75-09-2	µg/kg	5.12E+00	1.75E+07	2.93E-13	0.00%	2.10E+08	2.44E-08	0.00%
618-13_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	4.20E+02	--	--	--	1.75E+07	2.40E-05	0.10%
618-13_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	1.24E+04	--	--	--	7.00E+07	1.77E-04	0.74%
618-13_Shallow	non-Rad	Tin	7440-31-5	µg/kg	1.05E+03	--	--	--	2.10E+09	5.00E-07	0.00%
618-13_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	1.75E+03	--	--	--	1.05E+07	1.67E-04	0.69%
618-13_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	5.58E+04	--	--	--	1.75E+07	3.19E-03	13.23%
618-13_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.14E+04	--	--	--	1.05E+09	3.94E-05	0.16%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**4.00E-08**	--	--	**2.41E-02**	--
618-13_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	3.80E-02	1.77E+01	2.15E-07	23.22%	--	--	--
618-13_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.92E+00	1.76E+03	1.09E-07	11.82%	--	--	--
618-13_Shallow	Rad	Uranium-238	U-238	pCi/g	1.70E+00	2.83E+02	6.01E-07	64.96%	--	--	--
Total Radiological Risk Estimate						--	**9.25E-07**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**9.65E-07**	--	--	--	--
618-13_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	5.90E+00	--	--	--	3.15E+09	1.87E-09	0.00%
618-13_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	5.22E+06	--	--	--	3.50E+09	1.49E-03	6.94%
618-13_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	2.33E+02	--	--	--	1.40E+06	1.66E-04	0.77%
618-13_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	3.39E+03	8.75E+04	3.87E-08	100.00%	1.05E+06	3.23E-03	15.01%
618-13_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	5.77E+04	--	--	--	7.00E+08	8.24E-05	0.38%
618-13_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	1.84E+02	--	--	--	7.00E+06	2.63E-05	0.12%
618-13_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	9.60E+02	--	--	--	7.00E+08	1.37E-06	0.01%
618-13_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	4.70E+01	--	--	--	3.50E+06	1.34E-05	0.06%

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-13_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	8.74E+03	--	--	--	5.25E+09	1.66E-06	0.01%
618-13_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	5.71E+03	--	--	--	1.05E+06	5.44E-03	25.29%
618-13_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	1.01E+04	--	--	--	1.40E+08	7.21E-05	0.34%
618-13_Shallow_Focused	non-Rad	Hexavalent Chromium	18540-29-9	µg/kg	1.50E+02	--	--	--	1.05E+07	1.43E-05	0.07%
618-13_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	1.79E+07	--	--	--	2.45E+09	7.31E-03	33.97%
618-13_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	2.68E+05	--	--	--	4.90E+08	5.47E-04	2.54%
618-13_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	5.03E+00	1.75E+07	2.87E-13	0.00%	2.10E+08	2.40E-08	0.00%
618-13_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	2.97E+02	--	--	--	1.75E+07	1.70E-05	0.08%
618-13_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.00E+04	--	--	--	7.00E+07	1.43E-04	0.66%
618-13_Shallow_Focused	non-Rad	Tin	7440-31-5	µg/kg	7.45E+02	--	--	--	2.10E+09	3.55E-07	0.00%
618-13_Shallow_Focused	non-Rad	Uranium	7440-61-1	µg/kg	1.50E+03	--	--	--	1.05E+07	1.43E-04	0.66%
618-13_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	4.86E+04	--	--	--	1.75E+07	2.78E-03	12.91%
618-13_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	3.71E+04	--	--	--	1.05E+09	3.53E-05	0.16%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.87E-08**	**--**	**--**	**2.15E-02**	**--**
618-13_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.14E+00	1.76E+03	6.49E-08	16.07%	--	--	--
618-13_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	9.59E-01	2.83E+02	3.39E-07	83.93%	--	--	--
Total Radiological Risk Estimate						**--**	**4.04E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.42E-07**	**--**	**--**	**--**	**--**
618-2_Deep	Rad	Americium-241	14596-10-2	pCi/g	7.94E+00	9.42E+02	8.43E-07	1.06%	--	--	--
618-2_Deep	Rad	Cesium-137	10045-97-3	pCi/g	1.04E+00	1.77E+01	5.88E-06	7.41%	--	--	--
618-2_Deep	Rad	Plutonium-238	13981-16-3	pCi/g	1.50E+00	3.37E+03	4.45E-08	0.06%	--	--	--
618-2_Deep	Rad	Plutonium-239/240	PU-239/240	pCi/g	9.06E+01	2.91E+03	3.12E-06	3.93%	--	--	--
618-2_Deep	Rad	Plutonium-241	14119-32-5	pCi/g	4.20E+01	3.11E+04	1.35E-07	0.17%	--	--	--
618-2_Deep	Rad	Total beta radiostrontium	SR-RAD	pCi/g	1.16E+01	1.97E+03	5.89E-07	0.74%	--	--	--
618-2_Deep	Rad	Uranium-233/234	U-233/234	pCi/g	1.61E+02	1.76E+03	9.16E-06	11.55%	--	--	--
618-2_Deep	Rad	Uranium-235	15117-96-1	pCi/g	7.76E-01	6.14E+01	1.26E-06	1.59%	--	--	--
618-2_Deep	Rad	Uranium-238	U-238	pCi/g	1.65E+02	2.83E+02	5.83E-05	73.49%	--	--	--
Total Radiological Risk Estimate						**--**	**7.93E-05**	**--**	**--**	**--**	**--**
618-2_Deep_Focused	Rad	Americium-241	14596-10-2	pCi/g	9.19E+00	9.42E+02	9.76E-07	2.76%	--	--	--
618-2_Deep_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.12E+00	1.77E+01	6.33E-06	17.91%	--	--	--
618-2_Deep_Focused	Rad	Plutonium-238	13981-16-3	pCi/g	1.57E+00	3.37E+03	4.66E-08	0.13%	--	--	--
618-2_Deep_Focused	Rad	Plutonium-239/240	PU-239/240	pCi/g	9.16E+01	2.91E+03	3.15E-06	8.92%	--	--	--
618-2_Deep_Focused	Rad	Plutonium-241	14119-32-5	pCi/g	3.29E+01	3.11E+04	1.06E-07	0.30%	--	--	--
618-2_Deep_Focused	Rad	Total beta radiostrontium	SR-RAD	pCi/g	7.20E+00	1.97E+03	3.66E-07	1.04%	--	--	--
618-2_Deep_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	4.78E+01	1.76E+03	2.72E-06	7.70%	--	--	--
618-2_Deep_Focused	Rad	Uranium-235	15117-96-1	pCi/g	2.42E+00	6.14E+01	3.94E-06	11.15%	--	--	--
618-2_Deep_Focused	Rad	Uranium-238	U-238	pCi/g	5.01E+01	2.83E+02	1.77E-05	50.10%	--	--	--
Total Radiological Risk Estimate						**--**	**3.53E-05**	**--**	**--**	**--**	**--**
618-2_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	2.70E+03	8.75E+04	3.09E-08	100.00%	1.05E+06	2.57E-03	90.34%

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-2_Overburden	non-Rad	Barium	7440-39-3	µg/kg	7.47E+04	--	--	--	7.00E+08	1.07E-04	3.75%
618-2_Overburden	non-Rad	Chromium	7440-47-3	µg/kg	6.60E+03	--	--	--	5.25E+09	1.26E-06	0.04%
618-2_Overburden	non-Rad	Selenium	7782-49-2	µg/kg	1.00E+03	--	--	--	1.75E+07	5.71E-05	2.01%
618-2_Overburden	non-Rad	Tin	7440-31-5	µg/kg	2.70E+03	--	--	--	2.10E+09	1.29E-06	0.05%
618-2_Overburden	non-Rad	Uranium	7440-61-1	µg/kg	1.14E+03	--	--	--	1.05E+07	1.09E-04	3.81%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.09E-08**	**--**	**--**	**2.85E-03**	**--**
618-2_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	5.80E-02	1.77E+01	3.28E-07	57.17%	--	--	--
618-2_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	6.44E-01	1.76E+03	3.67E-08	6.39%	--	--	--
618-2_Overburden	Rad	Uranium-238	U-238	pCi/g	5.91E-01	2.83E+02	2.09E-07	36.43%	--	--	--
Total Radiological Risk Estimate						**--**	**5.73E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.04E-07**	**--**	**--**	**--**	**--**
618-2_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	1.90E+03	8.75E+04	2.17E-08	100.00%	1.05E+06	1.81E-03	75.40%
618-2_Shallow	non-Rad	Barium	7440-39-3	µg/kg	7.91E+04	--	--	--	7.00E+08	1.13E-04	4.71%
618-2_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	7.10E+03	--	--	--	5.25E+09	1.35E-06	0.06%
618-2_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	7.60E+02	--	--	--	1.75E+07	4.34E-05	1.81%
618-2_Shallow	non-Rad	Tin	7440-31-5	µg/kg	2.40E+03	--	--	--	2.10E+09	1.14E-06	0.05%
618-2_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	4.53E+03	--	--	--	1.05E+07	4.31E-04	17.98%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.17E-08**	**--**	**--**	**2.40E-03**	**--**
618-2_Shallow	Rad	Americium-241	14596-10-2	pCi/g	8.13E-01	9.42E+02	8.63E-08	0.61%	--	--	--
618-2_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	2.24E+00	1.77E+01	1.27E-05	88.77%	--	--	--
618-2_Shallow	Rad	Plutonium-239/240	PU-239/240	pCi/g	7.67E+00	2.91E+03	2.64E-07	1.85%	--	--	--
618-2_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	2.20E+00	1.76E+03	1.25E-07	0.88%	--	--	--
618-2_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.14E-01	6.14E+01	3.49E-07	2.44%	--	--	--
618-2_Shallow	Rad	Uranium-238	U-238	pCi/g	2.20E+00	2.83E+02	7.77E-07	5.45%	--	--	--
Total Radiological Risk Estimate						**--**	**1.43E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.43E-05**	**--**	**--**	**--**	**--**
618-2_Staging Pile	non-Rad	Arsenic	7440-38-2	µg/kg	3.06E+03	8.75E+04	3.50E-08	100.00%	1.05E+06	2.92E-03	83.50%
618-2_Staging Pile	non-Rad	Barium	7440-39-3	µg/kg	6.77E+04	--	--	--	7.00E+08	9.67E-05	2.77%
618-2_Staging Pile	non-Rad	Chromium	7440-47-3	µg/kg	6.42E+03	--	--	--	5.25E+09	1.22E-06	0.04%
618-2_Staging Pile	non-Rad	Uranium	7440-61-1	µg/kg	5.02E+03	--	--	--	1.05E+07	4.78E-04	13.69%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.50E-08**	**--**	**--**	**3.49E-03**	**--**
618-2_Staging Pile	Rad	Americium-241	14596-10-2	pCi/g	8.18E-01	9.42E+02	8.68E-08	4.38%	--	--	--
618-2_Staging Pile	Rad	Cesium-137	10045-97-3	pCi/g	9.50E-02	1.77E+01	5.37E-07	27.05%	--	--	--
618-2_Staging Pile	Rad	Plutonium-239/240	PU-239/240	pCi/g	1.00E+01	2.91E+03	3.44E-07	17.34%	--	--	--
618-2_Staging Pile	Rad	Tritium	10028-17-8	pCi/g	2.33E+00	4.98E+04	4.68E-09	0.24%	--	--	--
618-2_Staging Pile	Rad	Uranium-233/234	U-233/234	pCi/g	2.04E+00	1.76E+03	1.16E-07	5.85%	--	--	--
618-2_Staging Pile	Rad	Uranium-235	15117-96-1	pCi/g	1.22E-01	6.14E+01	1.99E-07	10.03%	--	--	--
618-2_Staging Pile	Rad	Uranium-238	U-238	pCi/g	1.97E+00	2.83E+02	6.97E-07	35.11%	--	--	--
Total Radiological Risk Estimate						**--**	**1.98E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.02E-06**	**--**	**--**	**--**	**--**

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-3_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.80E+03	8.75E+04	3.20E-08	100.00%	1.05E+06	2.67E-03	89.82%
618-3_Shallow	non-Rad	Barium	7440-39-3	µg/kg	7.65E+04	--	--	--	7.00E+08	1.09E-04	3.68%
618-3_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	9.70E+03	--	--	--	5.25E+09	1.85E-06	0.06%
618-3_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	6.59E+02	--	--	--	1.75E+07	3.77E-05	1.27%
618-3_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	1.61E+03	--	--	--	1.05E+07	1.53E-04	5.16%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.20E-08**	**--**	**--**	**2.97E-03**	**--**
618-3_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	6.77E-01	1.76E+03	3.85E-08	12.74%	--	--	--
618-3_Shallow	Rad	Uranium-238	U-238	pCi/g	7.47E-01	2.83E+02	2.64E-07	87.26%	--	--	--
Total Radiological Risk Estimate						**--**	**3.02E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.34E-07**	**--**	**--**	**--**	**--**
618-3_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	7.96E+01	1.76E+03	4.53E-06	11.22%	--	--	--
618-3_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.79E+00	6.14E+01	7.80E-06	19.32%	--	--	--
618-3_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	7.94E+01	2.83E+02	2.81E-05	69.47%	--	--	--
Total Radiological Risk Estimate						**--**	**4.04E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.04E-05**	**--**	**--**	**--**	**--**
618-4_Deep	Rad	Uranium-233/234	U-233/234	pCi/g	2.02E+01	1.76E+03	1.15E-06	10.93%	--	--	--
618-4_Deep	Rad	Uranium-235	15117-96-1	pCi/g	1.09E+00	6.14E+01	1.78E-06	16.87%	--	--	--
618-4_Deep	Rad	Uranium-238	U-238	pCi/g	2.15E+01	2.83E+02	7.60E-06	72.20%	--	--	--
Total Radiological Risk Estimate						**--**	**1.05E-05**	**--**	**--**	**--**	**--**
618-4_Deep_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	7.18E+00	1.76E+03	4.09E-07	11.10%	--	--	--
618-4_Deep_Focused	Rad	Uranium-235	15117-96-1	pCi/g	5.12E-01	6.14E+01	8.34E-07	22.66%	--	--	--
618-4_Deep_Focused	Rad	Uranium-238	U-238	pCi/g	6.90E+00	2.83E+02	2.44E-06	66.24%	--	--	--
Total Radiological Risk Estimate						**--**	**3.68E-06**	**--**	**--**	**--**	**--**
618-4_Overburden_2	non-Rad	Arsenic	7440-38-2	µg/kg	2.50E+03	8.75E+04	2.86E-08	100.00%	1.05E+06	2.38E-03	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.86E-08**	**--**	**--**	**2.38E-03**	**--**
618-4_Overburden_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.30E+00	1.76E+03	7.40E-08	12.93%	--	--	--
618-4_Overburden_2	Rad	Uranium-238	U-238	pCi/g	1.41E+00	2.83E+02	4.98E-07	87.07%	--	--	--
Total Radiological Risk Estimate						**--**	**5.72E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.01E-07**	**--**	**--**	**--**	**--**
618-4_Overburden_3	Rad	Uranium-233/234	U-233/234	pCi/g	4.24E-01	1.76E+03	2.41E-08	10.45%	--	--	--
618-4_Overburden_3	Rad	Uranium-235	15117-96-1	pCi/g	3.20E-02	6.14E+01	5.21E-08	22.56%	--	--	--
618-4_Overburden_3	Rad	Uranium-238	U-238	pCi/g	4.38E-01	2.83E+02	1.55E-07	66.99%	--	--	--
Total Radiological Risk Estimate						**--**	**2.31E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.31E-07**	**--**	**--**	**--**	**--**

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-4_Overburden_4	Rad	Uranium-233/234	U-233/234	pCi/g	9.42E-01	1.76E+03	5.36E-08	13.87%	--	--	--
618-4_Overburden_4	Rad	Uranium-238	U-238	pCi/g	9.42E-01	2.83E+02	3.33E-07	86.13%	--	--	--
Total Radiological Risk Estimate						--	**3.86E-07**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**3.86E-07**	--	--	--	--
618-4_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	3.20E+03	8.75E+04	3.66E-08	100.00%	1.05E+06	3.05E-03	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**3.66E-08**	--	--	**3.05E-03**	--
618-4_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	3.22E+00	1.76E+03	1.83E-07	14.45%	--	--	--
618-4_Shallow	Rad	Uranium-238	U-238	pCi/g	3.07E+00	2.83E+02	1.08E-06	85.55%	--	--	--
Total Radiological Risk Estimate						--	**1.27E-06**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.30E-06**	--	--	--	--
618-5_Deep	Rad	Uranium-233/234	U-233/234	pCi/g	8.60E+00	1.76E+03	4.89E-07	11.18%	--	--	--
618-5_Deep	Rad	Uranium-235	15117-96-1	pCi/g	4.62E-01	6.14E+01	7.52E-07	17.19%	--	--	--
618-5_Deep	Rad	Uranium-238	U-238	pCi/g	8.87E+00	2.83E+02	3.13E-06	71.62%	--	--	--
Total Radiological Risk Estimate						--	**4.38E-06**	--	--	--	--
618-5_Deep_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.07E+01	1.76E+03	6.09E-07	10.67%	--	--	--
618-5_Deep_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.82E-01	6.14E+01	7.85E-07	13.76%	--	--	--
618-5_Deep_Focused	Rad	Uranium-238	U-238	pCi/g	1.22E+01	2.83E+02	4.31E-06	75.56%	--	--	--
Total Radiological Risk Estimate						--	**5.70E-06**	--	--	--	--
618-5_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	3.40E+03	8.75E+04	3.89E-08	100.00%	1.05E+06	3.24E-03	98.47%
618-5_Overburden	non-Rad	Cadmium	7440-43-9	µg/kg	1.70E+02	--	--	--	3.50E+06	4.86E-05	1.48%
618-5_Overburden	non-Rad	Chromium	7440-47-3	µg/kg	9.70E+03	--	--	--	5.25E+09	1.85E-06	0.06%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**3.89E-08**	--	--	**3.29E-03**	--
618-5_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	4.14E+00	1.76E+03	2.36E-07	12.76%	--	--	--
618-5_Overburden	Rad	Uranium-238	U-238	pCi/g	4.56E+00	2.83E+02	1.61E-06	87.24%	--	--	--
Total Radiological Risk Estimate						--	**1.85E-06**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.89E-06**	--	--	--	--
618-5_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	4.30E+03	8.75E+04	4.91E-08	100.00%	1.05E+06	4.10E-03	99.95%
618-5_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.13E+04	--	--	--	5.25E+09	2.15E-06	0.05%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**4.91E-08**	--	--	**4.10E-03**	--
618-5_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	9.38E-01	1.76E+03	5.34E-08	12.58%	--	--	--
618-5_Shallow	Rad	Uranium-238	U-238	pCi/g	1.05E+00	2.83E+02	3.71E-07	87.42%	--	--	--
Total Radiological Risk Estimate						--	**4.24E-07**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**4.74E-07**	--	--	--	--

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-5_Staging Pile_4	non-Rad	Arsenic	7440-38-2	µg/kg	3.30E+03	8.75E+04	3.77E-08	100.00%	1.05E+06	3.14E-03	99.48%
618-5_Staging Pile_4	non-Rad	Cadmium	7440-43-9	µg/kg	5.00E+01	--	--	--	3.50E+06	1.43E-05	0.45%
618-5_Staging Pile_4	non-Rad	Chromium	7440-47-3	µg/kg	1.18E+04	--	--	--	5.25E+09	2.25E-06	0.07%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.77E-08**	**--**	**--**	**3.16E-03**	**--**
618-5_Staging Pile_4	Rad	Uranium-233/234	U-233/234	pCi/g	1.15E+00	1.76E+03	6.55E-08	14.08%	--	--	--
618-5_Staging Pile_4	Rad	Uranium-238	U-238	pCi/g	1.13E+00	2.83E+02	3.99E-07	85.92%	--	--	--
Total Radiological Risk Estimate						**--**	**4.65E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.02E-07**	**--**	**--**	**--**	**--**
618-5_Staging Pile_5	non-Rad	Arsenic	7440-38-2	µg/kg	2.70E+03	8.75E+04	3.09E-08	100.00%	1.05E+06	2.57E-03	99.92%
618-5_Staging Pile_5	non-Rad	Chromium	7440-47-3	µg/kg	1.03E+04	--	--	--	5.25E+09	1.96E-06	0.08%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.09E-08**	**--**	**--**	**2.57E-03**	**--**
618-5_Staging Pile_5	Rad	Uranium-233/234	U-233/234	pCi/g	1.52E+00	1.76E+03	8.65E-08	8.97%	--	--	--
618-5_Staging Pile_5	Rad	Uranium-235	15117-96-1	pCi/g	1.68E-01	6.14E+01	2.74E-07	28.37%	--	--	--
618-5_Staging Pile_5	Rad	Uranium-238	U-238	pCi/g	1.71E+00	2.83E+02	6.04E-07	62.66%	--	--	--
Total Radiological Risk Estimate						**--**	**9.64E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.95E-07**	**--**	**--**	**--**	**--**
618-7_Shallow_1	non-Rad	Aluminum	7429-90-5	µg/kg	5.25E+06	--	--	--	3.50E+09	1.50E-03	5.25%
618-7_Shallow_1	non-Rad	Antimony	7440-36-0	µg/kg	5.60E+02	--	--	--	1.40E+06	4.00E-04	1.40%
618-7_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	1.89E+03	8.75E+04	2.16E-08	100.00%	1.05E+06	1.80E-03	6.30%
618-7_Shallow_1	non-Rad	Barium	7440-39-3	µg/kg	6.89E+04	--	--	--	7.00E+08	9.84E-05	0.34%
618-7_Shallow_1	non-Rad	Beryllium	7440-41-7	µg/kg	2.78E+02	--	--	--	7.00E+06	3.97E-05	0.14%
618-7_Shallow_1	non-Rad	Cadmium	7440-43-9	µg/kg	6.52E+01	--	--	--	3.50E+06	1.86E-05	0.07%
618-7_Shallow_1	non-Rad	Chromium	7440-47-3	µg/kg	1.02E+04	--	--	--	5.25E+09	1.95E-06	0.01%
618-7_Shallow_1	non-Rad	Cobalt	7440-48-4	µg/kg	9.15E+03	--	--	--	1.05E+06	8.72E-03	30.47%
618-7_Shallow_1	non-Rad	Copper	7440-50-8	µg/kg	1.61E+04	--	--	--	1.40E+08	1.15E-04	0.40%
618-7_Shallow_1	non-Rad	Iron	7439-89-6	µg/kg	2.60E+07	--	--	--	2.45E+09	1.06E-02	37.04%
618-7_Shallow_1	non-Rad	Manganese	7439-96-5	µg/kg	3.26E+05	--	--	--	4.90E+08	6.65E-04	2.33%
618-7_Shallow_1	non-Rad	Mercury	7439-97-6	µg/kg	4.43E+01	--	--	--	1.05E+06	4.22E-05	0.15%
618-7_Shallow_1	non-Rad	Nickel	7440-02-0	µg/kg	2.10E+04	--	--	--	7.00E+07	3.00E-04	1.05%
618-7_Shallow_1	non-Rad	Tin	7440-31-5	µg/kg	1.55E+03	--	--	--	2.10E+09	7.37E-07	0.00%
618-7_Shallow_1	non-Rad	Vanadium	7440-62-2	µg/kg	7.46E+04	--	--	--	1.75E+07	4.26E-03	14.90%
618-7_Shallow_1	non-Rad	Zinc	7440-66-6	µg/kg	4.92E+04	--	--	--	1.05E+09	4.68E-05	0.16%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.16E-08**	**--**	**--**	**2.86E-02**	**--**
618-7_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	6.70E-02	1.77E+01	3.79E-07	15.52%	--	--	--
618-7_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	3.61E+00	1.76E+03	2.06E-07	8.43%	--	--	--
618-7_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	3.64E-01	6.14E+01	5.92E-07	24.27%	--	--	--
618-7_Shallow_1	Rad	Uranium-238	U-238	pCi/g	3.57E+00	2.83E+02	1.26E-06	51.77%	--	--	--
Total Radiological Risk Estimate						**--**	**2.44E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.46E-06**	**--**	**--**	**--**	**--**

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-7_Shallow_2	non-Rad	Aluminum	7429-90-5	µg/kg	4.97E+06	--	--	--	3.50E+09	1.42E-03	4.86%
618-7_Shallow_2	non-Rad	Antimony	7440-36-0	µg/kg	6.60E+02	--	--	--	1.40E+06	4.71E-04	1.61%
618-7_Shallow_2	non-Rad	Arsenic	7440-38-2	µg/kg	2.50E+03	8.75E+04	2.86E-08	100.00%	1.05E+06	2.38E-03	8.15%
618-7_Shallow_2	non-Rad	Barium	7440-39-3	µg/kg	7.38E+04	--	--	--	7.00E+08	1.05E-04	0.36%
618-7_Shallow_2	non-Rad	Beryllium	7440-41-7	µg/kg	4.40E+02	--	--	--	7.00E+06	6.29E-05	0.22%
618-7_Shallow_2	non-Rad	Chromium	7440-47-3	µg/kg	6.80E+03	--	--	--	5.25E+09	1.30E-06	0.00%
618-7_Shallow_2	non-Rad	Cobalt	7440-48-4	µg/kg	9.30E+03	--	--	--	1.05E+06	8.86E-03	30.31%
618-7_Shallow_2	non-Rad	Copper	7440-50-8	µg/kg	1.36E+04	--	--	--	1.40E+08	9.71E-05	0.33%
618-7_Shallow_2	non-Rad	Iron	7439-89-6	µg/kg	2.60E+07	--	--	--	2.45E+09	1.06E-02	36.32%
618-7_Shallow_2	non-Rad	Manganese	7439-96-5	µg/kg	3.64E+05	--	--	--	4.90E+08	7.43E-04	2.54%
618-7_Shallow_2	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	1.05E+06	1.90E-05	0.07%
618-7_Shallow_2	non-Rad	Nickel	7440-02-0	µg/kg	9.70E+03	--	--	--	7.00E+07	1.39E-04	0.47%
618-7_Shallow_2	non-Rad	Tin	7440-31-5	µg/kg	1.50E+03	--	--	--	2.10E+09	7.14E-07	0.00%
618-7_Shallow_2	non-Rad	Vanadium	7440-62-2	µg/kg	7.47E+04	--	--	--	1.75E+07	4.27E-03	14.61%
618-7_Shallow_2	non-Rad	Zinc	7440-66-6	µg/kg	4.62E+04	--	--	--	1.05E+09	4.40E-05	0.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.86E-08**	**--**	**--**	**2.92E-02**	**--**
618-7_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	5.66E-01	1.76E+03	3.22E-08	14.58%	--	--	--
618-7_Shallow_2	Rad	Uranium-238	U-238	pCi/g	5.34E-01	2.83E+02	1.89E-07	85.42%	--	--	--
Total Radiological Risk Estimate						**--**	**2.21E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.49E-07**	**--**	**--**	**--**	**--**
618-7_Shallow_3	non-Rad	Aluminum	7429-90-5	µg/kg	6.74E+06	--	--	--	3.50E+09	1.93E-03	6.84%
618-7_Shallow_3	non-Rad	Antimony	7440-36-0	µg/kg	4.50E+02	--	--	--	1.40E+06	3.21E-04	1.14%
618-7_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	2.80E+03	8.75E+04	3.20E-08	100.00%	1.05E+06	2.67E-03	9.47%
618-7_Shallow_3	non-Rad	Barium	7440-39-3	µg/kg	8.25E+04	--	--	--	7.00E+08	1.18E-04	0.42%
618-7_Shallow_3	non-Rad	Beryllium	7440-41-7	µg/kg	3.10E+02	--	--	--	7.00E+06	4.43E-05	0.16%
618-7_Shallow_3	non-Rad	Cadmium	7440-43-9	µg/kg	1.90E+02	--	--	--	3.50E+06	5.43E-05	0.19%
618-7_Shallow_3	non-Rad	Chromium	7440-47-3	µg/kg	1.01E+04	--	--	--	5.25E+09	1.92E-06	0.01%
618-7_Shallow_3	non-Rad	Cobalt	7440-48-4	µg/kg	8.60E+03	--	--	--	1.05E+06	8.19E-03	29.07%
618-7_Shallow_3	non-Rad	Copper	7440-50-8	µg/kg	1.36E+04	--	--	--	1.40E+08	9.71E-05	0.34%
618-7_Shallow_3	non-Rad	Iron	7439-89-6	µg/kg	2.43E+07	--	--	--	2.45E+09	9.92E-03	35.21%
618-7_Shallow_3	non-Rad	Manganese	7439-96-5	µg/kg	3.57E+05	--	--	--	4.90E+08	7.29E-04	2.59%
618-7_Shallow_3	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	1.05E+06	1.90E-05	0.07%
618-7_Shallow_3	non-Rad	Nickel	7440-02-0	µg/kg	1.01E+04	--	--	--	7.00E+07	1.44E-04	0.51%
618-7_Shallow_3	non-Rad	Tin	7440-31-5	µg/kg	1.80E+03	--	--	--	2.10E+09	8.57E-07	0.00%
618-7_Shallow_3	non-Rad	Vanadium	7440-62-2	µg/kg	6.82E+04	--	--	--	1.75E+07	3.90E-03	13.83%
618-7_Shallow_3	non-Rad	Zinc	7440-66-6	µg/kg	4.45E+04	--	--	--	1.05E+09	4.24E-05	0.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.20E-08**	**--**	**--**	**2.82E-02**	**--**
618-7_Shallow_3	Rad	Uranium-233/234	U-233/234	pCi/g	1.07E+00	1.76E+03	6.09E-08	11.42%	--	--	--
618-7_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	8.50E-02	6.14E+01	1.38E-07	25.96%	--	--	--
618-7_Shallow_3	Rad	Uranium-238	U-238	pCi/g	9.45E-01	2.83E+02	3.34E-07	62.62%	--	--	--
Total Radiological Risk Estimate						**--**	**5.33E-07**	**--**	**--**	**--**	**--**

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.65E-07**	**--**	**--**	**--**	**--**
618-7_Shallow_4	non-Rad	Aluminum	7429-90-5	µg/kg	5.65E+06	--	--	--	3.50E+09	1.61E-03	6.22%
618-7_Shallow_4	non-Rad	Antimony	7440-36-0	µg/kg	2.50E+02	--	--	--	1.40E+06	1.79E-04	0.69%
618-7_Shallow_4	non-Rad	Arsenic	7440-38-2	µg/kg	5.20E+03	8.75E+04	5.94E-08	100.00%	1.05E+06	4.95E-03	19.09%
618-7_Shallow_4	non-Rad	Barium	7440-39-3	µg/kg	5.79E+04	--	--	--	7.00E+08	8.27E-05	0.32%
618-7_Shallow_4	non-Rad	Beryllium	7440-41-7	µg/kg	2.20E+02	--	--	--	7.00E+06	3.14E-05	0.12%
618-7_Shallow_4	non-Rad	Cadmium	7440-43-9	µg/kg	9.00E+01	--	--	--	3.50E+06	2.57E-05	0.10%
618-7_Shallow_4	non-Rad	Chromium	7440-47-3	µg/kg	1.14E+04	--	--	--	5.25E+09	2.17E-06	0.01%
618-7_Shallow_4	non-Rad	Cobalt	7440-48-4	µg/kg	6.70E+03	--	--	--	1.05E+06	6.38E-03	24.59%
618-7_Shallow_4	non-Rad	Copper	7440-50-8	µg/kg	1.32E+04	--	--	--	1.40E+08	9.43E-05	0.36%
618-7_Shallow_4	non-Rad	Iron	7439-89-6	µg/kg	2.12E+07	--	--	--	2.45E+09	8.65E-03	33.35%
618-7_Shallow_4	non-Rad	Manganese	7439-96-5	µg/kg	2.85E+05	--	--	--	4.90E+08	5.82E-04	2.24%
618-7_Shallow_4	non-Rad	Nickel	7440-02-0	µg/kg	1.29E+04	--	--	--	7.00E+07	1.84E-04	0.71%
618-7_Shallow_4	non-Rad	Tin	7440-31-5	µg/kg	7.10E+02	--	--	--	2.10E+09	3.38E-07	0.00%
618-7_Shallow_4	non-Rad	Vanadium	7440-62-2	µg/kg	5.48E+04	--	--	--	1.75E+07	3.13E-03	12.07%
618-7_Shallow_4	non-Rad	Zinc	7440-66-6	µg/kg	3.70E+04	--	--	--	1.05E+09	3.52E-05	0.14%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.94E-08**	**--**	**--**	**2.59E-02**	**--**
618-7_Shallow_4	Rad	Uranium-233/234	U-233/234	pCi/g	6.89E-01	1.76E+03	3.92E-08	12.70%	--	--	--
618-7_Shallow_4	Rad	Uranium-238	U-238	pCi/g	7.63E-01	2.83E+02	2.70E-07	87.30%	--	--	--
Total Radiological Risk Estimate						**--**	**3.09E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.68E-07**	**--**	**--**	**--**	**--**
618-7_Shallow_Focused	non-Rad	Acenaphthene	83-32-9	µg/kg	1.50E+02	--	--	--	2.10E+08	7.14E-07	0.00%
618-7_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	7.61E+06	--	--	--	3.50E+09	2.17E-03	5.88%
618-7_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	9.80E+02	--	--	--	1.40E+06	7.00E-04	1.89%
618-7_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	6.70E+00	6.56E+04	1.02E-10	0.19%	--	--	--
618-7_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	4.20E+03	8.75E+04	4.80E-08	90.65%	1.05E+06	4.00E-03	10.81%
618-7_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	9.28E+04	--	--	--	7.00E+08	1.33E-04	0.36%
618-7_Shallow_Focused	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	8.80E+01	1.80E+05	4.89E-10	0.92%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	6.60E+01	1.80E+04	3.67E-09	6.93%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	5.20E+01	1.80E+05	2.89E-10	0.55%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	1.10E+01	1.80E+05	6.12E-11	0.12%	--	--	--
618-7_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	3.70E+02	--	--	--	7.00E+06	5.29E-05	0.14%
618-7_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	4.70E+02	9.38E+06	5.01E-11	0.09%	7.00E+07	6.71E-06	0.02%
618-7_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	6.20E+03	--	--	--	3.50E+06	1.77E-03	4.79%
618-7_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	6.59E+04	--	--	--	5.25E+09	1.26E-05	0.03%
618-7_Shallow_Focused	non-Rad	Chrysene	218-01-9	µg/kg	6.90E+01	1.80E+06	3.84E-11	0.07%	--	--	--
618-7_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	1.10E+04	--	--	--	1.05E+06	1.05E-02	28.31%
618-7_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	2.50E+04	--	--	--	1.40E+08	1.79E-04	0.48%
618-7_Shallow_Focused	non-Rad	Dibenz[a,h]anthracene	53-70-3	µg/kg	4.50E+01	1.80E+05	2.50E-10	0.47%	--	--	--
618-7_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	3.30E+01	--	--	--	3.50E+08	9.43E-08	0.00%
618-7_Shallow_Focused	non-Rad	Fluoranthene	206-44-0	µg/kg	4.80E+01	--	--	--	1.40E+08	3.43E-07	0.00%

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-7_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	2.87E+07	--	--	--	2.45E+09	1.17E-02	31.65%
618-7_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	4.25E+05	--	--	--	4.90E+08	8.67E-04	2.34%
618-7_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	1.05E+06	1.90E-05	0.05%
618-7_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.72E+04	--	--	--	7.00E+07	2.46E-04	0.66%
618-7_Shallow_Focused	non-Rad	Pyrene	129-00-0	µg/kg	4.10E+02	--	--	--	1.05E+08	3.90E-06	0.01%
618-7_Shallow_Focused	non-Rad	Tin	7440-31-5	µg/kg	1.20E+03	--	--	--	2.10E+09	5.71E-07	0.00%
618-7_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	8.05E+04	--	--	--	1.75E+07	4.60E-03	12.43%
618-7_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	5.24E+04	--	--	--	1.05E+09	4.99E-05	0.13%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.30E-08**	**--**	**--**	**3.70E-02**	**--**
618-7_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.00E-02	1.77E+01	5.65E-08	1.25%	--	--	--
618-7_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.09E+01	1.76E+03	6.20E-07	13.69%	--	--	--
618-7_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	9.74E-01	6.14E+01	1.59E-06	35.00%	--	--	--
618-7_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	6.42E+00	2.83E+02	2.27E-06	50.06%	--	--	--
Total Radiological Risk Estimate						**--**	**4.53E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.58E-06**	**--**	**--**	**--**	**--**
618-8_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	4.10E+03	8.75E+04	4.69E-08	100.00%	1.05E+06	3.90E-03	91.69%
618-8_Shallow	non-Rad	Barium	7440-39-3	µg/kg	9.76E+04	--	--	--	7.00E+08	1.39E-04	3.27%
618-8_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.24E+04	--	--	--	5.25E+09	2.36E-06	0.06%
618-8_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	8.46E+02	--	--	--	1.75E+07	4.83E-05	1.14%
618-8_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	1.72E+03	--	--	--	1.05E+07	1.64E-04	3.85%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.69E-08**	**--**	**--**	**4.26E-03**	**--**
618-8_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.19E+00	1.76E+03	6.77E-08	20.71%	--	--	--
618-8_Shallow	Rad	Uranium-238	U-238	pCi/g	7.34E-01	2.83E+02	2.59E-07	79.29%	--	--	--
Total Radiological Risk Estimate						**--**	**3.27E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.74E-07**	**--**	**--**	**--**	**--**
618-9_Shallow_Focused	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	1.10E+02	6.56E+05	1.68E-10	0.04%	1.40E+07	7.86E-06	0.01%
618-9_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	6.80E+02	--	--	--	3.15E+09	2.16E-07	0.00%
618-9_Shallow_Focused	non-Rad	Aldrin	309-00-2	µg/kg	3.90E+02	7.72E+03	5.05E-08	11.78%	1.05E+05	3.71E-03	3.28%
618-9_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	8.57E+06	--	--	--	3.50E+09	2.45E-03	2.16%
618-9_Shallow_Focused	non-Rad	Aroclor-1016	12674-11-2	µg/kg	1.90E+03	1.88E+06	1.01E-09	0.24%	2.45E+05	7.76E-03	6.85%
618-9_Shallow_Focused	non-Rad	Aroclor-1221	11104-28-2	µg/kg	1.90E+03	6.56E+04	2.90E-08	6.75%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1232	11141-16-5	µg/kg	1.90E+03	6.56E+04	2.90E-08	6.75%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1242	53469-21-9	µg/kg	1.90E+03	6.56E+04	2.90E-08	6.75%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.90E+03	6.56E+04	2.90E-08	6.75%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.90E+03	6.56E+04	5.94E-08	13.85%	7.00E+04	5.57E-02	49.21%
618-9_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.90E+03	6.56E+04	5.94E-08	13.85%	--	--	--
618-9_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.16E+04	8.75E+04	1.33E-07	30.91%	1.05E+06	1.10E-02	9.76%
618-9_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	9.02E+04	--	--	--	7.00E+08	1.29E-04	0.11%
618-9_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	3.30E+02	--	--	--	7.00E+06	4.71E-05	0.04%
618-9_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	5.20E+03	9.38E+06	5.55E-10	0.13%	7.00E+07	7.43E-05	0.07%
618-9_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	2.70E+03	6.91E+07	3.91E-11	0.01%	7.00E+08	3.86E-06	0.00%

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-9_Shallow_Focused	non-Rad	Chlordane	57-74-9	µg/kg	6.90E+01	3.75E+05	1.84E-10	0.04%	1.75E+06	3.94E-05	0.03%
618-9_Shallow_Focused	non-Rad	Chloroform	67-66-3	µg/kg	9.00E+00	4.23E+06	2.13E-12	0.00%	3.50E+07	2.57E-07	0.00%
618-9_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	9.70E+03	--	--	--	5.25E+09	1.85E-06	0.00%
618-9_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	1.14E+04	--	--	--	1.05E+06	1.09E-02	9.59%
618-9_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	1.67E+04	--	--	--	1.40E+08	1.19E-04	0.11%
618-9_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	7.20E+03	--	--	--	3.50E+08	2.06E-05	0.02%
618-9_Shallow_Focused	non-Rad	Heptachlor epoxide	1024-57-3	µg/kg	4.40E+01	1.44E+04	3.05E-09	0.71%	4.55E+04	9.67E-04	0.85%
618-9_Shallow_Focused	non-Rad	Hexachlorobutadiene	87-68-3	µg/kg	7.60E+02	1.68E+06	4.52E-10	0.11%	3.50E+06	2.17E-04	0.19%
618-9_Shallow_Focused	non-Rad	Hexachloroethane	67-72-1	µg/kg	1.70E+04	9.38E+06	1.81E-09	0.42%	3.50E+06	4.86E-03	4.29%
618-9_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	2.49E+07	--	--	--	2.45E+09	1.02E-02	8.98%
618-9_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	3.59E+05	--	--	--	4.90E+08	7.33E-04	0.65%
618-9_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	3.30E+02	--	--	--	1.05E+06	3.14E-04	0.28%
618-9_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	2.30E+03	1.75E+07	1.31E-10	0.03%	2.10E+08	1.10E-05	0.01%
618-9_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.06E+04	--	--	--	7.00E+07	1.51E-04	0.13%
618-9_Shallow_Focused	non-Rad	Nitrate	14797-55-8	µg/kg	1.67E+06	--	--	--	2.49E+10	6.72E-05	0.06%
618-9_Shallow_Focused	non-Rad	Tetrachloroethene	127-18-4	µg/kg	9.20E+02	2.43E+05	3.79E-09	0.88%	3.50E+07	2.63E-05	0.02%
618-9_Shallow_Focused	non-Rad	Toluene	108-88-3	µg/kg	9.00E+00	--	--	--	2.80E+08	3.21E-08	0.00%
618-9_Shallow_Focused	non-Rad	Trichloroethene	79-01-6	µg/kg	2.00E+00	1.47E+06	1.36E-12	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Uranium	7440-61-1	µg/kg	3.10E+03	--	--	--	1.05E+07	2.95E-04	0.26%
618-9_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	5.93E+04	--	--	--	1.75E+07	3.39E-03	2.99%
618-9_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	5.23E+04	--	--	--	1.05E+09	4.98E-05	0.04%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.29E-07**	**--**	**--**	**1.13E-01**	**--**
618-9_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	7.10E-02	6.14E+01	1.16E-07	9.84%	--	--	--
618-9_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	3.00E+00	2.83E+02	1.06E-06	90.16%	--	--	--
Total Radiological Risk Estimate						**--**	**1.18E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.60E-06**	**--**	**--**	**--**	**--**
628-4_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	3.37E+03	8.75E+04	3.86E-08	99.98%	1.05E+06	3.21E-03	99.97%
628-4_Overburden	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.09E+01	9.38E+06	6.50E-12	0.02%	7.00E+07	8.70E-07	0.03%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.86E-08**	**--**	**--**	**3.21E-03**	**--**
628-4_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	3.30E-02	1.77E+01	1.86E-07	36.56%	--	--	--
628-4_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	8.70E-01	1.76E+03	4.95E-08	9.71%	--	--	--
628-4_Overburden	Rad	Uranium-238	U-238	pCi/g	7.75E-01	2.83E+02	2.74E-07	53.72%	--	--	--
Total Radiological Risk Estimate						**--**	**5.10E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.48E-07**	**--**	**--**	**--**	**--**
628-4_Shallow	non-Rad	Aroclor-1242	53469-21-9	µg/kg	4.24E+01	6.56E+04	6.45E-10	0.98%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.12E+03	6.56E+04	1.70E-08	25.72%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.43E+02	6.56E+04	3.70E-09	5.60%	7.00E+04	3.47E-03	48.53%
628-4_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.78E+01	6.56E+04	5.76E-10	0.87%	--	--	--
628-4_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	3.86E+03	8.75E+04	4.42E-08	66.83%	1.05E+06	3.68E-03	51.47%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.61E-08**	**--**	**--**	**7.15E-03**	**--**
628-4_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.13E+00	1.76E+03	6.42E-08	10.41%	--	--	--

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
628-4_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	1.12E-01	6.14E+01	1.82E-07	29.54%	--	--	--
628-4_Shallow	Rad	Uranium-238	U-238	pCi/g	1.05E+00	2.83E+02	3.70E-07	60.04%	--	--	--
Total Radiological Risk Estimate						**--**	**6.17E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.83E-07**	**--**	**--**	**--**	**--**
UPR-300-17_Shallow	non-Rad	Acenaphthene	83-32-9	µg/kg	1.17E+02	--	--	--	2.10E+08	5.57E-07	0.00%
UPR-300-17_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.34E+06	--	--	--	3.50E+09	1.81E-03	4.86%
UPR-300-17_Shallow	non-Rad	Anthracene	120-12-7	µg/kg	7.01E+00	--	--	--	1.05E+09	6.68E-09	0.00%
UPR-300-17_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.59E+02	--	--	--	1.40E+06	2.56E-04	0.69%
UPR-300-17_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.97E+03	6.56E+04	3.00E-08	42.24%	--	--	--
UPR-300-17_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.50E+02	6.56E+04	6.86E-09	9.65%	7.00E+04	6.43E-03	17.26%
UPR-300-17_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.13E+02	6.56E+04	1.73E-09	2.43%	--	--	--
UPR-300-17_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.57E+03	8.75E+04	2.94E-08	41.38%	1.05E+06	2.45E-03	6.58%
UPR-300-17_Shallow	non-Rad	Barium	7440-39-3	µg/kg	8.10E+04	--	--	--	7.00E+08	1.16E-04	0.31%
UPR-300-17_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	5.92E+01	1.80E+05	3.30E-10	0.46%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	4.38E+01	1.80E+04	2.44E-09	3.43%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	3.27E+01	1.80E+05	1.82E-10	0.26%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	9.94E+00	1.80E+05	5.53E-11	0.08%	--	--	--
UPR-300-17_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.40E+02	--	--	--	7.00E+06	3.43E-05	0.09%
UPR-300-17_Shallow	non-Rad	Boron	7440-42-8	µg/kg	3.90E+03	--	--	--	7.00E+08	5.58E-06	0.01%
UPR-300-17_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	1.73E+02	--	--	--	3.50E+06	4.93E-05	0.13%
UPR-300-17_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.38E+04	--	--	--	5.25E+09	2.63E-06	0.01%
UPR-300-17_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	3.93E+01	1.80E+06	2.18E-11	0.03%	--	--	--
UPR-300-17_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.69E+03	--	--	--	1.05E+06	6.37E-03	17.10%
UPR-300-17_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.51E+04	--	--	--	1.40E+08	1.08E-04	0.29%
UPR-300-17_Shallow	non-Rad	Fluoranthene	206-44-0	µg/kg	3.53E+01	--	--	--	1.40E+08	2.52E-07	0.00%
UPR-300-17_Shallow	non-Rad	Fluorene	86-73-7	µg/kg	2.93E+00	--	--	--	1.40E+08	2.09E-08	0.00%
UPR-300-17_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	5.85E+00	1.80E+05	3.25E-11	0.05%	--	--	--
UPR-300-17_Shallow	non-Rad	Iron	7439-89-6	µg/kg	1.90E+07	--	--	--	2.45E+09	7.75E-03	20.79%
UPR-300-17_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	2.85E+05	--	--	--	4.90E+08	5.82E-04	1.56%
UPR-300-17_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	6.90E+01	--	--	--	1.05E+06	6.57E-05	0.18%
UPR-300-17_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	4.12E+02	--	--	--	1.75E+07	2.36E-05	0.06%
UPR-300-17_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	4.79E+01	--	--	--	7.00E+07	6.84E-07	0.00%
UPR-300-17_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	5.64E+05	--	--	--	7.00E+07	8.05E-03	21.62%
UPR-300-17_Shallow	non-Rad	Pyrene	129-00-0	µg/kg	3.41E+01	--	--	--	1.05E+08	3.25E-07	0.00%
UPR-300-17_Shallow	non-Rad	Silver	7440-22-4	µg/kg	3.40E+02	--	--	--	1.75E+07	1.94E-05	0.05%
UPR-300-17_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	5.21E+04	--	--	--	1.75E+07	2.98E-03	8.00%
UPR-300-17_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	1.57E+05	--	--	--	1.05E+09	1.50E-04	0.40%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**7.11E-08**	**--**	**--**	**3.73E-02**	**--**
UPR-300-17_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	6.15E+00	1.76E+03	3.50E-07	10.71%	--	--	--
UPR-300-17_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	9.14E-01	6.14E+01	1.49E-06	45.57%	--	--	--
UPR-300-17_Shallow	Rad	Uranium-238	U-238	pCi/g	4.04E+00	2.83E+02	1.43E-06	43.72%	--	--	--
Total Radiological Risk Estimate						**--**	**3.27E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.34E-06**	**--**	**--**	**--**	**--**

Table G-39. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
UPR-300-46_Shallow	non-Rad	Acenaphthene	83-32-9	µg/kg	1.31E+01	--	--	--	2.10E+08	6.23E-08	0.00%
UPR-300-46_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.80E+06	--	--	--	3.50E+09	1.94E-03	6.35%
UPR-300-46_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.81E+02	--	--	--	1.40E+06	2.72E-04	0.89%
UPR-300-46_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	8.79E+02	6.56E+04	1.34E-08	24.36%	--	--	--
UPR-300-46_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.90E+02	6.56E+04	7.46E-09	13.57%	7.00E+04	6.99E-03	22.88%
UPR-300-46_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	8.44E+01	6.56E+04	1.29E-09	2.34%	--	--	--
UPR-300-46_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.85E+03	8.75E+04	3.25E-08	59.16%	1.05E+06	2.71E-03	8.87%
UPR-300-46_Shallow	non-Rad	Barium	7440-39-3	µg/kg	8.21E+04	--	--	--	7.00E+08	1.17E-04	0.38%
UPR-300-46_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	3.88E+00	1.80E+05	2.16E-11	0.04%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	3.40E+00	1.80E+04	1.89E-10	0.34%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	5.40E+00	1.80E+05	3.00E-11	0.05%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	2.78E+00	1.80E+05	1.55E-11	0.03%	--	--	--
UPR-300-46_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.22E+02	--	--	--	7.00E+06	3.17E-05	0.10%
UPR-300-46_Shallow	non-Rad	Boron	7440-42-8	µg/kg	1.71E+03	--	--	--	7.00E+08	2.45E-06	0.01%
UPR-300-46_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	9.47E+01	--	--	--	3.50E+06	2.71E-05	0.09%
UPR-300-46_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.02E+04	--	--	--	5.25E+09	1.94E-06	0.01%
UPR-300-46_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	5.58E+00	1.80E+06	3.11E-12	0.01%	--	--	--
UPR-300-46_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.36E+03	--	--	--	1.05E+06	6.06E-03	19.82%
UPR-300-46_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.32E+04	--	--	--	1.40E+08	9.39E-05	0.31%
UPR-300-46_Shallow	non-Rad	Dibenz[a,h]anthracene	53-70-3	µg/kg	1.25E+00	1.80E+05	6.95E-12	0.01%	--	--	--
UPR-300-46_Shallow	non-Rad	Fluoranthene	206-44-0	µg/kg	9.55E+00	--	--	--	1.40E+08	6.82E-08	0.00%
UPR-300-46_Shallow	non-Rad	Fluorene	86-73-7	µg/kg	2.15E+00	--	--	--	1.40E+08	1.54E-08	0.00%
UPR-300-46_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	7.55E+00	1.80E+05	4.20E-11	0.08%	--	--	--
UPR-300-46_Shallow	non-Rad	Iron	7439-89-6	µg/kg	2.05E+07	--	--	--	2.45E+09	8.38E-03	27.41%
UPR-300-46_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.11E+05	--	--	--	4.90E+08	6.35E-04	2.08%
UPR-300-46_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	2.92E+01	--	--	--	1.05E+06	2.78E-05	0.09%
UPR-300-46_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	4.56E+02	--	--	--	1.75E+07	2.61E-05	0.09%
UPR-300-46_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	3.57E+01	--	--	--	7.00E+07	5.11E-07	0.00%
UPR-300-46_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	9.23E+03	--	--	--	7.00E+07	1.32E-04	0.43%
UPR-300-46_Shallow	non-Rad	Pyrene	129-00-0	µg/kg	4.44E+00	--	--	--	1.05E+08	4.22E-08	0.00%
UPR-300-46_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	5.38E+04	--	--	--	1.75E+07	3.07E-03	10.06%
UPR-300-46_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.79E+04	--	--	--	1.05E+09	4.57E-05	0.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.50E-08**	**--**	**--**	**3.06E-02**	**--**
UPR-300-46_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	7.00E-02	1.77E+01	3.95E-07	26.33%	--	--	--
UPR-300-46_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.77E+00	1.76E+03	1.01E-07	6.71%	--	--	--
UPR-300-46_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.43E-01	6.14E+01	3.96E-07	26.35%	--	--	--
UPR-300-46_Shallow	Rad	Uranium-238	U-238	pCi/g	1.73E+00	2.83E+02	6.10E-07	40.61%	--	--	--
Total Radiological Risk Estimate						**--**	**1.50E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.56E-06**	**--**	**--**	**--**	**--**

Table G-40. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300 ASH PITS_Shallow	non-Rad	Aroclor-1248	12672-29-6	ug/kg	5.20E+01	3.20E+09	1.63E-14	0.11%	--	--	--
300 ASH PITS_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	6.08E+03	4.24E+08	1.43E-11	99.89%	1.09E+09	5.55E-06	100.00%
300 ASH PITS_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	9.60E+01	7.60E+11	1.26E-16	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**1.43E-11**	**--**	**--**	**5.55E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate							**1.43E-11**	**--**	**--**	**--**	**--**
300-10_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	1.35E+04	4.24E+08	3.18E-11	100.00%	1.09E+09	1.23E-05	100.00%
300-10_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	2.00E+02	7.60E+11	2.63E-16	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**3.18E-11**	**--**	**--**	**1.23E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate							**3.18E-11**	**--**	**--**	**--**	**--**
300-109_Shallow_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	5.62E+06	--	--	--	3.65E+11	1.54E-05	13.79%
300-109_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	1.22E+02	3.20E+09	3.81E-14	0.10%	--	--	--
300-109_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	3.97E+01	3.20E+09	1.24E-14	0.03%	--	--	--
300-109_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	2.42E+03	4.24E+08	5.71E-12	14.65%	1.09E+09	2.21E-06	1.98%
300-109_Shallow_Focused	non-Rad	Barium	7440-39-3	ug/kg	6.33E+04	--	--	--	3.65E+10	1.74E-06	1.55%
300-109_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	1.24E+00	1.66E+09	7.48E-16	0.00%	--	--	--
300-109_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	2.30E+00	1.66E+10	1.39E-16	0.00%	--	--	--
300-109_Shallow_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	1.80E+02	7.60E+08	2.37E-13	0.61%	1.46E+09	1.23E-07	0.11%
300-109_Shallow_Focused	non-Rad	Boron	7440-42-8	ug/kg	6.32E+02	--	--	--	1.46E+12	4.33E-10	0.00%
300-109_Shallow_Focused	non-Rad	Cadmium	7440-43-9	ug/kg	5.90E+01	1.01E+09	5.82E-14	0.15%	7.30E+08	8.09E-08	0.07%
300-109_Shallow_Focused	non-Rad	Chrysene	218-01-9	ug/kg	1.77E+00	1.66E+11	1.07E-17	0.00%	--	--	--
300-109_Shallow_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	6.42E+03	2.03E+08	3.17E-11	81.35%	4.38E+08	1.47E-05	13.13%
300-109_Shallow_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	1.40E+01	1.66E+10	8.44E-16	0.00%	--	--	--
300-109_Shallow_Focused	non-Rad	Manganese	7439-96-5	ug/kg	2.78E+05	--	--	--	3.65E+09	7.62E-05	68.20%
300-109_Shallow_Focused	non-Rad	Mercury	7439-97-6	ug/kg	2.20E+01	--	--	--	2.19E+09	1.01E-08	0.01%
300-109_Shallow_Focused	non-Rad	Nickel	7440-02-0	ug/kg	8.49E+03	7.01E+09	1.21E-12	3.11%	6.57E+09	1.29E-06	1.16%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**3.89E-11**	**--**	**--**	**1.12E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**3.89E-11**	**--**	**--**	**--**	**--**
300-109_Staging Pile Area_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	5.78E+06	--	--	--	3.65E+11	1.58E-05	13.93%
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	3.68E+01	3.20E+09	1.15E-14	0.03%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	1.94E+01	3.20E+09	6.06E-15	0.02%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	2.58E+03	4.24E+08	6.08E-12	16.43%	1.09E+09	2.36E-06	2.07%
300-109_Staging Pile Area_Focused	non-Rad	Barium	7440-39-3	ug/kg	7.27E+04	--	--	--	3.65E+10	1.99E-06	1.75%
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)anthracene	56-55-3	ug/kg	2.08E+00	1.66E+10	1.25E-16	0.00%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	3.30E+00	1.66E+09	1.99E-15	0.01%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	1.31E+00	1.66E+10	7.90E-17	0.00%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	2.03E+02	7.60E+08	2.67E-13	0.72%	1.46E+09	1.39E-07	0.12%
300-109_Staging Pile Area_Focused	non-Rad	Boron	7440-42-8	ug/kg	1.06E+03	--	--	--	1.46E+12	7.27E-10	0.00%
300-109_Staging Pile Area_Focused	non-Rad	Cadmium	7440-43-9	ug/kg	6.60E+01	1.01E+09	6.51E-14	0.18%	7.30E+08	9.05E-08	0.08%
300-109_Staging Pile Area_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	5.95E+03	2.03E+08	2.94E-11	79.31%	4.38E+08	1.36E-05	11.95%

Table G-40. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-109_Staging Pile Area_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	2.92E+01	1.66E+10	1.76E-15	0.00%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Manganese	7439-96-5	ug/kg	2.86E+05	--	--	--	3.65E+09	7.84E-05	68.94%
300-109_Staging Pile Area_Focused	non-Rad	Nickel	7440-02-0	ug/kg	8.57E+03	7.01E+09	1.22E-12	3.30%	6.57E+09	1.31E-06	1.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**3.70E-11**	**--**	**--**	**1.14E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**3.70E-11**	**--**	**--**	**--**	**--**
300-18_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	2.20E+03	4.24E+08	5.19E-12	85.29%	1.09E+09	2.01E-06	47.32%
300-18_Shallow	non-Rad	Barium	7440-39-3	ug/kg	6.34E+04	--	--	--	3.65E+10	1.74E-06	40.91%
300-18_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	6.50E+02	7.60E+08	8.55E-13	14.06%	1.46E+09	4.46E-07	10.48%
300-18_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	4.00E+01	1.01E+09	3.95E-14	0.65%	7.30E+08	5.48E-08	1.29%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**6.08E-12**	**--**	**--**	**4.25E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate							**6.08E-12**	**--**	**--**	**--**	**--**
300-259_Shallow	non-Rad	Aluminum	7429-90-5	ug/kg	5.99E+06	--	--	--	3.65E+11	1.64E-05	13.36%
300-259_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	2.10E+03	4.24E+08	4.94E-12	13.92%	1.09E+09	1.92E-06	1.56%
300-259_Shallow	non-Rad	Barium	7440-39-3	ug/kg	7.52E+04	--	--	--	3.65E+10	2.06E-06	1.68%
300-259_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	2.26E+02	7.60E+08	2.97E-13	0.84%	1.46E+09	1.55E-07	0.13%
300-259_Shallow	non-Rad	Boron	7440-42-8	ug/kg	1.30E+03	--	--	--	1.46E+12	8.93E-10	0.00%
300-259_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	2.52E+02	1.01E+09	2.48E-13	0.70%	7.30E+08	3.45E-07	0.28%
300-259_Shallow	non-Rad	Cobalt	7440-48-4	ug/kg	5.83E+03	2.03E+08	2.88E-11	81.03%	4.38E+08	1.33E-05	10.83%
300-259_Shallow	non-Rad	Manganese	7439-96-5	ug/kg	3.19E+05	--	--	--	3.65E+09	8.74E-05	71.08%
300-259_Shallow	non-Rad	Mercury	7439-97-6	ug/kg	1.00E+01	--	--	--	2.19E+09	4.57E-09	0.00%
300-259_Shallow	non-Rad	Nickel	7440-02-0	ug/kg	8.75E+03	7.01E+09	1.25E-12	3.51%	6.57E+09	1.33E-06	1.08%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**3.55E-11**	**--**	**--**	**1.23E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**3.55E-11**	**--**	**--**	**--**	**--**
300-260_Shallow_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	8.17E+06	--	--	--	3.65E+11	2.24E-05	16.30%
300-260_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	3.16E+03	4.24E+08	7.45E-12	16.20%	1.09E+09	2.89E-06	2.10%
300-260_Shallow_Focused	non-Rad	Barium	7440-39-3	ug/kg	1.22E+05	--	--	--	3.65E+10	3.34E-06	2.43%
300-260_Shallow_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	2.39E+02	7.60E+08	3.15E-13	0.68%	1.46E+09	1.64E-07	0.12%
300-260_Shallow_Focused	non-Rad	Boron	7440-42-8	ug/kg	8.36E+03	--	--	--	1.46E+12	5.73E-09	0.00%
300-260_Shallow_Focused	non-Rad	Cadmium	7440-43-9	ug/kg	1.10E+02	1.01E+09	1.09E-13	0.24%	7.30E+08	1.51E-07	0.11%
300-260_Shallow_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	7.43E+03	2.03E+08	3.67E-11	79.72%	4.38E+08	1.70E-05	12.35%
300-260_Shallow_Focused	non-Rad	Manganese	7439-96-5	ug/kg	3.28E+05	--	--	--	3.65E+09	8.99E-05	65.44%
300-260_Shallow_Focused	non-Rad	Mercury	7439-97-6	ug/kg	1.20E+01	--	--	--	2.19E+09	5.48E-09	0.00%
300-260_Shallow_Focused	non-Rad	Nickel	7440-02-0	ug/kg	1.02E+04	7.01E+09	1.45E-12	3.16%	6.57E+09	1.55E-06	1.13%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**4.60E-11**	**--**	**--**	**1.37E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**4.60E-11**	**--**	**--**	**--**	**--**
300-275_Shallow_1	non-Rad	Aluminum	7429-90-5	ug/kg	5.61E+06	--	--	--	3.65E+11	1.54E-05	13.90%
300-275_Shallow_1	non-Rad	Arsenic	7440-38-2	ug/kg	2.21E+03	4.24E+08	5.21E-12	14.44%	1.09E+09	2.02E-06	1.82%

Table G-40. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-275_Shallow_1	non-Rad	Barium	7440-39-3	ug/kg	7.53E+04	--	--	--	3.65E+10	2.06E-06	1.86%
300-275_Shallow_1	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	1.30E+00	1.66E+09	7.84E-16	0.00%	--	--	--
300-275_Shallow_1	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	1.87E+00	1.66E+10	1.13E-16	0.00%	--	--	--
300-275_Shallow_1	non-Rad	Beryllium	7440-41-7	ug/kg	4.52E+02	7.60E+08	5.94E-13	1.65%	1.46E+09	3.10E-07	0.28%
300-275_Shallow_1	non-Rad	Boron	7440-42-8	ug/kg	1.47E+03	--	--	--	1.46E+12	1.00E-09	0.00%
300-275_Shallow_1	non-Rad	Cadmium	7440-43-9	ug/kg	8.33E+01	1.01E+09	8.22E-14	0.23%	7.30E+08	1.14E-07	0.10%
300-275_Shallow_1	non-Rad	Chrysene	218-01-9	ug/kg	2.20E+00	1.66E+11	1.33E-17	0.00%	--	--	--
300-275_Shallow_1	non-Rad	Cobalt	7440-48-4	ug/kg	5.85E+03	2.03E+08	2.89E-11	79.94%	4.38E+08	1.34E-05	12.07%
300-275_Shallow_1	non-Rad	Manganese	7439-96-5	ug/kg	2.77E+05	--	--	--	3.65E+09	7.59E-05	68.55%
300-275_Shallow_1	non-Rad	Mercury	7439-97-6	ug/kg	1.67E+01	--	--	--	2.19E+09	7.62E-09	0.01%
300-275_Shallow_1	non-Rad	Nickel	7440-02-0	ug/kg	9.46E+03	7.01E+09	1.35E-12	3.74%	6.57E+09	1.44E-06	1.30%
300-275_Shallow_1	non-Rad	Uranium	7440-61-1	ug/kg	2.50E+03	--	--	--	2.19E+10	1.14E-07	0.10%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**3.61E-11**	**--**	**--**	**1.11E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**3.61E-11**	**--**	**--**	**--**	**--**
300-275_Shallow_2	non-Rad	Aluminum	7429-90-5	ug/kg	6.24E+06	--	--	--	3.65E+11	1.71E-05	14.58%
300-275_Shallow_2	non-Rad	Arsenic	7440-38-2	ug/kg	2.76E+03	4.24E+08	6.51E-12	17.20%	1.09E+09	2.52E-06	2.15%
300-275_Shallow_2	non-Rad	Barium	7440-39-3	ug/kg	6.86E+04	--	--	--	3.65E+10	1.88E-06	1.60%
300-275_Shallow_2	non-Rad	Beryllium	7440-41-7	ug/kg	2.54E+02	7.60E+08	3.34E-13	0.88%	1.46E+09	1.74E-07	0.15%
300-275_Shallow_2	non-Rad	Boron	7440-42-8	ug/kg	1.15E+03	--	--	--	1.46E+12	7.86E-10	0.00%
300-275_Shallow_2	non-Rad	Cadmium	7440-43-9	ug/kg	1.44E+02	1.01E+09	1.42E-13	0.38%	7.30E+08	1.97E-07	0.17%
300-275_Shallow_2	non-Rad	Cobalt	7440-48-4	ug/kg	5.98E+03	2.03E+08	2.95E-11	77.93%	4.38E+08	1.37E-05	11.64%
300-275_Shallow_2	non-Rad	Manganese	7439-96-5	ug/kg	2.93E+05	--	--	--	3.65E+09	8.03E-05	68.44%
300-275_Shallow_2	non-Rad	Mercury	7439-97-6	ug/kg	2.80E+01	--	--	--	2.19E+09	1.28E-08	0.01%
300-275_Shallow_2	non-Rad	Nickel	7440-02-0	ug/kg	9.59E+03	7.01E+09	1.37E-12	3.61%	6.57E+09	1.46E-06	1.25%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**3.78E-11**	**--**	**--**	**1.17E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**3.78E-11**	**--**	**--**	**--**	**--**
300-33, 300-41, 300-256_Shallow	non-Rad	Aluminum	7429-90-5	ug/kg	6.32E+06	--	--	--	3.65E+11	1.73E-05	13.78%
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1016	12674-11-2	ug/kg	1.03E+01	9.12E+10	1.13E-16	0.00%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1242	53469-21-9	ug/kg	1.64E+01	3.20E+09	5.13E-15	0.01%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1248	12672-29-6	ug/kg	1.90E+02	3.20E+09	5.94E-14	0.09%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	8.44E+01	3.20E+09	2.64E-14	0.04%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1260	11096-82-5	ug/kg	1.73E+01	3.20E+09	5.40E-15	0.01%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	2.64E+03	4.24E+08	6.22E-12	9.58%	1.09E+09	2.41E-06	1.92%
300-33, 300-41, 300-256_Shallow	non-Rad	Barium	7440-39-3	ug/kg	7.24E+04	--	--	--	3.65E+10	1.99E-06	1.58%
300-33, 300-41, 300-256_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	2.56E+02	7.60E+08	3.36E-13	0.52%	1.46E+09	1.75E-07	0.14%
300-33, 300-41, 300-256_Shallow	non-Rad	Boron	7440-42-8	ug/kg	1.48E+03	--	--	--	1.46E+12	1.02E-09	0.00%
300-33, 300-41, 300-256_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	9.39E+01	1.01E+09	9.27E-14	0.14%	7.30E+08	1.29E-07	0.10%
300-33, 300-41, 300-256_Shallow	non-Rad	Cobalt	7440-48-4	ug/kg	6.27E+03	2.03E+08	3.10E-11	47.68%	4.38E+08	1.43E-05	11.40%
300-33, 300-41, 300-256_Shallow	non-Rad	Fluoride	16984-48-8	ug/kg	1.65E+03	--	--	--	9.48E+11	1.74E-09	0.00%
300-33, 300-41, 300-256_Shallow	non-Rad	Manganese	7439-96-5	ug/kg	3.15E+05	--	--	--	3.65E+09	8.63E-05	68.63%
300-33, 300-41, 300-256_Shallow	non-Rad	Mercury	7439-97-6	ug/kg	1.60E+01	--	--	--	2.19E+09	7.31E-09	0.01%

Table G-40. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-33, 300-41, 300-256_Shallow	non-Rad	Methylene chloride	75-09-2	ug/kg	2.91E+00	1.12E+05	2.60E-11	39.98%	2.11E+06	1.38E-06	1.10%
300-33, 300-41, 300-256_Shallow	non-Rad	Nickel	7440-02-0	ug/kg	8.88E+03	7.01E+09	1.27E-12	1.95%	6.57E+09	1.35E-06	1.08%
300-33, 300-41, 300-256_Shallow	non-Rad	Uranium	7440-61-1	ug/kg	7.26E+03	--	--	--	2.19E+10	3.32E-07	0.26%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**6.49E-11**	**--**	**--**	**1.26E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**6.49E-11**	**--**	**--**	**--**	**--**
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	5.51E+06	--	--	--	3.65E+11	1.51E-05	14.22%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	ug/kg	3.30E+02	3.20E+09	1.03E-13	0.18%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	3.85E+02	3.20E+09	1.20E-13	0.21%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	5.20E+01	3.20E+09	1.63E-14	0.03%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	3.24E+03	4.24E+08	7.64E-12	13.43%	1.09E+09	2.96E-06	2.79%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Barium	7440-39-3	ug/kg	6.46E+04	--	--	--	3.65E+10	1.77E-06	1.67%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	1.69E+02	7.60E+08	2.22E-13	0.39%	1.46E+09	1.16E-07	0.11%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Boron	7440-42-8	ug/kg	1.03E+03	--	--	--	1.46E+12	7.06E-10	0.00%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Cadmium	7440-43-9	ug/kg	1.00E+02	1.01E+09	9.87E-14	0.17%	7.30E+08	1.37E-07	0.13%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	5.64E+03	2.03E+08	2.78E-11	48.95%	4.38E+08	1.29E-05	12.13%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Fluoride	16984-48-8	ug/kg	1.30E+03	--	--	--	9.48E+11	1.37E-09	0.00%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Manganese	7439-96-5	ug/kg	2.59E+05	--	--	--	3.65E+09	7.10E-05	66.83%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	ug/kg	2.21E+00	1.12E+05	1.97E-11	34.62%	2.11E+06	1.05E-06	0.99%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Nickel	7440-02-0	ug/kg	8.04E+03	7.01E+09	1.15E-12	2.02%	6.57E+09	1.22E-06	1.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**5.69E-11**	**--**	**--**	**1.06E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**5.69E-11**	**--**	**--**	**--**	**--**
300-37_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	1.00E+02	3.20E+09	3.13E-14	3.03%	--	--	--
300-37_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	3.20E+03	3.20E+09	1.00E-12	96.97%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**1.03E-12**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate							**1.03E-12**	**--**	**--**	**--**	**--**
300-44_Overburden_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	9.10E+03	4.24E+08	2.15E-11	100.00%	1.09E+09	8.32E-06	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**2.15E-11**	**--**	**--**	**8.32E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate							**2.15E-11**	**--**	**--**	**--**	**--**
300-44_Shallow_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	6.71E+06	--	--	--	3.65E+11	1.84E-05	13.20%
300-44_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	1.69E+04	4.24E+08	3.98E-11	48.49%	1.09E+09	1.54E-05	11.08%
300-44_Shallow_Focused	non-Rad	Barium	7440-39-3	ug/kg	7.52E+04	--	--	--	3.65E+10	2.06E-06	1.48%
300-44_Shallow_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	4.80E+02	7.60E+08	6.32E-13	0.77%	1.46E+09	3.29E-07	0.24%
300-44_Shallow_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	8.20E+03	2.03E+08	4.05E-11	49.25%	4.38E+08	1.87E-05	13.44%
300-44_Shallow_Focused	non-Rad	Manganese	7439-96-5	ug/kg	3.03E+05	--	--	--	3.65E+09	8.31E-05	59.61%
300-44_Shallow_Focused	non-Rad	Nickel	7440-02-0	ug/kg	8.60E+03	7.01E+09	1.23E-12	1.49%	6.57E+09	1.31E-06	0.94%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**8.22E-11**	**--**	**--**	**1.39E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**8.22E-11**	**--**	**--**	**--**	**--**

Table G-40. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-45_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	8.60E+01	3.20E+09	2.69E-14	98.60%	--	--	--
300-45_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	2.90E+02	7.60E+11	3.82E-16	1.40%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**2.73E-14**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate							**2.73E-14**	**--**	**--**	**--**	**--**
300-49_Overburden	non-Rad	1,2,4-Trichlorobenzene	120-82-1	ug/kg	3.05E+01	--	--	--	3.10E+04	9.83E-04	87.90%
300-49_Overburden	non-Rad	1,4-Dichlorobenzene	106-46-7	ug/kg	2.88E+01	1.48E+04	1.95E-09	97.68%	5.19E+06	5.54E-06	0.49%
300-49_Overburden	non-Rad	2,4-Dinitrotoluene	121-14-2	ug/kg	1.89E+01	2.05E+10	9.24E-16	0.00%	--	--	--
300-49_Overburden	non-Rad	Aluminum	7429-90-5	ug/kg	6.30E+06	--	--	--	3.65E+11	1.73E-05	1.54%
300-49_Overburden	non-Rad	Aroclor-1254	11097-69-1	ug/kg	3.01E+03	3.20E+09	9.40E-13	0.05%	--	--	--
300-49_Overburden	non-Rad	Arsenic	7440-38-2	ug/kg	3.29E+03	4.24E+08	7.76E-12	0.39%	1.09E+09	3.01E-06	0.27%
300-49_Overburden	non-Rad	Barium	7440-39-3	ug/kg	7.61E+04	--	--	--	3.65E+10	2.09E-06	0.19%
300-49_Overburden	non-Rad	Beryllium	7440-41-7	ug/kg	2.01E+02	7.60E+08	2.65E-13	0.01%	1.46E+09	1.38E-07	0.01%
300-49_Overburden	non-Rad	Cadmium	7440-43-9	ug/kg	1.74E+02	1.01E+09	1.72E-13	0.01%	7.30E+08	2.39E-07	0.02%
300-49_Overburden	non-Rad	Cobalt	7440-48-4	ug/kg	7.13E+03	2.03E+08	3.52E-11	1.76%	4.38E+08	1.63E-05	1.46%
300-49_Overburden	non-Rad	Manganese	7439-96-5	ug/kg	3.17E+05	--	--	--	3.65E+09	8.68E-05	7.76%
300-49_Overburden	non-Rad	Nickel	7440-02-0	ug/kg	1.30E+04	7.01E+09	1.86E-12	0.09%	6.57E+09	1.99E-06	0.18%
300-49_Overburden	non-Rad	n-Nitrosodi-n-dipropylamine	621-64-7	ug/kg	3.97E+01	9.12E+08	4.36E-14	0.00%	--	--	--
300-49_Overburden	non-Rad	Pentachlorophenol	87-86-5	ug/kg	4.98E+01	3.58E+11	1.39E-16	0.00%	--	--	--
300-49_Overburden	non-Rad	Phenol	108-95-2	ug/kg	5.00E+01	--	--	--	2.54E+07	1.97E-06	0.18%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**2.00E-09**	**--**	**--**	**1.12E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate							**2.00E-09**	**--**	**--**	**--**	**--**
300-49_Shallow	non-Rad	Aluminum	7429-90-5	ug/kg	6.92E+06	--	--	--	3.65E+11	1.90E-05	12.84%
300-49_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	4.43E+03	4.24E+08	1.04E-11	17.90%	1.09E+09	4.05E-06	2.74%
300-49_Shallow	non-Rad	Barium	7440-39-3	ug/kg	8.99E+04	--	--	--	3.65E+10	2.46E-06	1.67%
300-49_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	3.03E+02	7.60E+08	3.98E-13	0.68%	1.46E+09	2.08E-07	0.14%
300-49_Shallow	non-Rad	Cobalt	7440-48-4	ug/kg	9.32E+03	2.03E+08	4.60E-11	78.82%	4.38E+08	2.13E-05	14.41%
300-49_Shallow	non-Rad	Manganese	7439-96-5	ug/kg	3.62E+05	--	--	--	3.65E+09	9.92E-05	67.11%
300-49_Shallow	non-Rad	Nickel	7440-02-0	ug/kg	1.07E+04	7.01E+09	1.52E-12	2.60%	6.57E+09	1.62E-06	1.10%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**5.84E-11**	**--**	**--**	**1.48E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**5.84E-11**	**--**	**--**	**--**	**--**
300-50_Overburden	non-Rad	Aluminum	7429-90-5	ug/kg	6.68E+06	--	--	--	3.65E+11	1.83E-05	13.20%
300-50_Overburden	non-Rad	Aroclor-1254	11097-69-1	ug/kg	3.34E+01	3.20E+09	1.05E-14	0.02%	--	--	--
300-50_Overburden	non-Rad	Aroclor-1260	11096-82-5	ug/kg	2.29E+02	3.20E+09	7.16E-14	0.11%	--	--	--
300-50_Overburden	non-Rad	Arsenic	7440-38-2	ug/kg	6.90E+03	4.24E+08	1.63E-11	24.70%	1.09E+09	6.30E-06	4.54%
300-50_Overburden	non-Rad	Barium	7440-39-3	ug/kg	1.18E+05	--	--	--	3.65E+10	3.23E-06	2.33%
300-50_Overburden	non-Rad	Beryllium	7440-41-7	ug/kg	3.25E+02	7.60E+08	4.28E-13	0.65%	1.46E+09	2.23E-07	0.16%
300-50_Overburden	non-Rad	Cadmium	7440-43-9	ug/kg	5.63E+02	1.01E+09	5.56E-13	0.84%	7.30E+08	7.72E-07	0.56%

Table G-40. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-50_Overburden	non-Rad	Cobalt	7440-48-4	ug/kg	9.39E+03	2.03E+08	4.63E-11	70.38%	4.38E+08	2.14E-05	15.46%
300-50_Overburden	non-Rad	Manganese	7439-96-5	ug/kg	3.14E+05	--	--	--	3.65E+09	8.62E-05	62.09%
300-50_Overburden	non-Rad	Nickel	7440-02-0	ug/kg	1.52E+04	7.01E+09	2.17E-12	3.30%	6.57E+09	2.32E-06	1.67%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**6.58E-11**	**--**	**--**	**1.39E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**6.58E-11**	**--**	**--**	**--**	**--**
300-50_Shallow	non-Rad	Aluminum	7429-90-5	ug/kg	6.88E+06	--	--	--	3.65E+11	1.89E-05	13.64%
300-50_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	1.26E+02	3.20E+09	3.95E-14	0.06%	--	--	--
300-50_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	6.40E+03	4.24E+08	1.51E-11	24.08%	1.09E+09	5.85E-06	4.23%
300-50_Shallow	non-Rad	Barium	7440-39-3	ug/kg	1.03E+05	--	--	--	3.65E+10	2.82E-06	2.04%
300-50_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	2.82E+02	7.60E+08	3.71E-13	0.59%	1.46E+09	1.93E-07	0.14%
300-50_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	1.93E+01	7.60E+11	2.54E-17	0.00%	--	--	--
300-50_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	4.63E+02	1.01E+09	4.57E-13	0.73%	7.30E+08	6.35E-07	0.46%
300-50_Shallow	non-Rad	Cobalt	7440-48-4	ug/kg	9.11E+03	2.03E+08	4.50E-11	71.71%	4.38E+08	2.08E-05	15.05%
300-50_Shallow	non-Rad	Manganese	7439-96-5	ug/kg	3.18E+05	--	--	--	3.65E+09	8.72E-05	63.07%
300-50_Shallow	non-Rad	Nickel	7440-02-0	ug/kg	1.24E+04	7.01E+09	1.77E-12	2.82%	6.57E+09	1.89E-06	1.37%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**6.27E-11**	**--**	**--**	**1.38E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**6.27E-11**	**--**	**--**	**--**	**--**
300-8_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	5.74E+02	7.60E+08	7.55E-13	100.00%	1.46E+09	3.93E-07	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**7.55E-13**	**--**	**--**	**3.93E-07**	**--**
Total Non-Radiological and Radiological Risk Estimate							**7.55E-13**	**--**	**--**	**--**	**--**
316-1_Shallow_1	non-Rad	Aroclor-1248	12672-29-6	ug/kg	3.00E+03	3.20E+09	9.38E-13	2.05%	--	--	--
316-1_Shallow_1	non-Rad	Arsenic	7440-38-2	ug/kg	1.90E+04	4.24E+08	4.48E-11	97.95%	1.09E+09	1.74E-05	100.00%
316-1_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	6.86E+01	7.60E+11	9.02E-17	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**4.58E-11**	**--**	**--**	**1.74E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate							**4.58E-11**	**--**	**--**	**--**	**--**
316-1_Shallow_3	non-Rad	Aluminum	7429-90-5	ug/kg	1.11E+07	--	--	--	3.65E+11	3.04E-05	16.41%
316-1_Shallow_3	non-Rad	Aroclor-1254	11097-69-1	ug/kg	9.82E+01	3.20E+09	3.07E-14	0.04%	--	--	--
316-1_Shallow_3	non-Rad	Arsenic	7440-38-2	ug/kg	5.14E+03	4.24E+08	1.21E-11	16.25%	1.09E+09	4.70E-06	2.53%
316-1_Shallow_3	non-Rad	Barium	7440-39-3	ug/kg	1.29E+05	--	--	--	3.65E+10	3.54E-06	1.91%
316-1_Shallow_3	non-Rad	Beryllium	7440-41-7	ug/kg	4.16E+02	7.60E+08	5.47E-13	0.73%	1.46E+09	2.85E-07	0.15%
316-1_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	3.42E+02	7.60E+11	4.50E-16	0.00%	--	--	--
316-1_Shallow_3	non-Rad	Cadmium	7440-43-9	ug/kg	4.74E+02	1.01E+09	4.68E-13	0.63%	7.30E+08	6.50E-07	0.35%
316-1_Shallow_3	non-Rad	Cobalt	7440-48-4	ug/kg	9.70E+03	2.03E+08	4.79E-11	64.24%	4.38E+08	2.22E-05	11.95%
316-1_Shallow_3	non-Rad	Heptachlor epoxide	1024-57-3	ug/kg	3.20E+00	7.01E+08	4.56E-15	0.01%	--	--	--
316-1_Shallow_3	non-Rad	Manganese	7439-96-5	ug/kg	3.93E+05	--	--	--	3.65E+09	1.08E-04	58.06%
316-1_Shallow_3	non-Rad	Mercury	7439-97-6	ug/kg	1.11E+03	--	--	--	2.19E+09	5.05E-07	0.27%
316-1_Shallow_3	non-Rad	Nickel	7440-02-0	ug/kg	9.47E+04	7.01E+09	1.35E-11	18.10%	6.57E+09	1.44E-05	7.77%

Table G-40. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-1_Shallow_3	non-Rad	Phenol	108-95-2	ug/kg	2.80E+01	--	--	--	2.54E+07	1.10E-06	0.59%
316-1_Shallow_3	non-Rad	Selenium	7782-49-2	ug/kg	1.44E+03	--	--	--	1.46E+12	9.90E-10	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**7.45E-11**	**--**	**--**	**1.85E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**7.45E-11**	**--**	**--**	**--**	**--**
316-1_Shallow_4	non-Rad	Aroclor-1254	11097-69-1	ug/kg	6.20E+01	3.20E+09	1.94E-14	100.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**1.94E-14**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate							**1.94E-14**	**--**	**--**	**--**	**--**
316-2_Shallow_2	non-Rad	Aroclor-1248	12672-29-6	ug/kg	6.97E+02	3.20E+09	2.18E-13	82.09%	--	--	--
316-2_Shallow_2	non-Rad	Aroclor-1254	11097-69-1	ug/kg	4.20E+01	3.20E+09	1.31E-14	4.95%	--	--	--
316-2_Shallow_2	non-Rad	Aroclor-1260	11096-82-5	ug/kg	1.10E+02	3.20E+09	3.44E-14	12.96%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**2.65E-13**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate							**2.65E-13**	**--**	**--**	**--**	**--**
316-2_Shallow_3	non-Rad	Arsenic	7440-38-2	ug/kg	8.00E+03	4.24E+08	1.89E-11	100.00%	1.09E+09	7.31E-06	100.00%
316-2_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	2.60E+02	7.60E+11	3.42E-16	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**1.89E-11**	**--**	**--**	**7.31E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate							**1.89E-11**	**--**	**--**	**--**	**--**
316-5_Shallow_1	non-Rad	Arsenic	7440-38-2	ug/kg	3.07E+03	4.24E+08	7.24E-12	99.97%	1.09E+09	2.81E-06	100.00%
316-5_Shallow_1	non-Rad	Benzo(a)anthracene	56-55-3	ug/kg	3.80E+01	1.66E+10	2.29E-15	0.03%	--	--	--
316-5_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	1.46E+02	7.60E+11	1.92E-16	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**7.24E-12**	**--**	**--**	**2.81E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate							**7.24E-12**	**--**	**--**	**--**	**--**
316-5_Shallow_2	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	1.40E+02	3.94E+03	3.56E-08	99.98%	--	--	--
316-5_Shallow_2	non-Rad	2-Butoxyethanol	111-76-2	ug/kg	2.40E+02	--	--	--	1.04E+09	2.31E-07	4.40%
316-5_Shallow_2	non-Rad	Arsenic	7440-38-2	ug/kg	3.18E+03	4.24E+08	7.50E-12	0.02%	1.09E+09	2.91E-06	55.46%
316-5_Shallow_2	non-Rad	Barium	7440-39-3	ug/kg	7.67E+04	--	--	--	3.65E+10	2.10E-06	40.13%
316-5_Shallow_2	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	1.80E+02	7.60E+11	2.37E-16	0.00%	--	--	--
316-5_Shallow_2	non-Rad	Chrysene	218-01-9	ug/kg	3.80E+01	1.66E+11	2.29E-16	0.00%	--	--	--
316-5_Shallow_2	non-Rad	Selenium	7782-49-2	ug/kg	4.90E+02	--	--	--	1.46E+12	3.36E-10	0.01%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**3.56E-08**	**--**	**--**	**5.24E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate							**3.56E-08**	**--**	**--**	**--**	**--**
316-5_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	ug/kg	5.70E+01	3.20E+09	1.78E-14	0.17%	--	--	--
316-5_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	7.00E+01	3.20E+09	2.19E-14	0.21%	--	--	--
316-5_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	5.20E+01	3.20E+09	1.63E-14	0.16%	--	--	--

Table G-40. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-5_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	4.30E+03	4.24E+08	1.01E-11	99.45%	1.09E+09	3.93E-06	100.00%
316-5_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	1.90E+02	7.60E+11	2.50E-16	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**1.02E-11**	**--**	**--**	**3.93E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate							**1.02E-11**	**--**	**--**	**--**	**--**
331 LSLDF_Shallow_Focused	non-Rad	4,4'-DDE (Dichlorodiphenyldichloroethylene)	72-55-9	ug/kg	2.50E+01	1.88E+10	1.33E-15	0.00%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Acetone	67-64-1	ug/kg	5.90E+02	--	--	--	4.15E+08	1.42E-06	0.96%
331 LSLDF_Shallow_Focused	non-Rad	Aldrin	309-00-2	ug/kg	5.60E-01	3.72E+08	1.50E-15	0.00%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Alpha-BHC	319-84-6	ug/kg	3.90E-01	1.01E+09	3.85E-16	0.00%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	6.90E+06	--	--	--	3.65E+11	1.89E-05	12.83%
331 LSLDF_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	8.50E+02	3.20E+09	2.66E-13	0.18%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	2.40E+03	4.24E+08	5.66E-12	3.81%	1.09E+09	2.19E-06	1.49%
331 LSLDF_Shallow_Focused	non-Rad	Barium	7440-39-3	ug/kg	7.86E+04	--	--	--	3.65E+10	2.15E-06	1.46%
331 LSLDF_Shallow_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	5.70E+02	7.60E+08	7.50E-13	0.50%	1.46E+09	3.91E-07	0.26%
331 LSLDF_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	9.10E+02	7.60E+11	1.20E-15	0.00%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Boron	7440-42-8	ug/kg	1.70E+03	--	--	--	1.46E+12	1.17E-09	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Cadmium	7440-43-9	ug/kg	1.40E+02	1.01E+09	1.38E-13	0.09%	7.30E+08	1.92E-07	0.13%
331 LSLDF_Shallow_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	8.60E+03	2.03E+08	4.24E-11	28.54%	4.38E+08	1.96E-05	13.32%
331 LSLDF_Shallow_Focused	non-Rad	Dieldrin	60-57-1	ug/kg	1.30E+01	3.96E+08	3.28E-14	0.02%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Manganese	7439-96-5	ug/kg	3.49E+05	--	--	--	3.65E+09	9.57E-05	64.87%
331 LSLDF_Shallow_Focused	non-Rad	Mercury	7439-97-6	ug/kg	1.10E+02	--	--	--	2.19E+09	5.03E-08	0.03%
331 LSLDF_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	ug/kg	1.10E+01	1.12E+05	9.80E-11	65.89%	2.11E+06	5.21E-06	3.53%
331 LSLDF_Shallow_Focused	non-Rad	Nickel	7440-02-0	ug/kg	1.00E+04	7.01E+09	1.43E-12	0.96%	6.57E+09	1.52E-06	1.03%
331 LSLDF_Shallow_Focused	non-Rad	Uranium	7440-61-1	ug/kg	2.30E+03	--	--	--	2.19E+10	1.05E-07	0.07%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**1.49E-10**	**--**	**--**	**1.47E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**1.49E-10**	**--**	**--**	**--**	**--**
600-243_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	2.70E+01	3.20E+09	8.43E-15	0.00%	--	--	--
600-243_Shallow	non-Rad	Aroclor-1260	11096-82-5	ug/kg	1.84E+01	3.20E+09	5.75E-15	0.00%	--	--	--
600-243_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	6.16E+03	4.24E+08	1.45E-11	0.10%	1.09E+09	5.63E-06	0.15%
600-243_Shallow	non-Rad	Barium	7440-39-3	ug/kg	2.92E+05	--	--	--	3.65E+10	8.01E-06	0.21%
600-243_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	ug/kg	4.33E+01	1.66E+10	2.61E-15	0.00%	--	--	--
600-243_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	4.27E+01	1.66E+09	2.58E-14	0.00%	--	--	--
600-243_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	4.63E+01	1.66E+10	2.79E-15	0.00%	--	--	--
600-243_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	ug/kg	3.18E+01	1.66E+10	1.92E-15	0.00%	--	--	--
600-243_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	2.08E+03	7.60E+08	2.74E-12	0.02%	1.46E+09	1.43E-06	0.04%
600-243_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	4.32E+02	7.60E+11	5.69E-16	0.00%	--	--	--
600-243_Shallow	non-Rad	Boron	7440-42-8	ug/kg	2.94E+05	--	--	--	1.46E+12	2.02E-07	0.01%
600-243_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	7.93E+02	1.01E+09	7.82E-13	0.01%	7.30E+08	1.09E-06	0.03%
600-243_Shallow	non-Rad	Chrysene	218-01-9	ug/kg	6.26E+01	1.66E+11	3.78E-16	0.00%	--	--	--
600-243_Shallow	non-Rad	Cobalt	7440-48-4	ug/kg	6.21E+03	2.03E+08	3.06E-11	0.20%	4.38E+08	1.42E-05	0.38%
600-243_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	2.80E+01	1.66E+10	1.69E-15	0.00%	--	--	--
600-243_Shallow	non-Rad	Manganese	7439-96-5	ug/kg	2.08E+05	--	--	--	3.65E+09	5.71E-05	1.51%

Table G-40. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
600-243_Shallow	non-Rad	Naphthalene	91-20-3	ug/kg	2.04E+02	1.36E+04	1.50E-08	99.66%	5.53E+04	3.68E-03	97.59%
600-243_Shallow	non-Rad	Nickel	7440-02-0	ug/kg	2.14E+04	7.01E+09	3.05E-12	0.02%	6.57E+09	3.26E-06	0.09%
600-243_Shallow	non-Rad	Selenium	7782-49-2	ug/kg	5.71E+03	--	--	--	1.46E+12	3.91E-09	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**1.51E-08**	**--**	**--**	**3.77E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate							**1.51E-08**	**--**	**--**	**--**	**--**
600-47_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	2.30E+03	4.24E+08	5.42E-12	87.90%	1.09E+09	2.10E-06	47.72%
600-47_Shallow	non-Rad	Barium	7440-39-3	ug/kg	6.70E+04	--	--	--	3.65E+10	1.84E-06	41.70%
600-47_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	5.00E+02	7.60E+08	6.58E-13	10.66%	1.46E+09	3.43E-07	7.78%
600-47_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	9.00E+01	1.01E+09	8.88E-14	1.44%	7.30E+08	1.23E-07	2.80%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**6.17E-12**	**--**	**--**	**4.40E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate							**6.17E-12**	**--**	**--**	**--**	**--**
618-1_Shallow	non-Rad	Aluminum	7429-90-5	ug/kg	6.21E+06	--	--	--	3.65E+11	1.70E-05	14.18%
618-1_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	2.64E+02	3.20E+09	8.25E-14	0.22%	--	--	--
618-1_Shallow	non-Rad	Aroclor-1260	11096-82-5	ug/kg	5.35E+01	3.20E+09	1.67E-14	0.04%	--	--	--
618-1_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	2.28E+03	4.24E+08	5.38E-12	14.02%	1.09E+09	2.08E-06	1.74%
618-1_Shallow	non-Rad	Barium	7440-39-3	ug/kg	9.72E+04	--	--	--	3.65E+10	2.66E-06	2.22%
618-1_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	1.88E+02	7.60E+08	2.47E-13	0.65%	1.46E+09	1.29E-07	0.11%
618-1_Shallow	non-Rad	Boron	7440-42-8	ug/kg	1.19E+03	--	--	--	1.46E+12	8.16E-10	0.00%
618-1_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	6.80E+01	1.01E+09	6.71E-14	0.18%	7.30E+08	9.32E-08	0.08%
618-1_Shallow	non-Rad	Cobalt	7440-48-4	ug/kg	6.36E+03	2.03E+08	3.14E-11	81.87%	4.38E+08	1.45E-05	12.11%
618-1_Shallow	non-Rad	Fluoride	16984-48-8	ug/kg	4.00E+02	--	--	--	9.48E+11	4.22E-10	0.00%
618-1_Shallow	non-Rad	Manganese	7439-96-5	ug/kg	3.00E+05	--	--	--	3.65E+09	8.22E-05	68.52%
618-1_Shallow	non-Rad	Mercury	7439-97-6	ug/kg	3.10E+01	--	--	--	2.19E+09	1.42E-08	0.01%
618-1_Shallow	non-Rad	Nickel	7440-02-0	ug/kg	8.15E+03	7.01E+09	1.16E-12	3.03%	6.57E+09	1.24E-06	1.03%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**3.83E-11**	**--**	**--**	**1.20E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**3.83E-11**	**--**	**--**	**--**	**--**
618-1_Shallow_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	1.22E+07	--	--	--	3.65E+11	3.34E-05	19.05%
618-1_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	ug/kg	3.51E+01	3.20E+09	1.10E-14	0.02%	--	--	--
618-1_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	9.81E+02	3.20E+09	3.07E-13	0.51%	--	--	--
618-1_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	5.60E+01	3.20E+09	1.75E-14	0.03%	--	--	--
618-1_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	6.09E+03	4.24E+08	1.44E-11	23.82%	1.09E+09	5.57E-06	3.17%
618-1_Shallow_Focused	non-Rad	Barium	7440-39-3	ug/kg	1.02E+05	--	--	--	3.65E+10	2.80E-06	1.59%
618-1_Shallow_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	3.71E+02	7.60E+08	4.88E-13	0.81%	1.46E+09	2.54E-07	0.14%
618-1_Shallow_Focused	non-Rad	Boron	7440-42-8	ug/kg	3.74E+03	--	--	--	1.46E+12	2.56E-09	0.00%
618-1_Shallow_Focused	non-Rad	Cadmium	7440-43-9	ug/kg	2.66E+02	1.01E+09	2.63E-13	0.44%	7.30E+08	3.65E-07	0.21%
618-1_Shallow_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	8.60E+03	2.03E+08	4.24E-11	70.41%	4.38E+08	1.96E-05	11.19%
618-1_Shallow_Focused	non-Rad	Fluoride	16984-48-8	ug/kg	9.00E+02	--	--	--	9.48E+11	9.49E-10	0.00%
618-1_Shallow_Focused	non-Rad	Manganese	7439-96-5	ug/kg	4.03E+05	--	--	--	3.65E+09	1.10E-04	62.94%
618-1_Shallow_Focused	non-Rad	Mercury	7439-97-6	ug/kg	1.98E+02	--	--	--	2.19E+09	9.05E-08	0.05%

Table G-40. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-1_Shallow_Focused	non-Rad	Nickel	7440-02-0	ug/kg	1.68E+04	7.01E+09	2.40E-12	3.97%	6.57E+09	2.56E-06	1.46%
618-1_Shallow_Focused	non-Rad	Uranium	7440-61-1	ug/kg	7.08E+03	--	--	--	2.19E+10	3.24E-07	0.18%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**6.03E-11**	**--**	**--**	**1.76E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**6.03E-11**	**--**	**--**	**--**	**--**
618-12_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	8.56E+03	4.24E+08	2.02E-11	100.00%	1.09E+09	7.82E-06	100.00%
618-12_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	6.30E+01	7.60E+11	8.29E-17	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**2.02E-11**	**--**	**--**	**7.82E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate							**2.02E-11**	**--**	**--**	**--**	**--**
618-13_Shallow	non-Rad	Acetone	67-64-1	ug/kg	8.64E+00	--	--	--	4.15E+08	2.08E-08	0.02%
618-13_Shallow	non-Rad	Aluminum	7429-90-5	ug/kg	6.34E+06	--	--	--	3.65E+11	1.74E-05	12.79%
618-13_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	3.50E+03	4.24E+08	8.25E-12	9.48%	1.09E+09	3.20E-06	2.35%
618-13_Shallow	non-Rad	Barium	7440-39-3	ug/kg	7.40E+04	--	--	--	3.65E+10	2.03E-06	1.49%
618-13_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	2.12E+02	7.60E+08	2.79E-13	0.32%	1.46E+09	1.45E-07	0.11%
618-13_Shallow	non-Rad	Boron	7440-42-8	ug/kg	1.05E+03	--	--	--	1.46E+12	7.20E-10	0.00%
618-13_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	6.30E+01	1.01E+09	6.22E-14	0.07%	7.30E+08	8.64E-08	0.06%
618-13_Shallow	non-Rad	Cobalt	7440-48-4	ug/kg	6.29E+03	2.03E+08	3.10E-11	35.67%	4.38E+08	1.44E-05	10.57%
618-13_Shallow	non-Rad	Manganese	7439-96-5	ug/kg	3.44E+05	--	--	--	3.65E+09	9.43E-05	69.38%
618-13_Shallow	non-Rad	Methylene chloride	75-09-2	ug/kg	5.12E+00	1.12E+05	4.56E-11	52.42%	2.11E+06	2.43E-06	1.78%
618-13_Shallow	non-Rad	Nickel	7440-02-0	ug/kg	1.24E+04	7.01E+09	1.77E-12	2.03%	6.57E+09	1.89E-06	1.39%
618-13_Shallow	non-Rad	Uranium	7440-61-1	ug/kg	1.75E+03	--	--	--	2.19E+10	8.00E-08	0.06%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**8.70E-11**	**--**	**--**	**1.36E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**8.70E-11**	**--**	**--**	**--**	**--**
618-13_Shallow_Focused	non-Rad	Acetone	67-64-1	ug/kg	5.90E+00	--	--	--	4.15E+08	1.42E-08	0.01%
618-13_Shallow_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	5.22E+06	--	--	--	3.65E+11	1.43E-05	13.04%
618-13_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	3.39E+03	4.24E+08	7.99E-12	8.92%	1.09E+09	3.10E-06	2.82%
618-13_Shallow_Focused	non-Rad	Barium	7440-39-3	ug/kg	5.77E+04	--	--	--	3.65E+10	1.58E-06	1.44%
618-13_Shallow_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	1.84E+02	7.60E+08	2.42E-13	0.27%	1.46E+09	1.26E-07	0.11%
618-13_Shallow_Focused	non-Rad	Boron	7440-42-8	ug/kg	9.60E+02	--	--	--	1.46E+12	6.58E-10	0.00%
618-13_Shallow_Focused	non-Rad	Cadmium	7440-43-9	ug/kg	4.70E+01	1.01E+09	4.64E-14	0.05%	7.30E+08	6.44E-08	0.06%
618-13_Shallow_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	5.71E+03	2.03E+08	2.82E-11	31.45%	4.38E+08	1.30E-05	11.89%
618-13_Shallow_Focused	non-Rad	Hexavalent Chromium	18540-29-9	ug/kg	1.50E+02	2.17E+07	6.91E-12	7.71%	7.30E+09	2.06E-08	0.02%
618-13_Shallow_Focused	non-Rad	Manganese	7439-96-5	ug/kg	2.68E+05	--	--	--	3.65E+09	7.35E-05	66.97%
618-13_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	ug/kg	5.03E+00	1.12E+05	4.48E-11	50.01%	2.11E+06	2.38E-06	2.17%
618-13_Shallow_Focused	non-Rad	Nickel	7440-02-0	ug/kg	1.00E+04	7.01E+09	1.43E-12	1.59%	6.57E+09	1.52E-06	1.39%
618-13_Shallow_Focused	non-Rad	Uranium	7440-61-1	ug/kg	1.50E+03	--	--	--	2.19E+10	6.85E-08	0.06%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**8.96E-11**	**--**	**--**	**1.10E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**8.96E-11**	**--**	**--**	**--**	**--**

Table G-40. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-2_Overburden	non-Rad	Arsenic	7440-38-2	ug/kg	2.70E+03	4.24E+08	6.37E-12	100.00%	1.09E+09	2.47E-06	54.01%
618-2_Overburden	non-Rad	Barium	7440-39-3	ug/kg	7.47E+04	--	--	--	3.65E+10	2.05E-06	44.83%
618-2_Overburden	non-Rad	Selenium	7782-49-2	ug/kg	1.00E+03	--	--	--	1.46E+12	6.85E-10	0.02%
618-2_Overburden	non-Rad	Uranium	7440-61-1	ug/kg	1.14E+03	--	--	--	2.19E+10	5.21E-08	1.14%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**6.37E-12**	**--**	**--**	**4.57E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate							**6.37E-12**	**--**	**--**	**--**	**--**
618-2_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	1.90E+03	4.24E+08	4.48E-12	100.00%	1.09E+09	1.74E-06	42.22%
618-2_Shallow	non-Rad	Barium	7440-39-3	ug/kg	7.91E+04	--	--	--	3.65E+10	2.17E-06	52.73%
618-2_Shallow	non-Rad	Selenium	7782-49-2	ug/kg	7.60E+02	--	--	--	1.46E+12	5.21E-10	0.01%
618-2_Shallow	non-Rad	Uranium	7440-61-1	ug/kg	4.53E+03	--	--	--	2.19E+10	2.07E-07	5.03%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**4.48E-12**	**--**	**--**	**4.11E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate							**4.48E-12**	**--**	**--**	**--**	**--**
618-2_Staging Pile	non-Rad	Arsenic	7440-38-2	ug/kg	3.06E+03	4.24E+08	7.22E-12	100.00%	1.09E+09	2.80E-06	57.30%
618-2_Staging Pile	non-Rad	Barium	7440-39-3	ug/kg	6.77E+04	--	--	--	3.65E+10	1.86E-06	38.00%
618-2_Staging Pile	non-Rad	Uranium	7440-61-1	ug/kg	5.02E+03	--	--	--	2.19E+10	2.29E-07	4.70%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**7.22E-12**	**--**	**--**	**4.88E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate							**7.22E-12**	**--**	**--**	**--**	**--**
618-3_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	2.80E+03	4.24E+08	6.60E-12	100.00%	1.09E+09	2.56E-06	54.10%
618-3_Shallow	non-Rad	Barium	7440-39-3	ug/kg	7.65E+04	--	--	--	3.65E+10	2.10E-06	44.34%
618-3_Shallow	non-Rad	Selenium	7782-49-2	ug/kg	6.59E+02	--	--	--	1.46E+12	4.52E-10	0.01%
618-3_Shallow	non-Rad	Uranium	7440-61-1	ug/kg	1.61E+03	--	--	--	2.19E+10	7.36E-08	1.56%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**6.60E-12**	**--**	**--**	**4.73E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate							**6.60E-12**	**--**	**--**	**--**	**--**
618-4_Overburden_2	non-Rad	Arsenic	7440-38-2	ug/kg	2.50E+03	4.24E+08	5.89E-12	100.00%	1.09E+09	2.28E-06	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**5.89E-12**	**--**	**--**	**2.28E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate							**5.89E-12**	**--**	**--**	**--**	**--**
618-4_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	3.20E+03	4.24E+08	7.54E-12	100.00%	1.09E+09	2.92E-06	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**7.54E-12**	**--**	**--**	**2.92E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate							**7.54E-12**	**--**	**--**	**--**	**--**
618-5_Overburden	non-Rad	Arsenic	7440-38-2	ug/kg	3.40E+03	4.24E+08	8.02E-12	97.95%	1.09E+09	3.11E-06	93.02%
618-5_Overburden	non-Rad	Cadmium	7440-43-9	ug/kg	1.70E+02	1.01E+09	1.68E-13	2.05%	7.30E+08	2.33E-07	6.98%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**8.18E-12**	**--**	**--**	**3.34E-06**	**--**

Table G-40. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
Total Non-Radiological and Radiological Risk Estimate							**8.18E-12**	--	--	--	--
618-5_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	4.30E+03	4.24E+08	1.01E-11	100.00%	1.09E+09	3.93E-06	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**1.01E-11**	--	--	**3.93E-06**	--
Total Non-Radiological and Radiological Risk Estimate							**1.01E-11**	--	--	--	--
618-5_Staging Pile_4	non-Rad	Arsenic	7440-38-2	ug/kg	3.30E+03	4.24E+08	7.78E-12	99.37%	1.09E+09	3.02E-06	97.78%
618-5_Staging Pile_4	non-Rad	Cadmium	7440-43-9	ug/kg	5.00E+01	1.01E+09	4.93E-14	0.63%	7.30E+08	6.85E-08	2.22%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**7.83E-12**	--	--	**3.08E-06**	--
Total Non-Radiological and Radiological Risk Estimate							**7.83E-12**	--	--	--	--
618-5_Staging Pile_5	non-Rad	Arsenic	7440-38-2	ug/kg	2.70E+03	4.24E+08	6.37E-12	100.00%	1.09E+09	2.47E-06	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**6.37E-12**	--	--	**2.47E-06**	--
Total Non-Radiological and Radiological Risk Estimate							**6.37E-12**	--	--	--	--
618-7_Shallow_1	non-Rad	Aluminum	7429-90-5	ug/kg	5.25E+06	--	--	--	3.65E+11	1.44E-05	10.92%
618-7_Shallow_1	non-Rad	Arsenic	7440-38-2	ug/kg	1.89E+03	4.24E+08	4.46E-12	8.41%	1.09E+09	1.73E-06	1.31%
618-7_Shallow_1	non-Rad	Barium	7440-39-3	ug/kg	6.89E+04	--	--	--	3.65E+10	1.89E-06	1.43%
618-7_Shallow_1	non-Rad	Beryllium	7440-41-7	ug/kg	2.78E+02	7.60E+08	3.66E-13	0.69%	1.46E+09	1.91E-07	0.14%
618-7_Shallow_1	non-Rad	Cadmium	7440-43-9	ug/kg	6.52E+01	1.01E+09	6.44E-14	0.12%	7.30E+08	8.94E-08	0.07%
618-7_Shallow_1	non-Rad	Cobalt	7440-48-4	ug/kg	9.15E+03	2.03E+08	4.52E-11	85.15%	4.38E+08	2.09E-05	15.86%
618-7_Shallow_1	non-Rad	Manganese	7439-96-5	ug/kg	3.26E+05	--	--	--	3.65E+09	8.94E-05	67.82%
618-7_Shallow_1	non-Rad	Mercury	7439-97-6	ug/kg	4.43E+01	--	--	--	2.19E+09	2.02E-08	0.02%
618-7_Shallow_1	non-Rad	Nickel	7440-02-0	ug/kg	2.10E+04	7.01E+09	2.99E-12	5.64%	6.57E+09	3.20E-06	2.42%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**5.30E-11**	--	--	**1.32E-04**	--
Total Non-Radiological and Radiological Risk Estimate							**5.30E-11**	--	--	--	--
618-7_Shallow_2	non-Rad	Aluminum	7429-90-5	ug/kg	4.97E+06	--	--	--	3.65E+11	1.36E-05	9.68%
618-7_Shallow_2	non-Rad	Arsenic	7440-38-2	ug/kg	2.50E+03	4.24E+08	5.89E-12	10.97%	1.09E+09	2.28E-06	1.62%
618-7_Shallow_2	non-Rad	Barium	7440-39-3	ug/kg	7.38E+04	--	--	--	3.65E+10	2.02E-06	1.44%
618-7_Shallow_2	non-Rad	Beryllium	7440-41-7	ug/kg	4.40E+02	7.60E+08	5.79E-13	1.08%	1.46E+09	3.02E-07	0.21%
618-7_Shallow_2	non-Rad	Cobalt	7440-48-4	ug/kg	9.30E+03	2.03E+08	4.59E-11	85.38%	4.38E+08	2.12E-05	15.09%
618-7_Shallow_2	non-Rad	Manganese	7439-96-5	ug/kg	3.64E+05	--	--	--	3.65E+09	9.98E-05	70.89%
618-7_Shallow_2	non-Rad	Mercury	7439-97-6	ug/kg	2.00E+01	--	--	--	2.19E+09	9.14E-09	0.01%
618-7_Shallow_2	non-Rad	Nickel	7440-02-0	ug/kg	9.70E+03	7.01E+09	1.38E-12	2.57%	6.57E+09	1.48E-06	1.05%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**5.37E-11**	--	--	**1.41E-04**	--
Total Non-Radiological and Radiological Risk Estimate							**5.37E-11**	--	--	--	--
618-7_Shallow_3	non-Rad	Aluminum	7429-90-5	ug/kg	6.74E+06	--	--	--	3.65E+11	1.85E-05	12.94%

Table G-40. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-7_Shallow_3	non-Rad	Arsenic	7440-38-2	ug/kg	2.80E+03	4.24E+08	6.60E-12	12.93%	1.09E+09	2.56E-06	1.79%
618-7_Shallow_3	non-Rad	Barium	7440-39-3	ug/kg	8.25E+04	--	--	--	3.65E+10	2.26E-06	1.58%
618-7_Shallow_3	non-Rad	Beryllium	7440-41-7	ug/kg	3.10E+02	7.60E+08	4.08E-13	0.80%	1.46E+09	2.12E-07	0.15%
618-7_Shallow_3	non-Rad	Cadmium	7440-43-9	ug/kg	1.90E+02	1.01E+09	1.88E-13	0.37%	7.30E+08	2.60E-07	0.18%
618-7_Shallow_3	non-Rad	Cobalt	7440-48-4	ug/kg	8.60E+03	2.03E+08	4.24E-11	83.09%	4.38E+08	1.96E-05	13.76%
618-7_Shallow_3	non-Rad	Manganese	7439-96-5	ug/kg	3.57E+05	--	--	--	3.65E+09	9.79E-05	68.52%
618-7_Shallow_3	non-Rad	Mercury	7439-97-6	ug/kg	2.00E+01	--	--	--	2.19E+09	9.14E-09	0.01%
618-7_Shallow_3	non-Rad	Nickel	7440-02-0	ug/kg	1.01E+04	7.01E+09	1.44E-12	2.82%	6.57E+09	1.54E-06	1.08%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**5.11E-11**	**--**	**--**	**1.43E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**5.11E-11**	**--**	**--**	**--**	**--**
618-7_Shallow_4	non-Rad	Aluminum	7429-90-5	ug/kg	5.65E+06	--	--	--	3.65E+11	1.55E-05	13.18%
618-7_Shallow_4	non-Rad	Arsenic	7440-38-2	ug/kg	5.20E+03	4.24E+08	1.23E-11	25.79%	1.09E+09	4.75E-06	4.04%
618-7_Shallow_4	non-Rad	Barium	7440-39-3	ug/kg	5.79E+04	--	--	--	3.65E+10	1.59E-06	1.35%
618-7_Shallow_4	non-Rad	Beryllium	7440-41-7	ug/kg	2.20E+02	7.60E+08	2.90E-13	0.61%	1.46E+09	1.51E-07	0.13%
618-7_Shallow_4	non-Rad	Cadmium	7440-43-9	ug/kg	9.00E+01	1.01E+09	8.88E-14	0.19%	7.30E+08	1.23E-07	0.10%
618-7_Shallow_4	non-Rad	Cobalt	7440-48-4	ug/kg	6.70E+03	2.03E+08	3.31E-11	69.55%	4.38E+08	1.53E-05	13.03%
618-7_Shallow_4	non-Rad	Manganese	7439-96-5	ug/kg	2.85E+05	--	--	--	3.65E+09	7.81E-05	66.49%
618-7_Shallow_4	non-Rad	Nickel	7440-02-0	ug/kg	1.29E+04	7.01E+09	1.84E-12	3.87%	6.57E+09	1.96E-06	1.67%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**4.75E-11**	**--**	**--**	**1.18E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**4.75E-11**	**--**	**--**	**--**	**--**
618-7_Shallow_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	7.61E+06	--	--	--	3.65E+11	2.09E-05	11.57%
618-7_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	ug/kg	6.70E+00	3.20E+09	2.09E-15	0.00%	--	--	--
618-7_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	4.20E+03	4.24E+08	9.90E-12	13.51%	1.09E+09	3.84E-06	2.13%
618-7_Shallow_Focused	non-Rad	Barium	7440-39-3	ug/kg	9.28E+04	--	--	--	3.65E+10	2.54E-06	1.41%
618-7_Shallow_Focused	non-Rad	Benzo(a)anthracene	56-55-3	ug/kg	8.80E+01	1.66E+10	5.31E-15	0.01%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	6.60E+01	1.66E+09	3.98E-14	0.05%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	5.20E+01	1.66E+10	3.14E-15	0.00%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(k)fluoranthene	207-08-9	ug/kg	1.10E+01	1.66E+10	6.63E-16	0.00%	--	--	--
618-7_Shallow_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	3.70E+02	7.60E+08	4.87E-13	0.66%	1.46E+09	2.54E-07	0.14%
618-7_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	4.70E+02	7.60E+11	6.18E-16	0.00%	--	--	--
618-7_Shallow_Focused	non-Rad	Cadmium	7440-43-9	ug/kg	6.20E+03	1.01E+09	6.12E-12	8.35%	7.30E+08	8.50E-06	4.71%
618-7_Shallow_Focused	non-Rad	Chrysene	218-01-9	ug/kg	6.90E+01	1.66E+11	4.16E-16	0.00%	--	--	--
618-7_Shallow_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	1.10E+04	2.03E+08	5.43E-11	74.06%	4.38E+08	2.51E-05	13.94%
618-7_Shallow_Focused	non-Rad	Dibenz[a,h]anthracene	53-70-3	ug/kg	4.50E+01	1.66E+10	2.71E-15	0.00%	--	--	--
618-7_Shallow_Focused	non-Rad	Manganese	7439-96-5	ug/kg	4.25E+05	--	--	--	3.65E+09	1.17E-04	64.63%
618-7_Shallow_Focused	non-Rad	Mercury	7439-97-6	ug/kg	2.00E+01	--	--	--	2.19E+09	9.14E-09	0.01%
618-7_Shallow_Focused	non-Rad	Nickel	7440-02-0	ug/kg	1.72E+04	7.01E+09	2.45E-12	3.35%	6.57E+09	2.62E-06	1.45%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**7.33E-11**	**--**	**--**	**1.80E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**7.33E-11**	**--**	**--**	**--**	**--**

Table G-40. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-8_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	4.10E+03	4.24E+08	9.67E-12	100.00%	1.09E+09	3.75E-06	57.63%
618-8_Shallow	non-Rad	Barium	7440-39-3	ug/kg	9.76E+04	--	--	--	3.65E+10	2.68E-06	41.15%
618-8_Shallow	non-Rad	Selenium	7782-49-2	ug/kg	8.46E+02	--	--	--	1.46E+12	5.80E-10	0.01%
618-8_Shallow	non-Rad	Uranium	7440-61-1	ug/kg	1.72E+03	--	--	--	2.19E+10	7.86E-08	1.21%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**9.67E-12**	**--**	**--**	**6.50E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate							**9.67E-12**	**--**	**--**	**--**	**--**
618-9_Shallow_Focused	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	1.10E+02	3.94E+03	2.79E-08	17.68%	--	--	--
618-9_Shallow_Focused	non-Rad	Acetone	67-64-1	ug/kg	6.80E+02	--	--	--	4.15E+08	1.64E-06	0.06%
618-9_Shallow_Focused	non-Rad	Aldrin	309-00-2	ug/kg	3.90E+02	3.72E+08	1.05E-12	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	8.57E+06	--	--	--	3.65E+11	2.35E-05	0.79%
618-9_Shallow_Focused	non-Rad	Aroclor-1016	12674-11-2	ug/kg	1.90E+03	9.12E+10	2.08E-14	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1221	11104-28-2	ug/kg	1.90E+03	3.20E+09	5.94E-13	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1232	11141-16-5	ug/kg	1.90E+03	3.20E+09	5.94E-13	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1242	53469-21-9	ug/kg	1.90E+03	3.20E+09	5.94E-13	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	ug/kg	1.90E+03	3.20E+09	5.94E-13	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	3.90E+03	3.20E+09	1.22E-12	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	3.90E+03	3.20E+09	1.22E-12	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	1.16E+04	4.24E+08	2.73E-11	0.02%	1.09E+09	1.06E-05	0.36%
618-9_Shallow_Focused	non-Rad	Barium	7440-39-3	ug/kg	9.02E+04	--	--	--	3.65E+10	2.47E-06	0.08%
618-9_Shallow_Focused	non-Rad	Beryllium	7440-41-7	ug/kg	3.30E+02	7.60E+08	4.34E-13	0.00%	1.46E+09	2.26E-07	0.01%
618-9_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	5.20E+03	7.60E+11	6.84E-15	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Chlordane	57-74-9	ug/kg	6.90E+01	1.82E+10	3.78E-15	0.00%	5.11E+10	1.35E-09	0.00%
618-9_Shallow_Focused	non-Rad	Chloroform	67-66-3	ug/kg	9.00E+00	2.42E+03	3.72E-09	2.35%	2.18E+05	4.13E-05	1.39%
618-9_Shallow_Focused	non-Rad	Cobalt	7440-48-4	ug/kg	1.14E+04	2.03E+08	5.63E-11	0.04%	4.38E+08	2.60E-05	0.88%
618-9_Shallow_Focused	non-Rad	Heptachlor epoxide	1024-57-3	ug/kg	4.40E+01	7.01E+08	6.27E-14	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Hexachlorobutadiene	87-68-3	ug/kg	7.60E+02	8.29E+10	9.17E-15	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Hexachloroethane	67-72-1	ug/kg	1.70E+04	4.56E+11	3.73E-14	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Manganese	7439-96-5	ug/kg	3.59E+05	--	--	--	3.65E+09	9.84E-05	3.31%
618-9_Shallow_Focused	non-Rad	Mercury	7439-97-6	ug/kg	3.30E+02	--	--	--	2.19E+09	1.51E-07	0.01%
618-9_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	ug/kg	2.30E+03	1.12E+05	2.05E-08	12.97%	2.11E+06	1.09E-03	36.68%
618-9_Shallow_Focused	non-Rad	Nickel	7440-02-0	ug/kg	1.06E+04	7.01E+09	1.51E-12	0.00%	6.57E+09	1.61E-06	0.05%
618-9_Shallow_Focused	non-Rad	Tetrachloroethene	127-18-4	ug/kg	9.20E+02	8.80E+03	1.05E-07	66.20%	5.60E+05	1.64E-03	55.24%
618-9_Shallow_Focused	non-Rad	Toluene	108-88-3	ug/kg	9.00E+00	--	--	--	1.04E+07	8.62E-07	0.03%
618-9_Shallow_Focused	non-Rad	Trichloroethene	79-01-6	ug/kg	2.00E+00	1.73E+03	1.16E-09	0.73%	6.04E+04	3.31E-05	1.11%
618-9_Shallow_Focused	non-Rad	Uranium	7440-61-1	ug/kg	3.10E+03	--	--	--	2.19E+10	1.42E-07	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**1.58E-07**	**--**	**--**	**2.97E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate							**1.58E-07**	**--**	**--**	**--**	**--**
628-4_Overburden	non-Rad	Arsenic	7440-38-2	ug/kg	3.37E+03	4.24E+08	7.96E-12	100.00%	1.09E+09	3.08E-06	100.00%
628-4_Overburden	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	6.09E+01	7.60E+11	8.02E-17	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**7.96E-12**	**--**	**--**	**3.08E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate							**7.96E-12**	**--**	**--**	**--**	**--**

Table G-40. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
628-4_Shallow	non-Rad	Aroclor-1242	53469-21-9	ug/kg	4.24E+01	3.20E+09	1.32E-14	0.14%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1248	12672-29-6	ug/kg	1.12E+03	3.20E+09	3.49E-13	3.65%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	2.43E+02	3.20E+09	7.59E-14	0.79%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1260	11096-82-5	ug/kg	3.78E+01	3.20E+09	1.18E-14	0.12%	--	--	--
628-4_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	3.86E+03	4.24E+08	9.11E-12	95.30%	1.09E+09	3.53E-06	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**9.56E-12**	**--**	**--**	**3.53E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate							**9.56E-12**	**--**	**--**	**--**	**--**
UPR-300-17_Shallow	non-Rad	Aluminum	7429-90-5	ug/kg	6.34E+06	--	--	--	3.65E+11	1.74E-05	1.63%
UPR-300-17_Shallow	non-Rad	Aroclor-1248	12672-29-6	ug/kg	1.97E+03	3.20E+09	6.16E-13	0.02%	--	--	--
UPR-300-17_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	4.50E+02	3.20E+09	1.41E-13	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Aroclor-1260	11096-82-5	ug/kg	1.13E+02	3.20E+09	3.54E-14	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	2.57E+03	4.24E+08	6.07E-12	0.17%	1.09E+09	2.35E-06	0.22%
UPR-300-17_Shallow	non-Rad	Barium	7440-39-3	ug/kg	8.10E+04	--	--	--	3.65E+10	2.22E-06	0.21%
UPR-300-17_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	ug/kg	5.92E+01	1.66E+10	3.57E-15	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	4.38E+01	1.66E+09	2.64E-14	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	3.27E+01	1.66E+10	1.97E-15	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	ug/kg	9.94E+00	1.66E+10	5.99E-16	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	2.40E+02	7.60E+08	3.16E-13	0.01%	1.46E+09	1.64E-07	0.02%
UPR-300-17_Shallow	non-Rad	Boron	7440-42-8	ug/kg	3.90E+03	--	--	--	1.46E+12	2.67E-09	0.00%
UPR-300-17_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	1.73E+02	1.01E+09	1.70E-13	0.00%	7.30E+08	2.37E-07	0.02%
UPR-300-17_Shallow	non-Rad	Chrysene	218-01-9	ug/kg	3.93E+01	1.66E+11	2.37E-16	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Cobalt	7440-48-4	ug/kg	6.69E+03	2.03E+08	3.30E-11	0.90%	4.38E+08	1.53E-05	1.43%
UPR-300-17_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	5.85E+00	1.66E+10	3.53E-16	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Manganese	7439-96-5	ug/kg	2.85E+05	--	--	--	3.65E+09	7.82E-05	7.32%
UPR-300-17_Shallow	non-Rad	Mercury	7439-97-6	ug/kg	6.90E+01	--	--	--	2.19E+09	3.15E-08	0.00%
UPR-300-17_Shallow	non-Rad	Naphthalene	91-20-3	ug/kg	4.79E+01	1.36E+04	3.53E-09	96.70%	5.53E+04	8.66E-04	81.11%
UPR-300-17_Shallow	non-Rad	Nickel	7440-02-0	ug/kg	5.64E+05	7.01E+09	8.04E-11	2.20%	6.57E+09	8.58E-05	8.04%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**3.65E-09**	**--**	**--**	**1.07E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate							**3.65E-09**	**--**	**--**	**--**	**--**
UPR-300-46_Shallow	non-Rad	Aluminum	7429-90-5	ug/kg	6.80E+06	--	--	--	3.65E+11	1.86E-05	2.42%
UPR-300-46_Shallow	non-Rad	Aroclor-1248	12672-29-6	ug/kg	8.79E+02	3.20E+09	2.75E-13	0.01%	--	--	--
UPR-300-46_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	4.90E+02	3.20E+09	1.53E-13	0.01%	--	--	--
UPR-300-46_Shallow	non-Rad	Aroclor-1260	11096-82-5	ug/kg	8.44E+01	3.20E+09	2.64E-14	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	2.85E+03	4.24E+08	6.71E-12	0.25%	1.09E+09	2.60E-06	0.34%
UPR-300-46_Shallow	non-Rad	Barium	7440-39-3	ug/kg	8.21E+04	--	--	--	3.65E+10	2.25E-06	0.29%
UPR-300-46_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	ug/kg	3.88E+00	1.66E+10	2.34E-16	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	3.40E+00	1.66E+09	2.05E-15	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	5.40E+00	1.66E+10	3.25E-16	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	ug/kg	2.78E+00	1.66E+10	1.68E-16	0.00%	--	--	--

Table G-40. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source Operable Unit Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
UPR-300-46_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	2.22E+02	7.60E+08	2.92E-13	0.01%	1.46E+09	1.52E-07	0.02%
UPR-300-46_Shallow	non-Rad	Boron	7440-42-8	ug/kg	1.71E+03	--	--	--	1.46E+12	1.17E-09	0.00%
UPR-300-46_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	9.47E+01	1.01E+09	9.35E-14	0.00%	7.30E+08	1.30E-07	0.02%
UPR-300-46_Shallow	non-Rad	Chrysene	218-01-9	ug/kg	5.58E+00	1.66E+11	3.37E-17	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Cobalt	7440-48-4	ug/kg	6.36E+03	2.03E+08	3.14E-11	1.17%	4.38E+08	1.45E-05	1.88%
UPR-300-46_Shallow	non-Rad	Dibenz[a,h]anthracene	53-70-3	ug/kg	1.25E+00	1.66E+10	7.54E-17	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	7.55E+00	1.66E+10	4.55E-16	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Manganese	7439-96-5	ug/kg	3.11E+05	--	--	--	3.65E+09	8.53E-05	11.06%
UPR-300-46_Shallow	non-Rad	Mercury	7439-97-6	ug/kg	2.92E+01	--	--	--	2.19E+09	1.34E-08	0.00%
UPR-300-46_Shallow	non-Rad	Naphthalene	91-20-3	ug/kg	3.57E+01	1.36E+04	2.64E-09	98.50%	5.53E+04	6.46E-04	83.79%
UPR-300-46_Shallow	non-Rad	Nickel	7440-02-0	ug/kg	9.23E+03	7.01E+09	1.32E-12	0.05%	6.57E+09	1.41E-06	0.18%
Total Non-Radiological Risk Estimate and Hazard Index Estimate							**2.68E-09**	**--**	**--**	**7.71E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate							**2.68E-09**	**--**	**--**	**--**	**--**

Table G-41. Summary of Industrial Worker Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Shallow Zone Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
300 ASH PITS_Shallow	7.03E-08	--	3.54E-07	--	4.24E-07	5.79E-03	--
300 VTS_Shallow	0.00E+00	--	1.64E-07	--	1.64E-07	0.00E+00	--
300-10_Shallow_Focused	1.54E-07	--	1.43E-06	--	1.58E-06	1.29E-02	--
300-109_Shallow_Focused	3.03E-08	--	5.67E-07	--	5.98E-07	2.26E-02	--
300-18_Shallow	2.51E-08	--	1.82E-07	--	2.07E-07	2.29E-03	--
300-223_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-23_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-259_Shallow	2.40E-08	--	5.67E-07	--	5.91E-07	2.15E-02	--
300-260_Shallow_Focused	3.61E-08	--	1.93E-06	--	1.96E-06	2.65E-02	--
300-272_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-275_Shallow_1	2.53E-08	--	4.95E-06	--	4.97E-06	2.19E-02	--
300-275_Shallow_2	3.16E-08	--	9.00E-07	--	9.32E-07	2.32E-02	--
300-33, 300-41, 300-256_Shallow	3.49E-08	--	1.40E-06	--	1.43E-06	2.54E-02	--
300-33, 300-41, 300-256_Shallow_Focused	4.87E-08	--	9.39E-07	--	9.87E-07	2.79E-02	--
300-37_Shallow_Focused	5.03E-08	--	0.00E+00	--	5.03E-08	1.43E-03	--
300-44_Shallow_Focused	1.93E-07	--	1.04E-07	--	2.97E-07	4.01E-02	--
300-45_Shallow_Focused	1.34E-09	--	6.52E-07	--	6.53E-07	4.14E-06	--
300-49_Shallow	5.06E-08	--	1.70E-06	--	1.75E-06	3.04E-02	--
300-50_Shallow	7.51E-08	--	4.82E-06	--	4.90E-06	3.28E-02	--
300-8_Shallow	0.00E+00	--	3.35E-07	--	3.35E-07	8.20E-05	--
316-1_Shallow_1	2.63E-07	--	1.19E-05	--	1.22E-05	1.81E-02	--
316-1_Shallow_3	6.05E-08	--	3.98E-05	--	3.99E-05	4.66E-02	--
316-1_Shallow_4	9.45E-10	--	8.95E-06	--	8.95E-06	8.86E-04	--
316-2_Shallow_1	0.00E+00	--	5.03E-05	--	5.03E-05	0.00E+00	--
316-2_Shallow_2	1.29E-08	--	6.59E-05	--	6.59E-05	6.00E-04	--
316-2_Shallow_3	9.15E-08	--	1.01E-05	--	1.02E-05	7.62E-03	--
316-5_Shallow_1	3.53E-08	--	7.49E-05	--	7.50E-05	2.93E-03	--
316-5_Shallow_2	3.66E-08	--	4.95E-05	--	4.96E-05	3.39E-03	--
316-5_Shallow_Focused	5.19E-08	--	3.88E-05	--	3.89E-05	5.10E-03	--
331 LSLDF_Shallow_Focused	4.22E-08	--	1.97E-07	--	2.39E-07	3.87E-02	--

Table G-41. Summary of Industrial Worker Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Shallow Zone Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
600-243_Shallow	7.44E-08	--	0.00E+00	--	7.44E-08	1.88E-02	--
600-259_Shallow	0.00E+00	--	3.84E-07	--	3.84E-07	0.00E+00	--
600-259_Shallow_Focused	0.00E+00	--	2.15E-07	--	2.15E-07	0.00E+00	--
600-47_Shallow	2.63E-08	--	6.36E-07	--	6.62E-07	2.38E-03	--
618-1_Shallow	3.09E-08	--	6.43E-07	--	6.74E-07	2.74E-02	--
618-1_Shallow_Focused	8.59E-08	--	5.16E-06	--	5.24E-06	4.93E-02	--
618-12_Shallow	9.78E-08	--	4.55E-06	--	4.65E-06	8.15E-03	--
618-13_Shallow	4.00E-08	--	9.25E-07	--	9.65E-07	2.41E-02	--
618-13_Shallow_Focused	3.87E-08	--	4.04E-07	--	4.42E-07	2.15E-02	--
618-2_Shallow	2.17E-08	--	1.43E-05	--	1.43E-05	2.40E-03	--
618-3_Shallow	3.20E-08	--	3.02E-07	--	3.34E-07	2.97E-03	--
618-3_Shallow_Focused	0.00E+00	--	4.04E-05	--	4.04E-05	0.00E+00	--
618-4_Shallow	3.66E-08	--	1.27E-06	--	1.30E-06	3.05E-03	--
618-5_Shallow	4.91E-08	--	4.24E-07	--	4.74E-07	4.10E-03	--
618-7_Shallow_1	2.16E-08	--	2.44E-06	--	2.46E-06	2.86E-02	--
618-7_Shallow_2	2.86E-08	--	2.21E-07	--	2.49E-07	2.92E-02	--
618-7_Shallow_3	3.20E-08	--	5.33E-07	--	5.65E-07	2.82E-02	--
618-7_Shallow_4	5.94E-08	--	3.09E-07	--	3.68E-07	2.59E-02	--
618-7_Shallow_Focused	5.30E-08	--	4.53E-06	--	4.58E-06	3.70E-02	--
618-8_Shallow	4.69E-08	--	3.27E-07	--	3.74E-07	4.26E-03	--
618-9_Shallow_Focused	4.29E-07	--	1.18E-06	--	1.60E-06	1.13E-01	--
628-4_Shallow	6.61E-08	--	6.17E-07	--	6.83E-07	7.15E-03	--
UPR-300-17_Shallow	7.11E-08	--	3.27E-06	--	3.34E-06	3.73E-02	--
UPR-300-46_Shallow	5.50E-08	--	1.50E-06	--	1.56E-06	3.06E-02	--

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Table G-42. Summary of MTCA Method C Inhalation Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Shallow Zone Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Non-Cancer Hazard Index	Hazard Drivers
300 ASH PITS_Shallow	1.43E-11	--	5.55E-06	--
300 VTS_Shallow	0.00E+00	--	0.00E+00	--
300-10_Shallow_Focused	3.18E-11	--	1.23E-05	--
300-109_Shallow_Focused	3.89E-11	--	1.12E-04	--
300-18_Shallow	6.08E-12	--	4.25E-06	--
300-223_Shallow_Focused	0.00E+00	--	0.00E+00	--
300-23_Shallow_Focused	0.00E+00	--	0.00E+00	--
300-259_Shallow	3.55E-11	--	1.23E-04	--
300-260_Shallow_Focused	4.60E-11	--	1.37E-04	--
300-272_Shallow_Focused	0.00E+00	--	0.00E+00	--
300-275_Shallow_1	3.61E-11	--	1.11E-04	--
300-275_Shallow_2	3.78E-11	--	1.17E-04	--
300-33, 300-41, 300-256_Shallow	6.49E-11	--	1.26E-04	--
300-33, 300-41, 300-	5.69E-11	--	1.06E-04	--
300-37_Shallow_Focused	1.03E-12	--	0.00E+00	--
300-44_Shallow_Focused	8.22E-11	--	1.39E-04	--
300-45_Shallow_Focused	2.73E-14	--	0.00E+00	--
300-49_Shallow	5.84E-11	--	1.48E-04	--
300-50_Shallow	6.27E-11	--	1.38E-04	--
300-8_Shallow	7.55E-13	--	3.93E-07	--
316-1_Shallow_1	4.58E-11	--	1.74E-05	--
316-1_Shallow_3	7.45E-11	--	1.85E-04	--
316-1_Shallow_4	1.94E-14	--	0.00E+00	--
316-2_Shallow_1	0.00E+00	--	0.00E+00	--
316-2_Shallow_2	2.65E-13	--	0.00E+00	--
316-2_Shallow_3	1.89E-11	--	7.31E-06	--
316-5_Shallow_1	7.24E-12	--	2.81E-06	--
316-5_Shallow_2	3.56E-08	--	5.24E-06	--
316-5_Shallow_Focused	1.02E-11	--	3.93E-06	--
331 LSLDF_Shallow_Focused	1.49E-10	--	1.47E-04	--
600-243_Shallow	1.51E-08	--	3.77E-03	--
600-259_Shallow	0.00E+00	--	0.00E+00	--
600-259_Shallow_Focused	0.00E+00	--	0.00E+00	--
600-47_Shallow	6.17E-12	--	4.40E-06	--
618-1_Shallow	3.83E-11	--	1.20E-04	--
618-1_Shallow_Focused	6.03E-11	--	1.76E-04	--
618-12_Shallow	2.02E-11	--	7.82E-06	--
618-13_Shallow	8.70E-11	--	1.36E-04	--
618-13_Shallow_Focused	8.96E-11	--	1.10E-04	--
618-2_Shallow	4.48E-12	--	4.11E-06	--

Table G-42. Summary of MTCA Method C Inhalation Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Shallow Zone Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Non-Cancer Hazard Index	Hazard Drivers
618-3_Shallow	6.60E-12	--	4.73E-06	--
618-3_Shallow_Focused	0.00E+00	--	0.00E+00	--
618-4_Shallow	7.54E-12	--	2.92E-06	--
618-5_Shallow	1.01E-11	--	3.93E-06	--
618-7_Shallow_1	5.30E-11	--	1.32E-04	--
618-7_Shallow_2	5.37E-11	--	1.41E-04	--
618-7_Shallow_3	5.11E-11	--	1.43E-04	--
618-7_Shallow_4	4.75E-11	--	1.18E-04	--
618-7_Shallow_Focused	7.33E-11	--	1.80E-04	--
618-8_Shallow	9.67E-12	--	6.50E-06	--
618-9_Shallow_Focused	1.58E-07	--	2.97E-03	--
628-4_Shallow	9.56E-12	--	3.53E-06	--
UPR-300-17_Shallow	3.65E-09	--	1.07E-03	--
UPR-300-46_Shallow	2.68E-09	--	7.71E-04	--

Table G-43. Summary of Industrial Worker Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Overburden Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
300-272_Overburden_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-44_Overburden_Focused	1.04E-07	--	1.22E-07	--	2.26E-07	8.67E-03	--
300-49_Overburden	8.57E-08	--	5.13E-07	--	5.99E-07	7.13E-02	--
300-50_Overburden	8.28E-08	--	3.49E-06	--	3.58E-06	3.01E-02	--
316-1_Overburden	0.00E+00	--	1.12E-05	--	1.12E-05	0.00E+00	--
600-259_Overburden	0.00E+00	--	1.92E-07	--	1.92E-07	0.00E+00	--
618-2_Overburden	3.09E-08	--	5.73E-07	--	6.04E-07	2.85E-03	--
618-4_Overburden_2	2.86E-08	--	5.72E-07	--	6.01E-07	2.38E-03	--
618-4_Overburden_3	0.00E+00	--	2.31E-07	--	2.31E-07	0.00E+00	--
618-4_Overburden_4	0.00E+00	--	3.86E-07	--	3.86E-07	0.00E+00	--
618-5_Overburden	3.89E-08	--	1.85E-06	--	1.89E-06	3.29E-03	--
628-4_Overburden	3.86E-08	--	5.10E-07	--	5.48E-07	3.21E-03	--

Table G-44. Summary of MTCA Method C Inhalation Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Overburden Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Non-Cancer Hazard Index	Hazard Drivers
300-272_Overburden_Focused	0.00E+00	--	0.00E+00	--
300-44_Overburden_Focused	2.15E-11	--	8.32E-06	--
300-49_Overburden	2.00E-09	--	1.12E-03	--
300-50_Overburden	6.58E-11	--	1.39E-04	--
316-1_Overburden	0.00E+00	--	0.00E+00	--
600-259_Overburden	0.00E+00	--	0.00E+00	--
618-2_Overburden	6.37E-12	--	4.57E-06	--
618-4_Overburden_2	5.89E-12	--	2.28E-06	--
618-4_Overburden_3	0.00E+00	--	0.00E+00	--
618-4_Overburden_4	0.00E+00	--	0.00E+00	--
618-5_Overburden	8.18E-12	--	3.34E-06	--
628-4_Overburden	7.96E-12	--	3.08E-06	--

Table G-45. Summary of Industrial Worker Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Staging Pile Area Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
300-109_Staging Pile Area_Focused	3.07E-08	--	9.61E-07	--	9.92E-07	2.14E-02	--
618-2_Staging Pile	3.50E-08	--	1.98E-06	--	2.02E-06	3.49E-03	--
618-5_Staging Pile_4	3.77E-08	--	4.65E-07	--	5.02E-07	3.16E-03	--
618-5_Staging Pile_5	3.09E-08	--	9.64E-07	--	9.95E-07	2.57E-03	--

Table G-46. Summary of MTCA Method C Inhalation Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Staging Pile Area Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Non-Cancer Hazard Index	Hazard Drivers
300-109_Staging Pile Area_Focused	3.70E-11	--	1.14E-04	--
618-2_Staging Pile	7.22E-12	--	4.88E-06	--
618-5_Staging Pile_4	7.83E-12	--	3.08E-06	--
618-5_Staging Pile_5	6.37E-12	--	2.47E-06	--

Table G-47. Summary of Industrial Scenario Risk Estimates and Primary Contributors to Risk For Deep Zone Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Radiological Cancer Risk	Radiological Risk Drivers
618-1_Deep	2.03E-05	--
618-1_Deep_Focused	7.11E-05	--
618-2_Deep	7.93E-05	--
618-2_Deep_Focused	3.53E-05	--
618-4_Deep	1.05E-05	--
618-4_Deep_Focused	3.68E-06	--
618-5_Deep	4.38E-06	--
618-5_Deep_Focused	5.70E-06	--

Table G-48. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300 ASH PITS_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	5.20E+01	6.56E+04	7.92E-10	98.59%	--	--	--
300 ASH PITS_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	9.60E+01	9.38E+06	1.02E-11	1.27%	7.00E+07	1.37E-06	92.66%
300 ASH PITS_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	7.60E+01	6.91E+07	1.10E-12	0.14%	7.00E+08	1.09E-07	7.34%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**8.04E-10**	**--**	**--**	**1.48E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.04E-10**	**--**	**--**	**--**	**--**
300-10_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.35E+04	8.75E+04	1.54E-07	99.98%	1.05E+06	1.29E-02	99.98%
300-10_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.00E+02	9.38E+06	2.13E-11	0.01%	7.00E+07	2.86E-06	0.02%
300-10_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	2.30E+02	6.91E+07	3.33E-12	0.00%	7.00E+08	3.29E-07	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.54E-07**	**--**	**--**	**1.29E-02**	**--**
300-10_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.37E+00	2.83E+02	4.84E-07	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**4.84E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.38E-07**	**--**	**--**	**--**	**--**
300-109_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.22E+02	6.56E+04	1.86E-09	70.83%	7.00E+04	1.74E-03	98.81%
300-109_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.97E+01	6.56E+04	6.05E-10	23.05%	--	--	--
300-109_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	1.24E+00	1.80E+04	6.90E-11	2.63%	--	--	--
300-109_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	2.30E+00	1.80E+05	1.28E-11	0.49%	--	--	--
300-109_Shallow_Focused	non-Rad	Chrysene	218-01-9	µg/kg	1.77E+00	1.80E+06	9.84E-13	0.04%	--	--	--
300-109_Shallow_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	1.40E+01	1.80E+05	7.79E-11	2.97%	--	--	--
300-109_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	2.20E+01	--	--	--	1.05E+06	2.10E-05	1.19%
300-109_Shallow_Focused	non-Rad	Pyrene	129-00-0	µg/kg	1.56E+00	--	--	--	1.05E+08	1.49E-08	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.62E-09**	**--**	**--**	**1.76E-03**	**--**
300-109_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.40E+00	1.76E+03	7.97E-08	14.05%	--	--	--
300-109_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.38E+00	2.83E+02	4.88E-07	85.95%	--	--	--
Total Radiological Risk Estimate						**--**	**5.67E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.70E-07**	**--**	**--**	**--**	**--**
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.68E+01	6.56E+04	5.61E-10	45.92%	7.00E+04	5.26E-04	99.85%
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.94E+01	6.56E+04	2.96E-10	24.21%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	2.08E+00	1.80E+05	1.16E-11	0.95%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	3.30E+00	1.80E+04	1.84E-10	15.03%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	1.31E+00	1.80E+05	7.29E-12	0.60%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Fluoranthene	206-44-0	µg/kg	5.14E+00	--	--	--	1.40E+08	3.67E-08	0.01%
300-109_Staging Pile Area_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	2.92E+01	1.80E+05	1.62E-10	13.30%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Pyrene	129-00-0	µg/kg	6.96E+00	--	--	--	1.05E+08	6.63E-08	0.01%
300-109_Staging Pile Area_Focused	non-Rad	Tin	7440-31-5	µg/kg	1.45E+03	--	--	--	2.10E+09	6.90E-07	0.13%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.22E-09**	**--**	**--**	**5.27E-04**	**--**
300-109_Staging Pile Area_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	2.54E+00	1.76E+03	1.45E-07	15.05%	--	--	--
300-109_Staging Pile Area_Focused	Rad	Uranium-238	U-238	pCi/g	2.31E+00	2.83E+02	8.16E-07	84.95%	--	--	--
Total Radiological Risk Estimate						**--**	**9.61E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.62E-07**	**--**	**--**	**--**	**--**

Table G-48. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-259_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.22E+02	--	--	--	1.40E+06	2.30E-04	33.52%
300-259_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.80E+05	--	--	--	1.05E+09	4.57E-04	66.48%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**6.87E-04**	**--**
300-259_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.59E+00	1.76E+03	9.07E-08	16.00%	--	--	--
300-259_Shallow	Rad	Uranium-238	U-238	pCi/g	1.35E+00	2.83E+02	4.76E-07	84.00%	--	--	--
Total Radiological Risk Estimate						**--**	**5.67E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.67E-07**	**--**	**--**	**--**	**--**
300-260_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	9.22E+02	--	--	--	1.40E+06	6.59E-04	50.26%
300-260_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	8.36E+03	--	--	--	7.00E+08	1.19E-05	0.91%
300-260_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	7.33E+04	--	--	--	1.40E+08	5.24E-04	39.96%
300-260_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	5.37E+02	--	--	--	1.75E+07	3.07E-05	2.34%
300-260_Shallow_Focused	non-Rad	Silver	7440-22-4	µg/kg	2.06E+02	--	--	--	1.75E+07	1.18E-05	0.90%
300-260_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	7.74E+04	--	--	--	1.05E+09	7.37E-05	5.63%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**1.31E-03**	**--**
300-260_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	2.51E-01	6.14E+01	4.09E-07	21.20%	--	--	--
300-260_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.30E+00	2.83E+02	1.52E-06	78.80%	--	--	--
Total Radiological Risk Estimate						**--**	**1.93E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.93E-06**	**--**	**--**	**--**	**--**
300-275_Shallow_1	non-Rad	Acenaphthene	83-32-9	µg/kg	9.60E+02	--	--	--	2.10E+08	4.57E-06	0.85%
300-275_Shallow_1	non-Rad	Antimony	7440-36-0	µg/kg	2.60E+02	--	--	--	1.40E+06	1.86E-04	34.39%
300-275_Shallow_1	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	1.30E+00	1.80E+04	7.23E-11	86.15%	--	--	--
300-275_Shallow_1	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	1.87E+00	1.80E+05	1.04E-11	12.39%	--	--	--
300-275_Shallow_1	non-Rad	Chrysene	218-01-9	µg/kg	2.20E+00	1.80E+06	1.22E-12	1.46%	--	--	--
300-275_Shallow_1	non-Rad	Copper	7440-50-8	µg/kg	4.29E+04	--	--	--	1.40E+08	3.07E-04	56.77%
300-275_Shallow_1	non-Rad	Fluoranthene	206-44-0	µg/kg	2.30E+03	--	--	--	1.40E+08	1.64E-05	3.04%
300-275_Shallow_1	non-Rad	Fluorene	86-73-7	µg/kg	8.11E+01	--	--	--	1.40E+08	5.80E-07	0.11%
300-275_Shallow_1	non-Rad	Mercury	7439-97-6	µg/kg	1.67E+01	--	--	--	1.05E+06	1.59E-05	2.94%
300-275_Shallow_1	non-Rad	Strontium	7440-24-6	µg/kg	2.02E+04	--	--	--	2.10E+09	9.62E-06	1.78%
300-275_Shallow_1	non-Rad	Tin	7440-31-5	µg/kg	1.48E+03	--	--	--	2.10E+09	7.06E-07	0.13%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**8.39E-11**	**--**	**--**	**5.40E-04**	**--**
300-275_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	7.72E+00	1.76E+03	4.39E-07	9.37%	--	--	--
300-275_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.00E+00	6.14E+01	1.63E-06	34.77%	--	--	--
300-275_Shallow_1	Rad	Uranium-238	U-238	pCi/g	7.41E+00	2.83E+02	2.62E-06	55.86%	--	--	--
Total Radiological Risk Estimate						**--**	**4.68E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.68E-06**	**--**	**--**	**--**	**--**
300-275_Shallow_2	non-Rad	Acenaphthene	83-32-9	µg/kg	3.60E+00	--	--	--	2.10E+08	1.71E-08	0.04%
300-275_Shallow_2	non-Rad	Fluoranthene	206-44-0	µg/kg	5.60E+01	--	--	--	1.40E+08	4.00E-07	0.99%

Table G-48. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-275_Shallow_2	non-Rad	Fluorene	86-73-7	µg/kg	2.60E+00	--	--	--	1.40E+08	1.86E-08	0.05%
300-275_Shallow_2	non-Rad	Mercury	7439-97-6	µg/kg	2.80E+01	--	--	--	1.05E+06	2.67E-05	65.77%
300-275_Shallow_2	non-Rad	Strontium	7440-24-6	µg/kg	2.71E+04	--	--	--	2.10E+09	1.29E-05	31.81%
300-275_Shallow_2	non-Rad	Tin	7440-31-5	µg/kg	1.15E+03	--	--	--	2.10E+09	5.47E-07	1.35%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**4.05E-05**	**--**
300-275_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.31E+00	1.76E+03	7.43E-08	8.26%	--	--	--
300-275_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	2.37E-01	6.14E+01	3.86E-07	42.89%	--	--	--
300-275_Shallow_2	Rad	Uranium-238	U-238	pCi/g	1.24E+00	2.83E+02	4.40E-07	48.86%	--	--	--
Total Radiological Risk Estimate						**--**	**9.00E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.00E-07**	**--**	**--**	**--**	**--**
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1016	12674-11-2	µg/kg	1.03E+01	1.88E+06	5.49E-12	0.12%	2.45E+05	4.20E-05	2.07%
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1242	53469-21-9	µg/kg	1.64E+01	6.56E+04	2.50E-10	5.31%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.90E+02	6.56E+04	2.90E-09	61.55%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	8.44E+01	6.56E+04	1.29E-09	27.35%	7.00E+04	1.21E-03	59.48%
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.73E+01	6.56E+04	2.63E-10	5.60%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	2.28E+02	6.91E+07	3.30E-12	0.07%	7.00E+08	3.26E-07	0.02%
300-33, 300-41, 300-256_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	1.60E+01	--	--	--	1.05E+06	1.52E-05	0.75%
300-33, 300-41, 300-256_Shallow	non-Rad	Methylene chloride	75-09-2	µg/kg	2.91E+00	1.75E+07	1.66E-13	0.00%	2.10E+08	1.39E-08	0.00%
300-33, 300-41, 300-256_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	4.86E+02	--	--	--	1.75E+07	2.78E-05	1.37%
300-33, 300-41, 300-256_Shallow	non-Rad	Silver	7440-22-4	µg/kg	7.82E+02	--	--	--	1.75E+07	4.47E-05	2.20%
300-33, 300-41, 300-256_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	7.26E+03	--	--	--	1.05E+07	6.91E-04	34.10%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.70E-09**	**--**	**--**	**2.03E-03**	**--**
300-33, 300-41, 300-256_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	2.14E+00	1.76E+03	1.22E-07	8.69%	--	--	--
300-33, 300-41, 300-256_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	3.38E-01	6.14E+01	5.50E-07	39.34%	--	--	--
300-33, 300-41, 300-256_Shallow	Rad	Uranium-238	U-238	pCi/g	2.06E+00	2.83E+02	7.27E-07	51.97%	--	--	--
Total Radiological Risk Estimate						**--**	**1.40E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.40E-06**	**--**	**--**	**--**	**--**
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.30E+02	6.56E+04	5.03E-09	43.02%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.85E+02	6.56E+04	5.87E-09	50.20%	7.00E+04	5.50E-03	100.00%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.20E+01	6.56E+04	7.92E-10	6.78%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	2.21E+00	1.75E+07	1.26E-13	0.00%	2.10E+08	1.05E-08	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.17E-08**	**--**	**--**	**5.50E-03**	**--**
300-33, 300-41, 300-256_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	3.02E+00	1.76E+03	1.72E-07	18.31%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	2.17E+00	2.83E+02	7.67E-07	81.69%	--	--	--
Total Radiological Risk Estimate						**--**	**9.39E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.50E-07**	**--**	**--**	**--**	**--**
300-37_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.00E+02	6.56E+04	1.52E-09	3.03%	7.00E+04	1.43E-03	100.00%
300-37_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.20E+03	6.56E+04	4.88E-08	96.97%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.03E-08**	**--**	**--**	**1.43E-03**	**--**

Table G-48. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.03E-08**	**--**	**--**	**--**	**--**
300-44_Overburden_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	9.10E+03	8.75E+04	1.04E-07	100.00%	1.05E+06	8.67E-03	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.04E-07**	**--**	**--**	**8.67E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.04E-07**	**--**	**--**	**--**	**--**
300-44_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	4.10E+03	--	--	--	1.40E+06	2.93E-03	15.39%
300-44_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.69E+04	8.75E+04	1.93E-07	100.00%	1.05E+06	1.61E-02	84.61%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.93E-07**	**--**	**--**	**1.90E-02**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.93E-07**	**--**	**--**	**--**	**--**
300-45_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	8.60E+01	6.56E+04	1.31E-09	97.69%	--	--	--
300-45_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.90E+02	9.38E+06	3.09E-11	2.31%	7.00E+07	4.14E-06	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.34E-09**	**--**	**--**	**4.14E-06**	**--**
300-45_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.20E+00	2.83E+02	4.24E-07	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**4.24E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.25E-07**	**--**	**--**	**--**	**--**
300-49_Overburden	non-Rad	1,2,4-Trichlorobenzene	120-82-1	µg/kg	3.05E+01	4.53E+06	6.74E-12	0.01%	3.50E+07	8.72E-07	0.00%
300-49_Overburden	non-Rad	1,4-Dichlorobenzene	106-46-7	µg/kg	2.88E+01	2.43E+07	1.18E-12	0.00%	2.45E+08	1.17E-07	0.00%
300-49_Overburden	non-Rad	2,4-Dinitrotoluene	121-14-2	µg/kg	1.89E+01	4.23E+05	4.47E-11	0.09%	7.00E+06	2.70E-06	0.01%
300-49_Overburden	non-Rad	2-Chlorophenol	95-57-8	µg/kg	5.13E+01	--	--	--	1.75E+07	2.93E-06	0.01%
300-49_Overburden	non-Rad	4-Chloro-3-methylphenol	59-50-7	µg/kg	4.60E+01	--	--	--	3.50E+08	1.31E-07	0.00%
300-49_Overburden	non-Rad	Acenaphthene	83-32-9	µg/kg	3.07E+01	--	--	--	2.10E+08	1.46E-07	0.00%
300-49_Overburden	non-Rad	Antimony	7440-36-0	µg/kg	2.32E+02	--	--	--	1.40E+06	1.66E-04	0.35%
300-49_Overburden	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.01E+03	6.56E+04	4.58E-08	95.39%	7.00E+04	4.30E-02	91.14%
300-49_Overburden	non-Rad	Copper	7440-50-8	µg/kg	5.36E+05	--	--	--	1.40E+08	3.83E-03	8.12%
300-49_Overburden	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	5.16E+01	--	--	--	3.50E+08	1.47E-07	0.00%
300-49_Overburden	non-Rad	n-Nitrosodi-n-dipropylamine	621-64-7	µg/kg	3.97E+01	1.88E+04	2.12E-09	4.41%	--	--	--
300-49_Overburden	non-Rad	Pentachlorophenol	87-86-5	µg/kg	4.98E+01	1.09E+06	4.56E-11	0.09%	1.05E+08	4.75E-07	0.00%
300-49_Overburden	non-Rad	Phenol	108-95-2	µg/kg	5.00E+01	--	--	--	1.05E+09	4.76E-08	0.00%
300-49_Overburden	non-Rad	Pyrene	129-00-0	µg/kg	4.01E+01	--	--	--	1.05E+08	3.82E-07	0.00%
300-49_Overburden	non-Rad	Silver	7440-22-4	µg/kg	7.03E+02	--	--	--	1.75E+07	4.01E-05	0.09%
300-49_Overburden	non-Rad	Zinc	7440-66-6	µg/kg	1.42E+05	--	--	--	1.05E+09	1.35E-04	0.29%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.80E-08**	**--**	**--**	**4.71E-02**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.80E-08**	**--**	**--**	**--**	**--**
300-49_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	1.76E+02	--	--	--	1.40E+06	1.26E-04	77.99%
300-49_Shallow	non-Rad	Silver	7440-22-4	µg/kg	6.21E+02	--	--	--	1.75E+07	3.55E-05	22.01%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**1.61E-04**	**--**

Table G-48. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-49_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.32E+00	1.76E+03	7.50E-08	8.90%	--	--	--
300-49_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.40E-01	6.14E+01	3.91E-07	46.42%	--	--	--
300-49_Shallow	Rad	Uranium-238	U-238	pCi/g	1.06E+00	2.83E+02	3.76E-07	44.67%	--	--	--
Total Radiological Risk Estimate						**--**	**8.42E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.42E-07**	**--**	**--**	**--**	**--**
300-50_Overburden	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.34E+01	6.56E+04	5.10E-10	0.62%	7.00E+04	4.78E-04	6.31%
300-50_Overburden	non-Rad	Aroclor-1260	11096-82-5	µg/kg	2.29E+02	6.56E+04	3.49E-09	4.22%	--	--	--
300-50_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	6.90E+03	8.75E+04	7.88E-08	95.17%	1.05E+06	6.57E-03	86.70%
300-50_Overburden	non-Rad	Copper	7440-50-8	µg/kg	6.45E+04	--	--	--	1.40E+08	4.61E-04	6.08%
300-50_Overburden	non-Rad	Silver	7440-22-4	µg/kg	1.20E+03	--	--	--	1.75E+07	6.87E-05	0.91%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**8.28E-08**	**--**	**--**	**7.58E-03**	**--**
300-50_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	6.03E+00	1.76E+03	3.43E-07	10.80%	--	--	--
300-50_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	4.49E-01	6.14E+01	7.31E-07	23.00%	--	--	--
300-50_Overburden	Rad	Uranium-238	U-238	pCi/g	5.95E+00	2.83E+02	2.10E-06	66.20%	--	--	--
Total Radiological Risk Estimate						**--**	**3.18E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.26E-06**	**--**	**--**	**--**	**--**
300-50_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.00E+03	--	--	--	1.40E+06	2.14E-03	52.03%
300-50_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.26E+02	6.56E+04	1.93E-09	99.89%	7.00E+04	1.80E-03	43.82%
300-50_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.93E+01	9.38E+06	2.06E-12	0.11%	7.00E+07	2.75E-07	0.01%
300-50_Shallow	non-Rad	Silver	7440-22-4	µg/kg	2.99E+03	--	--	--	1.75E+07	1.71E-04	4.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.93E-09**	**--**	**--**	**4.12E-03**	**--**
300-50_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	7.89E+00	1.76E+03	4.49E-07	9.97%	--	--	--
300-50_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	6.64E-01	6.14E+01	1.08E-06	24.01%	--	--	--
300-50_Shallow	Rad	Uranium-238	U-238	pCi/g	8.41E+00	2.83E+02	2.97E-06	66.02%	--	--	--
Total Radiological Risk Estimate						**--**	**4.50E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.51E-06**	**--**	**--**	**--**	**--**
316-1_Overburden	Rad	Cobalt-60	10198-40-0	pCi/g	3.18E-01	9.40E+00	3.38E-06	31.81%	--	--	--
316-1_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	1.30E+01	1.76E+03	7.37E-07	6.93%	--	--	--
316-1_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	1.08E+00	6.14E+01	1.76E-06	16.54%	--	--	--
316-1_Overburden	Rad	Uranium-238	U-238	pCi/g	1.35E+01	2.83E+02	4.76E-06	44.72%	--	--	--
Total Radiological Risk Estimate						**--**	**1.06E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.06E-05**	**--**	**--**	**--**	**--**
316-1_Shallow_1	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.00E+03	6.56E+04	4.57E-08	17.38%	--	--	--
316-1_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	1.90E+04	8.75E+04	2.17E-07	82.62%	1.05E+06	1.81E-02	99.99%
316-1_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.86E+01	9.38E+06	7.31E-12	0.00%	7.00E+07	9.80E-07	0.01%
316-1_Shallow_1	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	9.77E+01	6.91E+07	1.41E-12	0.00%	7.00E+08	1.40E-07	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.63E-07**	**--**	**--**	**1.81E-02**	**--**

Table G-48. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-1_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.21E+00	6.14E+01	1.98E-06	16.79%	--	--	--
316-1_Shallow_1	Rad	Uranium-238	U-238	pCi/g	2.77E+01	2.83E+02	9.79E-06	83.21%	--	--	--
Total Radiological Risk Estimate						**--**	**1.18E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.20E-05**	**--**	**--**	**--**	**--**
316-1_Shallow_3	non-Rad	Antimony	7440-36-0	µg/kg	4.90E+02	--	--	--	1.40E+06	3.50E-04	2.35%
316-1_Shallow_3	non-Rad	Aroclor-1254	11097-69-1	µg/kg	9.82E+01	6.56E+04	1.50E-09	85.28%	7.00E+04	1.40E-03	9.41%
316-1_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	3.42E+02	9.38E+06	3.65E-11	2.08%	7.00E+07	4.89E-06	0.03%
316-1_Shallow_3	non-Rad	Chromium	7440-47-3	µg/kg	5.05E+04	--	--	--	5.25E+09	9.61E-06	0.06%
316-1_Shallow_3	non-Rad	Copper	7440-50-8	µg/kg	1.37E+06	--	--	--	1.40E+08	9.76E-03	65.43%
316-1_Shallow_3	non-Rad	Heptachlor epoxide	1024-57-3	µg/kg	3.20E+00	1.44E+04	2.22E-10	12.64%	4.55E+04	7.03E-05	0.47%
316-1_Shallow_3	non-Rad	Mercury	7439-97-6	µg/kg	1.11E+03	--	--	--	1.05E+06	1.05E-03	7.06%
316-1_Shallow_3	non-Rad	Nickel	7440-02-0	µg/kg	9.47E+04	--	--	--	7.00E+07	1.35E-03	9.06%
316-1_Shallow_3	non-Rad	Phenol	108-95-2	µg/kg	2.80E+01	--	--	--	1.05E+09	2.67E-08	0.00%
316-1_Shallow_3	non-Rad	Selenium	7782-49-2	µg/kg	1.44E+03	--	--	--	1.75E+07	8.25E-05	0.55%
316-1_Shallow_3	non-Rad	Silver	7440-22-4	µg/kg	1.32E+04	--	--	--	1.75E+07	7.54E-04	5.05%
316-1_Shallow_3	non-Rad	Zinc	7440-66-6	µg/kg	8.20E+04	--	--	--	1.05E+09	7.81E-05	0.52%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.76E-09**	**--**	**--**	**1.49E-02**	**--**
316-1_Shallow_3	Rad	Cobalt-60	10198-40-0	pCi/g	2.32E+00	9.40E+00	2.47E-05	65.65%	--	--	--
316-1_Shallow_3	Rad	Uranium-233/234	U-233/234	pCi/g	2.27E+01	1.76E+03	1.29E-06	3.43%	--	--	--
316-1_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	2.64E+00	6.14E+01	4.29E-06	11.40%	--	--	--
316-1_Shallow_3	Rad	Uranium-238	U-238	pCi/g	2.08E+01	2.83E+02	7.36E-06	19.52%	--	--	--
Total Radiological Risk Estimate						**--**	**3.77E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.77E-05**	**--**	**--**	**--**	**--**
316-1_Shallow_4	non-Rad	Aroclor-1254	11097-69-1	µg/kg	6.20E+01	6.56E+04	9.45E-10	100.00%	7.00E+04	8.86E-04	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**9.45E-10**	**--**	**--**	**8.86E-04**	**--**
316-1_Shallow_4	Rad	Cobalt-60	10198-40-0	pCi/g	1.20E-01	9.40E+00	1.28E-06	14.26%	--	--	--
316-1_Shallow_4	Rad	Uranium-233/234	U-233/234	pCi/g	1.61E+01	1.76E+03	9.19E-07	10.27%	--	--	--
316-1_Shallow_4	Rad	Uranium-235	15117-96-1	pCi/g	1.05E+00	6.14E+01	1.71E-06	19.11%	--	--	--
316-1_Shallow_4	Rad	Uranium-238	U-238	pCi/g	1.43E+01	2.83E+02	5.04E-06	56.36%	--	--	--
Total Radiological Risk Estimate						**--**	**8.95E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.95E-06**	**--**	**--**	**--**	**--**
316-2_Shallow_1	Rad	Cobalt-60	10198-40-0	pCi/g	9.22E-02	9.40E+00	9.80E-07	1.96%	--	--	--
316-2_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	8.64E+01	1.76E+03	4.92E-06	9.81%	--	--	--
316-2_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.22E+01	6.14E+01	1.99E-05	39.66%	--	--	--
316-2_Shallow_1	Rad	Uranium-238	U-238	pCi/g	6.88E+01	2.83E+02	2.43E-05	48.57%	--	--	--
Total Radiological Risk Estimate						**--**	**5.01E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.01E-05**	**--**	**--**	**--**	**--**

Table G-48. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-2_Shallow_2	non-Rad	Aroclor-1248	12672-29-6	µg/kg	6.97E+02	6.56E+04	1.06E-08	82.09%	--	--	--
316-2_Shallow_2	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.20E+01	6.56E+04	6.40E-10	4.95%	7.00E+04	6.00E-04	100.00%
316-2_Shallow_2	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.10E+02	6.56E+04	1.68E-09	12.96%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.29E-08**	**--**	**--**	**6.00E-04**	**--**
316-2_Shallow_2	Rad	Cobalt-60	10198-40-0	pCi/g	4.53E-01	9.40E+00	4.82E-06	7.60%	--	--	--
316-2_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.15E+02	1.76E+03	6.52E-06	10.29%	--	--	--
316-2_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	1.11E+01	6.14E+01	1.81E-05	28.51%	--	--	--
316-2_Shallow_2	Rad	Uranium-238	U-238	pCi/g	9.62E+01	2.83E+02	3.40E-05	53.61%	--	--	--
Total Radiological Risk Estimate						**--**	**6.34E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.34E-05**	**--**	**--**	**--**	**--**
316-2_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	8.00E+03	8.75E+04	9.14E-08	99.97%	1.05E+06	7.62E-03	99.95%
316-2_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.60E+02	9.38E+06	2.77E-11	0.03%	7.00E+07	3.71E-06	0.05%
316-2_Shallow_3	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	1.80E+02	6.91E+07	2.61E-12	0.00%	7.00E+08	2.57E-07	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**9.15E-08**	**--**	**--**	**7.62E-03**	**--**
316-2_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	9.09E-01	6.14E+01	1.48E-06	14.63%	--	--	--
316-2_Shallow_3	Rad	Uranium-238	U-238	pCi/g	2.44E+01	2.83E+02	8.64E-06	85.37%	--	--	--
Total Radiological Risk Estimate						**--**	**1.01E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.02E-05**	**--**	**--**	**--**	**--**
316-5_Shallow_1	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	3.80E+01	1.80E+05	2.11E-10	92.55%	--	--	--
316-5_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.46E+02	9.38E+06	1.56E-11	6.82%	7.00E+07	2.08E-06	93.59%
316-5_Shallow_1	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	1.00E+02	6.91E+07	1.45E-12	0.63%	7.00E+08	1.43E-07	6.41%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.28E-10**	**--**	**--**	**2.23E-06**	**--**
316-5_Shallow_1	Rad	Americium-241	14596-10-2	pCi/g	4.79E-01	9.42E+02	5.08E-08	0.07%	--	--	--
316-5_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	2.31E+00	1.77E+01	1.31E-05	17.44%	--	--	--
316-5_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.86E+01	6.14E+01	3.03E-05	40.43%	--	--	--
316-5_Shallow_1	Rad	Uranium-238	U-238	pCi/g	8.92E+01	2.83E+02	3.15E-05	42.06%	--	--	--
Total Radiological Risk Estimate						**--**	**7.49E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.49E-05**	**--**	**--**	**--**	**--**
316-5_Shallow_2	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	1.40E+02	6.56E+05	2.13E-10	83.57%	1.40E+07	1.00E-05	4.57%
316-5_Shallow_2	non-Rad	2-Butoxyethanol	111-76-2	µg/kg	2.40E+02	--	--	--	1.75E+09	1.37E-07	0.06%
316-5_Shallow_2	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.80E+02	9.38E+06	1.92E-11	7.53%	7.00E+07	2.57E-06	1.17%
316-5_Shallow_2	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	1.10E+02	6.91E+07	1.59E-12	0.62%	7.00E+08	1.57E-07	0.07%
316-5_Shallow_2	non-Rad	Chrysene	218-01-9	µg/kg	3.80E+01	1.80E+06	2.11E-11	8.28%	--	--	--
316-5_Shallow_2	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	1.46E+02	--	--	--	3.50E+08	4.18E-07	0.19%
316-5_Shallow_2	non-Rad	Silver	7440-22-4	µg/kg	3.60E+03	--	--	--	1.75E+07	2.06E-04	93.93%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.55E-10**	**--**	**--**	**2.19E-04**	**--**
316-5_Shallow_2	Rad	Americium-241	14596-10-2	pCi/g	1.24E-01	9.42E+02	1.32E-08	0.03%	--	--	--
316-5_Shallow_2	Rad	Cesium-137	10045-97-3	pCi/g	1.71E+00	1.77E+01	9.68E-06	19.55%	--	--	--
316-5_Shallow_2	Rad	Cobalt-60	10198-40-0	pCi/g	1.18E-01	9.40E+00	1.26E-06	2.53%	--	--	--

Table G-48. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-5_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	9.04E+00	6.14E+01	1.47E-05	29.73%	--	--	--
316-5_Shallow_2	Rad	Uranium-238	U-238	pCi/g	6.75E+01	2.83E+02	2.39E-05	48.16%	--	--	--
Total Radiological Risk Estimate						**--**	**4.95E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.95E-05**	**--**	**--**	**--**	**--**
316-5_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	5.70E+01	6.56E+04	8.69E-10	31.61%	--	--	--
316-5_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	7.00E+01	6.56E+04	1.07E-09	38.82%	7.00E+04	1.00E-03	99.30%
316-5_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.20E+01	6.56E+04	7.92E-10	28.84%	--	--	--
316-5_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.90E+02	9.38E+06	2.03E-11	0.74%	7.00E+07	2.71E-06	0.27%
316-5_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	1.50E+03	--	--	--	3.50E+08	4.29E-06	0.43%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.75E-09**	**--**	**--**	**1.01E-03**	**--**
316-5_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.83E+00	1.77E+01	1.03E-05	26.64%	--	--	--
316-5_Shallow_Focused	Rad	Europium-155	14391-16-3	pCi/g	7.19E-02	9.66E+02	7.44E-09	0.02%	--	--	--
316-5_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	7.67E+00	6.14E+01	1.25E-05	32.19%	--	--	--
316-5_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.52E+01	2.83E+02	1.60E-05	41.15%	--	--	--
Total Radiological Risk Estimate						**--**	**3.88E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.88E-05**	**--**	**--**	**--**	**--**
331 LSLDF_Shallow_Focused	non-Rad	4,4'-DDE (Dichlorodiphenyldichloroethylene)	72-55-9	µg/kg	2.50E+01	3.86E+05	6.48E-11	0.44%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	5.90E+02	--	--	--	3.15E+09	1.87E-07	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Aldrin	309-00-2	µg/kg	5.60E-01	7.72E+03	7.25E-11	0.49%	1.05E+05	5.33E-06	0.04%
331 LSLDF_Shallow_Focused	non-Rad	Alpha-BHC	319-84-6	µg/kg	3.90E-01	2.08E+04	1.87E-11	0.13%	2.80E+07	1.39E-08	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	3.60E+02	--	--	--	1.40E+06	2.57E-04	2.00%
331 LSLDF_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	8.50E+02	6.56E+04	1.30E-08	87.54%	7.00E+04	1.21E-02	94.66%
331 LSLDF_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	9.10E+02	9.38E+06	9.71E-11	0.66%	7.00E+07	1.30E-05	0.10%
331 LSLDF_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	3.40E+02	6.91E+07	4.92E-12	0.03%	7.00E+08	4.86E-07	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Dieldrin	60-57-1	µg/kg	1.30E+01	8.20E+03	1.58E-09	10.71%	1.75E+05	7.43E-05	0.58%
331 LSLDF_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	9.80E+01	--	--	--	3.50E+08	2.80E-07	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Endosulfan I	959-98-8	µg/kg	1.90E+00	--	--	--	2.10E+07	9.05E-08	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Endosulfan II	33213-65-9	µg/kg	3.10E+00	--	--	--	2.10E+07	1.48E-07	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	1.10E+02	--	--	--	1.05E+06	1.05E-04	0.82%
331 LSLDF_Shallow_Focused	non-Rad	Methoxychlor	72-43-5	µg/kg	3.30E+00	--	--	--	1.75E+07	1.89E-07	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	1.10E+01	1.75E+07	6.29E-13	0.00%	2.10E+08	5.24E-08	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	5.90E+02	--	--	--	1.75E+07	3.37E-05	0.26%
331 LSLDF_Shallow_Focused	non-Rad	Nitrogen in Nitrite and Nitrate	NO2-N	µg/kg	9.50E+03	--	--	--	5.60E+09	1.70E-06	0.01%
331 LSLDF_Shallow_Focused	non-Rad	Silver	7440-22-4	µg/kg	1.10E+03	--	--	--	1.75E+07	6.29E-05	0.49%
331 LSLDF_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	1.37E+05	--	--	--	1.05E+09	1.30E-04	1.02%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.48E-08**	**--**	**--**	**1.28E-02**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.48E-08**	**--**	**--**	**--**	**--**
600-243_Shallow	non-Rad	2-Methylnaphthalene	91-57-6	µg/kg	2.79E+02	--	--	--	1.40E+07	1.99E-05	0.50%
600-243_Shallow	non-Rad	Anthracene	120-12-7	µg/kg	3.13E+01	--	--	--	1.05E+09	2.98E-08	0.00%

Table G-48. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
600-243_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	1.30E+03	--	--	--	1.40E+06	9.29E-04	23.50%
600-243_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.70E+01	6.56E+04	4.11E-10	10.34%	7.00E+04	3.86E-04	9.76%
600-243_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.84E+01	6.56E+04	2.80E-10	7.05%	--	--	--
600-243_Shallow	non-Rad	Barium	7440-39-3	µg/kg	2.92E+05	--	--	--	7.00E+08	4.17E-04	10.56%
600-243_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	4.33E+01	1.80E+05	2.41E-10	6.05%	--	--	--
600-243_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	4.27E+01	1.80E+04	2.37E-09	59.70%	--	--	--
600-243_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	4.63E+01	1.80E+05	2.58E-10	6.48%	--	--	--
600-243_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	3.18E+01	1.80E+05	1.77E-10	4.44%	--	--	--
600-243_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.08E+03	--	--	--	7.00E+06	2.97E-04	7.52%
600-243_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	4.32E+02	9.38E+06	4.61E-11	1.16%	7.00E+07	6.17E-06	0.16%
600-243_Shallow	non-Rad	Boron	7440-42-8	µg/kg	2.94E+05	--	--	--	7.00E+08	4.21E-04	10.64%
600-243_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	7.93E+02	--	--	--	3.50E+06	2.26E-04	5.73%
600-243_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	6.26E+01	1.80E+06	3.48E-11	0.88%	--	--	--
600-243_Shallow	non-Rad	Copper	7440-50-8	µg/kg	5.40E+04	--	--	--	1.40E+08	3.86E-04	9.76%
600-243_Shallow	non-Rad	Dibenzofuran	132-64-9	µg/kg	7.85E+01	--	--	--	5.83E+06	1.35E-05	0.34%
600-243_Shallow	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	3.72E+01	--	--	--	3.50E+08	1.06E-07	0.00%
600-243_Shallow	non-Rad	Fluoranthene	206-44-0	µg/kg	7.91E+01	--	--	--	1.40E+08	5.65E-07	0.01%
600-243_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	2.80E+01	1.80E+05	1.56E-10	3.91%	--	--	--
600-243_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	1.87E+03	--	--	--	1.75E+07	1.07E-04	2.70%
600-243_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	2.04E+02	--	--	--	7.00E+07	2.91E-06	0.07%
600-243_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	2.14E+04	--	--	--	7.00E+07	3.06E-04	7.73%
600-243_Shallow	non-Rad	Pyrene	129-00-0	µg/kg	7.00E+01	--	--	--	1.05E+08	6.66E-07	0.02%
600-243_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	5.71E+03	--	--	--	1.75E+07	3.26E-04	8.25%
600-243_Shallow	non-Rad	Silver	7440-22-4	µg/kg	5.00E+02	--	--	--	1.75E+07	2.86E-05	0.72%
600-243_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	8.41E+04	--	--	--	1.05E+09	8.01E-05	2.03%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.98E-09**	**--**	**--**	**3.95E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.98E-09**	**--**	**--**	**--**	**--**
600-47_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.36E+00	1.76E+03	7.74E-08	12.18%	--	--	--
600-47_Shallow	Rad	Uranium-238	U-238	pCi/g	1.58E+00	2.83E+02	5.58E-07	87.82%	--	--	--
Total Radiological Risk Estimate						**--**	**6.36E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.36E-07**	**--**	**--**	**--**	**--**
618-1_Deep	Rad	Uranium-233/234	U-233/234	pCi/g	3.31E+01	1.76E+03	1.88E-06	10.67%	--	--	--
618-1_Deep	Rad	Uranium-235	15117-96-1	pCi/g	2.74E+00	6.14E+01	4.46E-06	25.28%	--	--	--
618-1_Deep	Rad	Uranium-238	U-238	pCi/g	3.20E+01	2.83E+02	1.13E-05	64.05%	--	--	--
Total Radiological Risk Estimate						**--**	**1.77E-05**	**--**	**--**	**--**	**--**
618-1_Deep_Focused	Rad	Cesium-137	10045-97-3	pCi/g	6.52E+00	1.77E+01	3.68E-05	51.80%	--	--	--
618-1_Deep_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	6.99E+01	1.76E+03	3.98E-06	5.59%	--	--	--
618-1_Deep_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.46E+00	6.14E+01	7.26E-06	10.21%	--	--	--
618-1_Deep_Focused	Rad	Uranium-238	U-238	pCi/g	6.52E+01	2.83E+02	2.30E-05	32.40%	--	--	--

Table G-48. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
Total Radiological Risk Estimate						**--**	**7.11E-05**	**--**	**--**	**--**	**--**
618-1_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.64E+02	6.56E+04	4.02E-09	83.15%	7.00E+04	3.77E-03	99.22%
618-1_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.35E+01	6.56E+04	8.15E-10	16.85%	--	--	--
618-1_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	3.10E+01	--	--	--	1.05E+06	2.95E-05	0.78%
618-1_Shallow	non-Rad	Nitrogen in Nitrite and Nitrate	NO2-N	µg/kg	3.00E+02	--	--	--	5.60E+09	5.36E-08	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.84E-09**	**--**	**--**	**3.80E-03**	**--**
618-1_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.93E+00	1.76E+03	1.10E-07	17.07%	--	--	--
618-1_Shallow	Rad	Uranium-238	U-238	pCi/g	1.51E+00	2.83E+02	5.34E-07	82.93%	--	--	--
Total Radiological Risk Estimate						**--**	**6.43E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.48E-07**	**--**	**--**	**--**	**--**
618-1_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	1.22E+07	--	--	--	3.50E+09	3.49E-03	18.36%
618-1_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	4.55E+02	--	--	--	1.40E+06	3.25E-04	1.71%
618-1_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.51E+01	6.56E+04	5.35E-10	3.27%	--	--	--
618-1_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	9.81E+02	6.56E+04	1.49E-08	91.50%	7.00E+04	1.40E-02	73.80%
618-1_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.60E+01	6.56E+04	8.53E-10	5.22%	--	--	--
618-1_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	1.95E+04	--	--	--	5.25E+09	3.71E-06	0.02%
618-1_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	2.38E+04	--	--	--	1.40E+08	1.70E-04	0.90%
618-1_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	1.98E+02	--	--	--	1.05E+06	1.89E-04	0.99%
618-1_Shallow_Focused	non-Rad	Nitrogen in Nitrite and Nitrate	NO2-N	µg/kg	2.60E+02	--	--	--	5.60E+09	4.64E-08	0.00%
618-1_Shallow_Focused	non-Rad	Silver	7440-22-4	µg/kg	1.12E+03	--	--	--	1.75E+07	6.40E-05	0.34%
618-1_Shallow_Focused	non-Rad	Uranium	7440-61-1	µg/kg	7.08E+03	--	--	--	1.05E+07	6.74E-04	3.55%
618-1_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	6.81E+04	--	--	--	1.05E+09	6.49E-05	0.34%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.63E-08**	**--**	**--**	**1.90E-02**	**--**
618-1_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.13E+01	1.76E+03	6.43E-07	12.47%	--	--	--
618-1_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	9.87E-01	6.14E+01	1.61E-06	31.16%	--	--	--
618-1_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	8.23E+00	2.83E+02	2.91E-06	56.37%	--	--	--
Total Radiological Risk Estimate						**--**	**5.16E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.18E-06**	**--**	**--**	**--**	**--**
618-12_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	8.56E+03	8.75E+04	9.78E-08	99.99%	1.05E+06	8.15E-03	99.99%
618-12_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.30E+01	9.38E+06	6.72E-12	0.01%	7.00E+07	9.00E-07	0.01%
618-12_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	6.00E+01	6.91E+07	8.69E-13	0.00%	7.00E+08	8.57E-08	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**9.78E-08**	**--**	**--**	**8.15E-03**	**--**
618-12_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	4.71E-01	6.14E+01	7.66E-07	16.84%	--	--	--
618-12_Shallow	Rad	Uranium-238	U-238	pCi/g	1.07E+01	2.83E+02	3.78E-06	83.16%	--	--	--
Total Radiological Risk Estimate						**--**	**4.55E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.65E-06**	**--**	**--**	**--**	**--**
618-13_Shallow	non-Rad	Acetone	67-64-1	µg/kg	8.64E+00	--	--	--	3.15E+09	2.74E-09	0.00%

Table G-48. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-13_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.12E+02	--	--	--	1.40E+06	2.23E-04	99.76%
618-13_Shallow	non-Rad	Methylene chloride	75-09-2	µg/kg	5.12E+00	1.75E+07	2.93E-13	100.00%	2.10E+08	2.44E-08	0.01%
618-13_Shallow	non-Rad	Tin	7440-31-5	µg/kg	1.05E+03	--	--	--	2.10E+09	5.00E-07	0.22%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.93E-13**	**--**	**--**	**2.23E-04**	**--**
618-13_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.92E+00	1.76E+03	1.09E-07	15.39%	--	--	--
618-13_Shallow	Rad	Uranium-238	U-238	pCi/g	1.70E+00	2.83E+02	6.01E-07	84.61%	--	--	--
Total Radiological Risk Estimate						**--**	**7.10E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.10E-07**	**--**	**--**	**--**	**--**
618-13_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	5.90E+00	--	--	--	3.15E+09	1.87E-09	0.00%
618-13_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	2.33E+02	--	--	--	1.40E+06	1.66E-04	91.90%
618-13_Shallow_Focused	non-Rad	Hexavalent Chromium	18540-29-9	µg/kg	1.50E+02	--	--	--	1.05E+07	1.43E-05	7.89%
618-13_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	5.03E+00	1.75E+07	2.87E-13	100.00%	2.10E+08	2.40E-08	0.01%
618-13_Shallow_Focused	non-Rad	Tin	7440-31-5	µg/kg	7.45E+02	--	--	--	2.10E+09	3.55E-07	0.20%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.87E-13**	**--**	**--**	**1.81E-04**	**--**
618-13_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.14E+00	1.76E+03	6.49E-08	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**6.49E-08**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.49E-08**	**--**	**--**	**--**	**--**
618-2_Deep	Rad	Americium-241	14596-10-2	pCi/g	7.94E+00	9.42E+02	8.43E-07	1.15%	--	--	--
618-2_Deep	Rad	Plutonium-238	13981-16-3	pCi/g	1.50E+00	3.37E+03	4.45E-08	0.06%	--	--	--
618-2_Deep	Rad	Plutonium-239/240	PU-239/240	pCi/g	9.06E+01	2.91E+03	3.12E-06	4.24%	--	--	--
618-2_Deep	Rad	Plutonium-241	14119-32-5	pCi/g	4.20E+01	3.11E+04	1.35E-07	0.18%	--	--	--
618-2_Deep	Rad	Total beta radiostrontium	SR-RAD	pCi/g	1.16E+01	1.97E+03	5.89E-07	0.80%	--	--	--
618-2_Deep	Rad	Uranium-233/234	U-233/234	pCi/g	1.61E+02	1.76E+03	9.16E-06	12.47%	--	--	--
618-2_Deep	Rad	Uranium-235	15117-96-1	pCi/g	7.76E-01	6.14E+01	1.26E-06	1.72%	--	--	--
618-2_Deep	Rad	Uranium-238	U-238	pCi/g	1.65E+02	2.83E+02	5.83E-05	79.37%	--	--	--
Total Radiological Risk Estimate						**--**	**7.35E-05**	**--**	**--**	**--**	**--**
618-2_Deep_Focused	Rad	Americium-241	14596-10-2	pCi/g	9.19E+00	9.42E+02	9.76E-07	2.76%	--	--	--
618-2_Deep_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.12E+00	1.77E+01	6.33E-06	17.91%	--	--	--
618-2_Deep_Focused	Rad	Plutonium-238	13981-16-3	pCi/g	1.57E+00	3.37E+03	4.66E-08	0.13%	--	--	--
618-2_Deep_Focused	Rad	Plutonium-239/240	PU-239/240	pCi/g	9.16E+01	2.91E+03	3.15E-06	8.92%	--	--	--
618-2_Deep_Focused	Rad	Plutonium-241	14119-32-5	pCi/g	3.29E+01	3.11E+04	1.06E-07	0.30%	--	--	--
618-2_Deep_Focused	Rad	Total beta radiostrontium	SR-RAD	pCi/g	7.20E+00	1.97E+03	3.66E-07	1.04%	--	--	--
618-2_Deep_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	4.78E+01	1.76E+03	2.72E-06	7.70%	--	--	--
618-2_Deep_Focused	Rad	Uranium-235	15117-96-1	pCi/g	2.42E+00	6.14E+01	3.94E-06	11.15%	--	--	--
618-2_Deep_Focused	Rad	Uranium-238	U-238	pCi/g	5.01E+01	2.83E+02	1.77E-05	50.10%	--	--	--
Total Radiological Risk Estimate						**--**	**3.53E-05**	**--**	**--**	**--**	**--**
618-2_Overburden	non-Rad	Selenium	7782-49-2	µg/kg	1.00E+03	--	--	--	1.75E+07	5.71E-05	97.80%

Table G-48. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-2_Overburden	non-Rad	Tin	7440-31-5	µg/kg	2.70E+03	--	--	--	2.10E+09	1.29E-06	2.20%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**5.84E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-2_Shallow	non-Rad	Tin	7440-31-5	µg/kg	2.40E+03	--	--	--	2.10E+09	1.14E-06	0.26%
618-2_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	4.53E+03	--	--	--	1.05E+07	4.31E-04	99.74%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**4.33E-04**	**--**
618-2_Shallow	Rad	Americium-241	14596-10-2	pCi/g	8.13E-01	9.42E+02	8.63E-08	0.61%	--	--	--
618-2_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	2.24E+00	1.77E+01	1.27E-05	88.77%	--	--	--
618-2_Shallow	Rad	Plutonium-239/240	PU-239/240	pCi/g	7.67E+00	2.91E+03	2.64E-07	1.85%	--	--	--
618-2_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	2.20E+00	1.76E+03	1.25E-07	0.88%	--	--	--
618-2_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.14E-01	6.14E+01	3.49E-07	2.44%	--	--	--
618-2_Shallow	Rad	Uranium-238	U-238	pCi/g	2.20E+00	2.83E+02	7.77E-07	5.45%	--	--	--
Total Radiological Risk Estimate						**--**	**1.43E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.43E-05**	**--**	**--**	**--**	**--**
618-2_Staging Pile	non-Rad	Uranium	7440-61-1	µg/kg	5.02E+03	--	--	--	1.05E+07	4.78E-04	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**4.78E-04**	**--**
618-2_Staging Pile	Rad	Americium-241	14596-10-2	pCi/g	8.18E-01	9.42E+02	8.68E-08	6.00%	--	--	--
618-2_Staging Pile	Rad	Plutonium-239/240	PU-239/240	pCi/g	1.00E+01	2.91E+03	3.44E-07	23.78%	--	--	--
618-2_Staging Pile	Rad	Tritium	10028-17-8	pCi/g	2.33E+00	4.98E+04	4.68E-09	0.32%	--	--	--
618-2_Staging Pile	Rad	Uranium-233/234	U-233/234	pCi/g	2.04E+00	1.76E+03	1.16E-07	8.02%	--	--	--
618-2_Staging Pile	Rad	Uranium-235	15117-96-1	pCi/g	1.22E-01	6.14E+01	1.99E-07	13.75%	--	--	--
618-2_Staging Pile	Rad	Uranium-238	U-238	pCi/g	1.97E+00	2.83E+02	6.97E-07	48.13%	--	--	--
Total Radiological Risk Estimate						**--**	**1.45E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.45E-06**	**--**	**--**	**--**	**--**
618-3_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	7.96E+01	1.76E+03	4.53E-06	11.22%	--	--	--
618-3_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.79E+00	6.14E+01	7.80E-06	19.32%	--	--	--
618-3_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	7.94E+01	2.83E+02	2.81E-05	69.47%	--	--	--
Total Radiological Risk Estimate						**--**	**4.04E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.04E-05**	**--**	**--**	**--**	**--**
618-4_Deep	Rad	Uranium-233/234	U-233/234	pCi/g	2.02E+01	1.76E+03	1.15E-06	10.93%	--	--	--
618-4_Deep	Rad	Uranium-235	15117-96-1	pCi/g	1.09E+00	6.14E+01	1.78E-06	16.87%	--	--	--
618-4_Deep	Rad	Uranium-238	U-238	pCi/g	2.15E+01	2.83E+02	7.60E-06	72.20%	--	--	--
Total Radiological Risk Estimate						**--**	**1.05E-05**	**--**	**--**	**--**	**--**
618-4_Deep_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	7.18E+00	1.76E+03	4.09E-07	11.10%	--	--	--
618-4_Deep_Focused	Rad	Uranium-235	15117-96-1	pCi/g	5.12E-01	6.14E+01	8.34E-07	22.66%	--	--	--

Table G-48. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-4_Deep_Focused	Rad	Uranium-238	U-238	pCi/g	6.90E+00	2.83E+02	2.44E-06	66.24%	--	--	--
Total Radiological Risk Estimate						**--**	**3.68E-06**	**--**	**--**	**--**	**--**
618-4_Overburden_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.30E+00	1.76E+03	7.40E-08	12.93%	--	--	--
618-4_Overburden_2	Rad	Uranium-238	U-238	pCi/g	1.41E+00	2.83E+02	4.98E-07	87.07%	--	--	--
Total Radiological Risk Estimate						**--**	**5.72E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.72E-07**	**--**	**--**	**--**	**--**
618-4_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	3.22E+00	1.76E+03	1.83E-07	14.45%	--	--	--
618-4_Shallow	Rad	Uranium-238	U-238	pCi/g	3.07E+00	2.83E+02	1.08E-06	85.55%	--	--	--
Total Radiological Risk Estimate						**--**	**1.27E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.27E-06**	**--**	**--**	**--**	**--**
618-5_Deep	Rad	Uranium-233/234	U-233/234	pCi/g	8.60E+00	1.76E+03	4.89E-07	11.18%	--	--	--
618-5_Deep	Rad	Uranium-235	15117-96-1	pCi/g	4.62E-01	6.14E+01	7.52E-07	17.19%	--	--	--
618-5_Deep	Rad	Uranium-238	U-238	pCi/g	8.87E+00	2.83E+02	3.13E-06	71.62%	--	--	--
Total Radiological Risk Estimate						**--**	**4.38E-06**	**--**	**--**	**--**	**--**
618-5_Deep_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.07E+01	1.76E+03	6.09E-07	10.67%	--	--	--
618-5_Deep_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.82E-01	6.14E+01	7.85E-07	13.76%	--	--	--
618-5_Deep_Focused	Rad	Uranium-238	U-238	pCi/g	1.22E+01	2.83E+02	4.31E-06	75.56%	--	--	--
Total Radiological Risk Estimate						**--**	**5.70E-06**	**--**	**--**	**--**	**--**
618-5_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	4.14E+00	1.76E+03	2.36E-07	12.76%	--	--	--
618-5_Overburden	Rad	Uranium-238	U-238	pCi/g	4.56E+00	2.83E+02	1.61E-06	87.24%	--	--	--
Total Radiological Risk Estimate						**--**	**1.85E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.85E-06**	**--**	**--**	**--**	**--**
618-5_Staging Pile_4	Rad	Uranium-233/234	U-233/234	pCi/g	1.15E+00	1.76E+03	6.55E-08	14.08%	--	--	--
618-5_Staging Pile_4	Rad	Uranium-238	U-238	pCi/g	1.13E+00	2.83E+02	3.99E-07	85.92%	--	--	--
Total Radiological Risk Estimate						**--**	**4.65E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.65E-07**	**--**	**--**	**--**	**--**
618-5_Staging Pile_5	Rad	Uranium-233/234	U-233/234	pCi/g	1.52E+00	1.76E+03	8.65E-08	8.97%	--	--	--
618-5_Staging Pile_5	Rad	Uranium-235	15117-96-1	pCi/g	1.68E-01	6.14E+01	2.74E-07	28.37%	--	--	--
618-5_Staging Pile_5	Rad	Uranium-238	U-238	pCi/g	1.71E+00	2.83E+02	6.04E-07	62.66%	--	--	--
Total Radiological Risk Estimate						**--**	**9.64E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.64E-07**	**--**	**--**	**--**	**--**

Table G-48. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-7_Shallow_1	non-Rad	Antimony	7440-36-0	µg/kg	5.60E+02	--	--	--	1.40E+06	4.00E-04	53.86%
618-7_Shallow_1	non-Rad	Mercury	7439-97-6	µg/kg	4.43E+01	--	--	--	1.05E+06	4.22E-05	5.68%
618-7_Shallow_1	non-Rad	Nickel	7440-02-0	µg/kg	2.10E+04	--	--	--	7.00E+07	3.00E-04	40.36%
618-7_Shallow_1	non-Rad	Tin	7440-31-5	µg/kg	1.55E+03	--	--	--	2.10E+09	7.37E-07	0.10%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**7.43E-04**	**--**
618-7_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	3.61E+00	1.76E+03	2.06E-07	9.98%	--	--	--
618-7_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	3.64E-01	6.14E+01	5.92E-07	28.73%	--	--	--
618-7_Shallow_1	Rad	Uranium-238	U-238	pCi/g	3.57E+00	2.83E+02	1.26E-06	61.29%	--	--	--
Total Radiological Risk Estimate						**--**	**2.06E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.06E-06**	**--**	**--**	**--**	**--**
618-7_Shallow_2	non-Rad	Antimony	7440-36-0	µg/kg	6.60E+02	--	--	--	1.40E+06	4.71E-04	95.98%
618-7_Shallow_2	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	1.05E+06	1.90E-05	3.88%
618-7_Shallow_2	non-Rad	Tin	7440-31-5	µg/kg	1.50E+03	--	--	--	2.10E+09	7.14E-07	0.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**4.91E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-7_Shallow_3	non-Rad	Antimony	7440-36-0	µg/kg	4.50E+02	--	--	--	1.40E+06	3.21E-04	94.17%
618-7_Shallow_3	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	1.05E+06	1.90E-05	5.58%
618-7_Shallow_3	non-Rad	Tin	7440-31-5	µg/kg	1.80E+03	--	--	--	2.10E+09	8.57E-07	0.25%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**3.41E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-7_Shallow_4	non-Rad	Antimony	7440-36-0	µg/kg	2.50E+02	--	--	--	1.40E+06	1.79E-04	99.81%
618-7_Shallow_4	non-Rad	Tin	7440-31-5	µg/kg	7.10E+02	--	--	--	2.10E+09	3.38E-07	0.19%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**1.79E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-7_Shallow_Focused	non-Rad	Acenaphthene	83-32-9	µg/kg	1.50E+02	--	--	--	2.10E+08	7.14E-07	0.03%
618-7_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	9.80E+02	--	--	--	1.40E+06	7.00E-04	25.98%
618-7_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	6.70E+00	6.56E+04	1.02E-10	2.06%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	8.80E+01	1.80E+05	4.89E-10	9.88%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	6.60E+01	1.80E+04	3.67E-09	74.13%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	5.20E+01	1.80E+05	2.89E-10	5.84%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	1.10E+01	1.80E+05	6.12E-11	1.24%	--	--	--
618-7_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	4.70E+02	9.38E+06	5.01E-11	1.01%	7.00E+07	6.71E-06	0.25%
618-7_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	6.20E+03	--	--	--	3.50E+06	1.77E-03	65.76%
618-7_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	6.59E+04	--	--	--	5.25E+09	1.26E-05	0.47%
618-7_Shallow_Focused	non-Rad	Chrysene	218-01-9	µg/kg	6.90E+01	1.80E+06	3.84E-11	0.78%	--	--	--

Table G-48. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-7_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	2.50E+04	--	--	--	1.40E+08	1.79E-04	6.63%
618-7_Shallow_Focused	non-Rad	Dibenz[a,h]anthracene	53-70-3	µg/kg	4.50E+01	1.80E+05	2.50E-10	5.05%	--	--	--
618-7_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	3.30E+01	--	--	--	3.50E+08	9.43E-08	0.00%
618-7_Shallow_Focused	non-Rad	Fluoranthene	206-44-0	µg/kg	4.80E+01	--	--	--	1.40E+08	3.43E-07	0.01%
618-7_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	1.05E+06	1.90E-05	0.71%
618-7_Shallow_Focused	non-Rad	Pyrene	129-00-0	µg/kg	4.10E+02	--	--	--	1.05E+08	3.90E-06	0.14%
618-7_Shallow_Focused	non-Rad	Tin	7440-31-5	µg/kg	1.20E+03	--	--	--	2.10E+09	5.71E-07	0.02%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.95E-09**	**--**	**--**	**2.69E-03**	**--**
618-7_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.09E+01	1.76E+03	6.20E-07	13.86%	--	--	--
618-7_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	9.74E-01	6.14E+01	1.59E-06	35.45%	--	--	--
618-7_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	6.42E+00	2.83E+02	2.27E-06	50.69%	--	--	--
Total Radiological Risk Estimate						**--**	**4.48E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.48E-06**	**--**	**--**	**--**	**--**
618-8_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	8.46E+02	--	--	--	1.75E+07	4.83E-05	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**4.83E-05**	**--**
618-8_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.19E+00	1.76E+03	6.77E-08	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**6.77E-08**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.77E-08**	**--**	**--**	**--**	**--**
618-9_Shallow_Focused	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	1.10E+02	6.56E+05	1.68E-10	0.04%	1.40E+07	7.86E-06	0.01%
618-9_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	6.80E+02	--	--	--	3.15E+09	2.16E-07	0.00%
618-9_Shallow_Focused	non-Rad	Aldrin	309-00-2	µg/kg	3.90E+02	7.72E+03	5.05E-08	11.78%	1.05E+05	3.71E-03	4.38%
618-9_Shallow_Focused	non-Rad	Aroclor-1016	12674-11-2	µg/kg	1.90E+03	1.88E+06	1.01E-09	0.24%	2.45E+05	7.76E-03	9.14%
618-9_Shallow_Focused	non-Rad	Aroclor-1221	11104-28-2	µg/kg	1.90E+03	6.56E+04	2.90E-08	6.75%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1232	11141-16-5	µg/kg	1.90E+03	6.56E+04	2.90E-08	6.75%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1242	53469-21-9	µg/kg	1.90E+03	6.56E+04	2.90E-08	6.75%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.90E+03	6.56E+04	2.90E-08	6.75%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.90E+03	6.56E+04	5.94E-08	13.85%	7.00E+04	5.57E-02	65.67%
618-9_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.90E+03	6.56E+04	5.94E-08	13.85%	--	--	--
618-9_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.16E+04	8.75E+04	1.33E-07	30.91%	1.05E+06	1.10E-02	13.02%
618-9_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	5.20E+03	9.38E+06	5.55E-10	0.13%	7.00E+07	7.43E-05	0.09%
618-9_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	2.70E+03	6.91E+07	3.91E-11	0.01%	7.00E+08	3.86E-06	0.00%
618-9_Shallow_Focused	non-Rad	Chlordane	57-74-9	µg/kg	6.90E+01	3.75E+05	1.84E-10	0.04%	1.75E+06	3.94E-05	0.05%
618-9_Shallow_Focused	non-Rad	Chloroform	67-66-3	µg/kg	9.00E+00	4.23E+06	2.13E-12	0.00%	3.50E+07	2.57E-07	0.00%
618-9_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	7.20E+03	--	--	--	3.50E+08	2.06E-05	0.02%
618-9_Shallow_Focused	non-Rad	Heptachlor epoxide	1024-57-3	µg/kg	4.40E+01	1.44E+04	3.05E-09	0.71%	4.55E+04	9.67E-04	1.14%
618-9_Shallow_Focused	non-Rad	Hexachlorobutadiene	87-68-3	µg/kg	7.60E+02	1.68E+06	4.52E-10	0.11%	3.50E+06	2.17E-04	0.26%
618-9_Shallow_Focused	non-Rad	Hexachloroethane	67-72-1	µg/kg	1.70E+04	9.38E+06	1.81E-09	0.42%	3.50E+06	4.86E-03	5.73%
618-9_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	3.30E+02	--	--	--	1.05E+06	3.14E-04	0.37%
618-9_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	2.30E+03	1.75E+07	1.31E-10	0.03%	2.10E+08	1.10E-05	0.01%
618-9_Shallow_Focused	non-Rad	Nitrate	14797-55-8	µg/kg	1.67E+06	--	--	--	2.49E+10	6.72E-05	0.08%
618-9_Shallow_Focused	non-Rad	Tetrachloroethene	127-18-4	µg/kg	9.20E+02	2.43E+05	3.79E-09	0.88%	3.50E+07	2.63E-05	0.03%

Table G-48. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-9_Shallow_Focused	non-Rad	Toluene	108-88-3	µg/kg	9.00E+00	--	--	--	2.80E+08	3.21E-08	0.00%
618-9_Shallow_Focused	non-Rad	Trichloroethene	79-01-6	µg/kg	2.00E+00	1.47E+06	1.36E-12	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.29E-07**	**--**	**--**	**8.48E-02**	**--**
618-9_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	3.00E+00	2.83E+02	1.06E-06	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**1.06E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.49E-06**	**--**	**--**	**--**	**--**
628-4_Overburden	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.09E+01	9.38E+06	6.50E-12	100.00%	7.00E+07	8.70E-07	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.50E-12**	**--**	**--**	**8.70E-07**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.50E-12**	**--**	**--**	**--**	**--**
628-4_Shallow	non-Rad	Aroclor-1242	53469-21-9	µg/kg	4.24E+01	6.56E+04	6.45E-10	2.94%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.12E+03	6.56E+04	1.70E-08	77.55%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.43E+02	6.56E+04	3.70E-09	16.88%	7.00E+04	3.47E-03	100.00%
628-4_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.78E+01	6.56E+04	5.76E-10	2.63%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.19E-08**	**--**	**--**	**3.47E-03**	**--**
628-4_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.13E+00	1.76E+03	6.42E-08	26.06%	--	--	--
628-4_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	1.12E-01	6.14E+01	1.82E-07	73.94%	--	--	--
Total Radiological Risk Estimate						**--**	**2.47E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.68E-07**	**--**	**--**	**--**	**--**
UPR-300-17_Shallow	non-Rad	Acenaphthene	83-32-9	µg/kg	1.17E+02	--	--	--	2.10E+08	5.57E-07	0.00%
UPR-300-17_Shallow	non-Rad	Anthracene	120-12-7	µg/kg	7.01E+00	--	--	--	1.05E+09	6.68E-09	0.00%
UPR-300-17_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.59E+02	--	--	--	1.40E+06	2.56E-04	1.71%
UPR-300-17_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.97E+03	6.56E+04	3.00E-08	72.06%	--	--	--
UPR-300-17_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.50E+02	6.56E+04	6.86E-09	16.46%	7.00E+04	6.43E-03	42.92%
UPR-300-17_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.13E+02	6.56E+04	1.73E-09	4.14%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	5.92E+01	1.80E+05	3.30E-10	0.79%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	4.38E+01	1.80E+04	2.44E-09	5.85%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	3.27E+01	1.80E+05	1.82E-10	0.44%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	9.94E+00	1.80E+05	5.53E-11	0.13%	--	--	--
UPR-300-17_Shallow	non-Rad	Boron	7440-42-8	µg/kg	3.90E+03	--	--	--	7.00E+08	5.58E-06	0.04%
UPR-300-17_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	3.93E+01	1.80E+06	2.18E-11	0.05%	--	--	--
UPR-300-17_Shallow	non-Rad	Fluoranthene	206-44-0	µg/kg	3.53E+01	--	--	--	1.40E+08	2.52E-07	0.00%
UPR-300-17_Shallow	non-Rad	Fluorene	86-73-7	µg/kg	2.93E+00	--	--	--	1.40E+08	2.09E-08	0.00%
UPR-300-17_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	5.85E+00	1.80E+05	3.25E-11	0.08%	--	--	--
UPR-300-17_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	6.90E+01	--	--	--	1.05E+06	6.57E-05	0.44%
UPR-300-17_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	4.79E+01	--	--	--	7.00E+07	6.84E-07	0.00%
UPR-300-17_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	5.64E+05	--	--	--	7.00E+07	8.05E-03	53.76%
UPR-300-17_Shallow	non-Rad	Pyrene	129-00-0	µg/kg	3.41E+01	--	--	--	1.05E+08	3.25E-07	0.00%
UPR-300-17_Shallow	non-Rad	Silver	7440-22-4	µg/kg	3.40E+02	--	--	--	1.75E+07	1.94E-05	0.13%
UPR-300-17_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	1.57E+05	--	--	--	1.05E+09	1.50E-04	1.00%

Table G-48. Industrial Worker Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.17E-08**	**--**	**--**	**1.50E-02**	**--**
UPR-300-17_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	6.15E+00	1.76E+03	3.50E-07	10.71%	--	--	--
UPR-300-17_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	9.14E-01	6.14E+01	1.49E-06	45.57%	--	--	--
UPR-300-17_Shallow	Rad	Uranium-238	U-238	pCi/g	4.04E+00	2.83E+02	1.43E-06	43.72%	--	--	--
Total Radiological Risk Estimate						**--**	**3.27E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.31E-06**	**--**	**--**	**--**	**--**
UPR-300-46_Shallow	non-Rad	Acenaphthene	83-32-9	µg/kg	1.31E+01	--	--	--	2.10E+08	6.23E-08	0.00%
UPR-300-46_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.81E+02	--	--	--	1.40E+06	2.72E-04	3.73%
UPR-300-46_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	8.79E+02	6.56E+04	1.34E-08	59.66%	--	--	--
UPR-300-46_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.90E+02	6.56E+04	7.46E-09	33.23%	7.00E+04	6.99E-03	95.88%
UPR-300-46_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	8.44E+01	6.56E+04	1.29E-09	5.73%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	3.88E+00	1.80E+05	2.16E-11	0.10%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	3.40E+00	1.80E+04	1.89E-10	0.84%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	5.40E+00	1.80E+05	3.00E-11	0.13%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	2.78E+00	1.80E+05	1.55E-11	0.07%	--	--	--
UPR-300-46_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	5.58E+00	1.80E+06	3.11E-12	0.01%	--	--	--
UPR-300-46_Shallow	non-Rad	Dibenz[a,h]anthracene	53-70-3	µg/kg	1.25E+00	1.80E+05	6.95E-12	0.03%	--	--	--
UPR-300-46_Shallow	non-Rad	Fluoranthene	206-44-0	µg/kg	9.55E+00	--	--	--	1.40E+08	6.82E-08	0.00%
UPR-300-46_Shallow	non-Rad	Fluorene	86-73-7	µg/kg	2.15E+00	--	--	--	1.40E+08	1.54E-08	0.00%
UPR-300-46_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	7.55E+00	1.80E+05	4.20E-11	0.19%	--	--	--
UPR-300-46_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	2.92E+01	--	--	--	1.05E+06	2.78E-05	0.38%
UPR-300-46_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	3.57E+01	--	--	--	7.00E+07	5.11E-07	0.01%
UPR-300-46_Shallow	non-Rad	Pyrene	129-00-0	µg/kg	4.44E+00	--	--	--	1.05E+08	4.22E-08	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.24E-08**	**--**	**--**	**7.29E-03**	**--**
UPR-300-46_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.77E+00	1.76E+03	1.01E-07	9.11%	--	--	--
UPR-300-46_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.43E-01	6.14E+01	3.96E-07	35.76%	--	--	--
UPR-300-46_Shallow	Rad	Uranium-238	U-238	pCi/g	1.73E+00	2.83E+02	6.10E-07	55.13%	--	--	--
Total Radiological Risk Estimate						**--**	**1.11E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.13E-06**	**--**	**--**	**--**	**--**

Table G-49. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300 ASH PITS_Shallow	non-Rad	Aroclor-1248	12672-29-6	ug/kg	5.20E+01	3.20E+09	1.63E-14	99.23%	--	--	--
300 ASH PITS_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	9.60E+01	7.60E+11	1.26E-16	0.77%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.64E-14**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.64E-14**	**--**	**--**	**--**	**--**
300-10_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	1.35E+04	4.24E+08	3.18E-11	100.00%	1.09E+09	1.23E-05	100.00%
300-10_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	2.00E+02	7.60E+11	2.63E-16	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.18E-11**	**--**	**--**	**1.23E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.18E-11**	**--**	**--**	**--**	**--**
300-109_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	1.22E+02	3.20E+09	3.81E-14	72.93%	--	--	--
300-109_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	3.97E+01	3.20E+09	1.24E-14	23.73%	--	--	--
300-109_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	1.24E+00	1.66E+09	7.48E-16	1.43%	--	--	--
300-109_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	2.30E+00	1.66E+10	1.39E-16	0.27%	--	--	--
300-109_Shallow_Focused	non-Rad	Chrysene	218-01-9	ug/kg	1.77E+00	1.66E+11	1.07E-17	0.02%	--	--	--
300-109_Shallow_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	1.40E+01	1.66E+10	8.44E-16	1.62%	--	--	--
300-109_Shallow_Focused	non-Rad	Mercury	7439-97-6	ug/kg	2.20E+01	--	--	--	2.19E+09	1.01E-08	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.23E-14**	**--**	**--**	**1.01E-08**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.23E-14**	**--**	**--**	**--**	**--**
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	3.68E+01	3.20E+09	1.15E-14	53.44%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	1.94E+01	3.20E+09	6.06E-15	28.17%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)anthracene	56-55-3	ug/kg	2.08E+00	1.66E+10	1.25E-16	0.58%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	3.30E+00	1.66E+09	1.99E-15	9.25%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	1.31E+00	1.66E+10	7.90E-17	0.37%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	2.92E+01	1.66E+10	1.76E-15	8.18%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.15E-14**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.15E-14**	**--**	**--**	**--**	**--**
300-260_Shallow_Focused	non-Rad	Boron	7440-42-8	ug/kg	8.36E+03	--	--	--	1.46E+12	5.73E-09	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**5.73E-09**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
300-275_Shallow_1	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	1.30E+00	1.66E+09	7.84E-16	86.15%	--	--	--
300-275_Shallow_1	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	1.87E+00	1.66E+10	1.13E-16	12.39%	--	--	--
300-275_Shallow_1	non-Rad	Chrysene	218-01-9	ug/kg	2.20E+00	1.66E+11	1.33E-17	1.46%	--	--	--
300-275_Shallow_1	non-Rad	Mercury	7439-97-6	ug/kg	1.67E+01	--	--	--	2.19E+09	7.62E-09	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**9.10E-16**	**--**	**--**	**7.62E-09**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.10E-16**	**--**	**--**	**--**	**--**

Table G-49. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-275_Shallow_2	non-Rad	Mercury	7439-97-6	ug/kg	2.80E+01	--	--	--	2.19E+09	1.28E-08	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**1.28E-08**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1016	12674-11-2	ug/kg	1.03E+01	9.12E+10	1.13E-16	0.00%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1242	53469-21-9	ug/kg	1.64E+01	3.20E+09	5.13E-15	0.02%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1248	12672-29-6	ug/kg	1.90E+02	3.20E+09	5.94E-14	0.23%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	8.44E+01	3.20E+09	2.64E-14	0.10%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1260	11096-82-5	ug/kg	1.73E+01	3.20E+09	5.40E-15	0.02%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Mercury	7439-97-6	ug/kg	1.60E+01	--	--	--	2.19E+09	7.31E-09	0.43%
300-33, 300-41, 300-256_Shallow	non-Rad	Methylene chloride	75-09-2	ug/kg	2.91E+00	1.12E+05	2.60E-11	99.63%	2.11E+06	1.38E-06	80.28%
300-33, 300-41, 300-256_Shallow	non-Rad	Uranium	7440-61-1	ug/kg	7.26E+03	--	--	--	2.19E+10	3.32E-07	19.29%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.60E-11**	**--**	**--**	**1.72E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.60E-11**	**--**	**--**	**--**	**--**
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	ug/kg	3.30E+02	3.20E+09	1.03E-13	0.52%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	3.85E+02	3.20E+09	1.20E-13	0.60%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	5.20E+01	3.20E+09	1.63E-14	0.08%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	ug/kg	2.21E+00	1.12E+05	1.97E-11	98.80%	2.11E+06	1.05E-06	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.99E-11**	**--**	**--**	**1.05E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.99E-11**	**--**	**--**	**--**	**--**
300-37_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	1.00E+02	3.20E+09	3.13E-14	3.03%	--	--	--
300-37_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	3.20E+03	3.20E+09	1.00E-12	96.97%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.03E-12**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.03E-12**	**--**	**--**	**--**	**--**
300-44_Overburden_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	9.10E+03	4.24E+08	2.15E-11	100.00%	1.09E+09	8.32E-06	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.15E-11**	**--**	**--**	**8.32E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.15E-11**	**--**	**--**	**--**	**--**
300-44_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	1.69E+04	4.24E+08	3.98E-11	100.00%	1.09E+09	1.54E-05	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.98E-11**	**--**	**--**	**1.54E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.98E-11**	**--**	**--**	**--**	**--**
300-45_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	8.60E+01	3.20E+09	2.69E-14	98.60%	--	--	--
300-45_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	2.90E+02	7.60E+11	3.82E-16	1.40%	--	--	--

Table G-49. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**2.73E-14**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**2.73E-14**	--	--	--	--
300-49_Overburden	non-Rad	1,2,4-Trichlorobenzene	120-82-1	ug/kg	3.05E+01	--	--	--	3.10E+04	9.83E-04	99.24%
300-49_Overburden	non-Rad	1,4-Dichlorobenzene	106-46-7	ug/kg	2.88E+01	1.48E+04	1.95E-09	99.95%	5.19E+06	5.54E-06	0.56%
300-49_Overburden	non-Rad	2,4-Dinitrotoluene	121-14-2	ug/kg	1.89E+01	2.05E+10	9.24E-16	0.00%	--	--	--
300-49_Overburden	non-Rad	Aroclor-1254	11097-69-1	ug/kg	3.01E+03	3.20E+09	9.40E-13	0.05%	--	--	--
300-49_Overburden	non-Rad	n-Nitrosodi-n-dipropylamine	621-64-7	ug/kg	3.97E+01	9.12E+08	4.36E-14	0.00%	--	--	--
300-49_Overburden	non-Rad	Pentachlorophenol	87-86-5	ug/kg	4.98E+01	3.58E+11	1.39E-16	0.00%	--	--	--
300-49_Overburden	non-Rad	Phenol	108-95-2	ug/kg	5.00E+01	--	--	--	2.54E+07	1.97E-06	0.20%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**1.95E-09**	--	--	**9.91E-04**	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.95E-09**	--	--	--	--
300-50_Overburden	non-Rad	Aroclor-1254	11097-69-1	ug/kg	3.34E+01	3.20E+09	1.05E-14	0.06%	--	--	--
300-50_Overburden	non-Rad	Aroclor-1260	11096-82-5	ug/kg	2.29E+02	3.20E+09	7.16E-14	0.44%	--	--	--
300-50_Overburden	non-Rad	Arsenic	7440-38-2	ug/kg	6.90E+03	4.24E+08	1.63E-11	99.50%	1.09E+09	6.30E-06	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**1.63E-11**	--	--	**6.30E-06**	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.63E-11**	--	--	--	--
300-50_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	1.26E+02	3.20E+09	3.95E-14	99.94%	--	--	--
300-50_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	1.93E+01	7.60E+11	2.54E-17	0.06%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**3.95E-14**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**3.95E-14**	--	--	--	--
316-1_Shallow_1	non-Rad	Aroclor-1248	12672-29-6	ug/kg	3.00E+03	3.20E+09	9.38E-13	2.05%	--	--	--
316-1_Shallow_1	non-Rad	Arsenic	7440-38-2	ug/kg	1.90E+04	4.24E+08	4.48E-11	97.95%	1.09E+09	1.74E-05	100.00%
316-1_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	6.86E+01	7.60E+11	9.02E-17	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**4.58E-11**	--	--	**1.74E-05**	--
Total Non-Radiological and Radiological Risk Estimate						--	**4.58E-11**	--	--	--	--
316-1_Shallow_3	non-Rad	Aroclor-1254	11097-69-1	ug/kg	9.82E+01	3.20E+09	3.07E-14	0.23%	--	--	--
316-1_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	3.42E+02	7.60E+11	4.50E-16	0.00%	--	--	--
316-1_Shallow_3	non-Rad	Heptachlor epoxide	1024-57-3	ug/kg	3.20E+00	7.01E+08	4.56E-15	0.03%	--	--	--
316-1_Shallow_3	non-Rad	Mercury	7439-97-6	ug/kg	1.11E+03	--	--	--	2.19E+09	5.05E-07	3.15%
316-1_Shallow_3	non-Rad	Nickel	7440-02-0	ug/kg	9.47E+04	7.01E+09	1.35E-11	99.74%	6.57E+09	1.44E-05	89.96%
316-1_Shallow_3	non-Rad	Phenol	108-95-2	ug/kg	2.80E+01	--	--	--	2.54E+07	1.10E-06	6.88%
316-1_Shallow_3	non-Rad	Selenium	7782-49-2	ug/kg	1.44E+03	--	--	--	1.46E+12	9.90E-10	0.01%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**1.35E-11**	--	--	**1.60E-05**	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.35E-11**	--	--	--	--

Table G-49. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-1_Shallow_4	non-Rad	Aroclor-1254	11097-69-1	ug/kg	6.20E+01	3.20E+09	1.94E-14	100.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**1.94E-14**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.94E-14**	--	--	--	--
316-2_Shallow_2	non-Rad	Aroclor-1248	12672-29-6	ug/kg	6.97E+02	3.20E+09	2.18E-13	82.09%	--	--	--
316-2_Shallow_2	non-Rad	Aroclor-1254	11097-69-1	ug/kg	4.20E+01	3.20E+09	1.31E-14	4.95%	--	--	--
316-2_Shallow_2	non-Rad	Aroclor-1260	11096-82-5	ug/kg	1.10E+02	3.20E+09	3.44E-14	12.96%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**2.65E-13**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**2.65E-13**	--	--	--	--
316-2_Shallow_3	non-Rad	Arsenic	7440-38-2	ug/kg	8.00E+03	4.24E+08	1.89E-11	100.00%	1.09E+09	7.31E-06	100.00%
316-2_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	2.60E+02	7.60E+11	3.42E-16	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**1.89E-11**	--	--	**7.31E-06**	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.89E-11**	--	--	--	--
316-5_Shallow_1	non-Rad	Benzo(a)anthracene	56-55-3	ug/kg	3.80E+01	1.66E+10	2.29E-15	92.27%	--	--	--
316-5_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	1.46E+02	7.60E+11	1.92E-16	7.73%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**2.48E-15**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**2.48E-15**	--	--	--	--
316-5_Shallow_2	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	1.40E+02	3.94E+03	3.56E-08	100.00%	--	--	--
316-5_Shallow_2	non-Rad	2-Butoxyethanol	111-76-2	ug/kg	2.40E+02	--	--	--	1.04E+09	2.31E-07	100.00%
316-5_Shallow_2	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	1.80E+02	7.60E+11	2.37E-16	0.00%	--	--	--
316-5_Shallow_2	non-Rad	Chrysene	218-01-9	ug/kg	3.80E+01	1.66E+11	2.29E-16	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**3.56E-08**	--	--	**2.31E-07**	--
Total Non-Radiological and Radiological Risk Estimate						--	**3.56E-08**	--	--	--	--
316-5_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	ug/kg	5.70E+01	3.20E+09	1.78E-14	31.70%	--	--	--
316-5_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	7.00E+01	3.20E+09	2.19E-14	38.93%	--	--	--
316-5_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	5.20E+01	3.20E+09	1.63E-14	28.92%	--	--	--
316-5_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	1.90E+02	7.60E+11	2.50E-16	0.44%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**5.62E-14**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**5.62E-14**	--	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	4,4'-DDE (Dichlorodiphenyldichloroethylene)	72-55-9	ug/kg	2.50E+01	1.88E+10	1.33E-15	0.00%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Acetone	67-64-1	ug/kg	5.90E+02	--	--	--	4.15E+08	1.42E-06	21.25%
331 LSLDF_Shallow_Focused	non-Rad	Aldrin	309-00-2	ug/kg	5.60E-01	3.72E+08	1.50E-15	0.00%	--	--	--

Table G-49. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
331 LSLDF_Shallow_Focused	non-Rad	Alpha-BHC	319-84-6	ug/kg	3.90E-01	1.01E+09	3.85E-16	0.00%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	8.50E+02	3.20E+09	2.66E-13	0.27%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	9.10E+02	7.60E+11	1.20E-15	0.00%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Dieldrin	60-57-1	ug/kg	1.30E+01	3.96E+08	3.28E-14	0.03%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Mercury	7439-97-6	ug/kg	1.10E+02	--	--	--	2.19E+09	5.03E-08	0.75%
331 LSLDF_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	ug/kg	1.10E+01	1.12E+05	9.80E-11	99.69%	2.11E+06	5.21E-06	78.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**9.83E-11**	**--**	**--**	**6.68E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.83E-11**	**--**	**--**	**--**	**--**
600-243_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	2.70E+01	3.20E+09	8.43E-15	0.00%	--	--	--
600-243_Shallow	non-Rad	Aroclor-1260	11096-82-5	ug/kg	1.84E+01	3.20E+09	5.75E-15	0.00%	--	--	--
600-243_Shallow	non-Rad	Barium	7440-39-3	ug/kg	2.92E+05	--	--	--	3.65E+10	8.01E-06	0.22%
600-243_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	ug/kg	4.33E+01	1.66E+10	2.61E-15	0.00%	--	--	--
600-243_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	4.27E+01	1.66E+09	2.58E-14	0.00%	--	--	--
600-243_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	4.63E+01	1.66E+10	2.79E-15	0.00%	--	--	--
600-243_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	ug/kg	3.18E+01	1.66E+10	1.92E-15	0.00%	--	--	--
600-243_Shallow	non-Rad	Beryllium	7440-41-7	ug/kg	2.08E+03	7.60E+08	2.74E-12	0.02%	1.46E+09	1.43E-06	0.04%
600-243_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	4.32E+02	7.60E+11	5.69E-16	0.00%	--	--	--
600-243_Shallow	non-Rad	Boron	7440-42-8	ug/kg	2.94E+05	--	--	--	1.46E+12	2.02E-07	0.01%
600-243_Shallow	non-Rad	Cadmium	7440-43-9	ug/kg	7.93E+02	1.01E+09	7.82E-13	0.01%	7.30E+08	1.09E-06	0.03%
600-243_Shallow	non-Rad	Chrysene	218-01-9	ug/kg	6.26E+01	1.66E+11	3.78E-16	0.00%	--	--	--
600-243_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	2.80E+01	1.66E+10	1.69E-15	0.00%	--	--	--
600-243_Shallow	non-Rad	Naphthalene	91-20-3	ug/kg	2.04E+02	1.36E+04	1.50E-08	99.96%	5.53E+04	3.68E-03	99.62%
600-243_Shallow	non-Rad	Nickel	7440-02-0	ug/kg	2.14E+04	7.01E+09	3.05E-12	0.02%	6.57E+09	3.26E-06	0.09%
600-243_Shallow	non-Rad	Selenium	7782-49-2	ug/kg	5.71E+03	--	--	--	1.46E+12	3.91E-09	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.50E-08**	**--**	**--**	**3.69E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.50E-08**	**--**	**--**	**--**	**--**
618-1_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	2.64E+02	3.20E+09	8.25E-14	83.15%	--	--	--
618-1_Shallow	non-Rad	Aroclor-1260	11096-82-5	ug/kg	5.35E+01	3.20E+09	1.67E-14	16.85%	--	--	--
618-1_Shallow	non-Rad	Mercury	7439-97-6	ug/kg	3.10E+01	--	--	--	2.19E+09	1.42E-08	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**9.92E-14**	**--**	**--**	**1.42E-08**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.92E-14**	**--**	**--**	**--**	**--**
618-1_Shallow_Focused	non-Rad	Aluminum	7429-90-5	ug/kg	1.22E+07	--	--	--	3.65E+11	3.34E-05	98.78%
618-1_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	ug/kg	3.51E+01	3.20E+09	1.10E-14	3.27%	--	--	--
618-1_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	9.81E+02	3.20E+09	3.07E-13	91.50%	--	--	--
618-1_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	5.60E+01	3.20E+09	1.75E-14	5.22%	--	--	--
618-1_Shallow_Focused	non-Rad	Mercury	7439-97-6	ug/kg	1.98E+02	--	--	--	2.19E+09	9.05E-08	0.27%
618-1_Shallow_Focused	non-Rad	Uranium	7440-61-1	ug/kg	7.08E+03	--	--	--	2.19E+10	3.24E-07	0.96%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.35E-13**	**--**	**--**	**3.39E-05**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.35E-13**	**--**	**--**	**--**	**--**

Table G-49. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-12_Shallow	non-Rad	Arsenic	7440-38-2	ug/kg	8.56E+03	4.24E+08	2.02E-11	100.00%	1.09E+09	7.82E-06	100.00%
618-12_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	6.30E+01	7.60E+11	8.29E-17	0.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.02E-11**	**--**	**--**	**7.82E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.02E-11**	**--**	**--**	**--**	**--**
618-13_Shallow	non-Rad	Acetone	67-64-1	ug/kg	8.64E+00	--	--	--	4.15E+08	2.08E-08	0.85%
618-13_Shallow	non-Rad	Methylene chloride	75-09-2	ug/kg	5.12E+00	1.12E+05	4.56E-11	100.00%	2.11E+06	2.43E-06	99.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.56E-11**	**--**	**--**	**2.45E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.56E-11**	**--**	**--**	**--**	**--**
618-13_Shallow_Focused	non-Rad	Acetone	67-64-1	ug/kg	5.90E+00	--	--	--	4.15E+08	1.42E-08	0.59%
618-13_Shallow_Focused	non-Rad	Hexavalent Chromium	18540-29-9	ug/kg	1.50E+02	2.17E+07	6.91E-12	13.36%	7.30E+09	2.06E-08	0.85%
618-13_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	ug/kg	5.03E+00	1.12E+05	4.48E-11	86.64%	2.11E+06	2.38E-06	98.56%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.17E-11**	**--**	**--**	**2.42E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.17E-11**	**--**	**--**	**--**	**--**
618-2_Overburden	non-Rad	Selenium	7782-49-2	ug/kg	1.00E+03	--	--	--	1.46E+12	6.85E-10	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**6.85E-10**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-2_Shallow	non-Rad	Uranium	7440-61-1	ug/kg	4.53E+03	--	--	--	2.19E+10	2.07E-07	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**2.07E-07**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-2_Staging Pile	non-Rad	Uranium	7440-61-1	ug/kg	5.02E+03	--	--	--	2.19E+10	2.29E-07	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**2.29E-07**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-7_Shallow_1	non-Rad	Mercury	7439-97-6	ug/kg	4.43E+01	--	--	--	2.19E+09	2.02E-08	0.63%
618-7_Shallow_1	non-Rad	Nickel	7440-02-0	ug/kg	2.10E+04	7.01E+09	2.99E-12	100.00%	6.57E+09	3.20E-06	99.37%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.99E-12**	**--**	**--**	**3.22E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.99E-12**	**--**	**--**	**--**	**--**
618-7_Shallow_2	non-Rad	Mercury	7439-97-6	ug/kg	2.00E+01	--	--	--	2.19E+09	9.14E-09	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**9.14E-09**	**--**

Table G-49. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-7_Shallow_3	non-Rad	Mercury	7439-97-6	ug/kg	2.00E+01	--	--	--	2.19E+09	9.14E-09	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**9.14E-09**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-7_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	ug/kg	6.70E+00	3.20E+09	2.09E-15	0.03%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(a)anthracene	56-55-3	ug/kg	8.80E+01	1.66E+10	5.31E-15	0.09%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	6.60E+01	1.66E+09	3.98E-14	0.64%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	5.20E+01	1.66E+10	3.14E-15	0.05%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(k)fluoranthene	207-08-9	ug/kg	1.10E+01	1.66E+10	6.63E-16	0.01%	--	--	--
618-7_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	4.70E+02	7.60E+11	6.18E-16	0.01%	--	--	--
618-7_Shallow_Focused	non-Rad	Cadmium	7440-43-9	ug/kg	6.20E+03	1.01E+09	6.12E-12	99.11%	7.30E+08	8.50E-06	99.89%
618-7_Shallow_Focused	non-Rad	Chrysene	218-01-9	ug/kg	6.90E+01	1.66E+11	4.16E-16	0.01%	--	--	--
618-7_Shallow_Focused	non-Rad	Dibenz[a,h]anthracene	53-70-3	ug/kg	4.50E+01	1.66E+10	2.71E-15	0.04%	--	--	--
618-7_Shallow_Focused	non-Rad	Mercury	7439-97-6	ug/kg	2.00E+01	--	--	--	2.19E+09	9.14E-09	0.11%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.17E-12**	**--**	**--**	**8.51E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.17E-12**	**--**	**--**	**--**	**--**
618-8_Shallow	non-Rad	Selenium	7782-49-2	ug/kg	8.46E+02	--	--	--	1.46E+12	5.80E-10	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**5.80E-10**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-9_Shallow_Focused	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	1.10E+02	3.94E+03	2.79E-08	17.69%	--	--	--
618-9_Shallow_Focused	non-Rad	Acetone	67-64-1	ug/kg	6.80E+02	--	--	--	4.15E+08	1.64E-06	0.06%
618-9_Shallow_Focused	non-Rad	Aldrin	309-00-2	ug/kg	3.90E+02	3.72E+08	1.05E-12	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1016	12674-11-2	ug/kg	1.90E+03	9.12E+10	2.08E-14	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1221	11104-28-2	ug/kg	1.90E+03	3.20E+09	5.94E-13	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1232	11141-16-5	ug/kg	1.90E+03	3.20E+09	5.94E-13	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1242	53469-21-9	ug/kg	1.90E+03	3.20E+09	5.94E-13	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	ug/kg	1.90E+03	3.20E+09	5.94E-13	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	ug/kg	3.90E+03	3.20E+09	1.22E-12	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	ug/kg	3.90E+03	3.20E+09	1.22E-12	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Arsenic	7440-38-2	ug/kg	1.16E+04	4.24E+08	2.73E-11	0.02%	1.09E+09	1.06E-05	0.38%
618-9_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	5.20E+03	7.60E+11	6.84E-15	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Chlordane	57-74-9	ug/kg	6.90E+01	1.82E+10	3.78E-15	0.00%	5.11E+10	1.35E-09	0.00%
618-9_Shallow_Focused	non-Rad	Chloroform	67-66-3	ug/kg	9.00E+00	2.42E+03	3.72E-09	2.35%	2.18E+05	4.13E-05	1.46%
618-9_Shallow_Focused	non-Rad	Heptachlor epoxide	1024-57-3	ug/kg	4.40E+01	7.01E+08	6.27E-14	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Hexachlorobutadiene	87-68-3	ug/kg	7.60E+02	8.29E+10	9.17E-15	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Hexachloroethane	67-72-1	ug/kg	1.70E+04	4.56E+11	3.73E-14	0.00%	--	--	--
618-9_Shallow_Focused	non-Rad	Mercury	7439-97-6	ug/kg	3.30E+02	--	--	--	2.19E+09	1.51E-07	0.01%

Table G-49. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-9_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	ug/kg	2.30E+03	1.12E+05	2.05E-08	12.97%	2.11E+06	1.09E-03	38.66%
618-9_Shallow_Focused	non-Rad	Tetrachloroethene	127-18-4	ug/kg	9.20E+02	8.80E+03	1.05E-07	66.23%	5.60E+05	1.64E-03	58.23%
618-9_Shallow_Focused	non-Rad	Toluene	108-88-3	ug/kg	9.00E+00	--	--	--	1.04E+07	8.62E-07	0.03%
618-9_Shallow_Focused	non-Rad	Trichloroethene	79-01-6	ug/kg	2.00E+00	1.73E+03	1.16E-09	0.73%	6.04E+04	3.31E-05	1.17%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.58E-07**	**--**	**--**	**2.82E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.58E-07**	**--**	**--**	**--**	**--**
628-4_Overburden	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	6.09E+01	7.60E+11	8.02E-17	100.00%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**8.02E-17**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.02E-17**	**--**	**--**	**--**	**--**
628-4_Shallow	non-Rad	Aroclor-1242	53469-21-9	ug/kg	4.24E+01	3.20E+09	1.32E-14	2.94%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1248	12672-29-6	ug/kg	1.12E+03	3.20E+09	3.49E-13	77.55%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	2.43E+02	3.20E+09	7.59E-14	16.88%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1260	11096-82-5	ug/kg	3.78E+01	3.20E+09	1.18E-14	2.63%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.50E-13**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.50E-13**	**--**	**--**	**--**	**--**
UPR-300-17_Shallow	non-Rad	Aroclor-1248	12672-29-6	ug/kg	1.97E+03	3.20E+09	6.16E-13	0.02%	--	--	--
UPR-300-17_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	4.50E+02	3.20E+09	1.41E-13	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Aroclor-1260	11096-82-5	ug/kg	1.13E+02	3.20E+09	3.54E-14	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	ug/kg	5.92E+01	1.66E+10	3.57E-15	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	4.38E+01	1.66E+09	2.64E-14	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	3.27E+01	1.66E+10	1.97E-15	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	ug/kg	9.94E+00	1.66E+10	5.99E-16	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Boron	7440-42-8	ug/kg	3.90E+03	--	--	--	1.46E+12	2.67E-09	0.00%
UPR-300-17_Shallow	non-Rad	Chrysene	218-01-9	ug/kg	3.93E+01	1.66E+11	2.37E-16	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	5.85E+00	1.66E+10	3.53E-16	0.00%	--	--	--
UPR-300-17_Shallow	non-Rad	Mercury	7439-97-6	ug/kg	6.90E+01	--	--	--	2.19E+09	3.15E-08	0.00%
UPR-300-17_Shallow	non-Rad	Naphthalene	91-20-3	ug/kg	4.79E+01	1.36E+04	3.53E-09	97.75%	5.53E+04	8.66E-04	90.98%
UPR-300-17_Shallow	non-Rad	Nickel	7440-02-0	ug/kg	5.64E+05	7.01E+09	8.04E-11	2.22%	6.57E+09	8.58E-05	9.02%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.61E-09**	**--**	**--**	**9.52E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.61E-09**	**--**	**--**	**--**	**--**
UPR-300-46_Shallow	non-Rad	Aroclor-1248	12672-29-6	ug/kg	8.79E+02	3.20E+09	2.75E-13	0.01%	--	--	--
UPR-300-46_Shallow	non-Rad	Aroclor-1254	11097-69-1	ug/kg	4.90E+02	3.20E+09	1.53E-13	0.01%	--	--	--
UPR-300-46_Shallow	non-Rad	Aroclor-1260	11096-82-5	ug/kg	8.44E+01	3.20E+09	2.64E-14	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	ug/kg	3.88E+00	1.66E+10	2.34E-16	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	ug/kg	3.40E+00	1.66E+09	2.05E-15	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	ug/kg	5.40E+00	1.66E+10	3.25E-16	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	ug/kg	2.78E+00	1.66E+10	1.68E-16	0.00%	--	--	--

Table G-49. MTCA Method C Inhalation Pathway Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
UPR-300-46_Shallow	non-Rad	Chrysene	218-01-9	ug/kg	5.58E+00	1.66E+11	3.37E-17	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Dibenz[a,h]anthracene	53-70-3	ug/kg	1.25E+00	1.66E+10	7.54E-17	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	7.55E+00	1.66E+10	4.55E-16	0.00%	--	--	--
UPR-300-46_Shallow	non-Rad	Mercury	7439-97-6	ug/kg	2.92E+01	--	--	--	2.19E+09	1.34E-08	0.00%
UPR-300-46_Shallow	non-Rad	Naphthalene	91-20-3	ug/kg	3.57E+01	1.36E+04	2.64E-09	99.98%	5.53E+04	6.46E-04	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.64E-09**	**--**	**--**	**6.46E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.64E-09**	**--**	**--**	**--**	**--**

Table G-50. Comparison of EPCs for the 300 Area Source OU WasteSite Decision Units to MTCA-A Cleanup Levels for Industrial Properties

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	MTCA Method A Cleanup Level	EPC Exceeds Cleanup Level (Yes/No)?
300 ASH PITS_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	6,078	2.00E+04	No
300-10_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	13,500	2.00E+04	No
300-109_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	2,420	2.00E+04	No
300-109_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	2,890	1.00E+06	No
300-109_Staging Pile Area_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	2,580	2.00E+04	No
300-109_Staging Pile Area_Focused	non-Rad	Lead	7439-92-1	µg/kg	5,030	1.00E+06	No
300-18_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2,200	2.00E+04	No
300-18_Shallow	non-Rad	Lead	7439-92-1	µg/kg	3,600	1.00E+06	No
300-259_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2,096	2.00E+04	No
300-259_Shallow	non-Rad	Lead	7439-92-1	µg/kg	4,625	1.00E+06	No
300-260_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	3,160	2.00E+04	No
300-260_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	18,300	1.00E+06	No
300-275_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	2,211	2.00E+04	No
300-275_Shallow_1	non-Rad	Lead	7439-92-1	µg/kg	7,189	1.00E+06	No
300-275_Shallow_2	non-Rad	Arsenic	7440-38-2	µg/kg	2,761	2.00E+04	No
300-275_Shallow_2	non-Rad	Lead	7439-92-1	µg/kg	4,099	1.00E+06	No
300-33, 300-41, 300-256_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2,638	2.00E+04	No
300-33, 300-41, 300-256_Shallow	non-Rad	Lead	7439-92-1	µg/kg	4,268	1.00E+06	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	3,240	2.00E+04	No
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	3,160	1.00E+06	No
300-44_Overburden_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	9,100	2.00E+04	No
300-44_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	16,900	2.00E+04	No
300-49_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	3,291	2.00E+04	No
300-49_Overburden	non-Rad	Lead	7439-92-1	µg/kg	36,964	1.00E+06	No
300-49_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	4,431	2.00E+04	No
300-49_Shallow	non-Rad	Lead	7439-92-1	µg/kg	6,629	1.00E+06	No
300-50_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	6,897	2.00E+04	No
300-50_Overburden	non-Rad	Lead	7439-92-1	µg/kg	5,905	1.00E+06	No
300-50_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	6,403	2.00E+04	No
300-50_Shallow	non-Rad	Lead	7439-92-1	µg/kg	6,381	1.00E+06	No
316-1_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	19,014	2.00E+04	No
316-1_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	5,138	2.00E+04	No
316-1_Shallow_3	non-Rad	Lead	7439-92-1	µg/kg	14,409	1.00E+06	No

Table G-50. Comparison of EPCs for the 300 Area Source OU WasteSite Decision Units to MTCA-A Cleanup Levels for Industrial Properties

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	MTCA Method A Cleanup Level	EPC Exceeds Cleanup Level (Yes/No)?
316-2_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	8,000	2.00E+04	No
316-5_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	3,070	2.00E+04	No
316-5_Shallow_2	non-Rad	Arsenic	7440-38-2	µg/kg	3,180	2.00E+04	No
316-5_Shallow_2	non-Rad	Lead	7439-92-1	µg/kg	3,200	1.00E+06	No
316-5_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	4,300	2.00E+04	No
331 LSLDF_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	2,400	2.00E+04	No
331 LSLDF_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	9,000	1.00E+06	No
600-243_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	6,159	2.00E+04	No
600-243_Shallow	non-Rad	Lead	7439-92-1	µg/kg	40,139	1.00E+06	No
600-47_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2,300	2.00E+04	No
600-47_Shallow	non-Rad	Lead	7439-92-1	µg/kg	3,500	1.00E+06	No
618-1_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2,280	2.00E+04	No
618-1_Shallow	non-Rad	Lead	7439-92-1	µg/kg	3,100	1.00E+06	No
618-1_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	6,090	2.00E+04	No
618-1_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	6,210	1.00E+06	No
618-12_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	8,557	2.00E+04	No
618-13_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	3,500	2.00E+04	No
618-13_Shallow	non-Rad	Lead	7439-92-1	µg/kg	3,620	1.00E+06	No
618-13_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	3,390	2.00E+04	No
618-13_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	4,940	1.00E+06	No
618-2_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	2,700	2.00E+04	No
618-2_Overburden	non-Rad	Lead	7439-92-1	µg/kg	4,300	1.00E+06	No
618-2_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	1,900	2.00E+04	No
618-2_Shallow	non-Rad	Lead	7439-92-1	µg/kg	5,600	1.00E+06	No
618-2_Staging Pile	non-Rad	Arsenic	7440-38-2	µg/kg	3,063	2.00E+04	No
618-2_Staging Pile	non-Rad	Lead	7439-92-1	µg/kg	4,011	1.00E+06	No
618-3_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2,800	2.00E+04	No
618-3_Shallow	non-Rad	Lead	7439-92-1	µg/kg	3,900	1.00E+06	No
618-4_Overburden_2	non-Rad	Arsenic	7440-38-2	µg/kg	2,500	2.00E+04	No
618-4_Overburden_2	non-Rad	Lead	7439-92-1	µg/kg	4,700	1.00E+06	No
618-4_Overburden_3	non-Rad	Lead	7439-92-1	µg/kg	5,000	1.00E+06	No
618-4_Overburden_4	non-Rad	Lead	7439-92-1	µg/kg	4,800	1.00E+06	No
618-4_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	3,200	2.00E+04	No

Table G-50. Comparison of EPCs for the 300 Area Source OU WasteSite Decision Units to MTCA-A Cleanup Levels for Industrial Properties

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	Exposure Point Concentration	MTCA Method A Cleanup Level	EPC Exceeds Cleanup Level (Yes/No)?
618-4_Shallow	non-Rad	Lead	7439-92-1	µg/kg	49,000	1.00E+06	No
618-5_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	3,400	2.00E+04	No
618-5_Overburden	non-Rad	Lead	7439-92-1	µg/kg	7,500	1.00E+06	No
618-5_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	4,300	2.00E+04	No
618-5_Shallow	non-Rad	Lead	7439-92-1	µg/kg	6,100	1.00E+06	No
618-5_Staging Pile_4	non-Rad	Arsenic	7440-38-2	µg/kg	3,300	2.00E+04	No
618-5_Staging Pile_4	non-Rad	Lead	7439-92-1	µg/kg	5,300	1.00E+06	No
618-5_Staging Pile_5	non-Rad	Arsenic	7440-38-2	µg/kg	2,700	2.00E+04	No
618-5_Staging Pile_5	non-Rad	Lead	7439-92-1	µg/kg	3,900	1.00E+06	No
618-7_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	1,891	2.00E+04	No
618-7_Shallow_1	non-Rad	Lead	7439-92-1	µg/kg	14,567	1.00E+06	No
618-7_Shallow_2	non-Rad	Arsenic	7440-38-2	µg/kg	2,500	2.00E+04	No
618-7_Shallow_2	non-Rad	Lead	7439-92-1	µg/kg	2,800	1.00E+06	No
618-7_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	2,800	2.00E+04	No
618-7_Shallow_3	non-Rad	Lead	7439-92-1	µg/kg	4,300	1.00E+06	No
618-7_Shallow_4	non-Rad	Arsenic	7440-38-2	µg/kg	5,200	2.00E+04	No
618-7_Shallow_4	non-Rad	Lead	7439-92-1	µg/kg	3,000	1.00E+06	No
618-7_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	4,200	2.00E+04	No
618-7_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	6,500	1.00E+06	No
618-8_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	4,100	2.00E+04	No
618-8_Shallow	non-Rad	Lead	7439-92-1	µg/kg	5,100	1.00E+06	No
618-9_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	11,600	2.00E+04	No
618-9_Shallow_Focused	non-Rad	Lead	7439-92-1	µg/kg	7,700	1.00E+06	No
628-4_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	3,374	2.00E+04	No
628-4_Overburden	non-Rad	Lead	7439-92-1	µg/kg	7,284	1.00E+06	No
628-4_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	3,864	2.00E+04	No
628-4_Shallow	non-Rad	Lead	7439-92-1	µg/kg	99,167	1.00E+06	No
UPR-300-17_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2,573	2.00E+04	No
UPR-300-17_Shallow	non-Rad	Lead	7439-92-1	µg/kg	11,240	1.00E+06	No
UPR-300-46_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2,846	2.00E+04	No
UPR-300-46_Shallow	non-Rad	Lead	7439-92-1	µg/kg	7,105	1.00E+06	No

Table G-51. Summary of Industrial Worker Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Shallow Zone Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
300 ASH PITS_Shallow	8.04E-10	--	0.00E+00	--	8.04E-10	1.48E-06	--
300 VTS_Shallow	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-10_Shallow_Focused	1.54E-07	--	4.84E-07	--	6.38E-07	1.29E-02	--
300-109_Shallow_Focused	2.62E-09	--	5.67E-07	--	5.70E-07	1.76E-03	--
300-18_Shallow	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-223_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-23_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-259_Shallow	0.00E+00	--	5.67E-07	--	5.67E-07	6.87E-04	--
300-260_Shallow_Focused	0.00E+00	--	1.93E-06	--	1.93E-06	1.31E-03	--
300-272_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-275_Shallow_1	8.39E-11	--	4.68E-06	--	4.68E-06	5.40E-04	--
300-275_Shallow_2	0.00E+00	--	9.00E-07	--	9.00E-07	4.05E-05	--
300-33, 300-41, 300-256_Shallow	4.70E-09	--	1.40E-06	--	1.40E-06	2.03E-03	--
300-33, 300-41, 300-256_Shallow_Focused	1.17E-08	--	9.39E-07	--	9.50E-07	5.50E-03	--
300-37_Shallow_Focused	5.03E-08	--	0.00E+00	--	5.03E-08	1.43E-03	--
300-44_Shallow_Focused	1.93E-07	--	0.00E+00	--	1.93E-07	1.90E-02	--
300-45_Shallow_Focused	1.34E-09	--	4.24E-07	--	4.25E-07	4.14E-06	--
300-49_Shallow	0.00E+00	--	8.42E-07	--	8.42E-07	1.61E-04	--
300-50_Shallow	1.93E-09	--	4.50E-06	--	4.51E-06	4.12E-03	--
300-8_Shallow	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
316-1_Shallow_1	2.63E-07	--	1.18E-05	--	1.20E-05	1.81E-02	--
316-1_Shallow_3	1.76E-09	--	3.77E-05	--	3.77E-05	1.49E-02	--
316-1_Shallow_4	9.45E-10	--	8.95E-06	--	8.95E-06	8.86E-04	--
316-2_Shallow_1	0.00E+00	--	5.01E-05	--	5.01E-05	0.00E+00	--
316-2_Shallow_2	1.29E-08	--	6.34E-05	--	6.34E-05	6.00E-04	--
316-2_Shallow_3	9.15E-08	--	1.01E-05	--	1.02E-05	7.62E-03	--
316-5_Shallow_1	2.28E-10	--	7.49E-05	--	7.49E-05	2.23E-06	--
316-5_Shallow_2	2.55E-10	--	4.95E-05	--	4.95E-05	2.19E-04	--
316-5_Shallow_Focused	2.75E-09	--	3.88E-05	--	3.88E-05	1.01E-03	--
331 LSLDF_Shallow_Focused	1.48E-08	--	0.00E+00	--	1.48E-08	1.28E-02	--

Table G-51. Summary of Industrial Worker Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Shallow Zone Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
600-243_Shallow	3.98E-09	--	0.00E+00	--	3.98E-09	3.95E-03	--
600-259_Shallow	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
600-259_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
600-47_Shallow	0.00E+00	--	6.36E-07	--	6.36E-07	0.00E+00	--
618-1_Shallow	4.84E-09	--	6.43E-07	--	6.48E-07	3.80E-03	--
618-1_Shallow_Focused	1.63E-08	--	5.16E-06	--	5.18E-06	1.90E-02	--
618-12_Shallow	9.78E-08	--	4.55E-06	--	4.65E-06	8.15E-03	--
618-13_Shallow	2.93E-13	--	7.10E-07	--	7.10E-07	2.23E-04	--
618-13_Shallow_Focused	2.87E-13	--	6.49E-08	--	6.49E-08	1.81E-04	--
618-2_Shallow	0.00E+00	--	1.43E-05	--	1.43E-05	4.33E-04	--
618-3_Shallow	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
618-3_Shallow_Focused	0.00E+00	--	4.04E-05	--	4.04E-05	0.00E+00	--
618-4_Shallow	0.00E+00	--	1.27E-06	--	1.27E-06	0.00E+00	--
618-5_Shallow	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
618-7_Shallow_1	0.00E+00	--	2.06E-06	--	2.06E-06	7.43E-04	--
618-7_Shallow_2	0.00E+00	--	0.00E+00	--	0.00E+00	4.91E-04	--
618-7_Shallow_3	0.00E+00	--	0.00E+00	--	0.00E+00	3.41E-04	--
618-7_Shallow_4	0.00E+00	--	0.00E+00	--	0.00E+00	1.79E-04	--
618-7_Shallow_Focused	4.95E-09	--	4.48E-06	--	4.48E-06	2.69E-03	--
618-8_Shallow	0.00E+00	--	6.77E-08	--	6.77E-08	4.83E-05	--
618-9_Shallow_Focused	4.29E-07	--	1.06E-06	--	1.49E-06	8.48E-02	--
628-4_Shallow	2.19E-08	--	2.47E-07	--	2.68E-07	3.47E-03	--
UPR-300-17_Shallow	4.17E-08	--	3.27E-06	--	3.31E-06	1.50E-02	--
UPR-300-46_Shallow	2.24E-08	--	1.11E-06	--	1.13E-06	7.29E-03	--

Table G-52. Summary of MTCA Method C Inhalation Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Shallow Zone Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Non-Cancer Hazard Index	Hazard Drivers
300 ASH PITS_Shallow	1.64E-14	--	0.00E+00	--
300 VTS_Shallow	0.00E+00	--	0.00E+00	--
300-10_Shallow_Focused	3.18E-11	--	1.23E-05	--
300-109_Shallow_Focused	5.23E-14	--	1.01E-08	--
300-18_Shallow	0.00E+00	--	0.00E+00	--
300-223_Shallow_Focused	0.00E+00	--	0.00E+00	--
300-23_Shallow_Focused	0.00E+00	--	0.00E+00	--
300-259_Shallow	0.00E+00	--	0.00E+00	--
300-260_Shallow_Focused	0.00E+00	--	5.73E-09	--
300-272_Shallow_Focused	0.00E+00	--	0.00E+00	--
300-275_Shallow_1	9.10E-16	--	7.62E-09	--
300-275_Shallow_2	0.00E+00	--	1.28E-08	--
300-33, 300-41, 300-256_Shallow	2.60E-11	--	1.72E-06	--
300-33, 300-41, 300-256_Shallow_Focused	1.99E-11	--	1.05E-06	--
300-37_Shallow_Focused	1.03E-12	--	0.00E+00	--
300-44_Shallow_Focused	3.98E-11	--	1.54E-05	--
300-45_Shallow_Focused	2.73E-14	--	0.00E+00	--
300-49_Shallow	0.00E+00	--	0.00E+00	--
300-50_Shallow	3.95E-14	--	0.00E+00	--
300-8_Shallow	0.00E+00	--	0.00E+00	--
316-1_Shallow_1	4.58E-11	--	1.74E-05	--
316-1_Shallow_3	1.35E-11	--	1.60E-05	--
316-1_Shallow_4	1.94E-14	--	0.00E+00	--
316-2_Shallow_1	0.00E+00	--	0.00E+00	--
316-2_Shallow_2	2.65E-13	--	0.00E+00	--
316-2_Shallow_3	1.89E-11	--	7.31E-06	--
316-5_Shallow_1	2.48E-15	--	0.00E+00	--
316-5_Shallow_2	3.56E-08	--	2.31E-07	--
316-5_Shallow_Focused	5.62E-14	--	0.00E+00	--
331 LSLDF_Shallow_Focused	9.83E-11	--	6.68E-06	--
600-243_Shallow	1.50E-08	--	3.69E-03	--
600-259_Shallow	0.00E+00	--	0.00E+00	--
600-259_Shallow_Focused	0.00E+00	--	0.00E+00	--
600-47_Shallow	0.00E+00	--	0.00E+00	--
618-1_Shallow	9.92E-14	--	1.42E-08	--
618-1_Shallow_Focused	3.35E-13	--	3.39E-05	--
618-12_Shallow	2.02E-11	--	7.82E-06	--
618-13_Shallow	4.56E-11	--	2.45E-06	--
618-13_Shallow_Focused	5.17E-11	--	2.42E-06	--
618-2_Shallow	0.00E+00	--	2.07E-07	--
618-3_Shallow	0.00E+00	--	0.00E+00	--
618-3_Shallow_Focused	0.00E+00	--	0.00E+00	--
618-4_Shallow	0.00E+00	--	0.00E+00	--
618-5_Shallow	0.00E+00	--	0.00E+00	--
618-7_Shallow_1	2.99E-12	--	3.22E-06	--
618-7_Shallow_2	0.00E+00	--	9.14E-09	--
618-7_Shallow_3	0.00E+00	--	9.14E-09	--
618-7_Shallow_4	0.00E+00	--	0.00E+00	--
618-7_Shallow_Focused	6.17E-12	--	8.51E-06	--
618-8_Shallow	0.00E+00	--	5.80E-10	--

Table G-52. Summary of MTCA Method C Inhalation Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Shallow Zone Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Non-Cancer Hazard Index	Hazard Drivers
618-9_Shallow_Focused	1.58E-07	--	2.82E-03	--
628-4_Shallow	4.50E-13	--	0.00E+00	--
UPR-300-17_Shallow	3.61E-09	--	9.52E-04	--
UPR-300-46_Shallow	2.64E-09	--	6.46E-04	--

Table G-53. Summary of Industrial Worker Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Overburden Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
300-272_Overburden_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-44_Overburden_Focused	1.04E-07	--	0.00E+00	--	1.04E-07	8.67E-03	--
300-49_Overburden	4.80E-08	--	0.00E+00	--	4.80E-08	4.71E-02	--
300-50_Overburden	8.28E-08	--	3.18E-06	--	3.26E-06	7.58E-03	--
316-1_Overburden	0.00E+00	--	1.06E-05	--	1.06E-05	0.00E+00	--
600-259_Overburden	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
618-2_Overburden	0.00E+00	--	0.00E+00	--	0.00E+00	5.84E-05	--
618-4_Overburden_2	0.00E+00	--	5.72E-07	--	5.72E-07	0.00E+00	--
618-4_Overburden_3	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
618-4_Overburden_4	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
618-5_Overburden	0.00E+00	--	1.85E-06	--	1.85E-06	0.00E+00	--
628-4_Overburden	6.50E-12	--	0.00E+00	--	6.50E-12	8.70E-07	--

Table G-54. Summary of MTCA Method C Inhalation Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Overburden Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Non-Cancer Hazard Index	Hazard Drivers
300-272_Overburden_Focused	0.00E+00	--	0.00E+00	--
300-44_Overburden_Focused	2.15E-11	--	8.32E-06	--
300-49_Overburden	1.95E-09	--	9.91E-04	--
300-50_Overburden	1.63E-11	--	6.30E-06	--
316-1_Overburden	0.00E+00	--	0.00E+00	--
600-259_Overburden	0.00E+00	--	0.00E+00	--
618-2_Overburden	0.00E+00	--	6.85E-10	--
618-4_Overburden_2	0.00E+00	--	0.00E+00	--
618-4_Overburden_3	0.00E+00	--	0.00E+00	--
618-4_Overburden_4	0.00E+00	--	0.00E+00	--
618-5_Overburden	0.00E+00	--	0.00E+00	--
628-4_Overburden	8.02E-17	--	0.00E+00	--

Table G-55. Summary of Industrial Worker Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Staging Pile Area Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
300-109_Staging Pile Area_Focused	1.22E-09	--	9.61E-07	--	9.62E-07	5.27E-04	--
618-2_Staging Pile	0.00E+00	--	1.45E-06	--	1.45E-06	4.78E-04	--
618-5_Staging Pile_4	0.00E+00	--	4.65E-07	--	4.65E-07	0.00E+00	--
618-5_Staging Pile_5	0.00E+00	--	9.64E-07	--	9.64E-07	0.00E+00	--

Table G-56. Summary of MTCA Method C Inhalation Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Staging Pile Area Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Non-Cancer Hazard Index	Hazard Drivers
300-109_Staging Pile Area_Focused	2.15E-14	--	0.00E+00	--
618-2_Staging Pile	0.00E+00	--	2.29E-07	--
618-5_Staging Pile_4	0.00E+00	--	0.00E+00	--
618-5_Staging Pile_5	0.00E+00	--	0.00E+00	--

Table G-57. Summary of Industrial Scenario Risk Estimates and Primary Contributors to Risk For Deep Zone Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Radiological Cancer Risk	Radiological Risk Drivers
618-1_Deep	1.77E-05	--
618-1_Deep_Focused	7.11E-05	--
618-2_Deep	7.35E-05	--
618-2_Deep_Focused	3.53E-05	--
618-4_Deep	1.05E-05	--
618-4_Deep_Focused	3.68E-06	--
618-5_Deep	4.38E-06	--
618-5_Deep_Focused	5.70E-06	--

Table G-58. Resident Monument Worker Scenario Radiological Risk Estimates for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution
300 ASH PITS_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	3.88E-02	2.20E+01	1.76E-07	16.62%
300 ASH PITS_Shallow	Rad	Uranium-238	U-238	pCi/g	8.23E-01	9.31E+01	8.84E-07	83.38%
Total Radiological Risk Estimate						--	**1.06E-06**	--
300 VTS_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	2.90E-02	6.22E+00	4.66E-07	100.00%
Total Radiological Risk Estimate						--	**4.66E-07**	--
300-10_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.55E-01	6.22E+00	2.49E-06	60.08%
300-10_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.06E-02	2.20E+01	1.85E-07	4.45%
300-10_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.37E+00	9.31E+01	1.47E-06	35.48%
Total Radiological Risk Estimate						--	**4.15E-06**	--
300-109_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.40E+00	9.31E+02	1.50E-07	9.21%
300-109_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.38E+00	9.31E+01	1.48E-06	90.79%
Total Radiological Risk Estimate						--	**1.63E-06**	--
300-109_Staging Pile Area_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	2.54E+00	9.31E+02	2.73E-07	9.91%
300-109_Staging Pile Area_Focused	Rad	Uranium-238	U-238	pCi/g	2.31E+00	9.31E+01	2.48E-06	90.09%
Total Radiological Risk Estimate						--	**2.75E-06**	--
300-18_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	6.49E-01	9.31E+02	6.97E-08	13.64%
300-18_Shallow	Rad	Uranium-238	U-238	pCi/g	4.11E-01	9.31E+01	4.41E-07	86.36%
Total Radiological Risk Estimate						--	**5.11E-07**	--
300-259_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.59E+00	9.31E+02	1.71E-07	10.58%
300-259_Shallow	Rad	Uranium-238	U-238	pCi/g	1.35E+00	9.31E+01	1.45E-06	89.42%
Total Radiological Risk Estimate						--	**1.62E-06**	--

Table G-58. Resident Monument Worker Scenario Radiological Risk Estimates for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution
300-260_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	2.51E-01	2.20E+01	1.14E-06	19.81%
300-260_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.30E+00	9.31E+01	4.62E-06	80.19%
Total Radiological Risk Estimate						--	**5.76E-06**	--
300-275_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	4.65E-02	6.22E+00	7.47E-07	5.31%
300-275_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	7.72E+00	9.31E+02	8.29E-07	5.89%
300-275_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.00E+00	2.20E+01	4.55E-06	32.29%
300-275_Shallow_1	Rad	Uranium-238	U-238	pCi/g	7.41E+00	9.31E+01	7.95E-06	56.51%
Total Radiological Risk Estimate						--	**1.41E-05**	--
300-275_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.31E+00	9.31E+02	1.40E-07	5.49%
300-275_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	2.37E-01	2.20E+01	1.08E-06	42.18%
300-275_Shallow_2	Rad	Uranium-238	U-238	pCi/g	1.24E+00	9.31E+01	1.34E-06	52.33%
Total Radiological Risk Estimate						--	**2.55E-06**	--
300-33, 300-41, 300-256_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	2.14E+00	9.31E+02	2.30E-07	5.77%
300-33, 300-41, 300-256_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	3.38E-01	2.20E+01	1.54E-06	38.64%
300-33, 300-41, 300-256_Shallow	Rad	Uranium-238	U-238	pCi/g	2.06E+00	9.31E+01	2.21E-06	55.59%
Total Radiological Risk Estimate						--	**3.98E-06**	--
300-33, 300-41, 300-256_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	3.02E+00	9.31E+02	3.24E-07	12.22%
300-33, 300-41, 300-256_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	2.17E+00	9.31E+01	2.33E-06	87.78%
Total Radiological Risk Estimate						--	**2.66E-06**	--
300-44_Overburden_Focused	Rad	Uranium-238	U-238	pCi/g	3.45E-01	9.31E+01	3.71E-07	100.00%
Total Radiological Risk Estimate						--	**3.71E-07**	--
300-44_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	2.93E-01	9.31E+01	3.15E-07	100.00%
Total Radiological Risk Estimate						--	**3.15E-07**	--

Table G-58. Resident Monument Worker Scenario Radiological Risk Estimates for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution
300-45_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	2.28E-02	6.22E+00	3.67E-07	18.98%
300-45_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	6.06E-02	2.20E+01	2.75E-07	14.27%
300-45_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.20E+00	9.31E+01	1.29E-06	66.75%
Total Radiological Risk Estimate						--	**1.93E-06**	--
300-49_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	1.01E+00	9.31E+02	1.08E-07	7.36%
300-49_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	5.70E-02	2.20E+01	2.59E-07	17.62%
300-49_Overburden	Rad	Uranium-238	U-238	pCi/g	1.03E+00	9.31E+01	1.10E-06	75.02%
Total Radiological Risk Estimate						--	**1.47E-06**	--
300-49_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	1.51E-01	6.22E+00	2.43E-06	50.54%
300-49_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.32E+00	9.31E+02	1.41E-07	2.95%
300-49_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.40E-01	2.20E+01	1.09E-06	22.71%
300-49_Shallow	Rad	Uranium-238	U-238	pCi/g	1.06E+00	9.31E+01	1.14E-06	23.80%
Total Radiological Risk Estimate						--	**4.80E-06**	--
300-50_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	5.60E-02	6.22E+00	9.00E-07	9.02%
300-50_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	6.03E+00	9.31E+02	6.48E-07	6.49%
300-50_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	4.49E-01	2.20E+01	2.04E-06	20.44%
300-50_Overburden	Rad	Uranium-238	U-238	pCi/g	5.95E+00	9.31E+01	6.40E-06	64.06%
Total Radiological Risk Estimate						--	**9.98E-06**	--
300-50_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	5.60E-02	6.22E+00	9.00E-07	6.52%
300-50_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	7.89E+00	9.31E+02	8.48E-07	6.14%
300-50_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	6.64E-01	2.20E+01	3.02E-06	21.86%
300-50_Shallow	Rad	Uranium-238	U-238	pCi/g	8.41E+00	9.31E+01	9.04E-06	65.48%
Total Radiological Risk Estimate						--	**1.38E-05**	--
300-8_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	7.86E-01	9.31E+02	8.45E-08	8.74%

Table G-58. Resident Monument Worker Scenario Radiological Risk Estimates for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution
300-8_Shallow	Rad	Uranium-238	U-238	pCi/g	8.21E-01	9.31E+01	8.82E-07	91.26%
Total Radiological Risk Estimate						--	**9.67E-07**	--
316-1_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	1.01E-01	6.22E+00	1.62E-06	5.07%
316-1_Overburden	Rad	Cobalt-60	10198-40-0	pCi/g	3.18E-01	3.30E+00	9.64E-06	30.09%
316-1_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	1.30E+01	9.31E+02	1.39E-06	4.34%
316-1_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	1.08E+00	2.20E+01	4.91E-06	15.33%
316-1_Overburden	Rad	Uranium-238	U-238	pCi/g	1.35E+01	9.31E+01	1.45E-05	45.16%
Total Radiological Risk Estimate						--	**3.20E-05**	--
316-1_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	3.18E-02	6.22E+00	5.11E-07	1.43%
316-1_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.21E+00	2.20E+01	5.51E-06	15.41%
316-1_Shallow_1	Rad	Uranium-238	U-238	pCi/g	2.77E+01	9.31E+01	2.98E-05	83.16%
Total Radiological Risk Estimate						--	**3.58E-05**	--
316-1_Shallow_3	Rad	Cesium-137	10045-97-3	pCi/g	3.75E-01	6.22E+00	6.02E-06	5.32%
316-1_Shallow_3	Rad	Cobalt-60	10198-40-0	pCi/g	2.32E+00	3.30E+00	7.04E-05	62.20%
316-1_Shallow_3	Rad	Uranium-233/234	U-233/234	pCi/g	2.27E+01	9.31E+02	2.44E-06	2.15%
316-1_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	2.64E+00	2.20E+01	1.20E-05	10.58%
316-1_Shallow_3	Rad	Uranium-238	U-238	pCi/g	2.08E+01	9.31E+01	2.24E-05	19.74%
Total Radiological Risk Estimate						--	**1.13E-04**	--
316-1_Shallow_4	Rad	Cobalt-60	10198-40-0	pCi/g	1.20E-01	3.30E+00	3.64E-06	14.27%
316-1_Shallow_4	Rad	Uranium-233/234	U-233/234	pCi/g	1.61E+01	9.31E+02	1.73E-06	6.81%
316-1_Shallow_4	Rad	Uranium-235	15117-96-1	pCi/g	1.05E+00	2.20E+01	4.77E-06	18.74%
316-1_Shallow_4	Rad	Uranium-238	U-238	pCi/g	1.43E+01	9.31E+01	1.53E-05	60.18%
Total Radiological Risk Estimate						--	**2.55E-05**	--
316-2_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	3.10E-02	6.22E+00	4.98E-07	0.35%
316-2_Shallow_1	Rad	Cobalt-60	10198-40-0	pCi/g	9.22E-02	3.30E+00	2.79E-06	1.97%
316-2_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	8.64E+01	9.31E+02	9.28E-06	6.53%

Table G-58. Resident Monument Worker Scenario Radiological Risk Estimates for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution
316-2_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.22E+01	2.20E+01	5.55E-05	39.06%
316-2_Shallow_1	Rad	Uranium-238	U-238	pCi/g	6.88E+01	9.31E+01	7.40E-05	52.09%
Total Radiological Risk Estimate						--	**1.42E-04**	--
316-2_Shallow_2	Rad	Cesium-137	10045-97-3	pCi/g	4.48E-01	6.22E+00	7.21E-06	3.86%
316-2_Shallow_2	Rad	Cobalt-60	10198-40-0	pCi/g	4.53E-01	3.30E+00	1.37E-05	7.34%
316-2_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.15E+02	9.31E+02	1.23E-05	6.58%
316-2_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	1.11E+01	2.20E+01	5.05E-05	26.98%
316-2_Shallow_2	Rad	Uranium-238	U-238	pCi/g	9.62E+01	9.31E+01	1.03E-04	55.25%
Total Radiological Risk Estimate						--	**1.87E-04**	--
316-2_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	9.09E-01	2.20E+01	4.13E-06	13.59%
316-2_Shallow_3	Rad	Uranium-238	U-238	pCi/g	2.44E+01	9.31E+01	2.63E-05	86.41%
Total Radiological Risk Estimate						--	**3.04E-05**	--
316-5_Shallow_1	Rad	Americium-241	14596-10-2	pCi/g	4.79E-01	2.75E+02	1.74E-07	0.08%
316-5_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	2.31E+00	6.22E+00	3.72E-05	17.08%
316-5_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.86E+01	2.20E+01	8.45E-05	38.83%
316-5_Shallow_1	Rad	Uranium-238	U-238	pCi/g	8.92E+01	9.31E+01	9.58E-05	44.01%
Total Radiological Risk Estimate						--	**2.18E-04**	--
316-5_Shallow_2	Rad	Americium-241	14596-10-2	pCi/g	1.24E-01	2.75E+02	4.51E-08	0.03%
316-5_Shallow_2	Rad	Cesium-137	10045-97-3	pCi/g	1.71E+00	6.22E+00	2.76E-05	19.03%
316-5_Shallow_2	Rad	Cobalt-60	10198-40-0	pCi/g	1.18E-01	3.30E+00	3.58E-06	2.47%
316-5_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	9.04E+00	2.20E+01	4.11E-05	28.38%
316-5_Shallow_2	Rad	Uranium-238	U-238	pCi/g	6.75E+01	9.31E+01	7.25E-05	50.09%
Total Radiological Risk Estimate						--	**1.45E-04**	--
316-5_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.83E+00	6.22E+00	2.94E-05	26.07%
316-5_Shallow_Focused	Rad	Europium-155	14391-16-3	pCi/g	7.19E-02	3.54E+02	2.03E-08	0.02%
316-5_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	7.67E+00	2.20E+01	3.49E-05	30.89%

Table G-58. Resident Monument Worker Scenario Radiological Risk Estimates for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution
316-5_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.52E+01	9.31E+01	4.85E-05	43.02%
Total Radiological Risk Estimate						--	**1.13E-04**	--
331 LSLDF_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	5.40E-01	9.31E+02	5.80E-08	10.29%
331 LSLDF_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.71E-01	9.31E+01	5.06E-07	89.71%
Total Radiological Risk Estimate						--	**5.64E-07**	--
600-259_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	3.40E-02	6.22E+00	5.47E-07	100.00%
Total Radiological Risk Estimate						--	**5.47E-07**	--
600-259_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	6.80E-02	6.22E+00	1.09E-06	100.00%
Total Radiological Risk Estimate						--	**1.09E-06**	--
600-259_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	3.80E-02	6.22E+00	6.11E-07	100.00%
Total Radiological Risk Estimate						--	**6.11E-07**	--
600-47_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.36E+00	9.31E+02	1.46E-07	7.93%
600-47_Shallow	Rad	Uranium-238	U-238	pCi/g	1.58E+00	9.31E+01	1.70E-06	92.07%
Total Radiological Risk Estimate						--	**1.84E-06**	--
618-1_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.93E+00	9.31E+02	2.07E-07	11.33%
618-1_Shallow	Rad	Uranium-238	U-238	pCi/g	1.51E+00	9.31E+01	1.62E-06	88.67%
Total Radiological Risk Estimate						--	**1.83E-06**	--
618-1_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.13E+01	9.31E+02	1.21E-06	8.35%
618-1_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	9.87E-01	2.20E+01	4.49E-06	30.86%
618-1_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	8.23E+00	9.31E+01	8.84E-06	60.80%
Total Radiological Risk Estimate						--	**1.45E-05**	--

Table G-58. Resident Monument Worker Scenario Radiological Risk Estimates for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution
618-12_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	4.71E-01	2.20E+01	2.14E-06	15.68%
618-12_Shallow	Rad	Uranium-238	U-238	pCi/g	1.07E+01	9.31E+01	1.15E-05	84.32%
Total Radiological Risk Estimate						--	**1.36E-05**	--
618-13_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	3.80E-02	6.22E+00	6.11E-07	23.11%
618-13_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.92E+00	9.31E+02	2.06E-07	7.80%
618-13_Shallow	Rad	Uranium-238	U-238	pCi/g	1.70E+00	9.31E+01	1.83E-06	69.08%
Total Radiological Risk Estimate						--	**2.64E-06**	--
618-13_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.14E+00	9.31E+02	1.22E-07	10.62%
618-13_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	9.59E-01	9.31E+01	1.03E-06	89.38%
Total Radiological Risk Estimate						--	**1.15E-06**	--
618-2_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	5.80E-02	6.22E+00	9.32E-07	56.98%
618-2_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	6.44E-01	9.31E+02	6.92E-08	4.23%
618-2_Overburden	Rad	Uranium-238	U-238	pCi/g	5.91E-01	9.31E+01	6.35E-07	38.79%
Total Radiological Risk Estimate						--	**1.64E-06**	--
618-2_Shallow	Rad	Americium-241	14596-10-2	pCi/g	8.13E-01	2.75E+02	2.96E-07	0.72%
618-2_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	2.24E+00	6.22E+00	3.60E-05	87.19%
618-2_Shallow	Rad	Plutonium-239/240	PU-239/240	pCi/g	7.67E+00	5.39E+02	1.42E-06	3.45%
618-2_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	2.20E+00	9.31E+02	2.36E-07	0.57%
618-2_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.14E-01	2.20E+01	9.73E-07	2.36%
618-2_Shallow	Rad	Uranium-238	U-238	pCi/g	2.20E+00	9.31E+01	2.36E-06	5.72%
Total Radiological Risk Estimate						--	**4.13E-05**	--
618-2_Staging Pile	Rad	Americium-241	14596-10-2	pCi/g	8.18E-01	2.75E+02	2.97E-07	4.53%
618-2_Staging Pile	Rad	Cesium-137	10045-97-3	pCi/g	9.50E-02	6.22E+00	1.53E-06	23.24%
618-2_Staging Pile	Rad	Plutonium-239/240	PU-239/240	pCi/g	1.00E+01	5.39E+02	1.86E-06	28.23%

Table G-58. Resident Monument Worker Scenario Radiological Risk Estimates for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution
618-2_Staging Pile	Rad	Tritium	10028-17-8	pCi/g	2.33E+00	1.27E+06	1.83E-10	0.00%
618-2_Staging Pile	Rad	Uranium-233/234	U-233/234	pCi/g	2.04E+00	9.31E+02	2.19E-07	3.33%
618-2_Staging Pile	Rad	Uranium-235	15117-96-1	pCi/g	1.22E-01	2.20E+01	5.55E-07	8.45%
618-2_Staging Pile	Rad	Uranium-238	U-238	pCi/g	1.97E+00	9.31E+01	2.12E-06	32.22%
Total Radiological Risk Estimate						--	**6.57E-06**	--
618-3_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	6.77E-01	9.31E+02	7.27E-08	8.31%
618-3_Shallow	Rad	Uranium-238	U-238	pCi/g	7.47E-01	9.31E+01	8.02E-07	91.69%
Total Radiological Risk Estimate						--	**8.75E-07**	--
618-3_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	7.96E+01	9.31E+02	8.55E-06	7.40%
618-3_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.79E+00	2.20E+01	2.18E-05	18.83%
618-3_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	7.94E+01	9.31E+01	8.53E-05	73.77%
Total Radiological Risk Estimate						--	**1.16E-04**	--
618-4_Overburden_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.30E+00	9.31E+02	1.40E-07	8.44%
618-4_Overburden_2	Rad	Uranium-238	U-238	pCi/g	1.41E+00	9.31E+01	1.51E-06	91.56%
Total Radiological Risk Estimate						--	**1.65E-06**	--
618-4_Overburden_3	Rad	Uranium-233/234	U-233/234	pCi/g	4.24E-01	9.31E+02	4.55E-08	6.89%
618-4_Overburden_3	Rad	Uranium-235	15117-96-1	pCi/g	3.20E-02	2.20E+01	1.45E-07	21.99%
618-4_Overburden_3	Rad	Uranium-238	U-238	pCi/g	4.38E-01	9.31E+01	4.70E-07	71.12%
Total Radiological Risk Estimate						--	**6.61E-07**	--
618-4_Overburden_4	Rad	Uranium-233/234	U-233/234	pCi/g	9.42E-01	9.31E+02	1.01E-07	9.09%
618-4_Overburden_4	Rad	Uranium-238	U-238	pCi/g	9.42E-01	9.31E+01	1.01E-06	90.91%
Total Radiological Risk Estimate						--	**1.11E-06**	--
618-4_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	3.22E+00	9.31E+02	3.46E-07	9.49%
618-4_Shallow	Rad	Uranium-238	U-238	pCi/g	3.07E+00	9.31E+01	3.30E-06	90.51%

Table G-58. Resident Monument Worker Scenario Radiological Risk Estimates for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution
Total Radiological Risk Estimate						--	**3.64E-06**	--
618-5_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	4.14E+00	9.31E+02	4.45E-07	8.32%
618-5_Overburden	Rad	Uranium-238	U-238	pCi/g	4.56E+00	9.31E+01	4.90E-06	91.68%
Total Radiological Risk Estimate						--	**5.34E-06**	--
618-5_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	9.38E-01	9.31E+02	1.01E-07	8.20%
618-5_Shallow	Rad	Uranium-238	U-238	pCi/g	1.05E+00	9.31E+01	1.13E-06	91.80%
Total Radiological Risk Estimate						--	**1.23E-06**	--
618-5_Staging Pile_4	Rad	Uranium-233/234	U-233/234	pCi/g	1.15E+00	9.31E+02	1.24E-07	9.24%
618-5_Staging Pile_4	Rad	Uranium-238	U-238	pCi/g	1.13E+00	9.31E+01	1.21E-06	90.76%
Total Radiological Risk Estimate						--	**1.34E-06**	--
618-5_Staging Pile_5	Rad	Uranium-233/234	U-233/234	pCi/g	1.52E+00	9.31E+02	1.63E-07	5.91%
618-5_Staging Pile_5	Rad	Uranium-235	15117-96-1	pCi/g	1.68E-01	2.20E+01	7.64E-07	27.63%
618-5_Staging Pile_5	Rad	Uranium-238	U-238	pCi/g	1.71E+00	9.31E+01	1.84E-06	66.46%
Total Radiological Risk Estimate						--	**2.76E-06**	--
618-7_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	6.70E-02	6.22E+00	1.08E-06	15.49%
618-7_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	3.61E+00	9.31E+02	3.88E-07	5.58%
618-7_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	3.64E-01	2.20E+01	1.65E-06	23.75%
618-7_Shallow_1	Rad	Uranium-238	U-238	pCi/g	3.57E+00	9.31E+01	3.84E-06	55.18%
Total Radiological Risk Estimate						--	**6.96E-06**	--
618-7_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	5.66E-01	9.31E+02	6.08E-08	9.58%
618-7_Shallow_2	Rad	Uranium-238	U-238	pCi/g	5.34E-01	9.31E+01	5.74E-07	90.42%
Total Radiological Risk Estimate						--	**6.34E-07**	--

Table G-58. Resident Monument Worker Scenario Radiological Risk Estimates for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution
618-7_Shallow_3	Rad	Uranium-233/234	U-233/234	pCi/g	1.07E+00	9.31E+02	1.15E-07	7.58%
618-7_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	8.50E-02	2.20E+01	3.86E-07	25.48%
618-7_Shallow_3	Rad	Uranium-238	U-238	pCi/g	9.45E-01	9.31E+01	1.02E-06	66.94%
Total Radiological Risk Estimate						--	**1.52E-06**	--
618-7_Shallow_4	Rad	Uranium-233/234	U-233/234	pCi/g	6.89E-01	9.31E+02	7.40E-08	8.28%
618-7_Shallow_4	Rad	Uranium-238	U-238	pCi/g	7.63E-01	9.31E+01	8.20E-07	91.72%
Total Radiological Risk Estimate						--	**8.94E-07**	--
618-7_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.00E-02	6.22E+00	1.61E-07	1.27%
618-7_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.09E+01	9.31E+02	1.17E-06	9.25%
618-7_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	9.74E-01	2.20E+01	4.43E-06	34.99%
618-7_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	6.42E+00	9.31E+01	6.90E-06	54.49%
Total Radiological Risk Estimate						--	**1.27E-05**	--
618-8_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.19E+00	9.31E+02	1.28E-07	13.95%
618-8_Shallow	Rad	Uranium-238	U-238	pCi/g	7.34E-01	9.31E+01	7.88E-07	86.05%
Total Radiological Risk Estimate						--	**9.16E-07**	--
618-9_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	7.10E-02	2.20E+01	3.23E-07	9.10%
618-9_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	3.00E+00	9.31E+01	3.22E-06	90.90%
Total Radiological Risk Estimate						--	**3.55E-06**	--
628-4_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	3.30E-02	6.22E+00	5.31E-07	36.42%
628-4_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	8.70E-01	9.31E+02	9.35E-08	6.42%
628-4_Overburden	Rad	Uranium-238	U-238	pCi/g	7.75E-01	9.31E+01	8.33E-07	57.16%
Total Radiological Risk Estimate						--	**1.46E-06**	--

Table G-58. Resident Monument Worker Scenario Radiological Risk Estimates for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution
628-4_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.13E+00	9.31E+02	1.21E-07	6.90%
628-4_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	1.12E-01	2.20E+01	5.09E-07	28.97%
628-4_Shallow	Rad	Uranium-238	U-238	pCi/g	1.05E+00	9.31E+01	1.13E-06	64.13%
Total Radiological Risk Estimate						--	**1.76E-06**	--
UPR-300-17_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	6.15E+00	9.31E+02	6.60E-07	7.21%
UPR-300-17_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	9.14E-01	2.20E+01	4.15E-06	45.37%
UPR-300-17_Shallow	Rad	Uranium-238	U-238	pCi/g	4.04E+00	9.31E+01	4.34E-06	47.41%
Total Radiological Risk Estimate						--	**9.16E-06**	--
UPR-300-46_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	7.00E-02	6.22E+00	1.13E-06	26.33%
UPR-300-46_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.77E+00	9.31E+02	1.90E-07	4.45%
UPR-300-46_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.43E-01	2.20E+01	1.10E-06	25.84%
UPR-300-46_Shallow	Rad	Uranium-238	U-238	pCi/g	1.73E+00	9.31E+01	1.85E-06	43.38%
Total Radiological Risk Estimate						--	**4.27E-06**	--

Table G-59. Summary of Resident Monument Worker Scenario Radiological Risk Estimates and Primary Contributors to Risk For Shallow Zone Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk
300 ASH PITS_Shallow	1.06E-06	--	1.06E-06
300 VTS_Shallow	4.66E-07	--	4.66E-07
300-10_Shallow_Focused	4.15E-06	--	4.15E-06
300-109_Shallow_Focused	1.63E-06	--	1.63E-06
300-18_Shallow	5.11E-07	--	5.11E-07
300-223_Shallow_Focused	0.00E+00	--	0.00E+00
300-23_Shallow_Focused	0.00E+00	--	0.00E+00
300-259_Shallow	1.62E-06	--	1.62E-06
300-260_Shallow_Focused	5.76E-06	--	5.76E-06
300-272_Shallow_Focused	0.00E+00	--	0.00E+00
300-275_Shallow_1	1.41E-05	--	1.41E-05
300-275_Shallow_2	2.55E-06	--	2.55E-06
300-33, 300-41, 300-256_Shallow	3.98E-06	--	3.98E-06
300-33, 300-41, 300-256_Shallow_Focused	2.66E-06	--	2.66E-06
300-37_Shallow_Focused	0.00E+00	--	0.00E+00
300-44_Shallow_Focused	3.15E-07	--	3.15E-07
300-45_Shallow_Focused	1.93E-06	--	1.93E-06
300-49_Shallow	4.80E-06	--	4.80E-06
300-50_Shallow	1.38E-05	--	1.38E-05
300-8_Shallow	9.67E-07	--	9.67E-07
316-1_Shallow_1	3.58E-05	--	3.58E-05
316-1_Shallow_3	1.13E-04	--	1.13E-04
316-1_Shallow_4	2.55E-05	--	2.55E-05
316-2_Shallow_1	1.42E-04	--	1.42E-04
316-2_Shallow_2	1.87E-04	Uranium-238 (1.03e-04)	1.87E-04
316-2_Shallow_3	3.04E-05	--	3.04E-05
316-5_Shallow_1	2.18E-04	--	2.18E-04
316-5_Shallow_2	1.45E-04	--	1.45E-04
316-5_Shallow_Focused	1.13E-04	--	1.13E-04
331 LSLDF_Shallow_Focused	5.64E-07	--	5.64E-07
600-243_Shallow	0.00E+00	--	0.00E+00
600-259_Shallow	1.09E-06	--	1.09E-06
600-259_Shallow_Focused	6.11E-07	--	6.11E-07
600-47_Shallow	1.84E-06	--	1.84E-06
618-1_Shallow	1.83E-06	--	1.83E-06
618-1_Shallow_Focused	1.45E-05	--	1.45E-05
618-12_Shallow	1.36E-05	--	1.36E-05
618-13_Shallow	2.64E-06	--	2.64E-06
618-13_Shallow_Focused	1.15E-06	--	1.15E-06
618-2_Shallow	4.13E-05	--	4.13E-05
618-3_Shallow	8.75E-07	--	8.75E-07

Table G-59. Summary of Resident Monument Worker Scenario Radiological Risk Estimates and Primary Contributors to Risk For Shallow Zone Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk
618-3_Shallow_Focused	1.16E-04	--	1.16E-04
618-4_Shallow	3.64E-06	--	3.64E-06
618-5_Shallow	1.23E-06	--	1.23E-06
618-7_Shallow_1	6.96E-06	--	6.96E-06
618-7_Shallow_2	6.34E-07	--	6.34E-07
618-7_Shallow_3	1.52E-06	--	1.52E-06
618-7_Shallow_4	8.94E-07	--	8.94E-07
618-7_Shallow_Focused	1.27E-05	--	1.27E-05
618-8_Shallow	9.16E-07	--	9.16E-07
618-9_Shallow_Focused	3.55E-06	--	3.55E-06
628-4_Shallow	1.76E-06	--	1.76E-06
UPR-300-17_Shallow	9.16E-06	--	9.16E-06
UPR-300-46_Shallow	4.27E-06	--	4.27E-06

Table G-60. Summary of Resident Monument Worker Scenario Radiological Risk Estimates and Primary Contributors to Risk For Overburden Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk
300-272_Overburden_Focused	0.00E+00	--	0.00E+00
300-44_Overburden_Focused	3.71E-07	--	3.71E-07
300-49_Overburden	1.47E-06	--	1.47E-06
300-50_Overburden	9.98E-06	--	9.98E-06
316-1_Overburden	3.20E-05	--	3.20E-05
600-259_Overburden	5.47E-07	--	5.47E-07
618-2_Overburden	1.64E-06	--	1.64E-06
618-4_Overburden_2	1.65E-06	--	1.65E-06
618-4_Overburden_3	6.61E-07	--	6.61E-07
618-4_Overburden_4	1.11E-06	--	1.11E-06
618-5_Overburden	5.34E-06	--	5.34E-06
628-4_Overburden	1.46E-06	--	1.46E-06

Table G-61. Summary of Resident Monument Worker Scenario Radiological Risk Estimates and Primary Contributors to Risk For Staging Pile Area Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk
300-109_Staging Pile Area_Focused	2.75E-06	--	2.75E-06
618-2_Staging Pile	6.57E-06	--	6.57E-06
618-5_Staging Pile_4	1.34E-06	--	1.34E-06
618-5_Staging Pile_5	2.76E-06	--	2.76E-06

Table G-62. Resident Monument Worker Scenario Radiological Risk Estimates for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution
300-10_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.37E+00	9.31E+01	1.47E-06	100.00%
Total Radiological Risk Estimate						--	**1.47E-06**	--
300-109_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.40E+00	9.31E+02	1.50E-07	9.21%
300-109_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.38E+00	9.31E+01	1.48E-06	90.79%
Total Radiological Risk Estimate						--	**1.63E-06**	--
300-109_Staging Pile Area_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	2.54E+00	9.31E+02	2.73E-07	9.91%
300-109_Staging Pile Area_Focused	Rad	Uranium-238	U-238	pCi/g	2.31E+00	9.31E+01	2.48E-06	90.09%
Total Radiological Risk Estimate						--	**2.75E-06**	--
300-259_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.59E+00	9.31E+02	1.71E-07	10.58%
300-259_Shallow	Rad	Uranium-238	U-238	pCi/g	1.35E+00	9.31E+01	1.45E-06	89.42%
Total Radiological Risk Estimate						--	**1.62E-06**	--
300-260_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	2.51E-01	2.20E+01	1.14E-06	19.81%
300-260_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.30E+00	9.31E+01	4.62E-06	80.19%
Total Radiological Risk Estimate						--	**5.76E-06**	--
300-275_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	7.72E+00	9.31E+02	8.29E-07	6.22%
300-275_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.00E+00	2.20E+01	4.55E-06	34.10%
300-275_Shallow_1	Rad	Uranium-238	U-238	pCi/g	7.41E+00	9.31E+01	7.95E-06	59.68%
Total Radiological Risk Estimate						--	**1.33E-05**	--
300-275_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.31E+00	9.31E+02	1.40E-07	5.49%
300-275_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	2.37E-01	2.20E+01	1.08E-06	42.18%
300-275_Shallow_2	Rad	Uranium-238	U-238	pCi/g	1.24E+00	9.31E+01	1.34E-06	52.33%
Total Radiological Risk Estimate						--	**2.55E-06**	--

Table G-62. Resident Monument Worker Scenario Radiological Risk Estimates for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution
300-33, 300-41, 300-256_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	2.14E+00	9.31E+02	2.30E-07	5.77%
300-33, 300-41, 300-256_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	3.38E-01	2.20E+01	1.54E-06	38.64%
300-33, 300-41, 300-256_Shallow	Rad	Uranium-238	U-238	pCi/g	2.06E+00	9.31E+01	2.21E-06	55.59%
Total Radiological Risk Estimate						--	**3.98E-06**	--
300-33, 300-41, 300-256_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	3.02E+00	9.31E+02	3.24E-07	12.22%
300-33, 300-41, 300-256_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	2.17E+00	9.31E+01	2.33E-06	87.78%
Total Radiological Risk Estimate						--	**2.66E-06**	--
300-45_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.20E+00	9.31E+01	1.29E-06	100.00%
Total Radiological Risk Estimate						--	**1.29E-06**	--
300-49_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.32E+00	9.31E+02	1.41E-07	5.95%
300-49_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.40E-01	2.20E+01	1.09E-06	45.92%
300-49_Shallow	Rad	Uranium-238	U-238	pCi/g	1.06E+00	9.31E+01	1.14E-06	48.13%
Total Radiological Risk Estimate						--	**2.38E-06**	--
300-50_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	6.03E+00	9.31E+02	6.48E-07	7.13%
300-50_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	4.49E-01	2.20E+01	2.04E-06	22.46%
300-50_Overburden	Rad	Uranium-238	U-238	pCi/g	5.95E+00	9.31E+01	6.40E-06	70.41%
Total Radiological Risk Estimate						--	**9.08E-06**	--
300-50_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	7.89E+00	9.31E+02	8.48E-07	6.57%
300-50_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	6.64E-01	2.20E+01	3.02E-06	23.39%
300-50_Shallow	Rad	Uranium-238	U-238	pCi/g	8.41E+00	9.31E+01	9.04E-06	70.05%
Total Radiological Risk Estimate						--	**1.29E-05**	--
316-1_Overburden	Rad	Cobalt-60	10198-40-0	pCi/g	3.18E-01	3.30E+00	9.64E-06	31.70%

Table G-62. Resident Monument Worker Scenario Radiological Risk Estimates for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution
316-1_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	1.30E+01	9.31E+02	1.39E-06	4.58%
316-1_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	1.08E+00	2.20E+01	4.91E-06	16.15%
316-1_Overburden	Rad	Uranium-238	U-238	pCi/g	1.35E+01	9.31E+01	1.45E-05	47.57%
Total Radiological Risk Estimate						--	**3.04E-05**	--
316-1_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.21E+00	2.20E+01	5.51E-06	15.63%
316-1_Shallow_1	Rad	Uranium-238	U-238	pCi/g	2.77E+01	9.31E+01	2.98E-05	84.37%
Total Radiological Risk Estimate						--	**3.53E-05**	--
316-1_Shallow_3	Rad	Cobalt-60	10198-40-0	pCi/g	2.32E+00	3.30E+00	7.04E-05	65.70%
316-1_Shallow_3	Rad	Uranium-233/234	U-233/234	pCi/g	2.27E+01	9.31E+02	2.44E-06	2.28%
316-1_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	2.64E+00	2.20E+01	1.20E-05	11.18%
316-1_Shallow_3	Rad	Uranium-238	U-238	pCi/g	2.08E+01	9.31E+01	2.24E-05	20.85%
Total Radiological Risk Estimate						--	**1.07E-04**	--
316-1_Shallow_4	Rad	Cobalt-60	10198-40-0	pCi/g	1.20E-01	3.30E+00	3.64E-06	14.27%
316-1_Shallow_4	Rad	Uranium-233/234	U-233/234	pCi/g	1.61E+01	9.31E+02	1.73E-06	6.81%
316-1_Shallow_4	Rad	Uranium-235	15117-96-1	pCi/g	1.05E+00	2.20E+01	4.77E-06	18.74%
316-1_Shallow_4	Rad	Uranium-238	U-238	pCi/g	1.43E+01	9.31E+01	1.53E-05	60.18%
Total Radiological Risk Estimate						--	**2.55E-05**	--
316-2_Shallow_1	Rad	Cobalt-60	10198-40-0	pCi/g	9.22E-02	3.30E+00	2.79E-06	1.97%
316-2_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	8.64E+01	9.31E+02	9.28E-06	6.56%
316-2_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.22E+01	2.20E+01	5.55E-05	39.20%
316-2_Shallow_1	Rad	Uranium-238	U-238	pCi/g	6.88E+01	9.31E+01	7.40E-05	52.27%
Total Radiological Risk Estimate						--	**1.41E-04**	--
316-2_Shallow_2	Rad	Cobalt-60	10198-40-0	pCi/g	4.53E-01	3.30E+00	1.37E-05	7.63%
316-2_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.15E+02	9.31E+02	1.23E-05	6.85%
316-2_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	1.11E+01	2.20E+01	5.05E-05	28.06%

Table G-62. Resident Monument Worker Scenario Radiological Risk Estimates for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution
316-2_Shallow_2	Rad	Uranium-238	U-238	pCi/g	9.62E+01	9.31E+01	1.03E-04	57.46%
Total Radiological Risk Estimate						--	**1.80E-04**	--
316-2_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	9.09E-01	2.20E+01	4.13E-06	13.59%
316-2_Shallow_3	Rad	Uranium-238	U-238	pCi/g	2.44E+01	9.31E+01	2.63E-05	86.41%
Total Radiological Risk Estimate						--	**3.04E-05**	--
316-5_Shallow_1	Rad	Americium-241	14596-10-2	pCi/g	4.79E-01	2.75E+02	1.74E-07	0.08%
316-5_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	2.31E+00	6.22E+00	3.72E-05	17.08%
316-5_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.86E+01	2.20E+01	8.45E-05	38.83%
316-5_Shallow_1	Rad	Uranium-238	U-238	pCi/g	8.92E+01	9.31E+01	9.58E-05	44.01%
Total Radiological Risk Estimate						--	**2.18E-04**	--
316-5_Shallow_2	Rad	Americium-241	14596-10-2	pCi/g	1.24E-01	2.75E+02	4.51E-08	0.03%
316-5_Shallow_2	Rad	Cesium-137	10045-97-3	pCi/g	1.71E+00	6.22E+00	2.76E-05	19.03%
316-5_Shallow_2	Rad	Cobalt-60	10198-40-0	pCi/g	1.18E-01	3.30E+00	3.58E-06	2.47%
316-5_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	9.04E+00	2.20E+01	4.11E-05	28.38%
316-5_Shallow_2	Rad	Uranium-238	U-238	pCi/g	6.75E+01	9.31E+01	7.25E-05	50.09%
Total Radiological Risk Estimate						--	**1.45E-04**	--
316-5_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.83E+00	6.22E+00	2.94E-05	26.07%
316-5_Shallow_Focused	Rad	Europium-155	14391-16-3	pCi/g	7.19E-02	3.54E+02	2.03E-08	0.02%
316-5_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	7.67E+00	2.20E+01	3.49E-05	30.89%
316-5_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.52E+01	9.31E+01	4.85E-05	43.02%
Total Radiological Risk Estimate						--	**1.13E-04**	--
600-47_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.36E+00	9.31E+02	1.46E-07	7.93%
600-47_Shallow	Rad	Uranium-238	U-238	pCi/g	1.58E+00	9.31E+01	1.70E-06	92.07%
Total Radiological Risk Estimate						--	**1.84E-06**	--

Table G-62. Resident Monument Worker Scenario Radiological Risk Estimates for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution
618-1_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.93E+00	9.31E+02	2.07E-07	11.33%
618-1_Shallow	Rad	Uranium-238	U-238	pCi/g	1.51E+00	9.31E+01	1.62E-06	88.67%
Total Radiological Risk Estimate						--	**1.83E-06**	--
618-1_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.13E+01	9.31E+02	1.21E-06	8.35%
618-1_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	9.87E-01	2.20E+01	4.49E-06	30.86%
618-1_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	8.23E+00	9.31E+01	8.84E-06	60.80%
Total Radiological Risk Estimate						--	**1.45E-05**	--
618-12_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	4.71E-01	2.20E+01	2.14E-06	15.68%
618-12_Shallow	Rad	Uranium-238	U-238	pCi/g	1.07E+01	9.31E+01	1.15E-05	84.32%
Total Radiological Risk Estimate						--	**1.36E-05**	--
618-13_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.92E+00	9.31E+02	2.06E-07	10.15%
618-13_Shallow	Rad	Uranium-238	U-238	pCi/g	1.70E+00	9.31E+01	1.83E-06	89.85%
Total Radiological Risk Estimate						--	**2.03E-06**	--
618-13_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.14E+00	9.31E+02	1.22E-07	100.00%
Total Radiological Risk Estimate						--	**1.22E-07**	--
618-2_Shallow	Rad	Americium-241	14596-10-2	pCi/g	8.13E-01	2.75E+02	2.96E-07	0.72%
618-2_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	2.24E+00	6.22E+00	3.60E-05	87.19%
618-2_Shallow	Rad	Plutonium-239/240	PU-239/240	pCi/g	7.67E+00	5.39E+02	1.42E-06	3.45%
618-2_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	2.20E+00	9.31E+02	2.36E-07	0.57%
618-2_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.14E-01	2.20E+01	9.73E-07	2.36%
618-2_Shallow	Rad	Uranium-238	U-238	pCi/g	2.20E+00	9.31E+01	2.36E-06	5.72%
Total Radiological Risk Estimate						--	**4.13E-05**	--

Table G-62. Resident Monument Worker Scenario Radiological Risk Estimates for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution
618-2_Staging Pile	Rad	Americium-241	14596-10-2	pCi/g	8.18E-01	2.75E+02	2.97E-07	5.90%
618-2_Staging Pile	Rad	Plutonium-239/240	PU-239/240	pCi/g	1.00E+01	5.39E+02	1.86E-06	36.78%
618-2_Staging Pile	Rad	Tritium	10028-17-8	pCi/g	2.33E+00	1.27E+06	1.83E-10	0.00%
618-2_Staging Pile	Rad	Uranium-233/234	U-233/234	pCi/g	2.04E+00	9.31E+02	2.19E-07	4.34%
618-2_Staging Pile	Rad	Uranium-235	15117-96-1	pCi/g	1.22E-01	2.20E+01	5.55E-07	11.01%
618-2_Staging Pile	Rad	Uranium-238	U-238	pCi/g	1.97E+00	9.31E+01	2.12E-06	41.98%
Total Radiological Risk Estimate						--	**5.04E-06**	--
618-3_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	7.96E+01	9.31E+02	8.55E-06	7.40%
618-3_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.79E+00	2.20E+01	2.18E-05	18.83%
618-3_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	7.94E+01	9.31E+01	8.53E-05	73.77%
Total Radiological Risk Estimate						--	**1.16E-04**	--
618-4_Overburden_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.30E+00	9.31E+02	1.40E-07	8.44%
618-4_Overburden_2	Rad	Uranium-238	U-238	pCi/g	1.41E+00	9.31E+01	1.51E-06	91.56%
Total Radiological Risk Estimate						--	**1.65E-06**	--
618-4_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	3.22E+00	9.31E+02	3.46E-07	9.49%
618-4_Shallow	Rad	Uranium-238	U-238	pCi/g	3.07E+00	9.31E+01	3.30E-06	90.51%
Total Radiological Risk Estimate						--	**3.64E-06**	--
618-5_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	4.14E+00	9.31E+02	4.45E-07	8.32%
618-5_Overburden	Rad	Uranium-238	U-238	pCi/g	4.56E+00	9.31E+01	4.90E-06	91.68%
Total Radiological Risk Estimate						--	**5.34E-06**	--
618-5_Staging Pile_4	Rad	Uranium-233/234	U-233/234	pCi/g	1.15E+00	9.31E+02	1.24E-07	9.24%
618-5_Staging Pile_4	Rad	Uranium-238	U-238	pCi/g	1.13E+00	9.31E+01	1.21E-06	90.76%
Total Radiological Risk Estimate						--	**1.34E-06**	--

Table G-62. Resident Monument Worker Scenario Radiological Risk Estimates for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution
618-5_Staging Pile_5	Rad	Uranium-233/234	U-233/234	pCi/g	1.52E+00	9.31E+02	1.63E-07	5.91%
618-5_Staging Pile_5	Rad	Uranium-235	15117-96-1	pCi/g	1.68E-01	2.20E+01	7.64E-07	27.63%
618-5_Staging Pile_5	Rad	Uranium-238	U-238	pCi/g	1.71E+00	9.31E+01	1.84E-06	66.46%
Total Radiological Risk Estimate						--	**2.76E-06**	--
618-7_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	3.61E+00	9.31E+02	3.88E-07	6.60%
618-7_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	3.64E-01	2.20E+01	1.65E-06	28.11%
618-7_Shallow_1	Rad	Uranium-238	U-238	pCi/g	3.57E+00	9.31E+01	3.84E-06	65.29%
Total Radiological Risk Estimate						--	**5.88E-06**	--
618-7_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.09E+01	9.31E+02	1.17E-06	9.37%
618-7_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	9.74E-01	2.20E+01	4.43E-06	35.44%
618-7_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	6.42E+00	9.31E+01	6.90E-06	55.19%
Total Radiological Risk Estimate						--	**1.25E-05**	--
618-8_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.19E+00	9.31E+02	1.28E-07	100.00%
Total Radiological Risk Estimate						--	**1.28E-07**	--
618-9_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	3.00E+00	9.31E+01	3.22E-06	100.00%
Total Radiological Risk Estimate						--	**3.22E-06**	--
628-4_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.13E+00	9.31E+02	1.21E-07	19.25%
628-4_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	1.12E-01	2.20E+01	5.09E-07	80.75%
Total Radiological Risk Estimate						--	**6.30E-07**	--
UPR-300-17_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	6.15E+00	9.31E+02	6.60E-07	7.21%
UPR-300-17_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	9.14E-01	2.20E+01	4.15E-06	45.37%
UPR-300-17_Shallow	Rad	Uranium-238	U-238	pCi/g	4.04E+00	9.31E+01	4.34E-06	47.41%
Total Radiological Risk Estimate						--	**9.16E-06**	--

Table G-62. Resident Monument Worker Scenario Radiological Risk Estimates for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution
UPR-300-46_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.77E+00	9.31E+02	1.90E-07	6.04%
UPR-300-46_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.43E-01	2.20E+01	1.10E-06	35.07%
UPR-300-46_Shallow	Rad	Uranium-238	U-238	pCi/g	1.73E+00	9.31E+01	1.85E-06	58.89%
Total Radiological Risk Estimate						--	**3.15E-06**	--

Table G-63. Summary of Resident Monument Worker Scenario Radiological Risk Estimates and Primary Contributors to Risk For Shallow Zone Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk
300 ASH PITS_Shallow	0.00E+00	--	0.00E+00
300 VTS_Shallow	0.00E+00	--	0.00E+00
300-10_Shallow_Focused	1.47E-06	--	1.47E-06
300-109_Shallow_Focused	1.63E-06	--	1.63E-06
300-18_Shallow	0.00E+00	--	0.00E+00
300-223_Shallow_Focused	0.00E+00	--	0.00E+00
300-23_Shallow_Focused	0.00E+00	--	0.00E+00
300-259_Shallow	1.62E-06	--	1.62E-06
300-260_Shallow_Focused	5.76E-06	--	5.76E-06
300-272_Shallow_Focused	0.00E+00	--	0.00E+00
300-275_Shallow_1	1.33E-05	--	1.33E-05
300-275_Shallow_2	2.55E-06	--	2.55E-06
300-33, 300-41, 300-256_Shallow	3.98E-06	--	3.98E-06
300-33, 300-41, 300-256_Shallow_Focused	2.66E-06	--	2.66E-06
300-37_Shallow_Focused	0.00E+00	--	0.00E+00
300-44_Shallow_Focused	0.00E+00	--	0.00E+00
300-45_Shallow_Focused	1.29E-06	--	1.29E-06
300-49_Shallow	2.38E-06	--	2.38E-06
300-50_Shallow	1.29E-05	--	1.29E-05
300-8_Shallow	0.00E+00	--	0.00E+00
316-1_Shallow_1	3.53E-05	--	3.53E-05
316-1_Shallow_3	1.07E-04	--	1.07E-04
316-1_Shallow_4	2.55E-05	--	2.55E-05
316-2_Shallow_1	1.41E-04	--	1.41E-04
316-2_Shallow_2	1.80E-04	Uranium-238 (1.03e-04)	1.80E-04
316-2_Shallow_3	3.04E-05	--	3.04E-05
316-5_Shallow_1	2.18E-04	--	2.18E-04
316-5_Shallow_2	1.45E-04	--	1.45E-04

Table G-63. Summary of Resident Monument Worker Scenario Radiological Risk Estimates and Primary Contributors to Risk For Shallow Zone Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk
316-5_Shallow_Focused	1.13E-04	--	1.13E-04
331 LSLDF_Shallow_Focused	0.00E+00	--	0.00E+00
600-243_Shallow	0.00E+00	--	0.00E+00
600-259_Shallow	0.00E+00	--	0.00E+00
600-259_Shallow_Focused	0.00E+00	--	0.00E+00
600-47_Shallow	1.84E-06	--	1.84E-06
618-1_Shallow	1.83E-06	--	1.83E-06
618-1_Shallow_Focused	1.45E-05	--	1.45E-05
618-12_Shallow	1.36E-05	--	1.36E-05
618-13_Shallow	2.03E-06	--	2.03E-06
618-13_Shallow_Focused	1.22E-07	--	1.22E-07
618-2_Shallow	4.13E-05	--	4.13E-05
618-3_Shallow	0.00E+00	--	0.00E+00
618-3_Shallow_Focused	1.16E-04	--	1.16E-04
618-4_Shallow	3.64E-06	--	3.64E-06
618-5_Shallow	0.00E+00	--	0.00E+00
618-7_Shallow_1	5.88E-06	--	5.88E-06
618-7_Shallow_2	0.00E+00	--	0.00E+00
618-7_Shallow_3	0.00E+00	--	0.00E+00
618-7_Shallow_4	0.00E+00	--	0.00E+00
618-7_Shallow_Focused	1.25E-05	--	1.25E-05
618-8_Shallow	1.28E-07	--	1.28E-07
618-9_Shallow_Focused	3.22E-06	--	3.22E-06
628-4_Shallow	6.30E-07	--	6.30E-07
UPR-300-17_Shallow	9.16E-06	--	9.16E-06
UPR-300-46_Shallow	3.15E-06	--	3.15E-06

Table G-64. Summary of Resident Monument Worker Scenario Radiological Risk Estimates and Primary Contributors to Risk For Overburden Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk
300-272_Overburden_Focused	0.00E+00	--	0.00E+00
300-44_Overburden_Focused	0.00E+00	--	0.00E+00
300-49_Overburden	0.00E+00	--	0.00E+00
300-50_Overburden	9.08E-06	--	9.08E-06
316-1_Overburden	3.04E-05	--	3.04E-05
600-259_Overburden	0.00E+00	--	0.00E+00
618-2_Overburden	0.00E+00	--	0.00E+00
618-4_Overburden_2	1.65E-06	--	1.65E-06
618-4_Overburden_3	0.00E+00	--	0.00E+00
618-4_Overburden_4	0.00E+00	--	0.00E+00
618-5_Overburden	5.34E-06	--	5.34E-06
628-4_Overburden	0.00E+00	--	0.00E+00

Table G-65. Summary of Resident Monument Worker Scenario Radiological Risk Estimates and Primary Contributors to Risk For Staging Pile Area Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk
300-109_Staging Pile Area_Focused	2.75E-06	--	2.75E-06
618-2_Staging Pile	5.04E-06	--	5.04E-06
618-5_Staging Pile_4	1.34E-06	--	1.34E-06
618-5_Staging Pile_5	2.76E-06	--	2.76E-06

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Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300 ASH PITS_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	5.20E+01	2.58E+03	2.01E-08	1.48%	--	--	--
300 ASH PITS_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	6.08E+03	4.54E+03	1.34E-06	98.50%	2.53E+05	2.41E-02	99.97%
300 ASH PITS_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	9.60E+01	4.05E+05	2.37E-10	0.02%	1.43E+07	6.73E-06	0.03%
300 ASH PITS_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	7.60E+01	2.98E+06	2.55E-11	0.00%	1.43E+08	5.33E-07	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**1.36E-06**	--	--	**2.41E-02**	--
300 ASH PITS_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	3.88E-02	2.95E+02	1.31E-08	14.86%	--	--	--
300 ASH PITS_Shallow	Rad	Uranium-238	U-238	pCi/g	8.23E-01	1.09E+03	7.53E-08	85.14%	--	--	--
Total Radiological Risk Estimate						--	**8.84E-08**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.45E-06**	--	--	--	--
300 VTS_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	2.90E-02	1.00E+02	2.89E-08	100.00%	--	--	--
Total Radiological Risk Estimate						--	**2.89E-08**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**2.89E-08**	--	--	--	--
300-10_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.35E+04	4.54E+03	2.97E-06	99.98%	2.53E+05	5.35E-02	99.97%
300-10_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.00E+02	4.05E+05	4.94E-10	0.02%	1.43E+07	1.40E-05	0.03%
300-10_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	2.30E+02	2.98E+06	7.72E-11	0.00%	1.43E+08	1.61E-06	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**2.98E-06**	--	--	**5.35E-02**	--
300-10_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.55E-01	1.00E+02	1.55E-07	52.65%	--	--	--
300-10_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.06E-02	2.95E+02	1.38E-08	4.68%	--	--	--
300-10_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.37E+00	1.09E+03	1.25E-07	42.66%	--	--	--
Total Radiological Risk Estimate						--	**2.94E-07**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**3.27E-06**	--	--	--	--
300-109_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	5.62E+06	--	--	--	9.12E+08	6.16E-03	6.84%
300-109_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.22E+02	2.58E+03	4.72E-08	7.71%	1.31E+04	9.31E-03	10.33%
300-109_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.97E+01	2.58E+03	1.54E-08	2.51%	--	--	--
300-109_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	2.42E+03	4.54E+03	5.33E-07	87.05%	2.53E+05	9.58E-03	10.64%
300-109_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	6.33E+04	--	--	--	1.82E+08	3.47E-04	0.39%
300-109_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	1.24E+00	1.72E+02	7.20E-09	1.18%	--	--	--
300-109_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	2.30E+00	1.72E+03	1.34E-09	0.22%	--	--	--
300-109_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	1.80E+02	3.45E+09	5.21E-14	0.00%	1.82E+06	9.86E-05	0.11%
300-109_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	6.32E+02	--	--	--	1.82E+08	3.46E-06	0.00%
300-109_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	5.90E+01	4.60E+09	1.28E-14	0.00%	8.21E+05	7.19E-05	0.08%
300-109_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	6.95E+03	--	--	--	1.37E+09	5.08E-06	0.01%
300-109_Shallow_Focused	non-Rad	Chrysene	218-01-9	µg/kg	1.77E+00	1.72E+04	1.03E-10	0.02%	--	--	--
300-109_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	6.42E+03	9.20E+08	6.97E-12	0.00%	2.74E+05	2.35E-02	26.04%
300-109_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	1.08E+04	--	--	--	3.65E+07	2.96E-04	0.33%
300-109_Shallow_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	1.40E+01	1.72E+03	8.13E-09	1.33%	--	--	--
300-109_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	1.75E+07	--	--	--	6.39E+08	2.74E-02	30.42%
300-109_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	2.78E+05	--	--	--	1.28E+08	2.18E-03	2.42%
300-109_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	2.20E+01	--	--	--	2.74E+05	8.03E-05	0.09%

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-109_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	3.41E+02	--	--	--	4.56E+06	7.47E-05	0.08%
300-109_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	8.49E+03	3.19E+10	2.66E-13	0.00%	1.82E+07	4.65E-04	0.52%
300-109_Shallow_Focused	non-Rad	Pyrene	129-00-0	µg/kg	1.56E+00	--	--	--	2.01E+07	7.77E-08	0.00%
300-109_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	4.76E+04	--	--	--	4.56E+06	1.04E-02	11.58%
300-109_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	3.47E+04	--	--	--	2.74E+08	1.27E-04	0.14%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.13E-07**	**--**	**--**	**9.01E-02**	**--**
300-109_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.40E+00	5.81E+03	2.41E-08	16.03%	--	--	--
300-109_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.38E+00	1.09E+03	1.26E-07	83.97%	--	--	--
Total Radiological Risk Estimate						**--**	**1.50E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.63E-07**	**--**	**--**	**--**	**--**
300-109_Staging Pile Area_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	5.78E+06	--	--	--	9.12E+08	6.33E-03	7.57%
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.68E+01	2.58E+03	1.42E-08	2.27%	1.31E+04	2.81E-03	3.35%
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.94E+01	2.58E+03	7.51E-09	1.19%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	2.58E+03	4.54E+03	5.69E-07	90.48%	2.53E+05	1.02E-02	12.21%
300-109_Staging Pile Area_Focused	non-Rad	Barium	7440-39-3	µg/kg	7.27E+04	--	--	--	1.82E+08	3.98E-04	0.48%
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	2.08E+00	1.72E+03	1.21E-09	0.19%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	3.30E+00	1.72E+02	1.92E-08	3.05%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	1.31E+00	1.72E+03	7.61E-10	0.12%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	2.03E+02	3.45E+09	5.88E-14	0.00%	1.82E+06	1.11E-04	0.13%
300-109_Staging Pile Area_Focused	non-Rad	Boron	7440-42-8	µg/kg	1.06E+03	--	--	--	1.82E+08	5.81E-06	0.01%
300-109_Staging Pile Area_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	6.60E+01	4.60E+09	1.43E-14	0.00%	8.21E+05	8.04E-05	0.10%
300-109_Staging Pile Area_Focused	non-Rad	Chromium	7440-47-3	µg/kg	8.17E+03	--	--	--	1.37E+09	5.97E-06	0.01%
300-109_Staging Pile Area_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	5.95E+03	9.20E+08	6.46E-12	0.00%	2.74E+05	2.17E-02	25.97%
300-109_Staging Pile Area_Focused	non-Rad	Copper	7440-50-8	µg/kg	1.16E+04	--	--	--	3.65E+07	3.18E-04	0.38%
300-109_Staging Pile Area_Focused	non-Rad	Fluoranthene	206-44-0	µg/kg	5.14E+00	--	--	--	2.68E+07	1.92E-07	0.00%
300-109_Staging Pile Area_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	2.92E+01	1.72E+03	1.70E-08	2.70%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Iron	7439-89-6	µg/kg	1.84E+07	--	--	--	6.39E+08	2.88E-02	34.42%
300-109_Staging Pile Area_Focused	non-Rad	Manganese	7439-96-5	µg/kg	2.86E+05	--	--	--	1.28E+08	2.24E-03	2.68%
300-109_Staging Pile Area_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	4.08E+02	--	--	--	4.56E+06	8.94E-05	0.11%
300-109_Staging Pile Area_Focused	non-Rad	Nickel	7440-02-0	µg/kg	8.57E+03	3.19E+10	2.69E-13	0.00%	1.82E+07	4.70E-04	0.56%
300-109_Staging Pile Area_Focused	non-Rad	Pyrene	129-00-0	µg/kg	6.96E+00	--	--	--	2.01E+07	3.47E-07	0.00%
300-109_Staging Pile Area_Focused	non-Rad	Tin	7440-31-5	µg/kg	1.45E+03	--	--	--	5.48E+08	2.65E-06	0.00%
300-109_Staging Pile Area_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	4.51E+04	--	--	--	4.56E+06	9.88E-03	11.81%
300-109_Staging Pile Area_Focused	non-Rad	Zinc	7440-66-6	µg/kg	4.88E+04	--	--	--	2.74E+08	1.78E-04	0.21%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.28E-07**	**--**	**--**	**8.37E-02**	**--**
300-109_Staging Pile Area_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	2.54E+00	5.81E+03	4.37E-08	17.15%	--	--	--
300-109_Staging Pile Area_Focused	Rad	Uranium-238	U-238	pCi/g	2.31E+00	1.09E+03	2.11E-07	82.85%	--	--	--
Total Radiological Risk Estimate						**--**	**2.55E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.83E-07**	**--**	**--**	**--**	**--**
300-18_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.20E+03	4.54E+03	4.85E-07	100.00%	2.53E+05	8.71E-03	92.00%
300-18_Shallow	non-Rad	Barium	7440-39-3	µg/kg	6.34E+04	--	--	--	1.82E+08	3.47E-04	3.67%

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-18_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	6.50E+02	3.45E+09	1.88E-13	0.00%	1.82E+06	3.56E-04	3.76%
300-18_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	4.00E+01	4.60E+09	8.69E-15	0.00%	8.21E+05	4.87E-05	0.51%
300-18_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	6.90E+03	--	--	--	1.37E+09	5.04E-06	0.05%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.85E-07**	**--**	**--**	**9.47E-03**	**--**
300-18_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	6.49E-01	5.81E+03	1.12E-08	22.91%	--	--	--
300-18_Shallow	Rad	Uranium-238	U-238	pCi/g	4.11E-01	1.09E+03	3.76E-08	77.09%	--	--	--
Total Radiological Risk Estimate						**--**	**4.88E-08**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.34E-07**	**--**	**--**	**--**	**--**
300-259_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	5.99E+06	--	--	--	9.12E+08	6.57E-03	7.91%
300-259_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.22E+02	--	--	--	3.65E+05	8.83E-04	1.06%
300-259_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.10E+03	4.54E+03	4.62E-07	100.00%	2.53E+05	8.30E-03	9.99%
300-259_Shallow	non-Rad	Barium	7440-39-3	µg/kg	7.52E+04	--	--	--	1.82E+08	4.12E-04	0.50%
300-259_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.26E+02	3.45E+09	6.54E-14	0.00%	1.82E+06	1.24E-04	0.15%
300-259_Shallow	non-Rad	Boron	7440-42-8	µg/kg	1.30E+03	--	--	--	1.82E+08	7.14E-06	0.01%
300-259_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	2.52E+02	4.60E+09	5.46E-14	0.00%	8.21E+05	3.06E-04	0.37%
300-259_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	7.90E+03	--	--	--	1.37E+09	5.77E-06	0.01%
300-259_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	5.83E+03	9.20E+08	6.33E-12	0.00%	2.74E+05	2.13E-02	25.64%
300-259_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.07E+04	--	--	--	3.65E+07	2.93E-04	0.35%
300-259_Shallow	non-Rad	Iron	7439-89-6	µg/kg	1.96E+07	--	--	--	6.39E+08	3.07E-02	36.95%
300-259_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.19E+05	--	--	--	1.28E+08	2.50E-03	3.01%
300-259_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	1.00E+01	--	--	--	2.74E+05	3.65E-05	0.04%
300-259_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	3.03E+02	--	--	--	4.56E+06	6.64E-05	0.08%
300-259_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	8.75E+03	3.19E+10	2.75E-13	0.00%	1.82E+07	4.80E-04	0.58%
300-259_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	4.26E+04	--	--	--	4.56E+06	9.34E-03	11.25%
300-259_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.80E+05	--	--	--	2.74E+08	1.75E-03	2.11%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.62E-07**	**--**	**--**	**8.31E-02**	**--**
300-259_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.59E+00	5.81E+03	2.74E-08	18.21%	--	--	--
300-259_Shallow	Rad	Uranium-238	U-238	pCi/g	1.35E+00	1.09E+03	1.23E-07	81.79%	--	--	--
Total Radiological Risk Estimate						**--**	**1.51E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.13E-07**	**--**	**--**	**--**	**--**
300-260_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	8.17E+06	--	--	--	9.12E+08	8.95E-03	8.73%
300-260_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	9.22E+02	--	--	--	3.65E+05	2.53E-03	2.46%
300-260_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	3.16E+03	4.54E+03	6.96E-07	100.00%	2.53E+05	1.25E-02	12.19%
300-260_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	1.22E+05	--	--	--	1.82E+08	6.69E-04	0.65%
300-260_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	2.39E+02	3.45E+09	6.92E-14	0.00%	1.82E+06	1.31E-04	0.13%
300-260_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	8.36E+03	--	--	--	1.82E+08	4.58E-05	0.04%
300-260_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	1.10E+02	4.60E+09	2.39E-14	0.00%	8.21E+05	1.34E-04	0.13%
300-260_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	9.89E+03	--	--	--	1.37E+09	7.23E-06	0.01%
300-260_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	7.43E+03	9.20E+08	8.07E-12	0.00%	2.74E+05	2.71E-02	26.45%
300-260_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	7.33E+04	--	--	--	3.65E+07	2.01E-03	1.96%
300-260_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	2.04E+07	--	--	--	6.39E+08	3.19E-02	31.12%

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-260_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	3.28E+05	--	--	--	1.28E+08	2.57E-03	2.50%
300-260_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	1.20E+01	--	--	--	2.74E+05	4.38E-05	0.04%
300-260_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	5.37E+02	--	--	--	4.56E+06	1.18E-04	0.11%
300-260_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.02E+04	3.19E+10	3.20E-13	0.00%	1.82E+07	5.59E-04	0.54%
300-260_Shallow_Focused	non-Rad	Silver	7440-22-4	µg/kg	2.06E+02	--	--	--	4.56E+06	4.52E-05	0.04%
300-260_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	5.90E+04	--	--	--	4.56E+06	1.29E-02	12.60%
300-260_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	7.74E+04	--	--	--	2.74E+08	2.83E-04	0.28%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.96E-07**	**--**	**--**	**1.03E-01**	**--**
300-260_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	2.51E-01	2.95E+02	8.51E-08	17.78%	--	--	--
300-260_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.30E+00	1.09E+03	3.93E-07	82.22%	--	--	--
Total Radiological Risk Estimate						**--**	**4.78E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.17E-06**	**--**	**--**	**--**	**--**
300-275_Shallow_1	non-Rad	Acenaphthene	83-32-9	µg/kg	9.60E+02	--	--	--	4.01E+07	2.39E-05	0.03%
300-275_Shallow_1	non-Rad	Aluminum	7429-90-5	µg/kg	5.61E+06	--	--	--	9.12E+08	6.15E-03	7.27%
300-275_Shallow_1	non-Rad	Antimony	7440-36-0	µg/kg	2.60E+02	--	--	--	3.65E+05	7.12E-04	0.84%
300-275_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	2.21E+03	4.54E+03	4.87E-07	98.23%	2.53E+05	8.75E-03	10.35%
300-275_Shallow_1	non-Rad	Barium	7440-39-3	µg/kg	7.53E+04	--	--	--	1.82E+08	4.12E-04	0.49%
300-275_Shallow_1	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	1.30E+00	1.72E+02	7.55E-09	1.52%	--	--	--
300-275_Shallow_1	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	1.87E+00	1.72E+03	1.09E-09	0.22%	--	--	--
300-275_Shallow_1	non-Rad	Beryllium	7440-41-7	µg/kg	4.52E+02	3.45E+09	1.31E-13	0.00%	1.82E+06	2.48E-04	0.29%
300-275_Shallow_1	non-Rad	Boron	7440-42-8	µg/kg	1.47E+03	--	--	--	1.82E+08	8.03E-06	0.01%
300-275_Shallow_1	non-Rad	Cadmium	7440-43-9	µg/kg	8.33E+01	4.60E+09	1.81E-14	0.00%	8.21E+05	1.02E-04	0.12%
300-275_Shallow_1	non-Rad	Chromium	7440-47-3	µg/kg	8.02E+03	--	--	--	1.37E+09	5.86E-06	0.01%
300-275_Shallow_1	non-Rad	Chrysene	218-01-9	µg/kg	2.20E+00	1.72E+04	1.28E-10	0.03%	--	--	--
300-275_Shallow_1	non-Rad	Cobalt	7440-48-4	µg/kg	5.85E+03	9.20E+08	6.35E-12	0.00%	2.74E+05	2.14E-02	25.25%
300-275_Shallow_1	non-Rad	Copper	7440-50-8	µg/kg	4.29E+04	--	--	--	3.65E+07	1.18E-03	1.39%
300-275_Shallow_1	non-Rad	Fluoranthene	206-44-0	µg/kg	2.30E+03	--	--	--	2.68E+07	8.60E-05	0.10%
300-275_Shallow_1	non-Rad	Fluorene	86-73-7	µg/kg	8.11E+01	--	--	--	2.68E+07	3.03E-06	0.00%
300-275_Shallow_1	non-Rad	Iron	7439-89-6	µg/kg	1.79E+07	--	--	--	6.39E+08	2.80E-02	33.14%
300-275_Shallow_1	non-Rad	Lithium	7439-93-2	µg/kg	6.69E+03	--	--	--	1.83E+06	3.66E-03	4.33%
300-275_Shallow_1	non-Rad	Manganese	7439-96-5	µg/kg	2.77E+05	--	--	--	1.28E+08	2.17E-03	2.56%
300-275_Shallow_1	non-Rad	Mercury	7439-97-6	µg/kg	1.67E+01	--	--	--	2.74E+05	6.08E-05	0.07%
300-275_Shallow_1	non-Rad	Molybdenum	7439-98-7	µg/kg	3.78E+02	--	--	--	4.56E+06	8.29E-05	0.10%
300-275_Shallow_1	non-Rad	Nickel	7440-02-0	µg/kg	9.46E+03	3.19E+10	2.97E-13	0.00%	1.82E+07	5.18E-04	0.61%
300-275_Shallow_1	non-Rad	Silver	7440-22-4	µg/kg	1.21E+02	--	--	--	4.56E+06	2.65E-05	0.03%
300-275_Shallow_1	non-Rad	Strontium	7440-24-6	µg/kg	2.02E+04	--	--	--	5.48E+08	3.69E-05	0.04%
300-275_Shallow_1	non-Rad	Tin	7440-31-5	µg/kg	1.48E+03	--	--	--	5.48E+08	2.71E-06	0.00%
300-275_Shallow_1	non-Rad	Uranium	7440-61-1	µg/kg	2.50E+03	--	--	--	2.74E+06	9.13E-04	1.08%
300-275_Shallow_1	non-Rad	Vanadium	7440-62-2	µg/kg	4.51E+04	--	--	--	4.56E+06	9.89E-03	11.69%
300-275_Shallow_1	non-Rad	Zinc	7440-66-6	µg/kg	4.10E+04	--	--	--	2.74E+08	1.50E-04	0.18%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.96E-07**	**--**	**--**	**8.46E-02**	**--**
300-275_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	4.65E-02	1.00E+02	4.64E-08	3.88%	--	--	--
300-275_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	7.72E+00	5.81E+03	1.33E-07	11.11%	--	--	--

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-275_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.00E+00	2.95E+02	3.39E-07	28.35%	--	--	--
300-275_Shallow_1	Rad	Uranium-238	U-238	pCi/g	7.41E+00	1.09E+03	6.77E-07	56.66%	--	--	--
Total Radiological Risk Estimate						**--**	**1.20E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.69E-06**	**--**	**--**	**--**	**--**
300-275_Shallow_2	non-Rad	Acenaphthene	83-32-9	µg/kg	3.60E+00	--	--	--	4.01E+07	8.97E-08	0.00%
300-275_Shallow_2	non-Rad	Aluminum	7429-90-5	µg/kg	6.24E+06	--	--	--	9.12E+08	6.84E-03	7.62%
300-275_Shallow_2	non-Rad	Arsenic	7440-38-2	µg/kg	2.76E+03	4.54E+03	6.08E-07	100.00%	2.53E+05	1.09E-02	12.19%
300-275_Shallow_2	non-Rad	Barium	7440-39-3	µg/kg	6.86E+04	--	--	--	1.82E+08	3.76E-04	0.42%
300-275_Shallow_2	non-Rad	Beryllium	7440-41-7	µg/kg	2.54E+02	3.45E+09	7.36E-14	0.00%	1.82E+06	1.39E-04	0.16%
300-275_Shallow_2	non-Rad	Boron	7440-42-8	µg/kg	1.15E+03	--	--	--	1.82E+08	6.28E-06	0.01%
300-275_Shallow_2	non-Rad	Cadmium	7440-43-9	µg/kg	1.44E+02	4.60E+09	3.13E-14	0.00%	8.21E+05	1.75E-04	0.20%
300-275_Shallow_2	non-Rad	Chromium	7440-47-3	µg/kg	8.99E+03	--	--	--	1.37E+09	6.57E-06	0.01%
300-275_Shallow_2	non-Rad	Cobalt	7440-48-4	µg/kg	5.98E+03	9.20E+08	6.49E-12	0.00%	2.74E+05	2.18E-02	24.35%
300-275_Shallow_2	non-Rad	Copper	7440-50-8	µg/kg	1.16E+04	--	--	--	3.65E+07	3.18E-04	0.35%
300-275_Shallow_2	non-Rad	Fluoranthene	206-44-0	µg/kg	5.60E+01	--	--	--	2.68E+07	2.09E-06	0.00%
300-275_Shallow_2	non-Rad	Fluorene	86-73-7	µg/kg	2.60E+00	--	--	--	2.68E+07	9.72E-08	0.00%
300-275_Shallow_2	non-Rad	Iron	7439-89-6	µg/kg	1.96E+07	--	--	--	6.39E+08	3.06E-02	34.17%
300-275_Shallow_2	non-Rad	Lithium	7439-93-2	µg/kg	7.07E+03	--	--	--	1.83E+06	3.87E-03	4.32%
300-275_Shallow_2	non-Rad	Manganese	7439-96-5	µg/kg	2.93E+05	--	--	--	1.28E+08	2.29E-03	2.56%
300-275_Shallow_2	non-Rad	Mercury	7439-97-6	µg/kg	2.80E+01	--	--	--	2.74E+05	1.02E-04	0.11%
300-275_Shallow_2	non-Rad	Molybdenum	7439-98-7	µg/kg	4.04E+02	--	--	--	4.56E+06	8.85E-05	0.10%
300-275_Shallow_2	non-Rad	Nickel	7440-02-0	µg/kg	9.59E+03	3.19E+10	3.01E-13	0.00%	1.82E+07	5.26E-04	0.59%
300-275_Shallow_2	non-Rad	Strontium	7440-24-6	µg/kg	2.71E+04	--	--	--	5.48E+08	4.95E-05	0.06%
300-275_Shallow_2	non-Rad	Tin	7440-31-5	µg/kg	1.15E+03	--	--	--	5.48E+08	2.10E-06	0.00%
300-275_Shallow_2	non-Rad	Vanadium	7440-62-2	µg/kg	5.16E+04	--	--	--	4.56E+06	1.13E-02	12.62%
300-275_Shallow_2	non-Rad	Zinc	7440-66-6	µg/kg	4.12E+04	--	--	--	2.74E+08	1.51E-04	0.17%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.08E-07**	**--**	**--**	**8.97E-02**	**--**
300-275_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.31E+00	5.81E+03	2.25E-08	10.38%	--	--	--
300-275_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	2.37E-01	2.95E+02	8.03E-08	37.08%	--	--	--
300-275_Shallow_2	Rad	Uranium-238	U-238	pCi/g	1.24E+00	1.09E+03	1.14E-07	52.55%	--	--	--
Total Radiological Risk Estimate						**--**	**2.17E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.25E-07**	**--**	**--**	**--**	**--**
300-33, 300-41, 300-256_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.32E+06	--	--	--	9.12E+08	6.93E-03	6.93%
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1016	12674-11-2	µg/kg	1.03E+01	7.38E+04	1.40E-10	0.02%	4.59E+04	2.24E-04	0.22%
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1242	53469-21-9	µg/kg	1.64E+01	2.58E+03	6.35E-09	0.91%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.90E+02	2.58E+03	7.35E-08	10.49%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	8.44E+01	2.58E+03	3.27E-08	4.66%	1.31E+04	6.44E-03	6.44%
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.73E+01	2.58E+03	6.69E-09	0.95%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.64E+03	4.54E+03	5.81E-07	82.95%	2.53E+05	1.04E-02	10.44%
300-33, 300-41, 300-256_Shallow	non-Rad	Barium	7440-39-3	µg/kg	7.24E+04	--	--	--	1.82E+08	3.97E-04	0.40%
300-33, 300-41, 300-256_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.56E+02	3.45E+09	7.41E-14	0.00%	1.82E+06	1.40E-04	0.14%

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-33, 300-41, 300-256_Shallow	non-Rad	Boron	7440-42-8	µg/kg	1.48E+03	--	--	--	1.82E+08	8.13E-06	0.01%
300-33, 300-41, 300-256_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	2.28E+02	2.98E+06	7.65E-11	0.01%	1.43E+08	1.60E-06	0.00%
300-33, 300-41, 300-256_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	9.39E+01	4.60E+09	2.04E-14	0.00%	8.21E+05	1.14E-04	0.11%
300-33, 300-41, 300-256_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	8.78E+03	--	--	--	1.37E+09	6.42E-06	0.01%
300-33, 300-41, 300-256_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.27E+03	9.20E+08	6.81E-12	0.00%	2.74E+05	2.29E-02	22.91%
300-33, 300-41, 300-256_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.37E+04	--	--	--	3.65E+07	3.74E-04	0.37%
300-33, 300-41, 300-256_Shallow	non-Rad	Fluoride	16984-48-8	µg/kg	1.65E+03	--	--	--	5.47E+07	3.02E-05	0.03%
300-33, 300-41, 300-256_Shallow	non-Rad	Iron	7439-89-6	µg/kg	2.00E+07	--	--	--	6.39E+08	3.13E-02	31.34%
300-33, 300-41, 300-256_Shallow	non-Rad	Lithium	7439-93-2	µg/kg	5.50E+03	--	--	--	1.83E+06	3.01E-03	3.01%
300-33, 300-41, 300-256_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.15E+05	--	--	--	1.28E+08	2.47E-03	2.47%
300-33, 300-41, 300-256_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	1.60E+01	--	--	--	2.74E+05	5.84E-05	0.06%
300-33, 300-41, 300-256_Shallow	non-Rad	Methylene chloride	75-09-2	µg/kg	2.91E+00	3.37E+05	8.65E-12	0.00%	3.57E+07	8.16E-08	0.00%
300-33, 300-41, 300-256_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	4.86E+02	--	--	--	4.56E+06	1.06E-04	0.11%
300-33, 300-41, 300-256_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	8.88E+03	3.19E+10	2.79E-13	0.00%	1.82E+07	4.87E-04	0.49%
300-33, 300-41, 300-256_Shallow	non-Rad	Nitrate	14797-55-8	µg/kg	8.62E+03	--	--	--	6.48E+09	1.33E-06	0.00%
300-33, 300-41, 300-256_Shallow	non-Rad	Silver	7440-22-4	µg/kg	7.82E+02	--	--	--	4.56E+06	1.71E-04	0.17%
300-33, 300-41, 300-256_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	7.26E+03	--	--	--	2.74E+06	2.65E-03	2.65%
300-33, 300-41, 300-256_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	5.27E+04	--	--	--	4.56E+06	1.15E-02	11.55%
300-33, 300-41, 300-256_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.15E+04	--	--	--	2.74E+08	1.51E-04	0.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**7.01E-07**	**--**	**--**	**1.00E-01**	**--**
300-33, 300-41, 300-256_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	2.14E+00	5.81E+03	3.68E-08	10.84%	--	--	--
300-33, 300-41, 300-256_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	3.38E-01	2.95E+02	1.15E-07	33.73%	--	--	--
300-33, 300-41, 300-256_Shallow	Rad	Uranium-238	U-238	pCi/g	2.06E+00	1.09E+03	1.88E-07	55.43%	--	--	--
Total Radiological Risk Estimate						**--**	**3.40E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.04E-06**	**--**	**--**	**--**	**--**

300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	5.51E+06	--	--	--	9.12E+08	6.04E-03	5.19%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.30E+02	2.58E+03	1.28E-07	12.63%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.85E+02	2.58E+03	1.49E-07	14.74%	1.31E+04	2.94E-02	25.23%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.20E+01	2.58E+03	2.01E-08	1.99%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	3.24E+03	4.54E+03	7.14E-07	70.63%	2.53E+05	1.28E-02	11.02%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	6.46E+04	--	--	--	1.82E+08	3.54E-04	0.30%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	1.69E+02	3.45E+09	4.90E-14	0.00%	1.82E+06	9.26E-05	0.08%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	1.03E+03	--	--	--	1.82E+08	5.64E-06	0.00%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	1.00E+02	4.60E+09	2.17E-14	0.00%	8.21E+05	1.22E-04	0.10%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	8.08E+03	--	--	--	1.37E+09	5.90E-06	0.01%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	5.64E+03	9.20E+08	6.13E-12	0.00%	2.74E+05	2.06E-02	17.70%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	1.04E+04	--	--	--	3.65E+07	2.85E-04	0.24%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Fluoride	16984-48-8	µg/kg	1.30E+03	--	--	--	5.47E+07	2.37E-05	0.02%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	1.86E+07	--	--	--	6.39E+08	2.91E-02	25.02%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Lithium	7439-93-2	µg/kg	6.58E+03	--	--	--	1.83E+06	3.61E-03	3.10%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	2.59E+05	--	--	--	1.28E+08	2.03E-03	1.74%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	2.21E+00	3.37E+05	6.56E-12	0.00%	3.57E+07	6.19E-08	0.00%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	2.75E+02	--	--	--	4.56E+06	6.03E-05	0.05%

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	8.04E+03	3.19E+10	2.52E-13	0.00%	1.82E+07	4.41E-04	0.38%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Nitrate	14797-55-8	µg/kg	1.79E+04	--	--	--	6.48E+09	2.76E-06	0.00%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	5.14E+04	--	--	--	4.56E+06	1.13E-02	9.68%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	3.89E+04	--	--	--	2.74E+08	1.42E-04	0.12%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.01E-06**	**--**	**--**	**1.16E-01**	**--**
300-33, 300-41, 300-256_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	3.02E+00	5.81E+03	5.20E-08	20.76%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	2.17E+00	1.09E+03	1.99E-07	79.24%	--	--	--
Total Radiological Risk Estimate						**--**	**2.51E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.26E-06**	**--**	**--**	**--**	**--**
300-37_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.00E+02	2.58E+03	3.87E-08	3.03%	1.31E+04	7.63E-03	100.00%
300-37_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.20E+03	2.58E+03	1.24E-06	96.97%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.28E-06**	**--**	**--**	**7.63E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.28E-06**	**--**	**--**	**--**	**--**
300-44_Overburden_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	9.10E+03	4.54E+03	2.01E-06	100.00%	2.53E+05	3.60E-02	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.01E-06**	**--**	**--**	**3.60E-02**	**--**
300-44_Overburden_Focused	Rad	Uranium-238	U-238	pCi/g	3.45E-01	1.09E+03	3.16E-08	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**3.16E-08**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.04E-06**	**--**	**--**	**--**	**--**
300-44_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	6.71E+06	--	--	--	9.12E+08	7.35E-03	4.62%
300-44_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	4.10E+03	--	--	--	3.65E+05	1.12E-02	7.06%
300-44_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.69E+04	4.54E+03	3.72E-06	100.00%	2.53E+05	6.69E-02	42.04%
300-44_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	7.52E+04	--	--	--	1.82E+08	4.12E-04	0.26%
300-44_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	4.80E+02	3.45E+09	1.39E-13	0.00%	1.82E+06	2.63E-04	0.17%
300-44_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	9.30E+03	--	--	--	1.37E+09	6.79E-06	0.00%
300-44_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	8.20E+03	9.20E+08	8.91E-12	0.00%	2.74E+05	3.00E-02	18.82%
300-44_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	7.80E+03	--	--	--	3.65E+07	2.14E-04	0.13%
300-44_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	1.94E+07	--	--	--	6.39E+08	3.04E-02	19.08%
300-44_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	3.03E+05	--	--	--	1.28E+08	2.37E-03	1.49%
300-44_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	8.60E+03	3.19E+10	2.70E-13	0.00%	1.82E+07	4.71E-04	0.30%
300-44_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	4.32E+04	--	--	--	4.56E+06	9.47E-03	5.95%
300-44_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	3.78E+04	--	--	--	2.74E+08	1.38E-04	0.09%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.72E-06**	**--**	**--**	**1.59E-01**	**--**
300-44_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	2.93E-01	1.09E+03	2.68E-08	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**2.68E-08**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.75E-06**	**--**	**--**	**--**	**--**
300-45_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	8.60E+01	2.58E+03	3.33E-08	97.89%	--	--	--
300-45_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.90E+02	4.05E+05	7.17E-10	2.11%	1.43E+07	2.03E-05	100.00%

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.40E-08**	**--**	**--**	**2.03E-05**	**--**
300-45_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	2.28E-02	1.00E+02	2.28E-08	14.86%	--	--	--
300-45_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	6.06E-02	2.95E+02	2.05E-08	13.42%	--	--	--
300-45_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.20E+00	1.09E+03	1.10E-07	71.72%	--	--	--
Total Radiological Risk Estimate						**--**	**1.53E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.87E-07**	**--**	**--**	**--**	**--**
300-49_Overburden	non-Rad	1,2,4-Trichlorobenzene	120-82-1	µg/kg	3.05E+01	2.57E+05	1.19E-10	0.01%	1.30E+06	2.36E-05	0.01%
300-49_Overburden	non-Rad	1,4-Dichlorobenzene	106-46-7	µg/kg	2.88E+01	6.39E+04	4.50E-10	0.02%	5.10E+07	5.64E-07	0.00%
300-49_Overburden	non-Rad	2,4-Dinitrotoluene	121-14-2	µg/kg	1.89E+01	1.82E+04	1.04E-09	0.05%	1.42E+06	1.33E-05	0.00%
300-49_Overburden	non-Rad	2-Chlorophenol	95-57-8	µg/kg	5.13E+01	--	--	--	4.56E+06	1.13E-05	0.00%
300-49_Overburden	non-Rad	4-Chloro-3-methylphenol	59-50-7	µg/kg	4.60E+01	--	--	--	7.13E+07	6.45E-07	0.00%
300-49_Overburden	non-Rad	Acenaphthene	83-32-9	µg/kg	3.07E+01	--	--	--	4.01E+07	7.65E-07	0.00%
300-49_Overburden	non-Rad	Aluminum	7429-90-5	µg/kg	6.30E+06	--	--	--	9.12E+08	6.90E-03	2.04%
300-49_Overburden	non-Rad	Antimony	7440-36-0	µg/kg	2.32E+02	--	--	--	3.65E+05	6.36E-04	0.19%
300-49_Overburden	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.01E+03	2.58E+03	1.16E-06	59.96%	1.31E+04	2.29E-01	67.68%
300-49_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	3.29E+03	4.54E+03	7.25E-07	37.36%	2.53E+05	1.30E-02	3.85%
300-49_Overburden	non-Rad	Barium	7440-39-3	µg/kg	7.61E+04	--	--	--	1.82E+08	4.17E-04	0.12%
300-49_Overburden	non-Rad	Beryllium	7440-41-7	µg/kg	2.01E+02	3.45E+09	5.82E-14	0.00%	1.82E+06	1.10E-04	0.03%
300-49_Overburden	non-Rad	Cadmium	7440-43-9	µg/kg	1.74E+02	4.60E+09	3.79E-14	0.00%	8.21E+05	2.12E-04	0.06%
300-49_Overburden	non-Rad	Chromium	7440-47-3	µg/kg	1.81E+04	--	--	--	1.37E+09	1.32E-05	0.00%
300-49_Overburden	non-Rad	Cobalt	7440-48-4	µg/kg	7.13E+03	9.20E+08	7.74E-12	0.00%	2.74E+05	2.60E-02	7.68%
300-49_Overburden	non-Rad	Copper	7440-50-8	µg/kg	5.36E+05	--	--	--	3.65E+07	1.47E-02	4.33%
300-49_Overburden	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	5.16E+01	--	--	--	7.13E+07	7.24E-07	0.00%
300-49_Overburden	non-Rad	Iron	7439-89-6	µg/kg	2.08E+07	--	--	--	6.39E+08	3.25E-02	9.60%
300-49_Overburden	non-Rad	Manganese	7439-96-5	µg/kg	3.17E+05	--	--	--	1.28E+08	2.48E-03	0.73%
300-49_Overburden	non-Rad	Nickel	7440-02-0	µg/kg	1.30E+04	3.19E+10	4.09E-13	0.00%	1.82E+07	7.14E-04	0.21%
300-49_Overburden	non-Rad	n-Nitrosodi-n-dipropylamine	621-64-7	µg/kg	3.97E+01	8.09E+02	4.91E-08	2.53%	--	--	--
300-49_Overburden	non-Rad	Pentachlorophenol	87-86-5	µg/kg	4.98E+01	3.47E+04	1.44E-09	0.07%	1.61E+07	3.09E-06	0.00%
300-49_Overburden	non-Rad	Phenol	108-95-2	µg/kg	5.00E+01	--	--	--	2.14E+08	2.34E-07	0.00%
300-49_Overburden	non-Rad	Pyrene	129-00-0	µg/kg	4.01E+01	--	--	--	2.01E+07	2.00E-06	0.00%
300-49_Overburden	non-Rad	Silver	7440-22-4	µg/kg	7.03E+02	--	--	--	4.56E+06	1.54E-04	0.05%
300-49_Overburden	non-Rad	Vanadium	7440-62-2	µg/kg	5.04E+04	--	--	--	4.56E+06	1.10E-02	3.26%
300-49_Overburden	non-Rad	Zinc	7440-66-6	µg/kg	1.42E+05	--	--	--	2.74E+08	5.19E-04	0.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.94E-06**	**--**	**--**	**3.39E-01**	**--**
300-49_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	1.01E+00	5.81E+03	1.73E-08	13.28%	--	--	--
300-49_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	5.70E-02	2.95E+02	1.93E-08	14.79%	--	--	--
300-49_Overburden	Rad	Uranium-238	U-238	pCi/g	1.03E+00	1.09E+03	9.40E-08	71.93%	--	--	--
Total Radiological Risk Estimate						**--**	**1.31E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.07E-06**	**--**	**--**	**--**	**--**
300-49_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.92E+06	--	--	--	9.12E+08	7.58E-03	6.44%
300-49_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	1.76E+02	--	--	--	3.65E+05	4.82E-04	0.41%

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-49_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	4.43E+03	4.54E+03	9.76E-07	100.00%	2.53E+05	1.75E-02	14.89%
300-49_Shallow	non-Rad	Barium	7440-39-3	µg/kg	8.99E+04	--	--	--	1.82E+08	4.93E-04	0.42%
300-49_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	3.03E+02	3.45E+09	8.77E-14	0.00%	1.82E+06	1.66E-04	0.14%
300-49_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	9.17E+03	--	--	--	1.37E+09	6.70E-06	0.01%
300-49_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	9.32E+03	9.20E+08	1.01E-11	0.00%	2.74E+05	3.41E-02	28.90%
300-49_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.49E+04	--	--	--	3.65E+07	4.07E-04	0.35%
300-49_Shallow	non-Rad	Iron	7439-89-6	µg/kg	2.59E+07	--	--	--	6.39E+08	4.05E-02	34.35%
300-49_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.62E+05	--	--	--	1.28E+08	2.83E-03	2.41%
300-49_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	1.07E+04	3.19E+10	3.35E-13	0.00%	1.82E+07	5.84E-04	0.50%
300-49_Shallow	non-Rad	Silver	7440-22-4	µg/kg	6.21E+02	--	--	--	4.56E+06	1.36E-04	0.12%
300-49_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	5.87E+04	--	--	--	4.56E+06	1.29E-02	10.91%
300-49_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	5.47E+04	--	--	--	2.74E+08	2.00E-04	0.17%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**9.76E-07**	**--**	**--**	**1.18E-01**	**--**
300-49_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	1.51E-01	1.00E+02	1.51E-07	42.80%	--	--	--
300-49_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.32E+00	5.81E+03	2.27E-08	6.44%	--	--	--
300-49_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.40E-01	2.95E+02	8.13E-08	23.10%	--	--	--
300-49_Shallow	Rad	Uranium-238	U-238	pCi/g	1.06E+00	1.09E+03	9.74E-08	27.66%	--	--	--
Total Radiological Risk Estimate						**--**	**3.52E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.33E-06**	**--**	**--**	**--**	**--**
300-50_Overburden	non-Rad	Aluminum	7429-90-5	µg/kg	6.68E+06	--	--	--	9.12E+08	7.32E-03	6.20%
300-50_Overburden	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.34E+01	2.58E+03	1.29E-08	0.80%	1.31E+04	2.55E-03	2.16%
300-50_Overburden	non-Rad	Aroclor-1260	11096-82-5	µg/kg	2.29E+02	2.58E+03	8.87E-08	5.47%	--	--	--
300-50_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	6.90E+03	4.54E+03	1.52E-06	93.73%	2.53E+05	2.73E-02	23.11%
300-50_Overburden	non-Rad	Barium	7440-39-3	µg/kg	1.18E+05	--	--	--	1.82E+08	6.45E-04	0.55%
300-50_Overburden	non-Rad	Beryllium	7440-41-7	µg/kg	3.25E+02	3.45E+09	9.42E-14	0.00%	1.82E+06	1.78E-04	0.15%
300-50_Overburden	non-Rad	Cadmium	7440-43-9	µg/kg	5.63E+02	4.60E+09	1.22E-13	0.00%	8.21E+05	6.86E-04	0.58%
300-50_Overburden	non-Rad	Chromium	7440-47-3	µg/kg	1.22E+04	--	--	--	1.37E+09	8.91E-06	0.01%
300-50_Overburden	non-Rad	Cobalt	7440-48-4	µg/kg	9.39E+03	9.20E+08	1.02E-11	0.00%	2.74E+05	3.43E-02	29.02%
300-50_Overburden	non-Rad	Copper	7440-50-8	µg/kg	6.45E+04	--	--	--	3.65E+07	1.77E-03	1.50%
300-50_Overburden	non-Rad	Iron	7439-89-6	µg/kg	1.90E+07	--	--	--	6.39E+08	2.98E-02	25.19%
300-50_Overburden	non-Rad	Manganese	7439-96-5	µg/kg	3.14E+05	--	--	--	1.28E+08	2.46E-03	2.08%
300-50_Overburden	non-Rad	Nickel	7440-02-0	µg/kg	1.52E+04	3.19E+10	4.78E-13	0.00%	1.82E+07	8.35E-04	0.71%
300-50_Overburden	non-Rad	Silver	7440-22-4	µg/kg	1.20E+03	--	--	--	4.56E+06	2.63E-04	0.22%
300-50_Overburden	non-Rad	Vanadium	7440-62-2	µg/kg	4.52E+04	--	--	--	4.56E+06	9.92E-03	8.39%
300-50_Overburden	non-Rad	Zinc	7440-66-6	µg/kg	4.59E+04	--	--	--	2.74E+08	1.68E-04	0.14%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.62E-06**	**--**	**--**	**1.18E-01**	**--**
300-50_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	5.60E-02	1.00E+02	5.59E-08	6.52%	--	--	--
300-50_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	6.03E+00	5.81E+03	1.04E-07	12.12%	--	--	--
300-50_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	4.49E-01	2.95E+02	1.52E-07	17.76%	--	--	--
300-50_Overburden	Rad	Uranium-238	U-238	pCi/g	5.95E+00	1.09E+03	5.45E-07	63.59%	--	--	--
Total Radiological Risk Estimate						**--**	**8.56E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.48E-06**	**--**	**--**	**--**	**--**

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-50_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.88E+06	--	--	--	9.12E+08	7.54E-03	5.77%
300-50_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.00E+03	--	--	--	3.65E+05	8.22E-03	6.29%
300-50_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.26E+02	2.58E+03	4.89E-08	3.35%	1.31E+04	9.64E-03	7.37%
300-50_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	6.40E+03	4.54E+03	1.41E-06	96.65%	2.53E+05	2.54E-02	19.40%
300-50_Shallow	non-Rad	Barium	7440-39-3	µg/kg	1.03E+05	--	--	--	1.82E+08	5.65E-04	0.43%
300-50_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.82E+02	3.45E+09	8.16E-14	0.00%	1.82E+06	1.54E-04	0.12%
300-50_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.93E+01	4.05E+05	4.77E-11	0.00%	1.43E+07	1.35E-06	0.00%
300-50_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	4.63E+02	4.60E+09	1.01E-13	0.00%	8.21E+05	5.64E-04	0.43%
300-50_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.68E+04	--	--	--	1.37E+09	1.23E-05	0.01%
300-50_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	9.11E+03	9.20E+08	9.90E-12	0.00%	2.74E+05	3.33E-02	25.46%
300-50_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.68E+04	--	--	--	3.65E+07	4.61E-04	0.35%
300-50_Shallow	non-Rad	Iron	7439-89-6	µg/kg	1.96E+07	--	--	--	6.39E+08	3.06E-02	23.44%
300-50_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.18E+05	--	--	--	1.28E+08	2.49E-03	1.91%
300-50_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	1.24E+04	3.19E+10	3.90E-13	0.00%	1.82E+07	6.80E-04	0.52%
300-50_Shallow	non-Rad	Silver	7440-22-4	µg/kg	2.99E+03	--	--	--	4.56E+06	6.56E-04	0.50%
300-50_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	4.70E+04	--	--	--	4.56E+06	1.03E-02	7.88%
300-50_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.13E+04	--	--	--	2.74E+08	1.51E-04	0.12%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.46E-06**	**--**	**--**	**1.31E-01**	**--**
300-50_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	5.60E-02	1.00E+02	5.59E-08	4.71%	--	--	--
300-50_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	7.89E+00	5.81E+03	1.36E-07	11.45%	--	--	--
300-50_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	6.64E-01	2.95E+02	2.25E-07	18.96%	--	--	--
300-50_Shallow	Rad	Uranium-238	U-238	pCi/g	8.41E+00	1.09E+03	7.70E-07	64.88%	--	--	--
Total Radiological Risk Estimate						**--**	**1.19E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.65E-06**	**--**	**--**	**--**	**--**
300-8_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	5.74E+02	3.45E+09	1.66E-13	100.00%	1.82E+06	3.14E-04	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.66E-13**	**--**	**--**	**3.14E-04**	**--**
300-8_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	7.86E-01	5.81E+03	1.35E-08	15.27%	--	--	--
300-8_Shallow	Rad	Uranium-238	U-238	pCi/g	8.21E-01	1.09E+03	7.51E-08	84.73%	--	--	--
Total Radiological Risk Estimate						**--**	**8.87E-08**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.87E-08**	**--**	**--**	**--**	**--**
316-1_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	1.01E-01	1.00E+02	1.01E-07	4.15%	--	--	--
316-1_Overburden	Rad	Cobalt-60	10198-40-0	pCi/g	3.18E-01	6.31E+01	5.04E-07	20.79%	--	--	--
316-1_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	1.30E+01	5.81E+03	2.23E-07	9.19%	--	--	--
316-1_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	1.08E+00	2.95E+02	3.66E-07	15.09%	--	--	--
316-1_Overburden	Rad	Uranium-238	U-238	pCi/g	1.35E+01	1.09E+03	1.23E-06	50.77%	--	--	--
Total Radiological Risk Estimate						**--**	**2.43E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.43E-06**	**--**	**--**	**--**	**--**
316-1_Shallow_1	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.00E+03	2.58E+03	1.16E-06	21.70%	--	--	--

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-1_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	1.90E+04	4.54E+03	4.19E-06	78.30%	2.53E+05	7.53E-02	99.99%
316-1_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.86E+01	4.05E+05	1.69E-10	0.00%	1.43E+07	4.81E-06	0.01%
316-1_Shallow_1	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	9.77E+01	2.98E+06	3.28E-11	0.00%	1.43E+08	6.85E-07	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.35E-06**	**--**	**--**	**7.53E-02**	**--**
316-1_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	3.18E-02	1.00E+02	3.17E-08	1.07%	--	--	--
316-1_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.21E+00	2.95E+02	4.11E-07	13.81%	--	--	--
316-1_Shallow_1	Rad	Uranium-238	U-238	pCi/g	2.77E+01	1.09E+03	2.53E-06	85.13%	--	--	--
Total Radiological Risk Estimate						**--**	**2.98E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.33E-06**	**--**	**--**	**--**	**--**
316-1_Shallow_3	non-Rad	Aluminum	7429-90-5	µg/kg	1.11E+07	--	--	--	9.12E+08	1.22E-02	6.66%
316-1_Shallow_3	non-Rad	Antimony	7440-36-0	µg/kg	4.90E+02	--	--	--	3.65E+05	1.34E-03	0.74%
316-1_Shallow_3	non-Rad	Aroclor-1254	11097-69-1	µg/kg	9.82E+01	2.58E+03	3.80E-08	3.23%	1.31E+04	7.49E-03	4.10%
316-1_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	5.14E+03	4.54E+03	1.13E-06	96.26%	2.53E+05	2.03E-02	11.14%
316-1_Shallow_3	non-Rad	Barium	7440-39-3	µg/kg	1.29E+05	--	--	--	1.82E+08	7.08E-04	0.39%
316-1_Shallow_3	non-Rad	Beryllium	7440-41-7	µg/kg	4.16E+02	3.45E+09	1.21E-13	0.00%	1.82E+06	2.28E-04	0.12%
316-1_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	3.42E+02	4.05E+05	8.46E-10	0.07%	1.43E+07	2.40E-05	0.01%
316-1_Shallow_3	non-Rad	Cadmium	7440-43-9	µg/kg	4.74E+02	4.60E+09	1.03E-13	0.00%	8.21E+05	5.78E-04	0.32%
316-1_Shallow_3	non-Rad	Chromium	7440-47-3	µg/kg	5.05E+04	--	--	--	1.37E+09	3.69E-05	0.02%
316-1_Shallow_3	non-Rad	Cobalt	7440-48-4	µg/kg	9.70E+03	9.20E+08	1.05E-11	0.00%	2.74E+05	3.54E-02	19.41%
316-1_Shallow_3	non-Rad	Copper	7440-50-8	µg/kg	1.37E+06	--	--	--	3.65E+07	3.74E-02	20.50%
316-1_Shallow_3	non-Rad	Heptachlor epoxide	1024-57-3	µg/kg	3.20E+00	6.22E+02	5.14E-09	0.44%	9.27E+03	3.45E-04	0.19%
316-1_Shallow_3	non-Rad	Iron	7439-89-6	µg/kg	2.44E+07	--	--	--	6.39E+08	3.82E-02	20.93%
316-1_Shallow_3	non-Rad	Manganese	7439-96-5	µg/kg	3.93E+05	--	--	--	1.28E+08	3.08E-03	1.69%
316-1_Shallow_3	non-Rad	Mercury	7439-97-6	µg/kg	1.11E+03	--	--	--	2.74E+05	4.03E-03	2.21%
316-1_Shallow_3	non-Rad	Nickel	7440-02-0	µg/kg	9.47E+04	3.19E+10	2.97E-12	0.00%	1.82E+07	5.19E-03	2.84%
316-1_Shallow_3	non-Rad	Phenol	108-95-2	µg/kg	2.80E+01	--	--	--	2.14E+08	1.31E-07	0.00%
316-1_Shallow_3	non-Rad	Selenium	7782-49-2	µg/kg	1.44E+03	--	--	--	4.56E+06	3.17E-04	0.17%
316-1_Shallow_3	non-Rad	Silver	7440-22-4	µg/kg	1.32E+04	--	--	--	4.56E+06	2.89E-03	1.58%
316-1_Shallow_3	non-Rad	Vanadium	7440-62-2	µg/kg	5.67E+04	--	--	--	4.56E+06	1.24E-02	6.81%
316-1_Shallow_3	non-Rad	Zinc	7440-66-6	µg/kg	8.20E+04	--	--	--	2.74E+08	3.00E-04	0.16%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.18E-06**	**--**	**--**	**1.83E-01**	**--**
316-1_Shallow_3	Rad	Cesium-137	10045-97-3	pCi/g	3.75E-01	1.00E+02	3.74E-07	5.16%	--	--	--
316-1_Shallow_3	Rad	Cobalt-60	10198-40-0	pCi/g	2.32E+00	6.31E+01	3.69E-06	50.85%	--	--	--
316-1_Shallow_3	Rad	Uranium-233/234	U-233/234	pCi/g	2.27E+01	5.81E+03	3.91E-07	5.39%	--	--	--
316-1_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	2.64E+00	2.95E+02	8.94E-07	12.33%	--	--	--
316-1_Shallow_3	Rad	Uranium-238	U-238	pCi/g	2.08E+01	1.09E+03	1.90E-06	26.27%	--	--	--
Total Radiological Risk Estimate						**--**	**7.25E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.43E-06**	**--**	**--**	**--**	**--**
316-1_Shallow_4	non-Rad	Aroclor-1254	11097-69-1	µg/kg	6.20E+01	2.58E+03	2.40E-08	100.00%	1.31E+04	4.73E-03	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.40E-08**	**--**	**--**	**4.73E-03**	**--**
316-1_Shallow_4	Rad	Cobalt-60	10198-40-0	pCi/g	1.20E-01	6.31E+01	1.90E-07	8.93%	--	--	--

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-1_Shallow_4	Rad	Uranium-233/234	U-233/234	pCi/g	1.61E+01	5.81E+03	2.78E-07	13.05%	--	--	--
316-1_Shallow_4	Rad	Uranium-235	15117-96-1	pCi/g	1.05E+00	2.95E+02	3.56E-07	16.71%	--	--	--
316-1_Shallow_4	Rad	Uranium-238	U-238	pCi/g	1.43E+01	1.09E+03	1.31E-06	61.30%	--	--	--
Total Radiological Risk Estimate						**--**	**2.13E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.15E-06**	**--**	**--**	**--**	**--**
316-2_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	3.10E-02	1.00E+02	3.09E-08	0.26%	--	--	--
316-2_Shallow_1	Rad	Cobalt-60	10198-40-0	pCi/g	9.22E-02	6.31E+01	1.46E-07	1.21%	--	--	--
316-2_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	8.64E+01	5.81E+03	1.49E-06	12.29%	--	--	--
316-2_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.22E+01	2.95E+02	4.14E-06	34.18%	--	--	--
316-2_Shallow_1	Rad	Uranium-238	U-238	pCi/g	6.88E+01	1.09E+03	6.30E-06	52.06%	--	--	--
Total Radiological Risk Estimate						**--**	**1.21E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.21E-05**	**--**	**--**	**--**	**--**
316-2_Shallow_2	non-Rad	Aroclor-1248	12672-29-6	µg/kg	6.97E+02	2.58E+03	2.70E-07	82.09%	--	--	--
316-2_Shallow_2	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.20E+01	2.58E+03	1.63E-08	4.95%	1.31E+04	3.20E-03	100.00%
316-2_Shallow_2	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.10E+02	2.58E+03	4.26E-08	12.96%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.28E-07**	**--**	**--**	**3.20E-03**	**--**
316-2_Shallow_2	Rad	Cesium-137	10045-97-3	pCi/g	4.48E-01	1.00E+02	4.47E-07	2.85%	--	--	--
316-2_Shallow_2	Rad	Cobalt-60	10198-40-0	pCi/g	4.53E-01	6.31E+01	7.18E-07	4.57%	--	--	--
316-2_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.15E+02	5.81E+03	1.97E-06	12.57%	--	--	--
316-2_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	1.11E+01	2.95E+02	3.76E-06	23.96%	--	--	--
316-2_Shallow_2	Rad	Uranium-238	U-238	pCi/g	9.62E+01	1.09E+03	8.80E-06	56.05%	--	--	--
Total Radiological Risk Estimate						**--**	**1.57E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.60E-05**	**--**	**--**	**--**	**--**
316-2_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	8.00E+03	4.54E+03	1.76E-06	99.96%	2.53E+05	3.17E-02	99.94%
316-2_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.60E+02	4.05E+05	6.43E-10	0.04%	1.43E+07	1.82E-05	0.06%
316-2_Shallow_3	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	1.80E+02	2.98E+06	6.04E-11	0.00%	1.43E+08	1.26E-06	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.76E-06**	**--**	**--**	**3.17E-02**	**--**
316-2_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	9.09E-01	2.95E+02	3.08E-07	12.11%	--	--	--
316-2_Shallow_3	Rad	Uranium-238	U-238	pCi/g	2.44E+01	1.09E+03	2.24E-06	87.89%	--	--	--
Total Radiological Risk Estimate						**--**	**2.54E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.31E-06**	**--**	**--**	**--**	**--**
316-5_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	3.07E+03	4.54E+03	6.76E-07	96.79%	2.53E+05	1.22E-02	99.91%
316-5_Shallow_1	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	3.80E+01	1.72E+03	2.21E-08	3.16%	--	--	--
316-5_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.46E+02	4.05E+05	3.61E-10	0.05%	1.43E+07	1.02E-05	0.08%
316-5_Shallow_1	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	1.00E+02	2.98E+06	3.35E-11	0.00%	1.43E+08	7.01E-07	0.01%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.99E-07**	**--**	**--**	**1.22E-02**	**--**
316-5_Shallow_1	Rad	Americium-241	14596-10-2	pCi/g	4.79E-01	2.57E+03	1.86E-08	0.11%	--	--	--

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-5_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	2.31E+00	1.00E+02	2.31E-06	13.75%	--	--	--
316-5_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.86E+01	2.95E+02	6.30E-06	37.54%	--	--	--
316-5_Shallow_1	Rad	Uranium-238	U-238	pCi/g	8.92E+01	1.09E+03	8.16E-06	48.60%	--	--	--
Total Radiological Risk Estimate						**--**	**1.68E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.75E-05**	**--**	**--**	**--**	**--**
316-5_Shallow_2	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	1.40E+02	1.21E+04	1.16E-08	1.62%	3.65E+06	3.84E-05	0.27%
316-5_Shallow_2	non-Rad	2-Butoxyethanol	111-76-2	µg/kg	2.40E+02	--	--	--	3.56E+08	6.73E-07	0.00%
316-5_Shallow_2	non-Rad	Arsenic	7440-38-2	µg/kg	3.18E+03	4.54E+03	7.01E-07	98.00%	2.53E+05	1.26E-02	90.15%
316-5_Shallow_2	non-Rad	Barium	7440-39-3	µg/kg	7.67E+04	--	--	--	1.82E+08	4.20E-04	3.01%
316-5_Shallow_2	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.80E+02	4.05E+05	4.45E-10	0.06%	1.43E+07	1.26E-05	0.09%
316-5_Shallow_2	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	1.10E+02	2.98E+06	3.69E-11	0.01%	1.43E+08	7.72E-07	0.01%
316-5_Shallow_2	non-Rad	Chromium	7440-47-3	µg/kg	6.90E+03	--	--	--	1.37E+09	5.04E-06	0.04%
316-5_Shallow_2	non-Rad	Chrysene	218-01-9	µg/kg	3.80E+01	1.72E+04	2.21E-09	0.31%	--	--	--
316-5_Shallow_2	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	1.46E+02	--	--	--	7.13E+07	2.05E-06	0.01%
316-5_Shallow_2	non-Rad	Selenium	7782-49-2	µg/kg	4.90E+02	--	--	--	4.56E+06	1.07E-04	0.77%
316-5_Shallow_2	non-Rad	Silver	7440-22-4	µg/kg	3.60E+03	--	--	--	4.56E+06	7.89E-04	5.65%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**7.15E-07**	**--**	**--**	**1.40E-02**	**--**
316-5_Shallow_2	Rad	Americium-241	14596-10-2	pCi/g	1.24E-01	2.57E+03	4.83E-09	0.04%	--	--	--
316-5_Shallow_2	Rad	Cesium-137	10045-97-3	pCi/g	1.71E+00	1.00E+02	1.71E-06	15.35%	--	--	--
316-5_Shallow_2	Rad	Cobalt-60	10198-40-0	pCi/g	1.18E-01	6.31E+01	1.87E-07	1.68%	--	--	--
316-5_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	9.04E+00	2.95E+02	3.06E-06	27.50%	--	--	--
316-5_Shallow_2	Rad	Uranium-238	U-238	pCi/g	6.75E+01	1.09E+03	6.18E-06	55.43%	--	--	--
Total Radiological Risk Estimate						**--**	**1.11E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.19E-05**	**--**	**--**	**--**	**--**
316-5_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	5.70E+01	2.58E+03	2.21E-08	2.17%	--	--	--
316-5_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	7.00E+01	2.58E+03	2.71E-08	2.66%	1.31E+04	5.34E-03	23.83%
316-5_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.20E+01	2.58E+03	2.01E-08	1.98%	--	--	--
316-5_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	4.30E+03	4.54E+03	9.48E-07	93.14%	2.53E+05	1.70E-02	76.01%
316-5_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.90E+02	4.05E+05	4.70E-10	0.05%	1.43E+07	1.33E-05	0.06%
316-5_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	1.50E+03	--	--	--	7.13E+07	2.10E-05	0.09%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.02E-06**	**--**	**--**	**2.24E-02**	**--**
316-5_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.83E+00	1.00E+02	1.83E-06	21.33%	--	--	--
316-5_Shallow_Focused	Rad	Europium-155	14391-16-3	pCi/g	7.19E-02	5.87E+03	1.23E-09	0.01%	--	--	--
316-5_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	7.67E+00	2.95E+02	2.60E-06	30.36%	--	--	--
316-5_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.52E+01	1.09E+03	4.13E-06	48.29%	--	--	--
Total Radiological Risk Estimate						**--**	**8.56E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.58E-06**	**--**	**--**	**--**	**--**
331 LSLDF_Shallow_Focused	non-Rad	4,4'-DDE (Dichlorodiphenyldichloroethylene)	72-55-9	µg/kg	2.50E+01	1.67E+04	1.50E-09	0.17%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	5.90E+02	--	--	--	7.89E+08	7.48E-07	0.00%

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
331 LSLDF_Shallow_Focused	non-Rad	Aldrin	309-00-2	µg/kg	5.60E-01	3.33E+02	1.68E-09	0.19%	2.14E+04	2.62E-05	0.02%
331 LSLDF_Shallow_Focused	non-Rad	Alpha-BHC	319-84-6	µg/kg	3.90E-01	8.99E+02	4.34E-10	0.05%	5.70E+06	6.84E-08	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	6.90E+06	--	--	--	9.12E+08	7.56E-03	4.51%
331 LSLDF_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	3.60E+02	--	--	--	3.65E+05	9.86E-04	0.59%
331 LSLDF_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	8.50E+02	2.58E+03	3.29E-07	36.53%	1.31E+04	6.48E-02	38.68%
331 LSLDF_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	2.40E+03	4.54E+03	5.29E-07	58.73%	2.53E+05	9.50E-03	5.67%
331 LSLDF_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	7.86E+04	--	--	--	1.82E+08	4.31E-04	0.26%
331 LSLDF_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	5.70E+02	3.45E+09	1.65E-13	0.00%	1.82E+06	3.12E-04	0.19%
331 LSLDF_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	9.10E+02	4.05E+05	2.25E-09	0.25%	1.43E+07	6.38E-05	0.04%
331 LSLDF_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	1.70E+03	--	--	--	1.82E+08	9.32E-06	0.01%
331 LSLDF_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	3.40E+02	2.98E+06	1.14E-10	0.01%	1.43E+08	2.38E-06	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	1.40E+02	4.60E+09	3.04E-14	0.00%	8.21E+05	1.71E-04	0.10%
331 LSLDF_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	1.03E+04	--	--	--	1.37E+09	7.53E-06	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	8.60E+03	9.20E+08	9.34E-12	0.00%	2.74E+05	3.14E-02	18.74%
331 LSLDF_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	1.54E+04	--	--	--	3.65E+07	4.22E-04	0.25%
331 LSLDF_Shallow_Focused	non-Rad	Dieldrin	60-57-1	µg/kg	1.30E+01	3.54E+02	3.67E-08	4.08%	3.56E+04	3.65E-04	0.22%
331 LSLDF_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	9.80E+01	--	--	--	7.13E+07	1.37E-06	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Endosulfan I	959-98-8	µg/kg	1.90E+00	--	--	--	4.28E+06	4.44E-07	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Endosulfan II	33213-65-9	µg/kg	3.10E+00	--	--	--	4.28E+06	7.25E-07	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	2.20E+07	--	--	--	6.39E+08	3.44E-02	20.55%
331 LSLDF_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	3.49E+05	--	--	--	1.28E+08	2.73E-03	1.63%
331 LSLDF_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	1.10E+02	--	--	--	2.74E+05	4.01E-04	0.24%
331 LSLDF_Shallow_Focused	non-Rad	Methoxychlor	72-43-5	µg/kg	3.30E+00	--	--	--	3.56E+06	9.26E-07	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	1.10E+01	3.37E+05	3.26E-11	0.00%	3.57E+07	3.08E-07	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	5.90E+02	--	--	--	4.56E+06	1.29E-04	0.08%
331 LSLDF_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.00E+04	3.19E+10	3.14E-13	0.00%	1.82E+07	5.48E-04	0.33%
331 LSLDF_Shallow_Focused	non-Rad	Nitrate	14797-55-8	µg/kg	4.17E+04	--	--	--	6.48E+09	6.44E-06	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Nitrogen in Nitrite and Nitrate	NO2+NO3-N	µg/kg	9.50E+03	--	--	--	1.46E+09	6.51E-06	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Silver	7440-22-4	µg/kg	1.10E+03	--	--	--	4.56E+06	2.41E-04	0.14%
331 LSLDF_Shallow_Focused	non-Rad	Uranium	7440-61-1	µg/kg	2.30E+03	--	--	--	2.74E+06	8.40E-04	0.50%
331 LSLDF_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	5.31E+04	--	--	--	4.56E+06	1.16E-02	6.94%
331 LSLDF_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	1.37E+05	--	--	--	2.74E+08	5.00E-04	0.30%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**9.01E-07**	**--**	**--**	**1.68E-01**	**--**
331 LSLDF_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	5.40E-01	5.81E+03	9.30E-09	17.75%	--	--	--
331 LSLDF_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.71E-01	1.09E+03	4.31E-08	82.25%	--	--	--
Total Radiological Risk Estimate						**--**	**5.24E-08**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.53E-07**	**--**	**--**	**--**	**--**

600-243_Shallow	non-Rad	2-Methylnaphthalene	91-57-6	µg/kg	2.79E+02	--	--	--	2.68E+06	1.04E-04	0.14%
600-243_Shallow	non-Rad	Anthracene	120-12-7	µg/kg	3.13E+01	--	--	--	2.01E+08	1.56E-07	0.00%
600-243_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	1.30E+03	--	--	--	3.65E+05	3.56E-03	4.75%
600-243_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.70E+01	2.58E+03	1.04E-08	0.61%	1.31E+04	2.06E-03	2.74%
600-243_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.84E+01	2.58E+03	7.12E-09	0.41%	--	--	--
600-243_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	6.16E+03	4.54E+03	1.36E-06	79.02%	2.53E+05	2.44E-02	32.52%

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
600-243_Shallow	non-Rad	Barium	7440-39-3	µg/kg	2.92E+05	--	--	--	1.82E+08	1.60E-03	2.13%
600-243_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	4.33E+01	1.72E+03	2.51E-08	1.46%	--	--	--
600-243_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	4.27E+01	1.72E+02	2.48E-07	14.44%	--	--	--
600-243_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	4.63E+01	1.72E+03	2.69E-08	1.57%	--	--	--
600-243_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	3.18E+01	1.72E+03	1.84E-08	1.07%	--	--	--
600-243_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.08E+03	3.45E+09	6.02E-13	0.00%	1.82E+06	1.14E-03	1.52%
600-243_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	4.32E+02	4.05E+05	1.07E-09	0.06%	1.43E+07	3.03E-05	0.04%
600-243_Shallow	non-Rad	Boron	7440-42-8	µg/kg	2.94E+05	--	--	--	1.82E+08	1.61E-03	2.15%
600-243_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	7.93E+02	4.60E+09	1.72E-13	0.00%	8.21E+05	9.66E-04	1.29%
600-243_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.80E+04	--	--	--	1.37E+09	1.32E-05	0.02%
600-243_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	6.26E+01	1.72E+04	3.63E-09	0.21%	--	--	--
600-243_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.21E+03	9.20E+08	6.74E-12	0.00%	2.74E+05	2.27E-02	30.23%
600-243_Shallow	non-Rad	Copper	7440-50-8	µg/kg	5.40E+04	--	--	--	3.65E+07	1.48E-03	1.97%
600-243_Shallow	non-Rad	Dibenzofuran	132-64-9	µg/kg	7.85E+01	--	--	--	9.13E+05	8.60E-05	0.11%
600-243_Shallow	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	3.72E+01	--	--	--	7.13E+07	5.22E-07	0.00%
600-243_Shallow	non-Rad	Fluoranthene	206-44-0	µg/kg	7.91E+01	--	--	--	2.68E+07	2.96E-06	0.00%
600-243_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	2.80E+01	1.72E+03	1.63E-08	0.95%	--	--	--
600-243_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	2.08E+05	--	--	--	1.28E+08	1.63E-03	2.18%
600-243_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	1.87E+03	--	--	--	4.56E+06	4.10E-04	0.55%
600-243_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	2.04E+02	6.16E+04	3.31E-09	0.19%	2.24E+06	9.08E-05	0.12%
600-243_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	2.14E+04	3.19E+10	6.71E-13	0.00%	1.82E+07	1.17E-03	1.56%
600-243_Shallow	non-Rad	Pyrene	129-00-0	µg/kg	7.00E+01	--	--	--	2.01E+07	3.49E-06	0.00%
600-243_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	5.71E+03	--	--	--	4.56E+06	1.25E-03	1.67%
600-243_Shallow	non-Rad	Silver	7440-22-4	µg/kg	5.00E+02	--	--	--	4.56E+06	1.10E-04	0.15%
600-243_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	4.70E+04	--	--	--	4.56E+06	1.03E-02	13.73%
600-243_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	8.41E+04	--	--	--	2.74E+08	3.07E-04	0.41%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.72E-06**	**--**	**--**	**7.50E-02**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.72E-06**	**--**	**--**	**--**	**--**
600-259_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	3.40E-02	1.00E+02	3.39E-08	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**3.39E-08**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.39E-08**	**--**	**--**	**--**	**--**
600-259_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	6.80E-02	1.00E+02	6.79E-08	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**6.79E-08**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.79E-08**	**--**	**--**	**--**	**--**
600-259_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	3.80E-02	1.00E+02	3.79E-08	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**3.79E-08**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.79E-08**	**--**	**--**	**--**	**--**

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
600-47_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.30E+03	4.54E+03	5.07E-07	100.00%	2.53E+05	9.11E-03	92.35%
600-47_Shallow	non-Rad	Barium	7440-39-3	µg/kg	6.70E+04	--	--	--	1.82E+08	3.67E-04	3.72%
600-47_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	5.00E+02	3.45E+09	1.45E-13	0.00%	1.82E+06	2.74E-04	2.78%
600-47_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	9.00E+01	4.60E+09	1.96E-14	0.00%	8.21E+05	1.10E-04	1.11%
600-47_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	5.50E+03	--	--	--	1.37E+09	4.02E-06	0.04%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.07E-07**	**--**	**--**	**9.86E-03**	**--**
600-47_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.36E+00	5.81E+03	2.34E-08	13.94%	--	--	--
600-47_Shallow	Rad	Uranium-238	U-238	pCi/g	1.58E+00	1.09E+03	1.45E-07	86.06%	--	--	--
Total Radiological Risk Estimate						**--**	**1.68E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.75E-07**	**--**	**--**	**--**	**--**
618-1_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.21E+06	--	--	--	9.12E+08	6.81E-03	6.11%
618-1_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.64E+02	2.58E+03	1.02E-07	16.34%	1.31E+04	2.01E-02	18.09%
618-1_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.35E+01	2.58E+03	2.07E-08	3.31%	--	--	--
618-1_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.28E+03	4.54E+03	5.02E-07	80.35%	2.53E+05	9.03E-03	8.11%
618-1_Shallow	non-Rad	Barium	7440-39-3	µg/kg	9.72E+04	--	--	--	1.82E+08	5.33E-04	0.48%
618-1_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	1.88E+02	3.45E+09	5.45E-14	0.00%	1.82E+06	1.03E-04	0.09%
618-1_Shallow	non-Rad	Boron	7440-42-8	µg/kg	1.19E+03	--	--	--	1.82E+08	6.52E-06	0.01%
618-1_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	6.80E+01	4.60E+09	1.48E-14	0.00%	8.21E+05	8.29E-05	0.07%
618-1_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	7.93E+03	--	--	--	1.37E+09	5.79E-06	0.01%
618-1_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.36E+03	9.20E+08	6.91E-12	0.00%	2.74E+05	2.32E-02	20.87%
618-1_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.14E+04	--	--	--	3.65E+07	3.12E-04	0.28%
618-1_Shallow	non-Rad	Fluoride	16984-48-8	µg/kg	4.00E+02	--	--	--	5.47E+07	7.31E-06	0.01%
618-1_Shallow	non-Rad	Iron	7439-89-6	µg/kg	2.05E+07	--	--	--	6.39E+08	3.21E-02	28.83%
618-1_Shallow	non-Rad	Lithium	7439-93-2	µg/kg	6.38E+03	--	--	--	1.83E+06	3.50E-03	3.14%
618-1_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.00E+05	--	--	--	1.28E+08	2.35E-03	2.11%
618-1_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	3.10E+01	--	--	--	2.74E+05	1.13E-04	0.10%
618-1_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	3.36E+02	--	--	--	4.56E+06	7.36E-05	0.07%
618-1_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	8.15E+03	3.19E+10	2.56E-13	0.00%	1.82E+07	4.47E-04	0.40%
618-1_Shallow	non-Rad	Nitrate	14797-55-8	µg/kg	1.60E+03	--	--	--	6.48E+09	2.47E-07	0.00%
618-1_Shallow	non-Rad	Nitrogen in Nitrite and Nitrate	NO2+NO3-N	µg/kg	3.00E+02	--	--	--	1.46E+09	2.05E-07	0.00%
618-1_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	5.63E+04	--	--	--	4.56E+06	1.23E-02	11.08%
618-1_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.21E+04	--	--	--	2.74E+08	1.54E-04	0.14%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.25E-07**	**--**	**--**	**1.11E-01**	**--**
618-1_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.93E+00	5.81E+03	3.32E-08	19.39%	--	--	--
618-1_Shallow	Rad	Uranium-238	U-238	pCi/g	1.51E+00	1.09E+03	1.38E-07	80.61%	--	--	--
Total Radiological Risk Estimate						**--**	**1.71E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.97E-07**	**--**	**--**	**--**	**--**
618-1_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	1.22E+07	--	--	--	9.12E+08	1.34E-02	6.31%
618-1_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	4.55E+02	--	--	--	3.65E+05	1.25E-03	0.59%
618-1_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.51E+01	2.58E+03	1.36E-08	0.77%	--	--	--
618-1_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	9.81E+02	2.58E+03	3.80E-07	21.61%	1.31E+04	7.48E-02	35.31%

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-1_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.60E+01	2.58E+03	2.17E-08	1.23%	--	--	--
618-1_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	6.09E+03	4.54E+03	1.34E-06	76.38%	2.53E+05	2.41E-02	11.38%
618-1_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	1.02E+05	--	--	--	1.82E+08	5.59E-04	0.26%
618-1_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	3.71E+02	3.45E+09	1.07E-13	0.00%	1.82E+06	2.03E-04	0.10%
618-1_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	3.74E+03	--	--	--	1.82E+08	2.05E-05	0.01%
618-1_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	2.66E+02	4.60E+09	5.78E-14	0.00%	8.21E+05	3.24E-04	0.15%
618-1_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	1.95E+04	--	--	--	1.37E+09	1.42E-05	0.01%
618-1_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	8.60E+03	9.20E+08	9.34E-12	0.00%	2.74E+05	3.14E-02	14.83%
618-1_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	2.38E+04	--	--	--	3.65E+07	6.52E-04	0.31%
618-1_Shallow_Focused	non-Rad	Fluoride	16984-48-8	µg/kg	9.00E+02	--	--	--	5.47E+07	1.64E-05	0.01%
618-1_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	2.28E+07	--	--	--	6.39E+08	3.57E-02	16.85%
618-1_Shallow_Focused	non-Rad	Lithium	7439-93-2	µg/kg	1.33E+04	--	--	--	1.83E+06	7.29E-03	3.44%
618-1_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	4.03E+05	--	--	--	1.28E+08	3.16E-03	1.49%
618-1_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	1.98E+02	--	--	--	2.74E+05	7.23E-04	0.34%
618-1_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	3.56E+02	--	--	--	4.56E+06	7.80E-05	0.04%
618-1_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.68E+04	3.19E+10	5.27E-13	0.00%	1.82E+07	9.21E-04	0.43%
618-1_Shallow_Focused	non-Rad	Nitrate	14797-55-8	µg/kg	3.80E+03	--	--	--	6.48E+09	5.87E-07	0.00%
618-1_Shallow_Focused	non-Rad	Nitrogen in Nitrite and Nitrate	NO2+NO3-N	µg/kg	2.60E+02	--	--	--	1.46E+09	1.78E-07	0.00%
618-1_Shallow_Focused	non-Rad	Silver	7440-22-4	µg/kg	1.12E+03	--	--	--	4.56E+06	2.45E-04	0.12%
618-1_Shallow_Focused	non-Rad	Uranium	7440-61-1	µg/kg	7.08E+03	--	--	--	2.74E+06	2.59E-03	1.22%
618-1_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	6.47E+04	--	--	--	4.56E+06	1.42E-02	6.69%
618-1_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	6.81E+04	--	--	--	2.74E+08	2.49E-04	0.12%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.76E-06**	**--**	**--**	**2.12E-01**	**--**
618-1_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.13E+01	5.81E+03	1.95E-07	15.18%	--	--	--
618-1_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	9.87E-01	2.95E+02	3.35E-07	26.10%	--	--	--
618-1_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	8.23E+00	1.09E+03	7.53E-07	58.73%	--	--	--
Total Radiological Risk Estimate						**--**	**1.28E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.04E-06**	**--**	**--**	**--**	**--**
618-12_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	8.56E+03	4.54E+03	1.89E-06	99.99%	2.53E+05	3.39E-02	99.99%
618-12_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.30E+01	4.05E+05	1.56E-10	0.01%	1.43E+07	4.42E-06	0.01%
618-12_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	6.00E+01	2.98E+06	2.01E-11	0.00%	1.43E+08	4.21E-07	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.89E-06**	**--**	**--**	**3.39E-02**	**--**
618-12_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	4.71E-01	2.95E+02	1.59E-07	14.00%	--	--	--
618-12_Shallow	Rad	Uranium-238	U-238	pCi/g	1.07E+01	1.09E+03	9.80E-07	86.00%	--	--	--
Total Radiological Risk Estimate						**--**	**1.14E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.02E-06**	**--**	**--**	**--**	**--**
618-13_Shallow	non-Rad	Acetone	67-64-1	µg/kg	8.64E+00	--	--	--	7.89E+08	1.09E-08	0.00%
618-13_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.34E+06	--	--	--	9.12E+08	6.95E-03	7.43%
618-13_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.12E+02	--	--	--	3.65E+05	8.55E-04	0.91%
618-13_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	3.50E+03	4.54E+03	7.71E-07	100.00%	2.53E+05	1.39E-02	14.82%
618-13_Shallow	non-Rad	Barium	7440-39-3	µg/kg	7.40E+04	--	--	--	1.82E+08	4.06E-04	0.43%

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-13_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.12E+02	3.45E+09	6.14E-14	0.00%	1.82E+06	1.16E-04	0.12%
618-13_Shallow	non-Rad	Boron	7440-42-8	µg/kg	1.05E+03	--	--	--	1.82E+08	5.75E-06	0.01%
618-13_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	6.30E+01	4.60E+09	1.37E-14	0.00%	8.21E+05	7.68E-05	0.08%
618-13_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.07E+04	--	--	--	1.37E+09	7.82E-06	0.01%
618-13_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.29E+03	9.20E+08	6.83E-12	0.00%	2.74E+05	2.30E-02	24.57%
618-13_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.15E+04	--	--	--	3.65E+07	3.15E-04	0.34%
618-13_Shallow	non-Rad	Iron	7439-89-6	µg/kg	2.01E+07	--	--	--	6.39E+08	3.15E-02	33.65%
618-13_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.44E+05	--	--	--	1.28E+08	2.69E-03	2.88%
618-13_Shallow	non-Rad	Methylene chloride	75-09-2	µg/kg	5.12E+00	3.37E+05	1.52E-11	0.00%	3.57E+07	1.43E-07	0.00%
618-13_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	4.20E+02	--	--	--	4.56E+06	9.21E-05	0.10%
618-13_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	1.24E+04	3.19E+10	3.89E-13	0.00%	1.82E+07	6.79E-04	0.73%
618-13_Shallow	non-Rad	Tin	7440-31-5	µg/kg	1.05E+03	--	--	--	5.48E+08	1.92E-06	0.00%
618-13_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	1.75E+03	--	--	--	2.74E+06	6.39E-04	0.68%
618-13_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	5.58E+04	--	--	--	4.56E+06	1.22E-02	13.08%
618-13_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.14E+04	--	--	--	2.74E+08	1.51E-04	0.16%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**7.71E-07**	**--**	**--**	**9.35E-02**	**--**
618-13_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	3.80E-02	1.00E+02	3.79E-08	16.74%	--	--	--
618-13_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.92E+00	5.81E+03	3.31E-08	14.60%	--	--	--
618-13_Shallow	Rad	Uranium-238	U-238	pCi/g	1.70E+00	1.09E+03	1.56E-07	68.66%	--	--	--
Total Radiological Risk Estimate						**--**	**2.26E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.98E-07**	**--**	**--**	**--**	**--**
618-13_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	5.90E+00	--	--	--	7.89E+08	7.48E-09	0.00%
618-13_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	5.22E+06	--	--	--	9.12E+08	5.72E-03	6.85%
618-13_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	2.33E+02	--	--	--	3.65E+05	6.38E-04	0.76%
618-13_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	3.39E+03	4.54E+03	7.47E-07	100.00%	2.53E+05	1.34E-02	16.07%
618-13_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	5.77E+04	--	--	--	1.82E+08	3.16E-04	0.38%
618-13_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	1.84E+02	3.45E+09	5.33E-14	0.00%	1.82E+06	1.01E-04	0.12%
618-13_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	9.60E+02	--	--	--	1.82E+08	5.26E-06	0.01%
618-13_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	4.70E+01	4.60E+09	1.02E-14	0.00%	8.21E+05	5.73E-05	0.07%
618-13_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	8.74E+03	--	--	--	1.37E+09	6.39E-06	0.01%
618-13_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	5.71E+03	9.20E+08	6.20E-12	0.00%	2.74E+05	2.09E-02	24.97%
618-13_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	1.01E+04	--	--	--	3.65E+07	2.77E-04	0.33%
618-13_Shallow_Focused	non-Rad	Hexavalent Chromium	18540-29-9	µg/kg	1.50E+02	9.86E+07	1.52E-12	0.00%	2.74E+06	5.48E-05	0.07%
618-13_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	1.79E+07	--	--	--	6.39E+08	2.80E-02	33.55%
618-13_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	2.68E+05	--	--	--	1.28E+08	2.10E-03	2.51%
618-13_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	5.03E+00	3.37E+05	1.49E-11	0.00%	3.57E+07	1.41E-07	0.00%
618-13_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	2.97E+02	--	--	--	4.56E+06	6.51E-05	0.08%
618-13_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.00E+04	3.19E+10	3.14E-13	0.00%	1.82E+07	5.48E-04	0.66%
618-13_Shallow_Focused	non-Rad	Tin	7440-31-5	µg/kg	7.45E+02	--	--	--	5.48E+08	1.36E-06	0.00%
618-13_Shallow_Focused	non-Rad	Uranium	7440-61-1	µg/kg	1.50E+03	--	--	--	2.74E+06	5.48E-04	0.66%
618-13_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	4.86E+04	--	--	--	4.56E+06	1.07E-02	12.75%
618-13_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	3.71E+04	--	--	--	2.74E+08	1.36E-04	0.16%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**7.47E-07**	**--**	**--**	**8.35E-02**	**--**

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-13_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.14E+00	5.81E+03	1.96E-08	18.28%	--	--	--
618-13_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	9.59E-01	1.09E+03	8.77E-08	81.72%	--	--	--
Total Radiological Risk Estimate						**--**	**1.07E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.54E-07**	**--**	**--**	**--**	**--**
618-2_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	2.70E+03	4.54E+03	5.95E-07	100.00%	2.53E+05	1.07E-02	91.02%
618-2_Overburden	non-Rad	Barium	7440-39-3	µg/kg	7.47E+04	--	--	--	1.82E+08	4.09E-04	3.48%
618-2_Overburden	non-Rad	Chromium	7440-47-3	µg/kg	6.60E+03	--	--	--	1.37E+09	4.82E-06	0.04%
618-2_Overburden	non-Rad	Selenium	7782-49-2	µg/kg	1.00E+03	--	--	--	4.56E+06	2.19E-04	1.87%
618-2_Overburden	non-Rad	Tin	7440-31-5	µg/kg	2.70E+03	--	--	--	5.48E+08	4.93E-06	0.04%
618-2_Overburden	non-Rad	Uranium	7440-61-1	µg/kg	1.14E+03	--	--	--	2.74E+06	4.16E-04	3.55%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.95E-07**	**--**	**--**	**1.17E-02**	**--**
618-2_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	5.80E-02	1.00E+02	5.79E-08	47.04%	--	--	--
618-2_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	6.44E-01	5.81E+03	1.11E-08	9.01%	--	--	--
618-2_Overburden	Rad	Uranium-238	U-238	pCi/g	5.91E-01	1.09E+03	5.41E-08	43.94%	--	--	--
Total Radiological Risk Estimate						**--**	**1.23E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.18E-07**	**--**	**--**	**--**	**--**
618-2_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	1.90E+03	4.54E+03	4.19E-07	100.00%	2.53E+05	7.52E-03	76.87%
618-2_Shallow	non-Rad	Barium	7440-39-3	µg/kg	7.91E+04	--	--	--	1.82E+08	4.33E-04	4.43%
618-2_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	7.10E+03	--	--	--	1.37E+09	5.19E-06	0.05%
618-2_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	7.60E+02	--	--	--	4.56E+06	1.67E-04	1.70%
618-2_Shallow	non-Rad	Tin	7440-31-5	µg/kg	2.40E+03	--	--	--	5.48E+08	4.38E-06	0.04%
618-2_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	4.53E+03	--	--	--	2.74E+06	1.65E-03	16.91%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.19E-07**	**--**	**--**	**9.79E-03**	**--**
618-2_Shallow	Rad	Americium-241	14596-10-2	pCi/g	8.13E-01	2.57E+03	3.16E-08	1.13%	--	--	--
618-2_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	2.24E+00	1.00E+02	2.24E-06	79.60%	--	--	--
618-2_Shallow	Rad	Plutonium-239/240	PU-239/240	pCi/g	7.67E+00	3.34E+03	2.29E-07	8.17%	--	--	--
618-2_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	2.20E+00	5.81E+03	3.79E-08	1.35%	--	--	--
618-2_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.14E-01	2.95E+02	7.25E-08	2.58%	--	--	--
618-2_Shallow	Rad	Uranium-238	U-238	pCi/g	2.20E+00	1.09E+03	2.01E-07	7.17%	--	--	--
Total Radiological Risk Estimate						**--**	**2.81E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.23E-06**	**--**	**--**	**--**	**--**
618-2_Staging Pile	non-Rad	Arsenic	7440-38-2	µg/kg	3.06E+03	4.54E+03	6.75E-07	100.00%	2.53E+05	1.21E-02	84.58%
618-2_Staging Pile	non-Rad	Barium	7440-39-3	µg/kg	6.77E+04	--	--	--	1.82E+08	3.71E-04	2.59%
618-2_Staging Pile	non-Rad	Chromium	7440-47-3	µg/kg	6.42E+03	--	--	--	1.37E+09	4.69E-06	0.03%
618-2_Staging Pile	non-Rad	Uranium	7440-61-1	µg/kg	5.02E+03	--	--	--	2.74E+06	1.83E-03	12.80%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.75E-07**	**--**	**--**	**1.43E-02**	**--**
618-2_Staging Pile	Rad	Americium-241	14596-10-2	pCi/g	8.18E-01	2.57E+03	3.18E-08	4.56%	--	--	--
618-2_Staging Pile	Rad	Cesium-137	10045-97-3	pCi/g	9.50E-02	1.00E+02	9.48E-08	13.58%	--	--	--

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-2_Staging Pile	Rad	Plutonium-239/240	PU-239/240	pCi/g	1.00E+01	3.34E+03	2.99E-07	42.87%	--	--	--
618-2_Staging Pile	Rad	Tritium	10028-17-8	pCi/g	2.33E+00	1.54E+04	1.52E-08	2.17%	--	--	--
618-2_Staging Pile	Rad	Uranium-233/234	U-233/234	pCi/g	2.04E+00	5.81E+03	3.51E-08	5.03%	--	--	--
618-2_Staging Pile	Rad	Uranium-235	15117-96-1	pCi/g	1.22E-01	2.95E+02	4.14E-08	5.93%	--	--	--
618-2_Staging Pile	Rad	Uranium-238	U-238	pCi/g	1.97E+00	1.09E+03	1.80E-07	25.84%	--	--	--
Total Radiological Risk Estimate						**--**	**6.98E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.37E-06**	**--**	**--**	**--**	**--**
618-3_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.80E+03	4.54E+03	6.17E-07	100.00%	2.53E+05	1.11E-02	90.54%
618-3_Shallow	non-Rad	Barium	7440-39-3	µg/kg	7.65E+04	--	--	--	1.82E+08	4.19E-04	3.42%
618-3_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	9.70E+03	--	--	--	1.37E+09	7.09E-06	0.06%
618-3_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	6.59E+02	--	--	--	4.56E+06	1.44E-04	1.18%
618-3_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	1.61E+03	--	--	--	2.74E+06	5.88E-04	4.80%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.17E-07**	**--**	**--**	**1.22E-02**	**--**
618-3_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	6.77E-01	5.81E+03	1.17E-08	14.57%	--	--	--
618-3_Shallow	Rad	Uranium-238	U-238	pCi/g	7.47E-01	1.09E+03	6.83E-08	85.43%	--	--	--
Total Radiological Risk Estimate						**--**	**8.00E-08**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.97E-07**	**--**	**--**	**--**	**--**
618-3_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	7.96E+01	5.81E+03	1.37E-06	13.36%	--	--	--
618-3_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.79E+00	2.95E+02	1.62E-06	15.83%	--	--	--
618-3_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	7.94E+01	1.09E+03	7.26E-06	70.81%	--	--	--
Total Radiological Risk Estimate						**--**	**1.03E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.03E-05**	**--**	**--**	**--**	**--**
618-4_Overburden_2	non-Rad	Arsenic	7440-38-2	µg/kg	2.50E+03	4.54E+03	5.51E-07	100.00%	2.53E+05	9.90E-03	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.51E-07**	**--**	**--**	**9.90E-03**	**--**
618-4_Overburden_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.30E+00	5.81E+03	2.24E-08	14.79%	--	--	--
618-4_Overburden_2	Rad	Uranium-238	U-238	pCi/g	1.41E+00	1.09E+03	1.29E-07	85.21%	--	--	--
Total Radiological Risk Estimate						**--**	**1.51E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.02E-07**	**--**	**--**	**--**	**--**
618-4_Overburden_3	Rad	Uranium-233/234	U-233/234	pCi/g	4.24E-01	5.81E+03	7.30E-09	12.54%	--	--	--
618-4_Overburden_3	Rad	Uranium-235	15117-96-1	pCi/g	3.20E-02	2.95E+02	1.08E-08	18.63%	--	--	--
618-4_Overburden_3	Rad	Uranium-238	U-238	pCi/g	4.38E-01	1.09E+03	4.01E-08	68.83%	--	--	--
Total Radiological Risk Estimate						**--**	**5.82E-08**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.82E-08**	**--**	**--**	**--**	**--**
618-4_Overburden_4	Rad	Uranium-233/234	U-233/234	pCi/g	9.42E-01	5.81E+03	1.62E-08	15.84%	--	--	--
618-4_Overburden_4	Rad	Uranium-238	U-238	pCi/g	9.42E-01	1.09E+03	8.62E-08	84.16%	--	--	--

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
Total Radiological Risk Estimate						--	**1.02E-07**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.02E-07**	--	--	--	--
618-4_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	3.20E+03	4.54E+03	7.05E-07	100.00%	2.53E+05	1.27E-02	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**7.05E-07**	--	--	**1.27E-02**	--
618-4_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	3.22E+00	5.81E+03	5.54E-08	16.49%	--	--	--
618-4_Shallow	Rad	Uranium-238	U-238	pCi/g	3.07E+00	1.09E+03	2.81E-07	83.51%	--	--	--
Total Radiological Risk Estimate						--	**3.36E-07**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.04E-06**	--	--	--	--
618-5_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	3.40E+03	4.54E+03	7.49E-07	100.00%	2.53E+05	1.35E-02	98.43%
618-5_Overburden	non-Rad	Cadmium	7440-43-9	µg/kg	1.70E+02	4.60E+09	3.69E-14	0.00%	8.21E+05	2.07E-04	1.51%
618-5_Overburden	non-Rad	Chromium	7440-47-3	µg/kg	9.70E+03	--	--	--	1.37E+09	7.09E-06	0.05%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**7.49E-07**	--	--	**1.37E-02**	--
618-5_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	4.14E+00	5.81E+03	7.13E-08	14.60%	--	--	--
618-5_Overburden	Rad	Uranium-238	U-238	pCi/g	4.56E+00	1.09E+03	4.17E-07	85.40%	--	--	--
Total Radiological Risk Estimate						--	**4.88E-07**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.24E-06**	--	--	--	--
618-5_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	4.30E+03	4.54E+03	9.48E-07	100.00%	2.53E+05	1.70E-02	99.95%
618-5_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.13E+04	--	--	--	1.37E+09	8.26E-06	0.05%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**9.48E-07**	--	--	**1.70E-02**	--
618-5_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	9.38E-01	5.81E+03	1.62E-08	14.39%	--	--	--
618-5_Shallow	Rad	Uranium-238	U-238	pCi/g	1.05E+00	1.09E+03	9.61E-08	85.61%	--	--	--
Total Radiological Risk Estimate						--	**1.12E-07**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.06E-06**	--	--	--	--
618-5_Staging Pile_4	non-Rad	Arsenic	7440-38-2	µg/kg	3.30E+03	4.54E+03	7.27E-07	100.00%	2.53E+05	1.31E-02	99.47%
618-5_Staging Pile_4	non-Rad	Cadmium	7440-43-9	µg/kg	5.00E+01	4.60E+09	1.09E-14	0.00%	8.21E+05	6.09E-05	0.46%
618-5_Staging Pile_4	non-Rad	Chromium	7440-47-3	µg/kg	1.18E+04	--	--	--	1.37E+09	8.62E-06	0.07%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**7.27E-07**	--	--	**1.31E-02**	--
618-5_Staging Pile_4	Rad	Uranium-233/234	U-233/234	pCi/g	1.15E+00	5.81E+03	1.98E-08	16.08%	--	--	--
618-5_Staging Pile_4	Rad	Uranium-238	U-238	pCi/g	1.13E+00	1.09E+03	1.03E-07	83.92%	--	--	--
Total Radiological Risk Estimate						--	**1.23E-07**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**8.50E-07**	--	--	--	--
618-5_Staging Pile_5	non-Rad	Arsenic	7440-38-2	µg/kg	2.70E+03	4.54E+03	5.95E-07	100.00%	2.53E+05	1.07E-02	99.93%
618-5_Staging Pile_5	non-Rad	Chromium	7440-47-3	µg/kg	1.03E+04	--	--	--	1.37E+09	7.53E-06	0.07%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**5.95E-07**	--	--	**1.07E-02**	--
618-5_Staging Pile_5	Rad	Uranium-233/234	U-233/234	pCi/g	1.52E+00	5.81E+03	2.62E-08	10.93%	--	--	--

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-5_Staging Pile_5	Rad	Uranium-235	15117-96-1	pCi/g	1.68E-01	2.95E+02	5.69E-08	23.77%	--	--	--
618-5_Staging Pile_5	Rad	Uranium-238	U-238	pCi/g	1.71E+00	1.09E+03	1.56E-07	65.30%	--	--	--
Total Radiological Risk Estimate						**--**	**2.40E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.34E-07**	**--**	**--**	**--**	**--**
618-7_Shallow_1	non-Rad	Aluminum	7429-90-5	µg/kg	5.25E+06	--	--	--	9.12E+08	5.75E-03	5.22%
618-7_Shallow_1	non-Rad	Antimony	7440-36-0	µg/kg	5.60E+02	--	--	--	3.65E+05	1.53E-03	1.39%
618-7_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	1.89E+03	4.54E+03	4.17E-07	100.00%	2.53E+05	7.49E-03	6.79%
618-7_Shallow_1	non-Rad	Barium	7440-39-3	µg/kg	6.89E+04	--	--	--	1.82E+08	3.77E-04	0.34%
618-7_Shallow_1	non-Rad	Beryllium	7440-41-7	µg/kg	2.78E+02	3.45E+09	8.06E-14	0.00%	1.82E+06	1.52E-04	0.14%
618-7_Shallow_1	non-Rad	Cadmium	7440-43-9	µg/kg	6.52E+01	4.60E+09	1.42E-14	0.00%	8.21E+05	7.95E-05	0.07%
618-7_Shallow_1	non-Rad	Chromium	7440-47-3	µg/kg	1.02E+04	--	--	--	1.37E+09	7.47E-06	0.01%
618-7_Shallow_1	non-Rad	Cobalt	7440-48-4	µg/kg	9.15E+03	9.20E+08	9.94E-12	0.00%	2.74E+05	3.34E-02	30.31%
618-7_Shallow_1	non-Rad	Copper	7440-50-8	µg/kg	1.61E+04	--	--	--	3.65E+07	4.42E-04	0.40%
618-7_Shallow_1	non-Rad	Iron	7439-89-6	µg/kg	2.60E+07	--	--	--	6.39E+08	4.06E-02	36.84%
618-7_Shallow_1	non-Rad	Manganese	7439-96-5	µg/kg	3.26E+05	--	--	--	1.28E+08	2.55E-03	2.32%
618-7_Shallow_1	non-Rad	Mercury	7439-97-6	µg/kg	4.43E+01	--	--	--	2.74E+05	1.62E-04	0.15%
618-7_Shallow_1	non-Rad	Nickel	7440-02-0	µg/kg	2.10E+04	3.19E+10	6.58E-13	0.00%	1.82E+07	1.15E-03	1.04%
618-7_Shallow_1	non-Rad	Tin	7440-31-5	µg/kg	1.55E+03	--	--	--	5.48E+08	2.83E-06	0.00%
618-7_Shallow_1	non-Rad	Vanadium	7440-62-2	µg/kg	7.46E+04	--	--	--	4.56E+06	1.63E-02	14.82%
618-7_Shallow_1	non-Rad	Zinc	7440-66-6	µg/kg	4.92E+04	--	--	--	2.74E+08	1.80E-04	0.16%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.17E-07**	**--**	**--**	**1.10E-01**	**--**
618-7_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	6.70E-02	1.00E+02	6.69E-08	11.55%	--	--	--
618-7_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	3.61E+00	5.81E+03	6.22E-08	10.74%	--	--	--
618-7_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	3.64E-01	2.95E+02	1.23E-07	21.27%	--	--	--
618-7_Shallow_1	Rad	Uranium-238	U-238	pCi/g	3.57E+00	1.09E+03	3.27E-07	56.44%	--	--	--
Total Radiological Risk Estimate						**--**	**5.79E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.96E-07**	**--**	**--**	**--**	**--**
618-7_Shallow_2	non-Rad	Aluminum	7429-90-5	µg/kg	4.97E+06	--	--	--	9.12E+08	5.45E-03	4.83%
618-7_Shallow_2	non-Rad	Antimony	7440-36-0	µg/kg	6.60E+02	--	--	--	3.65E+05	1.81E-03	1.60%
618-7_Shallow_2	non-Rad	Arsenic	7440-38-2	µg/kg	2.50E+03	4.54E+03	5.51E-07	100.00%	2.53E+05	9.90E-03	8.77%
618-7_Shallow_2	non-Rad	Barium	7440-39-3	µg/kg	7.38E+04	--	--	--	1.82E+08	4.04E-04	0.36%
618-7_Shallow_2	non-Rad	Beryllium	7440-41-7	µg/kg	4.40E+02	3.45E+09	1.27E-13	0.00%	1.82E+06	2.41E-04	0.21%
618-7_Shallow_2	non-Rad	Chromium	7440-47-3	µg/kg	6.80E+03	--	--	--	1.37E+09	4.97E-06	0.00%
618-7_Shallow_2	non-Rad	Cobalt	7440-48-4	µg/kg	9.30E+03	9.20E+08	1.01E-11	0.00%	2.74E+05	3.40E-02	30.10%
618-7_Shallow_2	non-Rad	Copper	7440-50-8	µg/kg	1.36E+04	--	--	--	3.65E+07	3.73E-04	0.33%
618-7_Shallow_2	non-Rad	Iron	7439-89-6	µg/kg	2.60E+07	--	--	--	6.39E+08	4.07E-02	36.07%
618-7_Shallow_2	non-Rad	Manganese	7439-96-5	µg/kg	3.64E+05	--	--	--	1.28E+08	2.85E-03	2.53%
618-7_Shallow_2	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	2.74E+05	7.30E-05	0.06%
618-7_Shallow_2	non-Rad	Nickel	7440-02-0	µg/kg	9.70E+03	3.19E+10	3.04E-13	0.00%	1.82E+07	5.32E-04	0.47%
618-7_Shallow_2	non-Rad	Tin	7440-31-5	µg/kg	1.50E+03	--	--	--	5.48E+08	2.74E-06	0.00%
618-7_Shallow_2	non-Rad	Vanadium	7440-62-2	µg/kg	7.47E+04	--	--	--	4.56E+06	1.64E-02	14.51%

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-7_Shallow_2	non-Rad	Zinc	7440-66-6	µg/kg	4.62E+04	--	--	--	2.74E+08	1.69E-04	0.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.51E-07**	**--**	**--**	**1.13E-01**	**--**
618-7_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	5.66E-01	5.81E+03	9.75E-09	16.63%	--	--	--
618-7_Shallow_2	Rad	Uranium-238	U-238	pCi/g	5.34E-01	1.09E+03	4.88E-08	83.37%	--	--	--
Total Radiological Risk Estimate						**--**	**5.86E-08**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.09E-07**	**--**	**--**	**--**	**--**
618-7_Shallow_3	non-Rad	Aluminum	7429-90-5	µg/kg	6.74E+06	--	--	--	9.12E+08	7.39E-03	6.78%
618-7_Shallow_3	non-Rad	Antimony	7440-36-0	µg/kg	4.50E+02	--	--	--	3.65E+05	1.23E-03	1.13%
618-7_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	2.80E+03	4.54E+03	6.17E-07	100.00%	2.53E+05	1.11E-02	10.18%
618-7_Shallow_3	non-Rad	Barium	7440-39-3	µg/kg	8.25E+04	--	--	--	1.82E+08	4.52E-04	0.42%
618-7_Shallow_3	non-Rad	Beryllium	7440-41-7	µg/kg	3.10E+02	3.45E+09	8.98E-14	0.00%	1.82E+06	1.70E-04	0.16%
618-7_Shallow_3	non-Rad	Cadmium	7440-43-9	µg/kg	1.90E+02	4.60E+09	4.13E-14	0.00%	8.21E+05	2.32E-04	0.21%
618-7_Shallow_3	non-Rad	Chromium	7440-47-3	µg/kg	1.01E+04	--	--	--	1.37E+09	7.38E-06	0.01%
618-7_Shallow_3	non-Rad	Cobalt	7440-48-4	µg/kg	8.60E+03	9.20E+08	9.34E-12	0.00%	2.74E+05	3.14E-02	28.84%
618-7_Shallow_3	non-Rad	Copper	7440-50-8	µg/kg	1.36E+04	--	--	--	3.65E+07	3.73E-04	0.34%
618-7_Shallow_3	non-Rad	Iron	7439-89-6	µg/kg	2.43E+07	--	--	--	6.39E+08	3.80E-02	34.92%
618-7_Shallow_3	non-Rad	Manganese	7439-96-5	µg/kg	3.57E+05	--	--	--	1.28E+08	2.80E-03	2.57%
618-7_Shallow_3	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	2.74E+05	7.30E-05	0.07%
618-7_Shallow_3	non-Rad	Nickel	7440-02-0	µg/kg	1.01E+04	3.19E+10	3.17E-13	0.00%	1.82E+07	5.53E-04	0.51%
618-7_Shallow_3	non-Rad	Tin	7440-31-5	µg/kg	1.80E+03	--	--	--	5.48E+08	3.29E-06	0.00%
618-7_Shallow_3	non-Rad	Vanadium	7440-62-2	µg/kg	6.82E+04	--	--	--	4.56E+06	1.49E-02	13.72%
618-7_Shallow_3	non-Rad	Zinc	7440-66-6	µg/kg	4.45E+04	--	--	--	2.74E+08	1.63E-04	0.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.17E-07**	**--**	**--**	**1.09E-01**	**--**
618-7_Shallow_3	Rad	Uranium-233/234	U-233/234	pCi/g	1.07E+00	5.81E+03	1.84E-08	13.78%	--	--	--
618-7_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	8.50E-02	2.95E+02	2.88E-08	21.55%	--	--	--
618-7_Shallow_3	Rad	Uranium-238	U-238	pCi/g	9.45E-01	1.09E+03	8.64E-08	64.67%	--	--	--
Total Radiological Risk Estimate						**--**	**1.34E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**7.51E-07**	**--**	**--**	**--**	**--**
618-7_Shallow_4	non-Rad	Aluminum	7429-90-5	µg/kg	5.65E+06	--	--	--	9.12E+08	6.19E-03	6.12%
618-7_Shallow_4	non-Rad	Antimony	7440-36-0	µg/kg	2.50E+02	--	--	--	3.65E+05	6.85E-04	0.68%
618-7_Shallow_4	non-Rad	Arsenic	7440-38-2	µg/kg	5.20E+03	4.54E+03	1.15E-06	100.00%	2.53E+05	2.06E-02	20.36%
618-7_Shallow_4	non-Rad	Barium	7440-39-3	µg/kg	5.79E+04	--	--	--	1.82E+08	3.17E-04	0.31%
618-7_Shallow_4	non-Rad	Beryllium	7440-41-7	µg/kg	2.20E+02	3.45E+09	6.37E-14	0.00%	1.82E+06	1.21E-04	0.12%
618-7_Shallow_4	non-Rad	Cadmium	7440-43-9	µg/kg	9.00E+01	4.60E+09	1.96E-14	0.00%	8.21E+05	1.10E-04	0.11%
618-7_Shallow_4	non-Rad	Chromium	7440-47-3	µg/kg	1.14E+04	--	--	--	1.37E+09	8.33E-06	0.01%
618-7_Shallow_4	non-Rad	Cobalt	7440-48-4	µg/kg	6.70E+03	9.20E+08	7.28E-12	0.00%	2.74E+05	2.45E-02	24.20%
618-7_Shallow_4	non-Rad	Copper	7440-50-8	µg/kg	1.32E+04	--	--	--	3.65E+07	3.62E-04	0.36%
618-7_Shallow_4	non-Rad	Iron	7439-89-6	µg/kg	2.12E+07	--	--	--	6.39E+08	3.32E-02	32.82%
618-7_Shallow_4	non-Rad	Manganese	7439-96-5	µg/kg	2.85E+05	--	--	--	1.28E+08	2.23E-03	2.21%
618-7_Shallow_4	non-Rad	Nickel	7440-02-0	µg/kg	1.29E+04	3.19E+10	4.05E-13	0.00%	1.82E+07	7.07E-04	0.70%
618-7_Shallow_4	non-Rad	Tin	7440-31-5	µg/kg	7.10E+02	--	--	--	5.48E+08	1.30E-06	0.00%

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-7_Shallow_4	non-Rad	Vanadium	7440-62-2	µg/kg	5.48E+04	--	--	--	4.56E+06	1.20E-02	11.88%
618-7_Shallow_4	non-Rad	Zinc	7440-66-6	µg/kg	3.70E+04	--	--	--	2.74E+08	1.35E-04	0.13%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.15E-06**	**--**	**--**	**1.01E-01**	**--**
618-7_Shallow_4	Rad	Uranium-233/234	U-233/234	pCi/g	6.89E-01	5.81E+03	1.19E-08	14.53%	--	--	--
618-7_Shallow_4	Rad	Uranium-238	U-238	pCi/g	7.63E-01	1.09E+03	6.98E-08	85.47%	--	--	--
Total Radiological Risk Estimate						**--**	**8.17E-08**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.23E-06**	**--**	**--**	**--**	**--**
618-7_Shallow_Focused	non-Rad	Acenaphthene	83-32-9	µg/kg	1.50E+02	--	--	--	4.01E+07	3.74E-06	0.00%
618-7_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	7.61E+06	--	--	--	9.12E+08	8.34E-03	5.79%
618-7_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	9.80E+02	--	--	--	3.65E+05	2.68E-03	1.86%
618-7_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	6.70E+00	2.58E+03	2.59E-09	0.18%	--	--	--
618-7_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	4.20E+03	4.54E+03	9.25E-07	64.71%	2.53E+05	1.66E-02	11.55%
618-7_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	9.28E+04	--	--	--	1.82E+08	5.09E-04	0.35%
618-7_Shallow_Focused	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	8.80E+01	1.72E+03	5.11E-08	3.57%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	6.60E+01	1.72E+02	3.83E-07	26.79%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	5.20E+01	1.72E+03	3.02E-08	2.11%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	1.10E+01	1.72E+03	6.39E-09	0.45%	--	--	--
618-7_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	3.70E+02	3.45E+09	1.07E-13	0.00%	1.82E+06	2.03E-04	0.14%
618-7_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	4.70E+02	4.05E+05	1.16E-09	0.08%	1.43E+07	3.30E-05	0.02%
618-7_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	6.20E+03	4.60E+09	1.35E-12	0.00%	8.21E+05	7.56E-03	5.25%
618-7_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	6.59E+04	--	--	--	1.37E+09	4.81E-05	0.03%
618-7_Shallow_Focused	non-Rad	Chrysene	218-01-9	µg/kg	6.90E+01	1.72E+04	4.01E-09	0.28%	--	--	--
618-7_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	1.10E+04	9.20E+08	1.20E-11	0.00%	2.74E+05	4.02E-02	27.90%
618-7_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	2.50E+04	--	--	--	3.65E+07	6.85E-04	0.48%
618-7_Shallow_Focused	non-Rad	Dibenz[a,h]anthracene	53-70-3	µg/kg	4.50E+01	1.72E+03	2.61E-08	1.83%	--	--	--
618-7_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	3.30E+01	--	--	--	7.13E+07	4.63E-07	0.00%
618-7_Shallow_Focused	non-Rad	Fluoranthene	206-44-0	µg/kg	4.80E+01	--	--	--	2.68E+07	1.79E-06	0.00%
618-7_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	2.87E+07	--	--	--	6.39E+08	4.49E-02	31.20%
618-7_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	4.25E+05	--	--	--	1.28E+08	3.33E-03	2.31%
618-7_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	2.74E+05	7.30E-05	0.05%
618-7_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.72E+04	3.19E+10	5.40E-13	0.00%	1.82E+07	9.43E-04	0.65%
618-7_Shallow_Focused	non-Rad	Pyrene	129-00-0	µg/kg	4.10E+02	--	--	--	2.01E+07	2.04E-05	0.01%
618-7_Shallow_Focused	non-Rad	Tin	7440-31-5	µg/kg	1.20E+03	--	--	--	5.48E+08	2.19E-06	0.00%
618-7_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	8.05E+04	--	--	--	4.56E+06	1.76E-02	12.25%
618-7_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	5.24E+04	--	--	--	2.74E+08	1.91E-04	0.13%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.43E-06**	**--**	**--**	**1.44E-01**	**--**
618-7_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.00E-02	1.00E+02	9.98E-09	0.89%	--	--	--
618-7_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.09E+01	5.81E+03	1.88E-07	16.83%	--	--	--
618-7_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	9.74E-01	2.95E+02	3.30E-07	29.61%	--	--	--
618-7_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	6.42E+00	1.09E+03	5.87E-07	52.67%	--	--	--
Total Radiological Risk Estimate						**--**	**1.12E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.55E-06**	**--**	**--**	**--**	**--**

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-8_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	4.10E+03	4.54E+03	9.03E-07	100.00%	2.53E+05	1.62E-02	92.28%
618-8_Shallow	non-Rad	Barium	7440-39-3	µg/kg	9.76E+04	--	--	--	1.82E+08	5.35E-04	3.04%
618-8_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.24E+04	--	--	--	1.37E+09	9.06E-06	0.05%
618-8_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	8.46E+02	--	--	--	4.56E+06	1.85E-04	1.05%
618-8_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	1.72E+03	--	--	--	2.74E+06	6.28E-04	3.57%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**9.03E-07**	**--**	**--**	**1.76E-02**	**--**
618-8_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.19E+00	5.81E+03	2.05E-08	23.38%	--	--	--
618-8_Shallow	Rad	Uranium-238	U-238	pCi/g	7.34E-01	1.09E+03	6.71E-08	76.62%	--	--	--
Total Radiological Risk Estimate						**--**	**8.76E-08**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**9.91E-07**	**--**	**--**	**--**	**--**
618-9_Shallow_Focused	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	1.10E+02	1.21E+04	9.10E-09	0.09%	3.65E+06	3.01E-05	0.01%
618-9_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	6.80E+02	--	--	--	7.89E+08	8.62E-07	0.00%
618-9_Shallow_Focused	non-Rad	Aldrin	309-00-2	µg/kg	3.90E+02	3.33E+02	1.17E-06	11.26%	2.14E+04	1.82E-02	3.35%
618-9_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	8.57E+06	--	--	--	9.12E+08	9.39E-03	1.73%
618-9_Shallow_Focused	non-Rad	Aroclor-1016	12674-11-2	µg/kg	1.90E+03	7.38E+04	2.57E-08	0.25%	4.59E+04	4.14E-02	7.61%
618-9_Shallow_Focused	non-Rad	Aroclor-1221	11104-28-2	µg/kg	1.90E+03	1.99E+03	9.55E-07	9.18%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1232	11141-16-5	µg/kg	1.90E+03	1.99E+03	9.55E-07	9.18%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1242	53469-21-9	µg/kg	1.90E+03	2.58E+03	7.35E-07	7.07%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.90E+03	2.58E+03	7.35E-07	7.07%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.90E+03	2.58E+03	1.51E-06	14.51%	1.31E+04	2.97E-01	54.69%
618-9_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.90E+03	2.58E+03	1.51E-06	14.51%	--	--	--
618-9_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.16E+04	4.54E+03	2.56E-06	24.58%	2.53E+05	4.59E-02	8.44%
618-9_Shallow_Focused	non-Rad	Barium	7440-39-3	µg/kg	9.02E+04	--	--	--	1.82E+08	4.94E-04	0.09%
618-9_Shallow_Focused	non-Rad	Beryllium	7440-41-7	µg/kg	3.30E+02	3.45E+09	9.56E-14	0.00%	1.82E+06	1.81E-04	0.03%
618-9_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	5.20E+03	4.05E+05	1.29E-08	0.12%	1.43E+07	3.65E-04	0.07%
618-9_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	2.70E+03	2.98E+06	9.06E-10	0.01%	1.43E+08	1.89E-05	0.00%
618-9_Shallow_Focused	non-Rad	Chlordane	57-74-9	µg/kg	6.90E+01	1.89E+04	3.65E-09	0.04%	4.10E+05	1.68E-04	0.03%
618-9_Shallow_Focused	non-Rad	Chloroform	67-66-3	µg/kg	9.00E+00	1.05E+04	8.56E-10	0.01%	4.91E+06	1.83E-06	0.00%
618-9_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	9.70E+03	--	--	--	1.37E+09	7.09E-06	0.00%
618-9_Shallow_Focused	non-Rad	Cobalt	7440-48-4	µg/kg	1.14E+04	9.20E+08	1.24E-11	0.00%	2.74E+05	4.16E-02	7.66%
618-9_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	1.67E+04	--	--	--	3.65E+07	4.58E-04	0.08%
618-9_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	7.20E+03	--	--	--	7.13E+07	1.01E-04	0.02%
618-9_Shallow_Focused	non-Rad	Heptachlor epoxide	1024-57-3	µg/kg	4.40E+01	6.22E+02	7.07E-08	0.68%	9.27E+03	4.75E-03	0.87%
618-9_Shallow_Focused	non-Rad	Hexachlorobutadiene	87-68-3	µg/kg	7.60E+02	7.26E+04	1.05E-08	0.10%	7.13E+05	1.07E-03	0.20%
618-9_Shallow_Focused	non-Rad	Hexachloroethane	67-72-1	µg/kg	1.70E+04	4.05E+05	4.20E-08	0.40%	7.13E+05	2.38E-02	4.38%
618-9_Shallow_Focused	non-Rad	Iron	7439-89-6	µg/kg	2.49E+07	--	--	--	6.39E+08	3.90E-02	7.17%
618-9_Shallow_Focused	non-Rad	Manganese	7439-96-5	µg/kg	3.59E+05	--	--	--	1.28E+08	2.81E-03	0.52%
618-9_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	3.30E+02	--	--	--	2.74E+05	1.20E-03	0.22%
618-9_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	2.30E+03	3.37E+05	6.83E-09	0.07%	3.57E+07	6.44E-05	0.01%
618-9_Shallow_Focused	non-Rad	Nickel	7440-02-0	µg/kg	1.06E+04	3.19E+10	3.33E-13	0.00%	1.82E+07	5.81E-04	0.11%
618-9_Shallow_Focused	non-Rad	Nitrate	14797-55-8	µg/kg	1.67E+06	--	--	--	6.48E+09	2.58E-04	0.05%
618-9_Shallow_Focused	non-Rad	Tetrachloroethene	127-18-4	µg/kg	9.20E+02	1.03E+04	8.97E-08	0.86%	6.84E+06	1.35E-04	0.02%

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-9_Shallow_Focused	non-Rad	Toluene	108-88-3	µg/kg	9.00E+00	--	--	--	6.38E+07	1.41E-07	0.00%
618-9_Shallow_Focused	non-Rad	Trichloroethene	79-01-6	µg/kg	2.00E+00	7.17E+03	2.79E-10	0.00%	2.94E+06	6.80E-07	0.00%
618-9_Shallow_Focused	non-Rad	Uranium	7440-61-1	µg/kg	3.10E+03	--	--	--	2.74E+06	1.13E-03	0.21%
618-9_Shallow_Focused	non-Rad	Vanadium	7440-62-2	µg/kg	5.93E+04	--	--	--	4.56E+06	1.30E-02	2.39%
618-9_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	5.23E+04	--	--	--	2.74E+08	1.91E-04	0.04%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.04E-05**	**--**	**--**	**5.44E-01**	**--**
618-9_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	7.10E-02	2.95E+02	2.41E-08	8.06%	--	--	--
618-9_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	3.00E+00	1.09E+03	2.74E-07	91.94%	--	--	--
Total Radiological Risk Estimate						**--**	**2.99E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.07E-05**	**--**	**--**	**--**	**--**
628-4_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	3.37E+03	4.54E+03	7.43E-07	99.98%	2.53E+05	1.34E-02	99.97%
628-4_Overburden	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.09E+01	4.05E+05	1.51E-10	0.02%	1.43E+07	4.27E-06	0.03%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**7.44E-07**	**--**	**--**	**1.34E-02**	**--**
628-4_Overburden	Rad	Cesium-137	10045-97-3	pCi/g	3.30E-02	1.00E+02	3.29E-08	27.71%	--	--	--
628-4_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	8.70E-01	5.81E+03	1.50E-08	12.61%	--	--	--
628-4_Overburden	Rad	Uranium-238	U-238	pCi/g	7.75E-01	1.09E+03	7.09E-08	59.68%	--	--	--
Total Radiological Risk Estimate						**--**	**1.19E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.62E-07**	**--**	**--**	**--**	**--**
628-4_Shallow	non-Rad	Aroclor-1242	53469-21-9	µg/kg	4.24E+01	2.58E+03	1.64E-08	1.16%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.12E+03	2.58E+03	4.32E-07	30.66%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.43E+02	2.58E+03	9.40E-08	6.68%	1.31E+04	1.85E-02	54.77%
628-4_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.78E+01	2.58E+03	1.46E-08	1.04%	--	--	--
628-4_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	3.86E+03	4.54E+03	8.51E-07	60.47%	2.53E+05	1.53E-02	45.23%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.41E-06**	**--**	**--**	**3.38E-02**	**--**
628-4_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.13E+00	5.81E+03	1.94E-08	12.68%	--	--	--
628-4_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	1.12E-01	2.95E+02	3.79E-08	24.75%	--	--	--
628-4_Shallow	Rad	Uranium-238	U-238	pCi/g	1.05E+00	1.09E+03	9.59E-08	62.57%	--	--	--
Total Radiological Risk Estimate						**--**	**1.53E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.56E-06**	**--**	**--**	**--**	**--**
UPR-300-17_Shallow	non-Rad	Acenaphthene	83-32-9	µg/kg	1.17E+02	--	--	--	4.01E+07	2.91E-06	0.00%
UPR-300-17_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.34E+06	--	--	--	9.12E+08	6.95E-03	4.53%
UPR-300-17_Shallow	non-Rad	Anthracene	120-12-7	µg/kg	7.01E+00	--	--	--	2.01E+08	3.49E-08	0.00%
UPR-300-17_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.59E+02	--	--	--	3.65E+05	9.82E-04	0.64%
UPR-300-17_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.97E+03	2.58E+03	7.62E-07	40.83%	--	--	--
UPR-300-17_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.50E+02	2.58E+03	1.74E-07	9.33%	1.31E+04	3.43E-02	22.38%
UPR-300-17_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.13E+02	2.58E+03	4.38E-08	2.35%	--	--	--
UPR-300-17_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.57E+03	4.54E+03	5.67E-07	30.36%	2.53E+05	1.02E-02	6.64%
UPR-300-17_Shallow	non-Rad	Barium	7440-39-3	µg/kg	8.10E+04	--	--	--	1.82E+08	4.44E-04	0.29%
UPR-300-17_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	5.92E+01	1.72E+03	3.44E-08	1.84%	--	--	--

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
UPR-300-17_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	4.38E+01	1.72E+02	2.54E-07	13.62%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	3.27E+01	1.72E+03	1.90E-08	1.02%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	9.94E+00	1.72E+03	5.77E-09	0.31%	--	--	--
UPR-300-17_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.40E+02	3.45E+09	6.95E-14	0.00%	1.82E+06	1.31E-04	0.09%
UPR-300-17_Shallow	non-Rad	Boron	7440-42-8	µg/kg	3.90E+03	--	--	--	1.82E+08	2.14E-05	0.01%
UPR-300-17_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	1.73E+02	4.60E+09	3.75E-14	0.00%	8.21E+05	2.10E-04	0.14%
UPR-300-17_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.38E+04	--	--	--	1.37E+09	1.01E-05	0.01%
UPR-300-17_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	3.93E+01	1.72E+04	2.28E-09	0.12%	--	--	--
UPR-300-17_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.69E+03	9.20E+08	7.27E-12	0.00%	2.74E+05	2.44E-02	15.93%
UPR-300-17_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.51E+04	--	--	--	3.65E+07	4.15E-04	0.27%
UPR-300-17_Shallow	non-Rad	Fluoranthene	206-44-0	µg/kg	3.53E+01	--	--	--	2.68E+07	1.32E-06	0.00%
UPR-300-17_Shallow	non-Rad	Fluorene	86-73-7	µg/kg	2.93E+00	--	--	--	2.68E+07	1.09E-07	0.00%
UPR-300-17_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	5.85E+00	1.72E+03	3.40E-09	0.18%	--	--	--
UPR-300-17_Shallow	non-Rad	Iron	7439-89-6	µg/kg	1.90E+07	--	--	--	6.39E+08	2.97E-02	19.37%
UPR-300-17_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	2.85E+05	--	--	--	1.28E+08	2.23E-03	1.46%
UPR-300-17_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	6.90E+01	--	--	--	2.74E+05	2.52E-04	0.16%
UPR-300-17_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	4.12E+02	--	--	--	4.56E+06	9.04E-05	0.06%
UPR-300-17_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	4.79E+01	6.16E+04	7.78E-10	0.04%	2.24E+06	2.14E-05	0.01%
UPR-300-17_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	5.64E+05	3.19E+10	1.77E-11	0.00%	1.82E+07	3.09E-02	20.14%
UPR-300-17_Shallow	non-Rad	Pyrene	129-00-0	µg/kg	3.41E+01	--	--	--	2.01E+07	1.70E-06	0.00%
UPR-300-17_Shallow	non-Rad	Silver	7440-22-4	µg/kg	3.40E+02	--	--	--	4.56E+06	7.45E-05	0.05%
UPR-300-17_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	5.21E+04	--	--	--	4.56E+06	1.14E-02	7.45%
UPR-300-17_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	1.57E+05	--	--	--	2.74E+08	5.74E-04	0.37%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.87E-06**	**--**	**--**	**1.53E-01**	**--**
UPR-300-17_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	6.15E+00	5.81E+03	1.06E-07	13.48%	--	--	--
UPR-300-17_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	9.14E-01	2.95E+02	3.10E-07	39.44%	--	--	--
UPR-300-17_Shallow	Rad	Uranium-238	U-238	pCi/g	4.04E+00	1.09E+03	3.70E-07	47.08%	--	--	--
Total Radiological Risk Estimate						**--**	**7.85E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.65E-06**	**--**	**--**	**--**	**--**

UPR-300-46_Shallow	non-Rad	Acenaphthene	83-32-9	µg/kg	1.31E+01	--	--	--	4.01E+07	3.26E-07	0.00%
UPR-300-46_Shallow	non-Rad	Aluminum	7429-90-5	µg/kg	6.80E+06	--	--	--	9.12E+08	7.45E-03	5.79%
UPR-300-46_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.81E+02	--	--	--	3.65E+05	1.04E-03	0.81%
UPR-300-46_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	8.79E+02	2.58E+03	3.40E-07	27.83%	--	--	--
UPR-300-46_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.90E+02	2.58E+03	1.89E-07	15.50%	1.31E+04	3.73E-02	29.02%
UPR-300-46_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	8.44E+01	2.58E+03	3.27E-08	2.67%	--	--	--
UPR-300-46_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	2.85E+03	4.54E+03	6.27E-07	51.31%	2.53E+05	1.13E-02	8.76%
UPR-300-46_Shallow	non-Rad	Barium	7440-39-3	µg/kg	8.21E+04	--	--	--	1.82E+08	4.50E-04	0.35%
UPR-300-46_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	3.88E+00	1.72E+03	2.25E-09	0.18%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	3.40E+00	1.72E+02	1.98E-08	1.62%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	5.40E+00	1.72E+03	3.13E-09	0.26%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	2.78E+00	1.72E+03	1.62E-09	0.13%	--	--	--
UPR-300-46_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.22E+02	3.45E+09	6.43E-14	0.00%	1.82E+06	1.22E-04	0.09%
UPR-300-46_Shallow	non-Rad	Boron	7440-42-8	µg/kg	1.71E+03	--	--	--	1.82E+08	9.39E-06	0.01%

Table G-66. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
UPR-300-46_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	9.47E+01	4.60E+09	2.06E-14	0.00%	8.21E+05	1.15E-04	0.09%
UPR-300-46_Shallow	non-Rad	Chromium	7440-47-3	µg/kg	1.02E+04	--	--	--	1.37E+09	7.43E-06	0.01%
UPR-300-46_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	5.58E+00	1.72E+04	3.24E-10	0.03%	--	--	--
UPR-300-46_Shallow	non-Rad	Cobalt	7440-48-4	µg/kg	6.36E+03	9.20E+08	6.91E-12	0.00%	2.74E+05	2.32E-02	18.06%
UPR-300-46_Shallow	non-Rad	Copper	7440-50-8	µg/kg	1.32E+04	--	--	--	3.65E+07	3.60E-04	0.28%
UPR-300-46_Shallow	non-Rad	Dibenz[a,h]anthracene	53-70-3	µg/kg	1.25E+00	1.72E+03	7.26E-10	0.06%	--	--	--
UPR-300-46_Shallow	non-Rad	Fluoranthene	206-44-0	µg/kg	9.55E+00	--	--	--	2.68E+07	3.57E-07	0.00%
UPR-300-46_Shallow	non-Rad	Fluorene	86-73-7	µg/kg	2.15E+00	--	--	--	2.68E+07	8.03E-08	0.00%
UPR-300-46_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	7.55E+00	1.72E+03	4.38E-09	0.36%	--	--	--
UPR-300-46_Shallow	non-Rad	Iron	7439-89-6	µg/kg	2.05E+07	--	--	--	6.39E+08	3.21E-02	24.98%
UPR-300-46_Shallow	non-Rad	Manganese	7439-96-5	µg/kg	3.11E+05	--	--	--	1.28E+08	2.44E-03	1.89%
UPR-300-46_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	2.92E+01	--	--	--	2.74E+05	1.07E-04	0.08%
UPR-300-46_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	4.56E+02	--	--	--	4.56E+06	1.00E-04	0.08%
UPR-300-46_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	3.57E+01	6.16E+04	5.80E-10	0.05%	2.24E+06	1.59E-05	0.01%
UPR-300-46_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	9.23E+03	3.19E+10	2.90E-13	0.00%	1.82E+07	5.06E-04	0.39%
UPR-300-46_Shallow	non-Rad	Pyrene	129-00-0	µg/kg	4.44E+00	--	--	--	2.01E+07	2.21E-07	0.00%
UPR-300-46_Shallow	non-Rad	Vanadium	7440-62-2	µg/kg	5.38E+04	--	--	--	4.56E+06	1.18E-02	9.16%
UPR-300-46_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.79E+04	--	--	--	2.74E+08	1.75E-04	0.14%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.22E-06**	**--**	**--**	**1.29E-01**	**--**
UPR-300-46_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	7.00E-02	1.00E+02	6.99E-08	20.50%	--	--	--
UPR-300-46_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.77E+00	5.81E+03	3.05E-08	8.95%	--	--	--
UPR-300-46_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.43E-01	2.95E+02	8.24E-08	24.18%	--	--	--
UPR-300-46_Shallow	Rad	Uranium-238	U-238	pCi/g	1.73E+00	1.09E+03	1.58E-07	46.36%	--	--	--
Total Radiological Risk Estimate						**--**	**3.41E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.56E-06**	**--**	**--**	**--**	**--**

Table G-67. Summary of Casual Recreational User Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk for Shallow Zone Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
300 ASH PITS_Shallow	1.36E-06	Arsenic (1.34e-06)	8.84E-08	--	1.45E-06	2.41E-02	--
300 VTS_Shallow	0.00E+00	--	2.89E-08	--	2.89E-08	0.00E+00	--
300-10_Shallow_Focused	2.98E-06	Arsenic (2.97e-06)	2.94E-07	--	3.27E-06	5.35E-02	--
300-109_Shallow_Focused	6.13E-07	--	1.50E-07	--	7.63E-07	9.01E-02	--
300-18_Shallow	4.85E-07	--	4.88E-08	--	5.34E-07	9.47E-03	--
300-223_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-23_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-259_Shallow	4.62E-07	--	1.51E-07	--	6.13E-07	8.31E-02	--
300-260_Shallow_Focused	6.96E-07	--	4.78E-07	--	1.17E-06	1.03E-01	--
300-272_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-275_Shallow_1	4.96E-07	--	1.20E-06	--	1.69E-06	8.46E-02	--
300-275_Shallow_2	6.08E-07	--	2.17E-07	--	8.25E-07	8.97E-02	--
300-33, 300-41, 300-256_Shallow	7.01E-07	--	3.40E-07	--	1.04E-06	1.00E-01	--
300-33, 300-41, 300-256_Shallow_Focused	1.01E-06	--	2.51E-07	--	1.26E-06	1.16E-01	--
300-37_Shallow_Focused	1.28E-06	Aroclor-1260 (1.24e-06)	0.00E+00	--	1.28E-06	7.63E-03	--
300-44_Shallow_Focused	3.72E-06	Arsenic (3.72e-06)	2.68E-08	--	3.75E-06	1.59E-01	--
300-45_Shallow_Focused	3.40E-08	--	1.53E-07	--	1.87E-07	2.03E-05	--
300-49_Shallow	9.76E-07	--	3.52E-07	--	1.33E-06	1.18E-01	--
300-50_Shallow	1.46E-06	Arsenic (1.41e-06)	1.19E-06	--	2.65E-06	1.31E-01	--
300-8_Shallow	1.66E-13	--	8.87E-08	--	8.87E-08	3.14E-04	--
316-1_Shallow_1	5.35E-06	Aroclor-1248 (1.16e-06) Arsenic (4.19e-06)	2.98E-06	--	8.33E-06	7.53E-02	--
316-1_Shallow_3	1.18E-06	Arsenic (1.13e-06)	7.25E-06	--	8.43E-06	1.83E-01	--
316-1_Shallow_4	2.40E-08	--	2.13E-06	--	2.15E-06	4.73E-03	--
316-2_Shallow_1	0.00E+00	--	1.21E-05	--	1.21E-05	0.00E+00	--
316-2_Shallow_2	3.28E-07	--	1.57E-05	--	1.60E-05	3.20E-03	--
316-2_Shallow_3	1.76E-06	Arsenic (1.76e-06)	2.54E-06	--	4.31E-06	3.17E-02	--
316-5_Shallow_1	6.99E-07	--	1.68E-05	--	1.75E-05	1.22E-02	--
316-5_Shallow_2	7.15E-07	--	1.11E-05	--	1.19E-05	1.40E-02	--
316-5_Shallow_Focused	1.02E-06	--	8.56E-06	--	9.58E-06	2.24E-02	--
331 LSLDF_Shallow_Focused	9.01E-07	--	5.24E-08	--	9.53E-07	1.68E-01	--
600-243_Shallow	1.72E-06	Arsenic (1.36e-06)	0.00E+00	--	1.72E-06	7.50E-02	--
600-259_Shallow	0.00E+00	--	6.79E-08	--	6.79E-08	0.00E+00	--
600-259_Shallow_Focused	0.00E+00	--	3.79E-08	--	3.79E-08	0.00E+00	--

Table G-67. Summary of Casual Recreational User Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk for Shallow Zone Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
600-47_Shallow	5.07E-07	--	1.68E-07	--	6.75E-07	9.86E-03	--
618-1_Shallow	6.25E-07	--	1.71E-07	--	7.97E-07	1.11E-01	--
618-1_Shallow_Focused	1.76E-06	Arsenic (1.34e-06)	1.28E-06	--	3.04E-06	2.12E-01	--
618-12_Shallow	1.89E-06	Arsenic (1.89e-06)	1.14E-06	--	3.02E-06	3.39E-02	--
618-13_Shallow	7.71E-07	--	2.26E-07	--	9.98E-07	9.35E-02	--
618-13_Shallow_Focused	7.47E-07	--	1.07E-07	--	8.54E-07	8.35E-02	--
618-2_Shallow	4.19E-07	--	2.81E-06	--	3.23E-06	9.79E-03	--
618-3_Shallow	6.17E-07	--	8.00E-08	--	6.97E-07	1.22E-02	--
618-3_Shallow_Focused	0.00E+00	--	1.03E-05	--	1.03E-05	0.00E+00	--
618-4_Shallow	7.05E-07	--	3.36E-07	--	1.04E-06	1.27E-02	--
618-5_Shallow	9.48E-07	--	1.12E-07	--	1.06E-06	1.70E-02	--
618-7_Shallow_1	4.17E-07	--	5.79E-07	--	9.96E-07	1.10E-01	--
618-7_Shallow_2	5.51E-07	--	5.86E-08	--	6.09E-07	1.13E-01	--
618-7_Shallow_3	6.17E-07	--	1.34E-07	--	7.51E-07	1.09E-01	--
618-7_Shallow_4	1.15E-06	Arsenic (1.15e-06)	8.17E-08	--	1.23E-06	1.01E-01	--
618-7_Shallow_Focused	1.43E-06	--	1.12E-06	--	2.55E-06	1.44E-01	--
618-8_Shallow	9.03E-07	--	8.76E-08	--	9.91E-07	1.76E-02	--
618-9_Shallow_Focused	1.04E-05	Aldrin (1.17e-06) Aroclor-1254 (1.51e-06) Aroclor-1260 (1.51e-06) Arsenic (2.56e-06)	2.99E-07	--	1.07E-05	5.44E-01	--
628-4_Shallow	1.41E-06	--	1.53E-07	--	1.56E-06	3.38E-02	--
UPR-300-17_Shallow	1.87E-06	--	7.85E-07	--	2.65E-06	1.53E-01	--
UPR-300-46_Shallow	1.22E-06	--	3.41E-07	--	1.56E-06	1.29E-01	--

Table G-68. Summary of Casual Recreational User Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk for Overburden Area Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
300-272_Overburden_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-44_Overburden_Focused	2.01E-06	Arsenic (2.01e-06)	3.16E-08	--	2.04E-06	3.60E-02	--
300-49_Overburden	1.94E-06	Aroclor-1254 (1.16e-06)	1.31E-07	--	2.07E-06	3.39E-01	--
300-50_Overburden	1.62E-06	Arsenic (1.52e-06)	8.56E-07	--	2.48E-06	1.18E-01	--
316-1_Overburden	0.00E+00	--	2.43E-06	--	2.43E-06	0.00E+00	--
600-259_Overburden	0.00E+00	--	3.39E-08	--	3.39E-08	0.00E+00	--
618-2_Overburden	5.95E-07	--	1.23E-07	--	7.18E-07	1.17E-02	--
618-4_Overburden_2	5.51E-07	--	1.51E-07	--	7.02E-07	9.90E-03	--
618-4_Overburden_3	0.00E+00	--	5.82E-08	--	5.82E-08	0.00E+00	--
618-4_Overburden_4	0.00E+00	--	1.02E-07	--	1.02E-07	0.00E+00	--
618-5_Overburden	7.49E-07	--	4.88E-07	--	1.24E-06	1.37E-02	--
628-4_Overburden	7.44E-07	--	1.19E-07	--	8.62E-07	1.34E-02	--

Table G-69. Summary of Casual Recreational User Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk for Staging Pile Area Decision Units in the 300 Area Source Operable Unit

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
300-109_Staging Pile Area_Focused	6.28E-07	--	2.55E-07	--	8.83E-07	8.37E-02	--
618-2_Staging Pile	6.75E-07	--	6.98E-07	--	1.37E-06	1.43E-02	--
618-5_Staging Pile_4	7.27E-07	--	1.23E-07	--	8.50E-07	1.31E-02	--
618-5_Staging Pile_5	5.95E-07	--	2.40E-07	--	8.34E-07	1.07E-02	--

Table G-70. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300 ASH PITS_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	5.20E+01	2.58E+03	2.01E-08	98.71%	--	--	--
300 ASH PITS_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	9.60E+01	4.05E+05	2.37E-10	1.16%	1.43E+07	6.73E-06	92.66%
300 ASH PITS_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	7.60E+01	2.98E+06	2.55E-11	0.13%	1.43E+08	5.33E-07	7.34%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.04E-08**	**--**	**--**	**7.27E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.04E-08**	**--**	**--**	**--**	**--**
300-10_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.35E+04	4.54E+03	2.97E-06	99.98%	2.53E+05	5.35E-02	99.97%
300-10_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.00E+02	4.05E+05	4.94E-10	0.02%	1.43E+07	1.40E-05	0.03%
300-10_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	2.30E+02	2.98E+06	7.72E-11	0.00%	1.43E+08	1.61E-06	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.98E-06**	**--**	**--**	**5.35E-02**	**--**
300-10_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.37E+00	1.09E+03	1.25E-07	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**1.25E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.10E-06**	**--**	**--**	**--**	**--**
300-109_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.22E+02	2.58E+03	4.72E-08	59.50%	1.31E+04	9.31E-03	99.14%
300-109_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.97E+01	2.58E+03	1.54E-08	19.36%	--	--	--
300-109_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	1.24E+00	1.72E+02	7.20E-09	9.07%	--	--	--
300-109_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	2.30E+00	1.72E+03	1.34E-09	1.68%	--	--	--
300-109_Shallow_Focused	non-Rad	Chrysene	218-01-9	µg/kg	1.77E+00	1.72E+04	1.03E-10	0.13%	--	--	--
300-109_Shallow_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	1.40E+01	1.72E+03	8.13E-09	10.25%	--	--	--
300-109_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	2.20E+01	--	--	--	2.74E+05	8.03E-05	0.86%
300-109_Shallow_Focused	non-Rad	Pyrene	129-00-0	µg/kg	1.56E+00	--	--	--	2.01E+07	7.77E-08	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**7.93E-08**	**--**	**--**	**9.39E-03**	**--**
300-109_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.40E+00	5.81E+03	2.41E-08	16.03%	--	--	--
300-109_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.38E+00	1.09E+03	1.26E-07	83.97%	--	--	--
Total Radiological Risk Estimate						**--**	**1.50E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.30E-07**	**--**	**--**	**--**	**--**
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.68E+01	2.58E+03	1.42E-08	23.80%	1.31E+04	2.81E-03	99.89%
300-109_Staging Pile Area_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.94E+01	2.58E+03	7.51E-09	12.55%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	2.08E+00	1.72E+03	1.21E-09	2.02%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	3.30E+00	1.72E+02	1.92E-08	32.02%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	1.31E+00	1.72E+03	7.61E-10	1.27%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Fluoranthene	206-44-0	µg/kg	5.14E+00	--	--	--	2.68E+07	1.92E-07	0.01%
300-109_Staging Pile Area_Focused	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	2.92E+01	1.72E+03	1.70E-08	28.34%	--	--	--
300-109_Staging Pile Area_Focused	non-Rad	Pyrene	129-00-0	µg/kg	6.96E+00	--	--	--	2.01E+07	3.47E-07	0.01%
300-109_Staging Pile Area_Focused	non-Rad	Tin	7440-31-5	µg/kg	1.45E+03	--	--	--	5.48E+08	2.65E-06	0.09%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.98E-08**	**--**	**--**	**2.81E-03**	**--**
300-109_Staging Pile Area_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	2.54E+00	5.81E+03	4.37E-08	17.15%	--	--	--
300-109_Staging Pile Area_Focused	Rad	Uranium-238	U-238	pCi/g	2.31E+00	1.09E+03	2.11E-07	82.85%	--	--	--
Total Radiological Risk Estimate						**--**	**2.55E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.15E-07**	**--**	**--**	**--**	**--**

Table G-70. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-259_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.22E+02	--	--	--	3.65E+05	8.83E-04	33.52%
300-259_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	4.80E+05	--	--	--	2.74E+08	1.75E-03	66.48%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**2.64E-03**	**--**
300-259_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.59E+00	5.81E+03	2.74E-08	18.21%	--	--	--
300-259_Shallow	Rad	Uranium-238	U-238	pCi/g	1.35E+00	1.09E+03	1.23E-07	81.79%	--	--	--
Total Radiological Risk Estimate						**--**	**1.51E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.51E-07**	**--**	**--**	**--**	**--**
300-260_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	9.22E+02	--	--	--	3.65E+05	2.53E-03	50.26%
300-260_Shallow_Focused	non-Rad	Boron	7440-42-8	µg/kg	8.36E+03	--	--	--	1.82E+08	4.58E-05	0.91%
300-260_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	7.33E+04	--	--	--	3.65E+07	2.01E-03	39.96%
300-260_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	5.37E+02	--	--	--	4.56E+06	1.18E-04	2.34%
300-260_Shallow_Focused	non-Rad	Silver	7440-22-4	µg/kg	2.06E+02	--	--	--	4.56E+06	4.52E-05	0.90%
300-260_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	7.74E+04	--	--	--	2.74E+08	2.83E-04	5.63%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**5.03E-03**	**--**
300-260_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	2.51E-01	2.95E+02	8.51E-08	17.78%	--	--	--
300-260_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.30E+00	1.09E+03	3.93E-07	82.22%	--	--	--
Total Radiological Risk Estimate						**--**	**4.78E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.78E-07**	**--**	**--**	**--**	**--**
300-275_Shallow_1	non-Rad	Acenaphthene	83-32-9	µg/kg	9.60E+02	--	--	--	4.01E+07	2.39E-05	1.14%
300-275_Shallow_1	non-Rad	Antimony	7440-36-0	µg/kg	2.60E+02	--	--	--	3.65E+05	7.12E-04	33.89%
300-275_Shallow_1	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	1.30E+00	1.72E+02	7.55E-09	86.15%	--	--	--
300-275_Shallow_1	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	1.87E+00	1.72E+03	1.09E-09	12.39%	--	--	--
300-275_Shallow_1	non-Rad	Chrysene	218-01-9	µg/kg	2.20E+00	1.72E+04	1.28E-10	1.46%	--	--	--
300-275_Shallow_1	non-Rad	Copper	7440-50-8	µg/kg	4.29E+04	--	--	--	3.65E+07	1.18E-03	55.96%
300-275_Shallow_1	non-Rad	Fluoranthene	206-44-0	µg/kg	2.30E+03	--	--	--	2.68E+07	8.60E-05	4.09%
300-275_Shallow_1	non-Rad	Fluorene	86-73-7	µg/kg	8.11E+01	--	--	--	2.68E+07	3.03E-06	0.14%
300-275_Shallow_1	non-Rad	Mercury	7439-97-6	µg/kg	1.67E+01	--	--	--	2.74E+05	6.08E-05	2.89%
300-275_Shallow_1	non-Rad	Strontium	7440-24-6	µg/kg	2.02E+04	--	--	--	5.48E+08	3.69E-05	1.76%
300-275_Shallow_1	non-Rad	Tin	7440-31-5	µg/kg	1.48E+03	--	--	--	5.48E+08	2.71E-06	0.13%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**8.76E-09**	**--**	**--**	**2.10E-03**	**--**
300-275_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	7.72E+00	5.81E+03	1.33E-07	11.56%	--	--	--
300-275_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.00E+00	2.95E+02	3.39E-07	29.49%	--	--	--
300-275_Shallow_1	Rad	Uranium-238	U-238	pCi/g	7.41E+00	1.09E+03	6.77E-07	58.95%	--	--	--
Total Radiological Risk Estimate						**--**	**1.15E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.16E-06**	**--**	**--**	**--**	**--**
300-275_Shallow_2	non-Rad	Acenaphthene	83-32-9	µg/kg	3.60E+00	--	--	--	4.01E+07	8.97E-08	0.06%
300-275_Shallow_2	non-Rad	Fluoranthene	206-44-0	µg/kg	5.60E+01	--	--	--	2.68E+07	2.09E-06	1.34%

Table G-70. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-275_Shallow_2	non-Rad	Fluorene	86-73-7	µg/kg	2.60E+00	--	--	--	2.68E+07	9.72E-08	0.06%
300-275_Shallow_2	non-Rad	Mercury	7439-97-6	µg/kg	2.80E+01	--	--	--	2.74E+05	1.02E-04	65.49%
300-275_Shallow_2	non-Rad	Strontium	7440-24-6	µg/kg	2.71E+04	--	--	--	5.48E+08	4.95E-05	31.70%
300-275_Shallow_2	non-Rad	Tin	7440-31-5	µg/kg	1.15E+03	--	--	--	5.48E+08	2.10E-06	1.35%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**1.56E-04**	**--**
300-275_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.31E+00	5.81E+03	2.25E-08	10.38%	--	--	--
300-275_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	2.37E-01	2.95E+02	8.03E-08	37.08%	--	--	--
300-275_Shallow_2	Rad	Uranium-238	U-238	pCi/g	1.24E+00	1.09E+03	1.14E-07	52.55%	--	--	--
Total Radiological Risk Estimate						**--**	**2.17E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.17E-07**	**--**	**--**	**--**	**--**
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1016	12674-11-2	µg/kg	1.03E+01	7.38E+04	1.40E-10	0.12%	4.59E+04	2.24E-04	2.33%
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1242	53469-21-9	µg/kg	1.64E+01	2.58E+03	6.35E-09	5.31%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.90E+02	2.58E+03	7.35E-08	61.55%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	8.44E+01	2.58E+03	3.27E-08	27.35%	1.31E+04	6.44E-03	66.70%
300-33, 300-41, 300-256_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.73E+01	2.58E+03	6.69E-09	5.60%	--	--	--
300-33, 300-41, 300-256_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	2.28E+02	2.98E+06	7.65E-11	0.06%	1.43E+08	1.60E-06	0.02%
300-33, 300-41, 300-256_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	1.60E+01	--	--	--	2.74E+05	5.84E-05	0.60%
300-33, 300-41, 300-256_Shallow	non-Rad	Methylene chloride	75-09-2	µg/kg	2.91E+00	3.37E+05	8.65E-12	0.01%	3.57E+07	8.16E-08	0.00%
300-33, 300-41, 300-256_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	4.86E+02	--	--	--	4.56E+06	1.06E-04	1.10%
300-33, 300-41, 300-256_Shallow	non-Rad	Silver	7440-22-4	µg/kg	7.82E+02	--	--	--	4.56E+06	1.71E-04	1.78%
300-33, 300-41, 300-256_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	7.26E+03	--	--	--	2.74E+06	2.65E-03	27.47%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.19E-07**	**--**	**--**	**9.65E-03**	**--**
300-33, 300-41, 300-256_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	2.14E+00	5.81E+03	3.68E-08	10.84%	--	--	--
300-33, 300-41, 300-256_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	3.38E-01	2.95E+02	1.15E-07	33.73%	--	--	--
300-33, 300-41, 300-256_Shallow	Rad	Uranium-238	U-238	pCi/g	2.06E+00	1.09E+03	1.88E-07	55.43%	--	--	--
Total Radiological Risk Estimate						**--**	**3.40E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.59E-07**	**--**	**--**	**--**	**--**
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.30E+02	2.58E+03	1.28E-07	43.02%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.85E+02	2.58E+03	1.49E-07	50.19%	1.31E+04	2.94E-02	100.00%
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.20E+01	2.58E+03	2.01E-08	6.78%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	2.21E+00	3.37E+05	6.56E-12	0.00%	3.57E+07	6.19E-08	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.97E-07**	**--**	**--**	**2.94E-02**	**--**
300-33, 300-41, 300-256_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	3.02E+00	5.81E+03	5.20E-08	20.76%	--	--	--
300-33, 300-41, 300-256_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	2.17E+00	1.09E+03	1.99E-07	79.24%	--	--	--
Total Radiological Risk Estimate						**--**	**2.51E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**5.47E-07**	**--**	**--**	**--**	**--**
300-37_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.00E+02	2.58E+03	3.87E-08	3.03%	1.31E+04	7.63E-03	100.00%
300-37_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.20E+03	2.58E+03	1.24E-06	96.97%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.28E-06**	**--**	**--**	**7.63E-03**	**--**

Table G-70. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
Total Non-Radiological and Radiological Risk Estimate						--	**1.28E-06**	--	--	--	--
300-44_Overburden_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	9.10E+03	4.54E+03	2.01E-06	100.00%	2.53E+05	3.60E-02	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**2.01E-06**	--	--	**3.60E-02**	--
Total Non-Radiological and Radiological Risk Estimate						--	**2.01E-06**	--	--	--	--
300-44_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	4.10E+03	--	--	--	3.65E+05	1.12E-02	14.37%
300-44_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.69E+04	4.54E+03	3.72E-06	100.00%	2.53E+05	6.69E-02	85.63%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**3.72E-06**	--	--	**7.82E-02**	--
Total Non-Radiological and Radiological Risk Estimate						--	**3.72E-06**	--	--	--	--
300-45_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	8.60E+01	2.58E+03	3.33E-08	97.89%	--	--	--
300-45_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.90E+02	4.05E+05	7.17E-10	2.11%	1.43E+07	2.03E-05	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**3.40E-08**	--	--	**2.03E-05**	--
300-45_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	1.20E+00	1.09E+03	1.10E-07	100.00%	--	--	--
Total Radiological Risk Estimate						--	**1.10E-07**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.44E-07**	--	--	--	--
300-49_Overburden	non-Rad	1,2,4-Trichlorobenzene	120-82-1	µg/kg	3.05E+01	2.57E+05	1.19E-10	0.01%	1.30E+06	2.36E-05	0.01%
300-49_Overburden	non-Rad	1,4-Dichlorobenzene	106-46-7	µg/kg	2.88E+01	6.39E+04	4.50E-10	0.04%	5.10E+07	5.64E-07	0.00%
300-49_Overburden	non-Rad	2,4-Dinitrotoluene	121-14-2	µg/kg	1.89E+01	1.82E+04	1.04E-09	0.09%	1.42E+06	1.33E-05	0.01%
300-49_Overburden	non-Rad	2-Chlorophenol	95-57-8	µg/kg	5.13E+01	--	--	--	4.56E+06	1.13E-05	0.00%
300-49_Overburden	non-Rad	4-Chloro-3-methylphenol	59-50-7	µg/kg	4.60E+01	--	--	--	7.13E+07	6.45E-07	0.00%
300-49_Overburden	non-Rad	Acenaphthene	83-32-9	µg/kg	3.07E+01	--	--	--	4.01E+07	7.65E-07	0.00%
300-49_Overburden	non-Rad	Antimony	7440-36-0	µg/kg	2.32E+02	--	--	--	3.65E+05	6.36E-04	0.26%
300-49_Overburden	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.01E+03	2.58E+03	1.16E-06	95.71%	1.31E+04	2.29E-01	93.46%
300-49_Overburden	non-Rad	Copper	7440-50-8	µg/kg	5.36E+05	--	--	--	3.65E+07	1.47E-02	5.98%
300-49_Overburden	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	5.16E+01	--	--	--	7.13E+07	7.24E-07	0.00%
300-49_Overburden	non-Rad	n-Nitrosodi-n-dipropylamine	621-64-7	µg/kg	3.97E+01	8.09E+02	4.91E-08	4.04%	--	--	--
300-49_Overburden	non-Rad	Pentachlorophenol	87-86-5	µg/kg	4.98E+01	3.47E+04	1.44E-09	0.12%	1.61E+07	3.09E-06	0.00%
300-49_Overburden	non-Rad	Phenol	108-95-2	µg/kg	5.00E+01	--	--	--	2.14E+08	2.34E-07	0.00%
300-49_Overburden	non-Rad	Pyrene	129-00-0	µg/kg	4.01E+01	--	--	--	2.01E+07	2.00E-06	0.00%
300-49_Overburden	non-Rad	Silver	7440-22-4	µg/kg	7.03E+02	--	--	--	4.56E+06	1.54E-04	0.06%
300-49_Overburden	non-Rad	Zinc	7440-66-6	µg/kg	1.42E+05	--	--	--	2.74E+08	5.19E-04	0.21%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**1.22E-06**	--	--	**2.45E-01**	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.22E-06**	--	--	--	--
300-49_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	1.76E+02	--	--	--	3.65E+05	4.82E-04	77.99%
300-49_Shallow	non-Rad	Silver	7440-22-4	µg/kg	6.21E+02	--	--	--	4.56E+06	1.36E-04	22.01%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**0.00E+00**	--	--	**6.18E-04**	--

Table G-70. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
300-49_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.32E+00	5.81E+03	2.27E-08	11.26%	--	--	--
300-49_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.40E-01	2.95E+02	8.13E-08	40.39%	--	--	--
300-49_Shallow	Rad	Uranium-238	U-238	pCi/g	1.06E+00	1.09E+03	9.74E-08	48.35%	--	--	--
Total Radiological Risk Estimate						**--**	**2.01E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.01E-07**	**--**	**--**	**--**	**--**
300-50_Overburden	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.34E+01	2.58E+03	1.29E-08	0.80%	1.31E+04	2.55E-03	8.00%
300-50_Overburden	non-Rad	Aroclor-1260	11096-82-5	µg/kg	2.29E+02	2.58E+03	8.87E-08	5.47%	--	--	--
300-50_Overburden	non-Rad	Arsenic	7440-38-2	µg/kg	6.90E+03	4.54E+03	1.52E-06	93.73%	2.53E+05	2.73E-02	85.63%
300-50_Overburden	non-Rad	Copper	7440-50-8	µg/kg	6.45E+04	--	--	--	3.65E+07	1.77E-03	5.54%
300-50_Overburden	non-Rad	Silver	7440-22-4	µg/kg	1.20E+03	--	--	--	4.56E+06	2.63E-04	0.83%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.62E-06**	**--**	**--**	**3.19E-02**	**--**
300-50_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	6.03E+00	5.81E+03	1.04E-07	12.97%	--	--	--
300-50_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	4.49E-01	2.95E+02	1.52E-07	19.00%	--	--	--
300-50_Overburden	Rad	Uranium-238	U-238	pCi/g	5.95E+00	1.09E+03	5.45E-07	68.03%	--	--	--
Total Radiological Risk Estimate						**--**	**8.01E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.42E-06**	**--**	**--**	**--**	**--**
300-50_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.00E+03	--	--	--	3.65E+05	8.22E-03	44.40%
300-50_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	1.26E+02	2.58E+03	4.89E-08	99.90%	1.31E+04	9.64E-03	52.05%
300-50_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.93E+01	4.05E+05	4.77E-11	0.10%	1.43E+07	1.35E-06	0.01%
300-50_Shallow	non-Rad	Silver	7440-22-4	µg/kg	2.99E+03	--	--	--	4.56E+06	6.56E-04	3.54%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.89E-08**	**--**	**--**	**1.85E-02**	**--**
300-50_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	7.89E+00	5.81E+03	1.36E-07	12.02%	--	--	--
300-50_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	6.64E-01	2.95E+02	2.25E-07	19.90%	--	--	--
300-50_Shallow	Rad	Uranium-238	U-238	pCi/g	8.41E+00	1.09E+03	7.70E-07	68.08%	--	--	--
Total Radiological Risk Estimate						**--**	**1.13E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.18E-06**	**--**	**--**	**--**	**--**
316-1_Overburden	Rad	Cobalt-60	10198-40-0	pCi/g	3.18E-01	6.31E+01	5.04E-07	21.69%	--	--	--
316-1_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	1.30E+01	5.81E+03	2.23E-07	9.59%	--	--	--
316-1_Overburden	Rad	Uranium-235	15117-96-1	pCi/g	1.08E+00	2.95E+02	3.66E-07	15.75%	--	--	--
316-1_Overburden	Rad	Uranium-238	U-238	pCi/g	1.35E+01	1.09E+03	1.23E-06	52.97%	--	--	--
Total Radiological Risk Estimate						**--**	**2.32E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.32E-06**	**--**	**--**	**--**	**--**
316-1_Shallow_1	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.00E+03	2.58E+03	1.16E-06	21.70%	--	--	--
316-1_Shallow_1	non-Rad	Arsenic	7440-38-2	µg/kg	1.90E+04	4.54E+03	4.19E-06	78.30%	2.53E+05	7.53E-02	99.99%
316-1_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.86E+01	4.05E+05	1.69E-10	0.00%	1.43E+07	4.81E-06	0.01%
316-1_Shallow_1	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	9.77E+01	2.98E+06	3.28E-11	0.00%	1.43E+08	6.85E-07	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.35E-06**	**--**	**--**	**7.53E-02**	**--**

Table G-70. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-1_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.21E+00	2.95E+02	4.11E-07	13.96%	--	--	--
316-1_Shallow_1	Rad	Uranium-238	U-238	pCi/g	2.77E+01	1.09E+03	2.53E-06	86.04%	--	--	--
Total Radiological Risk Estimate						**--**	**2.95E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.30E-06**	**--**	**--**	**--**	**--**
316-1_Shallow_3	non-Rad	Antimony	7440-36-0	µg/kg	4.90E+02	--	--	--	3.65E+05	1.34E-03	2.26%
316-1_Shallow_3	non-Rad	Aroclor-1254	11097-69-1	µg/kg	9.82E+01	2.58E+03	3.80E-08	86.39%	1.31E+04	7.49E-03	12.61%
316-1_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	3.42E+02	4.05E+05	8.46E-10	1.92%	1.43E+07	2.40E-05	0.04%
316-1_Shallow_3	non-Rad	Chromium	7440-47-3	µg/kg	5.05E+04	--	--	--	1.37E+09	3.69E-05	0.06%
316-1_Shallow_3	non-Rad	Copper	7440-50-8	µg/kg	1.37E+06	--	--	--	3.65E+07	3.74E-02	63.02%
316-1_Shallow_3	non-Rad	Heptachlor epoxide	1024-57-3	µg/kg	3.20E+00	6.22E+02	5.14E-09	11.68%	9.27E+03	3.45E-04	0.58%
316-1_Shallow_3	non-Rad	Mercury	7439-97-6	µg/kg	1.11E+03	--	--	--	2.74E+05	4.03E-03	6.79%
316-1_Shallow_3	non-Rad	Nickel	7440-02-0	µg/kg	9.47E+04	3.19E+10	2.97E-12	0.01%	1.82E+07	5.19E-03	8.73%
316-1_Shallow_3	non-Rad	Phenol	108-95-2	µg/kg	2.80E+01	--	--	--	2.14E+08	1.31E-07	0.00%
316-1_Shallow_3	non-Rad	Selenium	7782-49-2	µg/kg	1.44E+03	--	--	--	4.56E+06	3.17E-04	0.53%
316-1_Shallow_3	non-Rad	Silver	7440-22-4	µg/kg	1.32E+04	--	--	--	4.56E+06	2.89E-03	4.87%
316-1_Shallow_3	non-Rad	Zinc	7440-66-6	µg/kg	8.20E+04	--	--	--	2.74E+08	3.00E-04	0.50%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.40E-08**	**--**	**--**	**5.94E-02**	**--**
316-1_Shallow_3	Rad	Cobalt-60	10198-40-0	pCi/g	2.32E+00	6.31E+01	3.69E-06	53.62%	--	--	--
316-1_Shallow_3	Rad	Uranium-233/234	U-233/234	pCi/g	2.27E+01	5.81E+03	3.91E-07	5.69%	--	--	--
316-1_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	2.64E+00	2.95E+02	8.94E-07	13.00%	--	--	--
316-1_Shallow_3	Rad	Uranium-238	U-238	pCi/g	2.08E+01	1.09E+03	1.90E-06	27.70%	--	--	--
Total Radiological Risk Estimate						**--**	**6.88E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.92E-06**	**--**	**--**	**--**	**--**
316-1_Shallow_4	non-Rad	Aroclor-1254	11097-69-1	µg/kg	6.20E+01	2.58E+03	2.40E-08	100.00%	1.31E+04	4.73E-03	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.40E-08**	**--**	**--**	**4.73E-03**	**--**
316-1_Shallow_4	Rad	Cobalt-60	10198-40-0	pCi/g	1.20E-01	6.31E+01	1.90E-07	8.93%	--	--	--
316-1_Shallow_4	Rad	Uranium-233/234	U-233/234	pCi/g	1.61E+01	5.81E+03	2.78E-07	13.05%	--	--	--
316-1_Shallow_4	Rad	Uranium-235	15117-96-1	pCi/g	1.05E+00	2.95E+02	3.56E-07	16.71%	--	--	--
316-1_Shallow_4	Rad	Uranium-238	U-238	pCi/g	1.43E+01	1.09E+03	1.31E-06	61.30%	--	--	--
Total Radiological Risk Estimate						**--**	**2.13E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.15E-06**	**--**	**--**	**--**	**--**
316-2_Shallow_1	Rad	Cobalt-60	10198-40-0	pCi/g	9.22E-02	6.31E+01	1.46E-07	1.21%	--	--	--
316-2_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	8.64E+01	5.81E+03	1.49E-06	12.32%	--	--	--
316-2_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.22E+01	2.95E+02	4.14E-06	34.27%	--	--	--
316-2_Shallow_1	Rad	Uranium-238	U-238	pCi/g	6.88E+01	1.09E+03	6.30E-06	52.20%	--	--	--
Total Radiological Risk Estimate						**--**	**1.21E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.21E-05**	**--**	**--**	**--**	**--**

Table G-70. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-2_Shallow_2	non-Rad	Aroclor-1248	12672-29-6	µg/kg	6.97E+02	2.58E+03	2.70E-07	82.09%	--	--	--
316-2_Shallow_2	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.20E+01	2.58E+03	1.63E-08	4.95%	1.31E+04	3.20E-03	100.00%
316-2_Shallow_2	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.10E+02	2.58E+03	4.26E-08	12.96%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.28E-07**	**--**	**--**	**3.20E-03**	**--**
316-2_Shallow_2	Rad	Cobalt-60	10198-40-0	pCi/g	4.53E-01	6.31E+01	7.18E-07	4.71%	--	--	--
316-2_Shallow_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.15E+02	5.81E+03	1.97E-06	12.94%	--	--	--
316-2_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	1.11E+01	2.95E+02	3.76E-06	24.67%	--	--	--
316-2_Shallow_2	Rad	Uranium-238	U-238	pCi/g	9.62E+01	1.09E+03	8.80E-06	57.69%	--	--	--
Total Radiological Risk Estimate						**--**	**1.53E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.56E-05**	**--**	**--**	**--**	**--**
316-2_Shallow_3	non-Rad	Arsenic	7440-38-2	µg/kg	8.00E+03	4.54E+03	1.76E-06	99.96%	2.53E+05	3.17E-02	99.94%
316-2_Shallow_3	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	2.60E+02	4.05E+05	6.43E-10	0.04%	1.43E+07	1.82E-05	0.06%
316-2_Shallow_3	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	1.80E+02	2.98E+06	6.04E-11	0.00%	1.43E+08	1.26E-06	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.76E-06**	**--**	**--**	**3.17E-02**	**--**
316-2_Shallow_3	Rad	Uranium-235	15117-96-1	pCi/g	9.09E-01	2.95E+02	3.08E-07	12.11%	--	--	--
316-2_Shallow_3	Rad	Uranium-238	U-238	pCi/g	2.44E+01	1.09E+03	2.24E-06	87.89%	--	--	--
Total Radiological Risk Estimate						**--**	**2.54E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**4.31E-06**	**--**	**--**	**--**	**--**
316-5_Shallow_1	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	3.80E+01	1.72E+03	2.21E-08	98.24%	--	--	--
316-5_Shallow_1	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.46E+02	4.05E+05	3.61E-10	1.61%	1.43E+07	1.02E-05	93.59%
316-5_Shallow_1	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	1.00E+02	2.98E+06	3.35E-11	0.15%	1.43E+08	7.01E-07	6.41%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**2.25E-08**	**--**	**--**	**1.09E-05**	**--**
316-5_Shallow_1	Rad	Americium-241	14596-10-2	pCi/g	4.79E-01	2.57E+03	1.86E-08	0.11%	--	--	--
316-5_Shallow_1	Rad	Cesium-137	10045-97-3	pCi/g	2.31E+00	1.00E+02	2.31E-06	13.75%	--	--	--
316-5_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	1.86E+01	2.95E+02	6.30E-06	37.54%	--	--	--
316-5_Shallow_1	Rad	Uranium-238	U-238	pCi/g	8.92E+01	1.09E+03	8.16E-06	48.60%	--	--	--
Total Radiological Risk Estimate						**--**	**1.68E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.68E-05**	**--**	**--**	**--**	**--**
316-5_Shallow_2	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	1.40E+02	1.21E+04	1.16E-08	81.16%	3.65E+06	3.84E-05	4.55%
316-5_Shallow_2	non-Rad	2-Butoxyethanol	111-76-2	µg/kg	2.40E+02	--	--	--	3.56E+08	6.73E-07	0.08%
316-5_Shallow_2	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.80E+02	4.05E+05	4.45E-10	3.12%	1.43E+07	1.26E-05	1.50%
316-5_Shallow_2	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	1.10E+02	2.98E+06	3.69E-11	0.26%	1.43E+08	7.72E-07	0.09%
316-5_Shallow_2	non-Rad	Chrysene	218-01-9	µg/kg	3.80E+01	1.72E+04	2.21E-09	15.46%	--	--	--
316-5_Shallow_2	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	1.46E+02	--	--	--	7.13E+07	2.05E-06	0.24%
316-5_Shallow_2	non-Rad	Silver	7440-22-4	µg/kg	3.60E+03	--	--	--	4.56E+06	7.89E-04	93.54%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.43E-08**	**--**	**--**	**8.44E-04**	**--**
316-5_Shallow_2	Rad	Americium-241	14596-10-2	pCi/g	1.24E-01	2.57E+03	4.83E-09	0.04%	--	--	--
316-5_Shallow_2	Rad	Cesium-137	10045-97-3	pCi/g	1.71E+00	1.00E+02	1.71E-06	15.35%	--	--	--
316-5_Shallow_2	Rad	Cobalt-60	10198-40-0	pCi/g	1.18E-01	6.31E+01	1.87E-07	1.68%	--	--	--

Table G-70. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
316-5_Shallow_2	Rad	Uranium-235	15117-96-1	pCi/g	9.04E+00	2.95E+02	3.06E-06	27.50%	--	--	--
316-5_Shallow_2	Rad	Uranium-238	U-238	pCi/g	6.75E+01	1.09E+03	6.18E-06	55.43%	--	--	--
Total Radiological Risk Estimate						**--**	**1.11E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.12E-05**	**--**	**--**	**--**	**--**
316-5_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	5.70E+01	2.58E+03	2.21E-08	31.63%	--	--	--
316-5_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	7.00E+01	2.58E+03	2.71E-08	38.84%	1.31E+04	5.34E-03	99.36%
316-5_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.20E+01	2.58E+03	2.01E-08	28.85%	--	--	--
316-5_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1.90E+02	4.05E+05	4.70E-10	0.67%	1.43E+07	1.33E-05	0.25%
316-5_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	1.50E+03	--	--	--	7.13E+07	2.10E-05	0.39%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**6.97E-08**	**--**	**--**	**5.37E-03**	**--**
316-5_Shallow_Focused	Rad	Cesium-137	10045-97-3	pCi/g	1.83E+00	1.00E+02	1.83E-06	21.33%	--	--	--
316-5_Shallow_Focused	Rad	Europium-155	14391-16-3	pCi/g	7.19E-02	5.87E+03	1.23E-09	0.01%	--	--	--
316-5_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	7.67E+00	2.95E+02	2.60E-06	30.36%	--	--	--
316-5_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	4.52E+01	1.09E+03	4.13E-06	48.29%	--	--	--
Total Radiological Risk Estimate						**--**	**8.56E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.63E-06**	**--**	**--**	**--**	**--**
331 LSLDF_Shallow_Focused	non-Rad	4,4'-DDE (Dichlorodiphenyldichloroethylene)	72-55-9	µg/kg	2.50E+01	1.67E+04	1.50E-09	0.40%	--	--	--
331 LSLDF_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	5.90E+02	--	--	--	7.89E+08	7.48E-07	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Aldrin	309-00-2	µg/kg	5.60E-01	3.33E+02	1.68E-09	0.45%	2.14E+04	2.62E-05	0.04%
331 LSLDF_Shallow_Focused	non-Rad	Alpha-BHC	319-84-6	µg/kg	3.90E-01	8.99E+02	4.34E-10	0.12%	5.70E+06	6.84E-08	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	3.60E+02	--	--	--	3.65E+05	9.86E-04	1.46%
331 LSLDF_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	8.50E+02	2.58E+03	3.29E-07	88.50%	1.31E+04	6.48E-02	95.96%
331 LSLDF_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	9.10E+02	4.05E+05	2.25E-09	0.61%	1.43E+07	6.38E-05	0.09%
331 LSLDF_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	3.40E+02	2.98E+06	1.14E-10	0.03%	1.43E+08	2.38E-06	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Dieldrin	60-57-1	µg/kg	1.30E+01	3.54E+02	3.67E-08	9.88%	3.56E+04	3.65E-04	0.54%
331 LSLDF_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	9.80E+01	--	--	--	7.13E+07	1.37E-06	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Endosulfan I	959-98-8	µg/kg	1.90E+00	--	--	--	4.28E+06	4.44E-07	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Endosulfan II	33213-65-9	µg/kg	3.10E+00	--	--	--	4.28E+06	7.25E-07	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	1.10E+02	--	--	--	2.74E+05	4.01E-04	0.59%
331 LSLDF_Shallow_Focused	non-Rad	Methoxychlor	72-43-5	µg/kg	3.30E+00	--	--	--	3.56E+06	9.26E-07	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	1.10E+01	3.37E+05	3.26E-11	0.01%	3.57E+07	3.08E-07	0.00%
331 LSLDF_Shallow_Focused	non-Rad	Molybdenum	7439-98-7	µg/kg	5.90E+02	--	--	--	4.56E+06	1.29E-04	0.19%
331 LSLDF_Shallow_Focused	non-Rad	Nitrogen in Nitrite and Nitrate	NO2-N	µg/kg	9.50E+03	--	--	--	1.46E+09	6.51E-06	0.01%
331 LSLDF_Shallow_Focused	non-Rad	Silver	7440-22-4	µg/kg	1.10E+03	--	--	--	4.56E+06	2.41E-04	0.36%
331 LSLDF_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	1.37E+05	--	--	--	2.74E+08	5.00E-04	0.74%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.72E-07**	**--**	**--**	**6.76E-02**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.72E-07**	**--**	**--**	**--**	**--**
600-243_Shallow	non-Rad	2-Methylnaphthalene	91-57-6	µg/kg	2.79E+02	--	--	--	2.68E+06	1.04E-04	0.65%
600-243_Shallow	non-Rad	Anthracene	120-12-7	µg/kg	3.13E+01	--	--	--	2.01E+08	1.56E-07	0.00%

Table G-70. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
600-243_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	1.30E+03	--	--	--	3.65E+05	3.56E-03	22.28%
600-243_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.70E+01	2.58E+03	1.04E-08	2.90%	1.31E+04	2.06E-03	12.88%
600-243_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.84E+01	2.58E+03	7.12E-09	1.98%	--	--	--
600-243_Shallow	non-Rad	Barium	7440-39-3	µg/kg	2.92E+05	--	--	--	1.82E+08	1.60E-03	10.01%
600-243_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	4.33E+01	1.72E+03	2.51E-08	6.98%	--	--	--
600-243_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	4.27E+01	1.72E+02	2.48E-07	68.83%	--	--	--
600-243_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	4.63E+01	1.72E+03	2.69E-08	7.47%	--	--	--
600-243_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	3.18E+01	1.72E+03	1.84E-08	5.12%	--	--	--
600-243_Shallow	non-Rad	Beryllium	7440-41-7	µg/kg	2.08E+03	3.45E+09	6.02E-13	0.00%	1.82E+06	1.14E-03	7.13%
600-243_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	4.32E+02	4.05E+05	1.07E-09	0.30%	1.43E+07	3.03E-05	0.19%
600-243_Shallow	non-Rad	Boron	7440-42-8	µg/kg	2.94E+05	--	--	--	1.82E+08	1.61E-03	10.09%
600-243_Shallow	non-Rad	Cadmium	7440-43-9	µg/kg	7.93E+02	4.60E+09	1.72E-13	0.00%	8.21E+05	9.66E-04	6.04%
600-243_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	6.26E+01	1.72E+04	3.63E-09	1.01%	--	--	--
600-243_Shallow	non-Rad	Copper	7440-50-8	µg/kg	5.40E+04	--	--	--	3.65E+07	1.48E-03	9.25%
600-243_Shallow	non-Rad	Dibenzofuran	132-64-9	µg/kg	7.85E+01	--	--	--	9.13E+05	8.60E-05	0.54%
600-243_Shallow	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	3.72E+01	--	--	--	7.13E+07	5.22E-07	0.00%
600-243_Shallow	non-Rad	Fluoranthene	206-44-0	µg/kg	7.91E+01	--	--	--	2.68E+07	2.96E-06	0.02%
600-243_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	2.80E+01	1.72E+03	1.63E-08	4.51%	--	--	--
600-243_Shallow	non-Rad	Molybdenum	7439-98-7	µg/kg	1.87E+03	--	--	--	4.56E+06	4.10E-04	2.56%
600-243_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	2.04E+02	6.16E+04	3.31E-09	0.92%	2.24E+06	9.08E-05	0.57%
600-243_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	2.14E+04	3.19E+10	6.71E-13	0.00%	1.82E+07	1.17E-03	7.33%
600-243_Shallow	non-Rad	Pyrene	129-00-0	µg/kg	7.00E+01	--	--	--	2.01E+07	3.49E-06	0.02%
600-243_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	5.71E+03	--	--	--	4.56E+06	1.25E-03	7.83%
600-243_Shallow	non-Rad	Silver	7440-22-4	µg/kg	5.00E+02	--	--	--	4.56E+06	1.10E-04	0.69%
600-243_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	8.41E+04	--	--	--	2.74E+08	3.07E-04	1.92%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**3.60E-07**	**--**	**--**	**1.60E-02**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.60E-07**	**--**	**--**	**--**	**--**
600-47_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.36E+00	5.81E+03	2.34E-08	13.94%	--	--	--
600-47_Shallow	Rad	Uranium-238	U-238	pCi/g	1.58E+00	1.09E+03	1.45E-07	86.06%	--	--	--
Total Radiological Risk Estimate						**--**	**1.68E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.68E-07**	**--**	**--**	**--**	**--**
618-1_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.64E+02	2.58E+03	1.02E-07	83.15%	1.31E+04	2.01E-02	99.44%
618-1_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.35E+01	2.58E+03	2.07E-08	16.85%	--	--	--
618-1_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	3.10E+01	--	--	--	2.74E+05	1.13E-04	0.56%
618-1_Shallow	non-Rad	Nitrogen in Nitrite and Nitrate	NO2-N	µg/kg	3.00E+02	--	--	--	1.46E+09	2.05E-07	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.23E-07**	**--**	**--**	**2.02E-02**	**--**
618-1_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.93E+00	5.81E+03	3.32E-08	19.39%	--	--	--
618-1_Shallow	Rad	Uranium-238	U-238	pCi/g	1.51E+00	1.09E+03	1.38E-07	80.61%	--	--	--
Total Radiological Risk Estimate						**--**	**1.71E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.94E-07**	**--**	**--**	**--**	**--**

Table G-70. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-1_Shallow_Focused	non-Rad	Aluminum	7429-90-5	µg/kg	1.22E+07	--	--	--	9.12E+08	1.34E-02	14.24%
618-1_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	4.55E+02	--	--	--	3.65E+05	1.25E-03	1.33%
618-1_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	3.51E+01	2.58E+03	1.36E-08	3.27%	--	--	--
618-1_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	9.81E+02	2.58E+03	3.80E-07	91.50%	1.31E+04	7.48E-02	79.68%
618-1_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	5.60E+01	2.58E+03	2.17E-08	5.22%	--	--	--
618-1_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	1.95E+04	--	--	--	1.37E+09	1.42E-05	0.02%
618-1_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	2.38E+04	--	--	--	3.65E+07	6.52E-04	0.69%
618-1_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	1.98E+02	--	--	--	2.74E+05	7.23E-04	0.77%
618-1_Shallow_Focused	non-Rad	Nitrogen in Nitrite and Nitrate	NO2-N	µg/kg	2.60E+02	--	--	--	1.46E+09	1.78E-07	0.00%
618-1_Shallow_Focused	non-Rad	Silver	7440-22-4	µg/kg	1.12E+03	--	--	--	4.56E+06	2.45E-04	0.26%
618-1_Shallow_Focused	non-Rad	Uranium	7440-61-1	µg/kg	7.08E+03	--	--	--	2.74E+06	2.59E-03	2.75%
618-1_Shallow_Focused	non-Rad	Zinc	7440-66-6	µg/kg	6.81E+04	--	--	--	2.74E+08	2.49E-04	0.26%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**4.15E-07**	**--**	**--**	**9.39E-02**	**--**
618-1_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.13E+01	5.81E+03	1.95E-07	15.18%	--	--	--
618-1_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	9.87E-01	2.95E+02	3.35E-07	26.10%	--	--	--
618-1_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	8.23E+00	1.09E+03	7.53E-07	58.73%	--	--	--
Total Radiological Risk Estimate						**--**	**1.28E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.70E-06**	**--**	**--**	**--**	**--**
618-12_Shallow	non-Rad	Arsenic	7440-38-2	µg/kg	8.56E+03	4.54E+03	1.89E-06	99.99%	2.53E+05	3.39E-02	99.99%
618-12_Shallow	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.30E+01	4.05E+05	1.56E-10	0.01%	1.43E+07	4.42E-06	0.01%
618-12_Shallow	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	6.00E+01	2.98E+06	2.01E-11	0.00%	1.43E+08	4.21E-07	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.89E-06**	**--**	**--**	**3.39E-02**	**--**
618-12_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	4.71E-01	2.95E+02	1.59E-07	14.00%	--	--	--
618-12_Shallow	Rad	Uranium-238	U-238	pCi/g	1.07E+01	1.09E+03	9.80E-07	86.00%	--	--	--
Total Radiological Risk Estimate						**--**	**1.14E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**3.02E-06**	**--**	**--**	**--**	**--**
618-13_Shallow	non-Rad	Acetone	67-64-1	µg/kg	8.64E+00	--	--	--	7.89E+08	1.09E-08	0.00%
618-13_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.12E+02	--	--	--	3.65E+05	8.55E-04	99.76%
618-13_Shallow	non-Rad	Methylene chloride	75-09-2	µg/kg	5.12E+00	3.37E+05	1.52E-11	100.00%	3.57E+07	1.43E-07	0.02%
618-13_Shallow	non-Rad	Tin	7440-31-5	µg/kg	1.05E+03	--	--	--	5.48E+08	1.92E-06	0.22%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.52E-11**	**--**	**--**	**8.57E-04**	**--**
618-13_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.92E+00	5.81E+03	3.31E-08	17.53%	--	--	--
618-13_Shallow	Rad	Uranium-238	U-238	pCi/g	1.70E+00	1.09E+03	1.56E-07	82.47%	--	--	--
Total Radiological Risk Estimate						**--**	**1.89E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.89E-07**	**--**	**--**	**--**	**--**
618-13_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	5.90E+00	--	--	--	7.89E+08	7.48E-09	0.00%
618-13_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	2.33E+02	--	--	--	3.65E+05	6.38E-04	91.89%
618-13_Shallow_Focused	non-Rad	Hexavalent Chromium	18540-29-9	µg/kg	1.50E+02	9.86E+07	1.52E-12	9.25%	2.74E+06	5.48E-05	7.89%

Table G-70. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-13_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	5.03E+00	3.37E+05	1.49E-11	90.75%	3.57E+07	1.41E-07	0.02%
618-13_Shallow_Focused	non-Rad	Tin	7440-31-5	µg/kg	7.45E+02	--	--	--	5.48E+08	1.36E-06	0.20%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.64E-11**	**--**	**--**	**6.95E-04**	**--**
618-13_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.14E+00	5.81E+03	1.96E-08	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**1.96E-08**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.96E-08**	**--**	**--**	**--**	**--**
618-2_Overburden	non-Rad	Selenium	7782-49-2	µg/kg	1.00E+03	--	--	--	4.56E+06	2.19E-04	97.80%
618-2_Overburden	non-Rad	Tin	7440-31-5	µg/kg	2.70E+03	--	--	--	5.48E+08	4.93E-06	2.20%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**2.24E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-2_Shallow	non-Rad	Tin	7440-31-5	µg/kg	2.40E+03	--	--	--	5.48E+08	4.38E-06	0.26%
618-2_Shallow	non-Rad	Uranium	7440-61-1	µg/kg	4.53E+03	--	--	--	2.74E+06	1.65E-03	99.74%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**1.66E-03**	**--**
618-2_Shallow	Rad	Americium-241	14596-10-2	pCi/g	8.13E-01	2.57E+03	3.16E-08	1.13%	--	--	--
618-2_Shallow	Rad	Cesium-137	10045-97-3	pCi/g	2.24E+00	1.00E+02	2.24E-06	79.60%	--	--	--
618-2_Shallow	Rad	Plutonium-239/240	PU-239/240	pCi/g	7.67E+00	3.34E+03	2.29E-07	8.17%	--	--	--
618-2_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	2.20E+00	5.81E+03	3.79E-08	1.35%	--	--	--
618-2_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.14E-01	2.95E+02	7.25E-08	2.58%	--	--	--
618-2_Shallow	Rad	Uranium-238	U-238	pCi/g	2.20E+00	1.09E+03	2.01E-07	7.17%	--	--	--
Total Radiological Risk Estimate						**--**	**2.81E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.81E-06**	**--**	**--**	**--**	**--**
618-2_Staging Pile	non-Rad	Uranium	7440-61-1	µg/kg	5.02E+03	--	--	--	2.74E+06	1.83E-03	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**1.83E-03**	**--**
618-2_Staging Pile	Rad	Americium-241	14596-10-2	pCi/g	8.18E-01	2.57E+03	3.18E-08	5.28%	--	--	--
618-2_Staging Pile	Rad	Plutonium-239/240	PU-239/240	pCi/g	1.00E+01	3.34E+03	2.99E-07	49.61%	--	--	--
618-2_Staging Pile	Rad	Tritium	10028-17-8	pCi/g	2.33E+00	1.54E+04	1.52E-08	2.51%	--	--	--
618-2_Staging Pile	Rad	Uranium-233/234	U-233/234	pCi/g	2.04E+00	5.81E+03	3.51E-08	5.82%	--	--	--
618-2_Staging Pile	Rad	Uranium-235	15117-96-1	pCi/g	1.22E-01	2.95E+02	4.14E-08	6.87%	--	--	--
618-2_Staging Pile	Rad	Uranium-238	U-238	pCi/g	1.97E+00	1.09E+03	1.80E-07	29.91%	--	--	--
Total Radiological Risk Estimate						**--**	**6.03E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.03E-07**	**--**	**--**	**--**	**--**
618-3_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	7.96E+01	5.81E+03	1.37E-06	13.36%	--	--	--
618-3_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	4.79E+00	2.95E+02	1.62E-06	15.83%	--	--	--
618-3_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	7.94E+01	1.09E+03	7.26E-06	70.81%	--	--	--
Total Radiological Risk Estimate						**--**	**1.03E-05**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.03E-05**	**--**	**--**	**--**	**--**

Table G-70. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-4_Overburden_2	Rad	Uranium-233/234	U-233/234	pCi/g	1.30E+00	5.81E+03	2.24E-08	14.79%	--	--	--
618-4_Overburden_2	Rad	Uranium-238	U-238	pCi/g	1.41E+00	1.09E+03	1.29E-07	85.21%	--	--	--
Total Radiological Risk Estimate						--	**1.51E-07**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.51E-07**	--	--	--	--
618-4_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	3.22E+00	5.81E+03	5.54E-08	16.49%	--	--	--
618-4_Shallow	Rad	Uranium-238	U-238	pCi/g	3.07E+00	1.09E+03	2.81E-07	83.51%	--	--	--
Total Radiological Risk Estimate						--	**3.36E-07**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**3.36E-07**	--	--	--	--
618-5_Overburden	Rad	Uranium-233/234	U-233/234	pCi/g	4.14E+00	5.81E+03	7.13E-08	14.60%	--	--	--
618-5_Overburden	Rad	Uranium-238	U-238	pCi/g	4.56E+00	1.09E+03	4.17E-07	85.40%	--	--	--
Total Radiological Risk Estimate						--	**4.88E-07**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**4.88E-07**	--	--	--	--
618-5_Staging Pile_4	Rad	Uranium-233/234	U-233/234	pCi/g	1.15E+00	5.81E+03	1.98E-08	16.08%	--	--	--
618-5_Staging Pile_4	Rad	Uranium-238	U-238	pCi/g	1.13E+00	1.09E+03	1.03E-07	83.92%	--	--	--
Total Radiological Risk Estimate						--	**1.23E-07**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**1.23E-07**	--	--	--	--
618-5_Staging Pile_5	Rad	Uranium-233/234	U-233/234	pCi/g	1.52E+00	5.81E+03	2.62E-08	10.93%	--	--	--
618-5_Staging Pile_5	Rad	Uranium-235	15117-96-1	pCi/g	1.68E-01	2.95E+02	5.69E-08	23.77%	--	--	--
618-5_Staging Pile_5	Rad	Uranium-238	U-238	pCi/g	1.71E+00	1.09E+03	1.56E-07	65.30%	--	--	--
Total Radiological Risk Estimate						--	**2.40E-07**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**2.40E-07**	--	--	--	--
618-7_Shallow_1	non-Rad	Antimony	7440-36-0	µg/kg	5.60E+02	--	--	--	3.65E+05	1.53E-03	53.87%
618-7_Shallow_1	non-Rad	Mercury	7439-97-6	µg/kg	4.43E+01	--	--	--	2.74E+05	1.62E-04	5.68%
618-7_Shallow_1	non-Rad	Nickel	7440-02-0	µg/kg	2.10E+04	3.19E+10	6.58E-13	100.00%	1.82E+07	1.15E-03	40.36%
618-7_Shallow_1	non-Rad	Tin	7440-31-5	µg/kg	1.55E+03	--	--	--	5.48E+08	2.83E-06	0.10%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						--	**6.58E-13**	--	--	**2.85E-03**	--
618-7_Shallow_1	Rad	Uranium-233/234	U-233/234	pCi/g	3.61E+00	5.81E+03	6.22E-08	12.14%	--	--	--
618-7_Shallow_1	Rad	Uranium-235	15117-96-1	pCi/g	3.64E-01	2.95E+02	1.23E-07	24.05%	--	--	--
618-7_Shallow_1	Rad	Uranium-238	U-238	pCi/g	3.57E+00	1.09E+03	3.27E-07	63.81%	--	--	--
Total Radiological Risk Estimate						--	**5.13E-07**	--	--	--	--
Total Non-Radiological and Radiological Risk Estimate						--	**5.13E-07**	--	--	--	--

Table G-70. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-7_Shallow_2	non-Rad	Antimony	7440-36-0	µg/kg	6.60E+02	--	--	--	3.65E+05	1.81E-03	95.98%
618-7_Shallow_2	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	2.74E+05	7.30E-05	3.87%
618-7_Shallow_2	non-Rad	Tin	7440-31-5	µg/kg	1.50E+03	--	--	--	5.48E+08	2.74E-06	0.15%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**1.88E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-7_Shallow_3	non-Rad	Antimony	7440-36-0	µg/kg	4.50E+02	--	--	--	3.65E+05	1.23E-03	94.17%
618-7_Shallow_3	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	2.74E+05	7.30E-05	5.58%
618-7_Shallow_3	non-Rad	Tin	7440-31-5	µg/kg	1.80E+03	--	--	--	5.48E+08	3.29E-06	0.25%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**1.31E-03**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-7_Shallow_4	non-Rad	Antimony	7440-36-0	µg/kg	2.50E+02	--	--	--	3.65E+05	6.85E-04	99.81%
618-7_Shallow_4	non-Rad	Tin	7440-31-5	µg/kg	7.10E+02	--	--	--	5.48E+08	1.30E-06	0.19%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**6.86E-04**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**0.00E+00**	**--**	**--**	**--**	**--**
618-7_Shallow_Focused	non-Rad	Acenaphthene	83-32-9	µg/kg	1.50E+02	--	--	--	4.01E+07	3.74E-06	0.03%
618-7_Shallow_Focused	non-Rad	Antimony	7440-36-0	µg/kg	9.80E+02	--	--	--	3.65E+05	2.68E-03	24.17%
618-7_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	6.70E+00	2.58E+03	2.59E-09	0.51%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	8.80E+01	1.72E+03	5.11E-08	10.12%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	6.60E+01	1.72E+02	3.83E-07	75.92%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	5.20E+01	1.72E+03	3.02E-08	5.98%	--	--	--
618-7_Shallow_Focused	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	1.10E+01	1.72E+03	6.39E-09	1.27%	--	--	--
618-7_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	4.70E+02	4.05E+05	1.16E-09	0.23%	1.43E+07	3.30E-05	0.30%
618-7_Shallow_Focused	non-Rad	Cadmium	7440-43-9	µg/kg	6.20E+03	4.60E+09	1.35E-12	0.00%	8.21E+05	7.56E-03	68.02%
618-7_Shallow_Focused	non-Rad	Chromium	7440-47-3	µg/kg	6.59E+04	--	--	--	1.37E+09	4.81E-05	0.43%
618-7_Shallow_Focused	non-Rad	Chrysene	218-01-9	µg/kg	6.90E+01	1.72E+04	4.01E-09	0.79%	--	--	--
618-7_Shallow_Focused	non-Rad	Copper	7440-50-8	µg/kg	2.50E+04	--	--	--	3.65E+07	6.85E-04	6.17%
618-7_Shallow_Focused	non-Rad	Dibenz[a,h]anthracene	53-70-3	µg/kg	4.50E+01	1.72E+03	2.61E-08	5.18%	--	--	--
618-7_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	3.30E+01	--	--	--	7.13E+07	4.63E-07	0.00%
618-7_Shallow_Focused	non-Rad	Fluoranthene	206-44-0	µg/kg	4.80E+01	--	--	--	2.68E+07	1.79E-06	0.02%
618-7_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	2.00E+01	--	--	--	2.74E+05	7.30E-05	0.66%
618-7_Shallow_Focused	non-Rad	Pyrene	129-00-0	µg/kg	4.10E+02	--	--	--	2.01E+07	2.04E-05	0.18%
618-7_Shallow_Focused	non-Rad	Tin	7440-31-5	µg/kg	1.20E+03	--	--	--	5.48E+08	2.19E-06	0.02%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.05E-07**	**--**	**--**	**1.11E-02**	**--**
618-7_Shallow_Focused	Rad	Uranium-233/234	U-233/234	pCi/g	1.09E+01	5.81E+03	1.88E-07	16.98%	--	--	--
618-7_Shallow_Focused	Rad	Uranium-235	15117-96-1	pCi/g	9.74E-01	2.95E+02	3.30E-07	29.87%	--	--	--
618-7_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	6.42E+00	1.09E+03	5.87E-07	53.14%	--	--	--
Total Radiological Risk Estimate						**--**	**1.11E-06**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.61E-06**	**--**	**--**	**--**	**--**

Table G-70. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
618-8_Shallow	non-Rad	Selenium	7782-49-2	µg/kg	8.46E+02	--	--	--	4.56E+06	1.85E-04	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**0.00E+00**	**--**	**--**	**1.85E-04**	**--**
618-8_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.19E+00	5.81E+03	2.05E-08	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**2.05E-08**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.05E-08**	**--**	**--**	**--**	**--**
618-9_Shallow_Focused	non-Rad	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	1.10E+02	1.21E+04	9.10E-09	0.09%	3.65E+06	3.01E-05	0.01%
618-9_Shallow_Focused	non-Rad	Acetone	67-64-1	µg/kg	6.80E+02	--	--	--	7.89E+08	8.62E-07	0.00%
618-9_Shallow_Focused	non-Rad	Aldrin	309-00-2	µg/kg	3.90E+02	3.33E+02	1.17E-06	11.26%	2.14E+04	1.82E-02	4.19%
618-9_Shallow_Focused	non-Rad	Aroclor-1016	12674-11-2	µg/kg	1.90E+03	7.38E+04	2.57E-08	0.25%	4.59E+04	4.14E-02	9.52%
618-9_Shallow_Focused	non-Rad	Aroclor-1221	11104-28-2	µg/kg	1.90E+03	1.99E+03	9.55E-07	9.18%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1232	11141-16-5	µg/kg	1.90E+03	1.99E+03	9.55E-07	9.18%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1242	53469-21-9	µg/kg	1.90E+03	2.58E+03	7.35E-07	7.07%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.90E+03	2.58E+03	7.35E-07	7.07%	--	--	--
618-9_Shallow_Focused	non-Rad	Aroclor-1254	11097-69-1	µg/kg	3.90E+03	2.58E+03	1.51E-06	14.51%	1.31E+04	2.97E-01	68.38%
618-9_Shallow_Focused	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.90E+03	2.58E+03	1.51E-06	14.51%	--	--	--
618-9_Shallow_Focused	non-Rad	Arsenic	7440-38-2	µg/kg	1.16E+04	4.54E+03	2.56E-06	24.58%	2.53E+05	4.59E-02	10.56%
618-9_Shallow_Focused	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	5.20E+03	4.05E+05	1.29E-08	0.12%	1.43E+07	3.65E-04	0.08%
618-9_Shallow_Focused	non-Rad	Butylbenzylphthalate	85-68-7	µg/kg	2.70E+03	2.98E+06	9.06E-10	0.01%	1.43E+08	1.89E-05	0.00%
618-9_Shallow_Focused	non-Rad	Chlordane	57-74-9	µg/kg	6.90E+01	1.89E+04	3.65E-09	0.04%	4.10E+05	1.68E-04	0.04%
618-9_Shallow_Focused	non-Rad	Chloroform	67-66-3	µg/kg	9.00E+00	1.05E+04	8.56E-10	0.01%	4.91E+06	1.83E-06	0.00%
618-9_Shallow_Focused	non-Rad	Di-n-butylphthalate	84-74-2	µg/kg	7.20E+03	--	--	--	7.13E+07	1.01E-04	0.02%
618-9_Shallow_Focused	non-Rad	Heptachlor epoxide	1024-57-3	µg/kg	4.40E+01	6.22E+02	7.07E-08	0.68%	9.27E+03	4.75E-03	1.09%
618-9_Shallow_Focused	non-Rad	Hexachlorobutadiene	87-68-3	µg/kg	7.60E+02	7.26E+04	1.05E-08	0.10%	7.13E+05	1.07E-03	0.25%
618-9_Shallow_Focused	non-Rad	Hexachloroethane	67-72-1	µg/kg	1.70E+04	4.05E+05	4.20E-08	0.40%	7.13E+05	2.38E-02	5.48%
618-9_Shallow_Focused	non-Rad	Mercury	7439-97-6	µg/kg	3.30E+02	--	--	--	2.74E+05	1.20E-03	0.28%
618-9_Shallow_Focused	non-Rad	Methylene chloride	75-09-2	µg/kg	2.30E+03	3.37E+05	6.83E-09	0.07%	3.57E+07	6.44E-05	0.01%
618-9_Shallow_Focused	non-Rad	Nitrate	14797-55-8	µg/kg	1.67E+06	--	--	--	6.48E+09	2.58E-04	0.06%
618-9_Shallow_Focused	non-Rad	Tetrachloroethene	127-18-4	µg/kg	9.20E+02	1.03E+04	8.97E-08	0.86%	6.84E+06	1.35E-04	0.03%
618-9_Shallow_Focused	non-Rad	Toluene	108-88-3	µg/kg	9.00E+00	--	--	--	6.38E+07	1.41E-07	0.00%
618-9_Shallow_Focused	non-Rad	Trichloroethene	79-01-6	µg/kg	2.00E+00	7.17E+03	2.79E-10	0.00%	2.94E+06	6.80E-07	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.04E-05**	**--**	**--**	**4.35E-01**	**--**
618-9_Shallow_Focused	Rad	Uranium-238	U-238	pCi/g	3.00E+00	1.09E+03	2.74E-07	100.00%	--	--	--
Total Radiological Risk Estimate						**--**	**2.74E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.07E-05**	**--**	**--**	**--**	**--**
628-4_Overburden	non-Rad	Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.09E+01	4.05E+05	1.51E-10	100.00%	1.43E+07	4.27E-06	100.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.51E-10**	**--**	**--**	**4.27E-06**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**1.51E-10**	**--**	**--**	**--**	**--**
628-4_Shallow	non-Rad	Aroclor-1242	53469-21-9	µg/kg	4.24E+01	2.58E+03	1.64E-08	2.94%	--	--	--

Table G-70. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
628-4_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.12E+03	2.58E+03	4.32E-07	77.55%	--	--	--
628-4_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	2.43E+02	2.58E+03	9.40E-08	16.88%	1.31E+04	1.85E-02	100.00%
628-4_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	3.78E+01	2.58E+03	1.46E-08	2.63%	--	--	--
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.57E-07**	**--**	**--**	**1.85E-02**	**--**
628-4_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.13E+00	5.81E+03	1.94E-08	33.88%	--	--	--
628-4_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	1.12E-01	2.95E+02	3.79E-08	66.12%	--	--	--
Total Radiological Risk Estimate						**--**	**5.74E-08**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**6.14E-07**	**--**	**--**	**--**	**--**

UPR-300-17_Shallow	non-Rad	Acenaphthene	83-32-9	µg/kg	1.17E+02	--	--	--	4.01E+07	2.91E-06	0.00%
UPR-300-17_Shallow	non-Rad	Anthracene	120-12-7	µg/kg	7.01E+00	--	--	--	2.01E+08	3.49E-08	0.00%
UPR-300-17_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.59E+02	--	--	--	3.65E+05	9.82E-04	1.46%
UPR-300-17_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	1.97E+03	2.58E+03	7.62E-07	58.63%	--	--	--
UPR-300-17_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.50E+02	2.58E+03	1.74E-07	13.39%	1.31E+04	3.43E-02	51.12%
UPR-300-17_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	1.13E+02	2.58E+03	4.38E-08	3.37%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	5.92E+01	1.72E+03	3.44E-08	2.65%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	4.38E+01	1.72E+02	2.54E-07	19.55%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	3.27E+01	1.72E+03	1.90E-08	1.46%	--	--	--
UPR-300-17_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	9.94E+00	1.72E+03	5.77E-09	0.44%	--	--	--
UPR-300-17_Shallow	non-Rad	Boron	7440-42-8	µg/kg	3.90E+03	--	--	--	1.82E+08	2.14E-05	0.03%
UPR-300-17_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	3.93E+01	1.72E+04	2.28E-09	0.18%	--	--	--
UPR-300-17_Shallow	non-Rad	Fluoranthene	206-44-0	µg/kg	3.53E+01	--	--	--	2.68E+07	1.32E-06	0.00%
UPR-300-17_Shallow	non-Rad	Fluorene	86-73-7	µg/kg	2.93E+00	--	--	--	2.68E+07	1.09E-07	0.00%
UPR-300-17_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	5.85E+00	1.72E+03	3.40E-09	0.26%	--	--	--
UPR-300-17_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	6.90E+01	--	--	--	2.74E+05	2.52E-04	0.38%
UPR-300-17_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	4.79E+01	6.16E+04	7.78E-10	0.06%	2.24E+06	2.14E-05	0.03%
UPR-300-17_Shallow	non-Rad	Nickel	7440-02-0	µg/kg	5.64E+05	3.19E+10	1.77E-11	0.00%	1.82E+07	3.09E-02	46.00%
UPR-300-17_Shallow	non-Rad	Pyrene	129-00-0	µg/kg	3.41E+01	--	--	--	2.01E+07	1.70E-06	0.00%
UPR-300-17_Shallow	non-Rad	Silver	7440-22-4	µg/kg	3.40E+02	--	--	--	4.56E+06	7.45E-05	0.11%
UPR-300-17_Shallow	non-Rad	Zinc	7440-66-6	µg/kg	1.57E+05	--	--	--	2.74E+08	5.74E-04	0.86%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**1.30E-06**	**--**	**--**	**6.71E-02**	**--**
UPR-300-17_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	6.15E+00	5.81E+03	1.06E-07	13.48%	--	--	--
UPR-300-17_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	9.14E-01	2.95E+02	3.10E-07	39.44%	--	--	--
UPR-300-17_Shallow	Rad	Uranium-238	U-238	pCi/g	4.04E+00	1.09E+03	3.70E-07	47.08%	--	--	--
Total Radiological Risk Estimate						**--**	**7.85E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**2.09E-06**	**--**	**--**	**--**	**--**

UPR-300-46_Shallow	non-Rad	Acenaphthene	83-32-9	µg/kg	1.31E+01	--	--	--	4.01E+07	3.26E-07	0.00%
UPR-300-46_Shallow	non-Rad	Antimony	7440-36-0	µg/kg	3.81E+02	--	--	--	3.65E+05	1.04E-03	2.71%
UPR-300-46_Shallow	non-Rad	Aroclor-1248	12672-29-6	µg/kg	8.79E+02	2.58E+03	3.40E-07	57.16%	--	--	--
UPR-300-46_Shallow	non-Rad	Aroclor-1254	11097-69-1	µg/kg	4.90E+02	2.58E+03	1.89E-07	31.84%	1.31E+04	3.73E-02	96.97%
UPR-300-46_Shallow	non-Rad	Aroclor-1260	11096-82-5	µg/kg	8.44E+01	2.58E+03	3.27E-08	5.49%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(a)anthracene	56-55-3	µg/kg	3.88E+00	1.72E+03	2.25E-09	0.38%	--	--	--

Table G-70. Casual Recreational User Scenario Risk Estimates and Noncancer Hazards for 300 Area Source OU Waste Site Decision Units Without Background Contribution

Waste Site/Decision Unit	Analyte Group	Analyte Name	CAS No.	Units	EPC	Cancer Effects PRG	Cancer Risk Estimate	Percent Contribution	Noncancer Effects PRG	Noncancer Hazard Quotient	Percent Contribution
UPR-300-46_Shallow	non-Rad	Benzo(a)pyrene	50-32-8	µg/kg	3.40E+00	1.72E+02	1.98E-08	3.32%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(b)fluoranthene	205-99-2	µg/kg	5.40E+00	1.72E+03	3.13E-09	0.53%	--	--	--
UPR-300-46_Shallow	non-Rad	Benzo(k)fluoranthene	207-08-9	µg/kg	2.78E+00	1.72E+03	1.62E-09	0.27%	--	--	--
UPR-300-46_Shallow	non-Rad	Chrysene	218-01-9	µg/kg	5.58E+00	1.72E+04	3.24E-10	0.05%	--	--	--
UPR-300-46_Shallow	non-Rad	Dibenz[a,h]anthracene	53-70-3	µg/kg	1.25E+00	1.72E+03	7.26E-10	0.12%	--	--	--
UPR-300-46_Shallow	non-Rad	Fluoranthene	206-44-0	µg/kg	9.55E+00	--	--	--	2.68E+07	3.57E-07	0.00%
UPR-300-46_Shallow	non-Rad	Fluorene	86-73-7	µg/kg	2.15E+00	--	--	--	2.68E+07	8.03E-08	0.00%
UPR-300-46_Shallow	non-Rad	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	7.55E+00	1.72E+03	4.38E-09	0.74%	--	--	--
UPR-300-46_Shallow	non-Rad	Mercury	7439-97-6	µg/kg	2.92E+01	--	--	--	2.74E+05	1.07E-04	0.28%
UPR-300-46_Shallow	non-Rad	Naphthalene	91-20-3	µg/kg	3.57E+01	6.16E+04	5.80E-10	0.10%	2.24E+06	1.59E-05	0.04%
UPR-300-46_Shallow	non-Rad	Pyrene	129-00-0	µg/kg	4.44E+00	--	--	--	2.01E+07	2.21E-07	0.00%
Total Non-Radiological Risk Estimate and Hazard Index Estimate						**--**	**5.95E-07**	**--**	**--**	**3.85E-02**	**--**
UPR-300-46_Shallow	Rad	Uranium-233/234	U-233/234	pCi/g	1.77E+00	5.81E+03	3.05E-08	11.26%	--	--	--
UPR-300-46_Shallow	Rad	Uranium-235	15117-96-1	pCi/g	2.43E-01	2.95E+02	8.24E-08	30.41%	--	--	--
UPR-300-46_Shallow	Rad	Uranium-238	U-238	pCi/g	1.73E+00	1.09E+03	1.58E-07	58.32%	--	--	--
Total Radiological Risk Estimate						**--**	**2.71E-07**	**--**	**--**	**--**	**--**
Total Non-Radiological and Radiological Risk Estimate						**--**	**8.66E-07**	**--**	**--**	**--**	**--**

Table G-71. Summary of Casual Recreational User Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk for Shallow Zone Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
300 ASH PITS_Shallow	2.04E-08	--	0.00E+00	--	2.04E-08	7.27E-06	--
300 VTS_Shallow	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-10_Shallow_Focused	2.98E-06	Arsenic (2.97e-06)	1.25E-07	--	3.10E-06	5.35E-02	--
300-109_Shallow_Focused	7.93E-08	--	1.50E-07	--	2.30E-07	9.39E-03	--
300-18_Shallow	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-223_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-23_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-259_Shallow	0.00E+00	--	1.51E-07	--	1.51E-07	2.64E-03	--
300-260_Shallow_Focused	0.00E+00	--	4.78E-07	--	4.78E-07	5.03E-03	--
300-272_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-275_Shallow_1	8.76E-09	--	1.15E-06	--	1.16E-06	2.10E-03	--
300-275_Shallow_2	0.00E+00	--	2.17E-07	--	2.17E-07	1.56E-04	--
300-33, 300-41, 300-256_Shallow	1.19E-07	--	3.40E-07	--	4.59E-07	9.65E-03	--
300-33, 300-41, 300-256_Shallow_Focused	2.97E-07	--	2.51E-07	--	5.47E-07	2.94E-02	--
300-37_Shallow_Focused	1.28E-06	Aroclor-1260 (1.24e-	0.00E+00	--	1.28E-06	7.63E-03	--
300-44_Shallow_Focused	3.72E-06	Arsenic (3.72e-06)	0.00E+00	--	3.72E-06	7.82E-02	--
300-45_Shallow_Focused	3.40E-08	--	1.10E-07	--	1.44E-07	2.03E-05	--
300-49_Shallow	0.00E+00	--	2.01E-07	--	2.01E-07	6.18E-04	--
300-50_Shallow	4.89E-08	--	1.13E-06	--	1.18E-06	1.85E-02	--
300-8_Shallow	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
316-1_Shallow_1	5.35E-06	Aroclor-1248 (1.16e-06)	2.95E-06	--	8.30E-06	7.53E-02	--
316-1_Shallow_3	4.40E-08	--	6.88E-06	--	6.92E-06	5.94E-02	--
316-1_Shallow_4	2.40E-08	--	2.13E-06	--	2.15E-06	4.73E-03	--
316-2_Shallow_1	0.00E+00	--	1.21E-05	--	1.21E-05	0.00E+00	--
316-2_Shallow_2	3.28E-07	--	1.53E-05	--	1.56E-05	3.20E-03	--
316-2_Shallow_3	1.76E-06	Arsenic (1.76e-06)	2.54E-06	--	4.31E-06	3.17E-02	--
316-5_Shallow_1	2.25E-08	--	1.68E-05	--	1.68E-05	1.09E-05	--
316-5_Shallow_2	1.43E-08	--	1.11E-05	--	1.12E-05	8.44E-04	--
316-5_Shallow_Focused	6.97E-08	--	8.56E-06	--	8.63E-06	5.37E-03	--
331 LSLDF_Shallow_Focused	3.72E-07	--	0.00E+00	--	3.72E-07	6.76E-02	--
600-243_Shallow	3.60E-07	--	0.00E+00	--	3.60E-07	1.60E-02	--

Table G-71. Summary of Casual Recreational User Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk for Shallow Zone Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
600-259_Shallow	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
600-259_Shallow_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
600-47_Shallow	0.00E+00	--	1.68E-07	--	1.68E-07	0.00E+00	--
618-1_Shallow	1.23E-07	--	1.71E-07	--	2.94E-07	2.02E-02	--
618-1_Shallow_Focused	4.15E-07	--	1.28E-06	--	1.70E-06	9.39E-02	--
618-12_Shallow	1.89E-06	Arsenic (1.89e-06)	1.14E-06	--	3.02E-06	3.39E-02	--
618-13_Shallow	1.52E-11	--	1.89E-07	--	1.89E-07	8.57E-04	--
618-13_Shallow_Focused	1.64E-11	--	1.96E-08	--	1.96E-08	6.95E-04	--
618-2_Shallow	0.00E+00	--	2.81E-06	--	2.81E-06	1.66E-03	--
618-3_Shallow	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
618-3_Shallow_Focused	0.00E+00	--	1.03E-05	--	1.03E-05	0.00E+00	--
618-4_Shallow	0.00E+00	--	3.36E-07	--	3.36E-07	0.00E+00	--
618-5_Shallow	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
618-7_Shallow_1	6.58E-13	--	5.13E-07	--	5.13E-07	2.85E-03	--
618-7_Shallow_2	0.00E+00	--	0.00E+00	--	0.00E+00	1.88E-03	--
618-7_Shallow_3	0.00E+00	--	0.00E+00	--	0.00E+00	1.31E-03	--
618-7_Shallow_4	0.00E+00	--	0.00E+00	--	0.00E+00	6.86E-04	--
618-7_Shallow_Focused	5.05E-07	--	1.11E-06	--	1.61E-06	1.11E-02	--
618-8_Shallow	0.00E+00	--	2.05E-08	--	2.05E-08	1.85E-04	--
618-9_Shallow_Focused	1.04E-05	Aldrin (1.17e-06) Aroclor-1254 (1.51e-06) Aroclor-1260 (1.51e-	2.74E-07	--	1.07E-05	4.35E-01	--
628-4_Shallow	5.57E-07	--	5.74E-08	--	6.14E-07	1.85E-02	--
UPR-300-17_Shallow	1.30E-06	--	7.85E-07	--	2.09E-06	6.71E-02	--
UPR-300-46_Shallow	5.95E-07	--	2.71E-07	--	8.66E-07	3.85E-02	--

Table G-72. Summary of Casual Recreational User Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk for Overburden Area Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
300-272_Overburden_Focused	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
300-44_Overburden_Focused	2.01E-06	Arsenic (2.01e-06)	0.00E+00	--	2.01E-06	3.60E-02	--
300-49_Overburden	1.22E-06	Aroclor-1254 (1.16e-06)	0.00E+00	--	1.22E-06	2.45E-01	--
300-50_Overburden	1.62E-06	Arsenic (1.52e-06)	8.01E-07	--	2.42E-06	3.19E-02	--
316-1_Overburden	0.00E+00	--	2.32E-06	--	2.32E-06	0.00E+00	--
600-259_Overburden	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
618-2_Overburden	0.00E+00	--	0.00E+00	--	0.00E+00	2.24E-04	--
618-4_Overburden_2	0.00E+00	--	1.51E-07	--	1.51E-07	0.00E+00	--
618-4_Overburden_3	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
618-4_Overburden_4	0.00E+00	--	0.00E+00	--	0.00E+00	0.00E+00	--
618-5_Overburden	0.00E+00	--	4.88E-07	--	4.88E-07	0.00E+00	--
628-4_Overburden	1.51E-10	--	0.00E+00	--	1.51E-10	4.27E-06	--

Table G-73. Summary of Casual Recreational User Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk for Staging Pile Area Decision Units in the 300 Area Source Operable Unit Without Background Contribution

Waste Site/Decision Unit	Chemical Cancer Risk	Chemical Risk Drivers	Radiological Cancer Risk	Radiological Risk Drivers	Total Non-Rad and Rad Risk	Non-Cancer Hazard Index	Hazard Drivers
300-109_Staging Pile Area_Focused	5.98E-08	--	2.55E-07	--	3.15E-07	2.81E-03	--
618-2_Staging Pile	0.00E+00	--	6.03E-07	--	6.03E-07	1.83E-03	--
618-5_Staging Pile_4	0.00E+00	--	1.23E-07	--	1.23E-07	0.00E+00	--
618-5_Staging Pile_5	0.00E+00	--	2.40E-07	--	2.40E-07	0.00E+00	--

Table G-74. Year When 300 Area Source OU Soil Concentrations Decay to Residential RBSLs

Waste Site Decision Unit	Collection Date	Risk Driver	Half-Life (Year)	EPC (pCi/g)	Residential PRG	Number of years When EPC < Resident PRG	Collection Year	Year When EPC < Resident PRG
618-1_Deep_Focused	1/26/2010	Cesium-137	30	7	4.40E+00	1.70E+01	2010	2027
		Uranium-238	4.47E+09	65	5.40E+01	1.22E+09	2010	1.22E+09
618-2_Deep	9/7/2006	Total beta radiostrontium	29.1	12	2.27E+00	6.85E+01	2006	2074
		Uranium-233/234	2.45E+05	161	1.33E+02	6.75E+04	2006	69536
		Uranium-238	4.47E+09	165	5.40E+01	7.20E+09	2006	7.20E+09
618-2_Deep_Focused	9/7/2006	Total beta radiostrontium	2.91E+01	7.2	2.27E+00	4.85E+01	2006	2054
316-2_Shallow_1	3/12/1999	Uranium-238	4.47E+09	68.8	5.40E+01	1.57E+09	1999	1.57E+09
316-2_Shallow_2	3/12/1999	Uranium-238	4.47E+09	96.0	5.40E+01	3.71E+09	1999	3.71E+09
316-5_Shallow_1	11/12/1997	Uranium-235	7.04E+08	18.6	1.63E+01	1.34E+08	1997	1.34E+08
		Uranium-238	4.47E+09	89.2	5.40E+01	3.24E+09	1997	3.24E+09
316-5_Shallow_2	11/13/1997	Uranium-238	4.47E+09	67.5	5.40E+01	1.44E+09	1997	1.44E+09
618-3_Shallow_Focused	11/30/2005	Uranium-238	4.47E+09	79.4	5.40E+01	2.49E+09	2005	2.49E+09

Table G-75. Summary of Residential Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Total Calculated Uranium for Shallow Zone Decision Units in 300 Area Source OU without Background Contribution

Waste Site/Decision Unit	Radiological Cancer Risk	Radiological Risk Drivers	Non-Cancer Hazard Quotient	Hazard Drivers
300 ASH PITS_Shallow	0.00E+00	--	0.00	--
300-10_Shallow_Focused	2.53E-06	--	0.02	--
300-109_Shallow_Focused	2.55E-06	--	0.02	--
300-18_Shallow	0.00E+00	--	0.00	--
300-259_Shallow	2.41E-06	--	0.02	--
300-260_Shallow_Focused	7.95E-06	--	0.05	--
300-275_Shallow_1	1.38E-05	--	0.09	--
300-275_Shallow_2	2.31E-06	--	0.02	--
300-33, 300-41, 300-256_Shallow	3.32E-06	--	0.02	--
300-33, 300-41, 300-256_Shallow_Focused	4.01E-06	--	0.03	--
300-44_Shallow_Focused	0.00E+00	--	0.00	--
300-45_Shallow_Focused	2.24E-06	--	0.02	--
300-49_Shallow	0.00E+00	--	0.00	--
300-50_Shallow	1.42E-05	--	0.10	--
300-8_Shallow	0.00E+00	--	0.00	--
316-1_Shallow_1	5.16E-05	--	0.35	--
316-1_Shallow_3	3.92E-05	--	0.26	--
316-1_Shallow_4	2.67E-05	--	0.18	--
316-2_Shallow_1	1.31E-04	Total_U_Isotopes (1.31e-04)	0.88	--
316-2_Shallow_2	1.81E-04	Total_U_Isotopes (1.81e-04)	1.21	Total_U_Isotopes (1.21)
316-2_Shallow_3	4.54E-05	--	0.31	--
316-5_Shallow_1	1.69E-04	Total_U_Isotopes (1.69e-04)	1.13	Total_U_Isotopes (1.13)
316-5_Shallow_2	1.27E-04	Total_U_Isotopes (1.27e-04)	0.85	--
316-5_Shallow_Focused	8.58E-05	--	0.58	--
331 LSLDF_Shallow_Focused	0.00E+00	--	0.00	--
600-47_Shallow	2.67E-06	--	0.02	--
618-1_Shallow	2.62E-06	--	0.02	--

Table G-75. Summary of Residential Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Total Calculated Uranium for Shallow Zone Decision Units in 300 Area Source OU without Background Contribution

Waste Site/Decision Unit	Radiological Cancer Risk	Radiological Risk Drivers	Non-Cancer Hazard Quotient	Hazard Drivers
618-1_Shallow_Focused	1.55E-05	--	0.10	--
618-12_Shallow	1.99E-05	--	0.13	--
618-13_Shallow	3.14E-06	--	0.02	--
618-13_Shallow_Focused	0.00E+00	--	0.00	--
618-2_Shallow	3.63E-06	--	0.02	--
618-3_Shallow	0.00E+00	--	0.00	--
618-3_Shallow_Focused	1.48E-04	Total_U_Isotopes (1.48e-04)	1.00	--
618-4_Shallow	4.63E-06	--	0.03	--
618-5_Shallow	0.00E+00	--	0.00	--
618-7_Shallow_1	6.72E-06	--	0.05	--
618-7_Shallow_2	0.00E+00	--	0.00	--
618-7_Shallow_3	0.00E+00	--	0.00	--
618-7_Shallow_4	0.00E+00	--	0.00	--
618-7_Shallow_Focused	1.22E-05	--	0.08	--
618-8_Shallow	0.00E+00	--	0.00	--
618-9_Shallow_Focused	5.57E-06	--	0.04	--
628-4_Shallow	0.00E+00	--	0.00	--
UPR-300-17_Shallow	7.71E-06	--	0.05	--
UPR-300-46_Shallow	3.04E-06	--	0.02	--

Table G-76. Comparison of Residential Scenario Risk Estimates, Noncancer Hazards, and Primary Contributors to Risk For Calculated Total Uranium Concentrations versus Isotopic Uranium Activities in 300 Area Source OU

Waste Site/Decision Unit	Radiological Cancer Risk for Total Calculated Uranium (Mass-Based)	Radiological Risk Drivers	Radiological Cancer Risk for Isotopic Uranium (Activity-Based)	Radiological Risk Drivers	Non-Cancer Hazard Quotient for Total Calculated Uranium (Mass-Based)	Hazard Drivers
316-2_Shallow_1	1.31E-04	Total Calculated Uranium (1.31e-04)	2.70E-04	Uranium-238 (1.27e-04)	0.88	Total Calculated Uranium (0.88)
316-2_Shallow_2	1.81E-04	Total Calculated Uranium (1.81e-04)	3.47E-04	Uranium-238 (1.78e-04)	1.21	Total Calculated Uranium (1.21)
316-5_Shallow_1	1.69E-04	Total Calculated Uranium (1.69e-04)	3.32E-04	Uranium-235 (1.14e-04) Uranium-238 (1.65e-04)	1.13	Total Calculated Uranium (1.13)
316-5_Shallow_2	1.27E-04	Total Calculated Uranium (1.27e-04)	2.23E-04	Uranium-238 (1.25e-04)	0.85	Total Calculated Uranium (0.85)
618-3_Shallow_Focused	1.48E-04	Total Calculated Uranium (1.48e-04)	2.36E-04	Uranium-238 (1.47e-04)	0.99	Total Calculated Uranium (0.99)

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RESPONSIBLE CONTACTS

Name	Phone Number
Author: Kristin Scott	376-7355
Manager: Alaa Aly	376-0300

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Name *(print)*	Organization

APPROVAL SIGNATURES

Author:	Kristin Scott	12-8-11	RELEASE / ISSUE
Name: (Print)	K.M. Scott	Date	
Responsible Manager:	Alaa Aly	12/8/11	
Name: (print)	A.H. Aly	Date	
Other:			
Name: (print)		Date	

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Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

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CH2MHILL
Plateau Remediation Company

P.O. Box 1600
Richland, Washington 99352

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K. M. Scott
CH2M HILL Plateau Remediation Company

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Richland, Washington

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Environmental Calculation Cover Page

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Project: 100 Areas and 300 Area Remedial Investigation/Feasibility Study Reports **Date: December 8, 2011**

Calculation Title & Description: Identification of Contaminants of Potential Concern for Groundwater Risk Assessment at the 300 Area Subregion of the 300-FF-5 Groundwater Operable Unit

Describes the selection of groundwater COPCs for the 300 Area subregion of the 300-FF-5 Groundwater Operable Unit.

Preparer: Kristin Scott	**Basis of Qualification:** Education & Experience
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Part 3: Document Review & Approval:

Preparer:

Kristin Scott/ Risk Assessor
NAME/POSITION

Kristin Scott
SIGNATURE

12-8-11
DATE

Checker:

Doug Evans/Risk Assessor
NAME/POSITION

Doug Evans
SIGNATURE

12/8/2011
DATE

Senior Reviewer:

Doug Evans/Risk Assessor
NAME/POSITION

Doug Evans
SIGNATURE

12/8/2011
DATE

Responsible Manager:

Alaa Aly/Risk and Modeling Integration Manager
NAME/POSITION

SIGNATURE

12/8/11
DATE

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Terms

ARAR	applicable or relevant and appropriate requirements
AWQC	Aquatic Water Quality Standards
BRA	Baseline Risk Assessment
COPC	contaminant of potential concern
DOE	U.S. Department of Energy
ECF	environmental calculation file
EPA	Environmental Protection Agency
EPC	Exposure Point Concentration
FS	Feasibility Study
HEIS	Hanford Environmental Information System
MCL	Maximum Contaminant Level
MCLG	Maximum Residual Disinfectant Levels
MDL	Method Detection Limit
OU	operable unit
QL	quantitation limit
RI/FS	Remedial Investigation/Feasibility Study
SDWA	Safe Drinking Water Act
SAP	Sampling and Analysis Plan
WAC	Washington Administrative Code

1 Purpose

This environmental calculation describes the identification of contaminants of potential concern (COPCs) for the groundwater risk assessment at the 300 Area subregion of the 300-FF-5 Groundwater Operable Unit (OU) (hereafter referred to simply as the 300 Area subregion). This evaluation supports DOE/RL-2010-99, *Remedial Investigation/Feasibility Study for the 300-FF1, 300-FF-2, and 300-FF-5 Operable Units.*

This environmental calculation includes a description of the 300 Area subregion COPC identification process, and the COPC results.

2 Background

Groundwater COPCs are potentially site-related analytes that are detected in groundwater at levels that represent a potential threat to human health or the environment and that have analytical data of sufficient quality for use in a quantitative baseline risk assessment. COPCs are selected based on a multi-step screening process. COPCs that pose a potentially unacceptable risk are carried forward to be addressed by the feasibility study (FS).

1. In general, COPCs with exposure point concentrations above an action level [see Section 3.3 for a complete list of chemical-specific applicable or relevant and appropriate requirements (ARARs)] were retained as COPCs.
2. Exceptions to this general rule are made for analytes that have exposure point concentrations that *are not* above their action level (which are calculated for the subregion as a whole), but exist locally at concentrations above the action level (i.e., are localized contaminants that represent a potential threat to human health or the environment).

A preliminary COPC evaluation was conducted in 2008 to support DOE/RL-2009-30, *300 Area Remedial Investigation/Feasibility Study Work Plan for the 300-FF-1, 300-FF-2, and 300-FF-5 Operable Units* and DOE/RL-2009-45, *300 Area Remedial Investigation/Feasibility Study Sampling and Analysis Plan for the 300-FF-1, 300-FF-2 and 300-FF-5 Operable Units.* The work plan effort evaluated groundwater analytical data collected over a 17-year period (1992 to 2009) and resulted in the identification of historic COPCs that are reported in DOE/RL-2009-45, Table 1-4. The historic COPCs identified in DOE/RL-2009-45 for the 300 Area subregion are also listed in Table 2-1, below.

The groundwater data used in this calculation were collected specifically to addresses the data needs identified in DOE/RL-2009-30. The groundwater data set also addresses the chemical, spatial, and temporal uncertainties associated with the previous groundwater risk results.

This calculation focuses on:

1. Validating and updating the results of the DOE/RL-2009-30 COPC evaluation, using more recent and comprehensive groundwater analytical data, and
2. Evaluating the groundwater analytical data collected in accordance with DOE/RL-2009-45 to identify those analytes that qualify as COPCs.

This calculation uses a rigorous screening methodology that incorporates action levels derived from a comprehensive set of chemical-specific ARARs.

Table 2-1. List of Historic Contaminants of Potential Concern in the 300 Area Subregion[a]

Contaminants of Potential Concern			
Metals			
Antimony	Arsenic	Cadmium	Chromium
Cobalt	Copper	Lead	Manganese
Mercury	Nickel	Selenium	Silver
Thallium	Uranium	Zinc	
Volatile Organic Compounds			
1,2-Dichloroethene (total)	Carbon tetrachloride	Chloroform	cis-1,2-Dichloroethene
Tetrachloroethene	Trichloroethene	Vinyl Chloride	
Radiological			
Strontium-90	Tritium	Uranium-233/234	Uranium-235
Uranium-238			
Anions			
Cyanide	Fluoride	Nitrate (as N)	Nitrite (as N)
Sulfate			

Notes:

a. DOE/RL-2009-45, Table 1-4.

3 Methodology

The COPC identification methodology is a sequence of three steps:

1. Extract (from the Hanford Environmental Information System) and process the 300 Area subregion-specific analytical data sets.
2. Evaluate the data set to select analytes that qualify for the groundwater risk assessment.
3. Evaluate the analytes, to identify analytes that qualify as COPCs.

The COPCs will be carried forward into the supplemental groundwater risk evaluation, which will be conducted as part of the remedial investigation/feasibility study (RI/FS).

3.1 Verification of Data Set Completeness

A list of the analytical methods used is gathered from the dataset and compared against the methods specified in the sampling and analysis plan (DOE/RL-2009-45). The following steps are taken to verify that the data set is complete and contains only those records that will be used in the COPC identification process:

- Identify any records associated with an analytical method not called out in the SAP.
- Identify any records associated with an analytical method not equivalent to a method identified in the SAP.
- Identify each well, and independently verify that all results are reported in the data set, identifying any wells for which sample results are missing.

3.2 Analytical Data Processing

The data set obtained from HEIS included the following types of information:

- Analytical results from both unfiltered and filtered samples
- Data qualification and data validation flags, including rejected results
- Results for a given analyte reported by more than one analytical method
- Parent, field duplicate, and field split sample results

The analytical data were processed to eliminate unusable results and thus identify one set of results per sampling location and date of sample collection. The data processing steps and the numbers of records associated with each step are presented in Figure 3-1. Descriptions of the data processing steps follow.

3.2.1 Unfiltered Sample Results

Only analytical results from unfiltered samples are used in identifying COPCs; results from filtered samples are excluded. Unfiltered sample results represent total concentrations of the analytes, while filtered sample results represent only dissolved concentrations. Use of filtered sampling results might lead to underestimation of chemical and radiological concentrations (e.g., in water from an unfiltered tap).

The publication, EPA/541/1-89/002, *Risk Assessment Guidance for Superfund Volume I Human Health Evaluation Manual (Part A)*, addresses this issue in providing guidance on estimating exposure concentrations in groundwater:

> "While filtration of ground-water samples provides useful information for understanding chemical transport within an aquifer, the use of filtered samples for estimating exposure is very controversial because these data may underestimate chemical concentrations in water from an unfiltered tap. Therefore, data from unfiltered samples should be used to estimate exposure concentrations."

3.2.2 Laboratory and Data Validation Flags

Analytical data are received from the laboratory with data qualification flags. Validation qualifiers are assigned during the data validation process. The following rules determine how flagged and/or qualified sample results are used in identifying COPCs.

- Sample results flagged with a "U" qualifier, or combination of qualifiers that include a "U," such as a "UJ," are considered nondetected results.
- Sample results without a "U" qualifier are considered detected concentrations, including results with no qualifier or with a "J" qualifier.
- Sample results that are rejected and flagged with an "R" qualifier are not used in identifying COPCs.

3.2.3 Analytes Reported by Numerous Analytical Methods

Often analytes are reported by more than one analytical method, resulting in multiple results for the same analyte from the same location. When analytes are reported by more than one analytical method, the data are processed to select the method that provides the most reliable results. For example, the gamma spectroscopy method provides concentration results for the uranium isotopes; however, uranium concentrations reported by a uranium-isotope-specific method are preferred.

3.2.4 Field Duplicate and Field Split Results

Field quality control samples (field duplicates and field splits) are collected in the field and analyzed by the laboratory as unique samples. The parent sample and quality control samples are collected from the same location (i.e., monitoring well) on the same date, resulting in more than one sample per location/date. The following criteria are used to reduce multiple sample results for an individual location/date to a single result:

- If two or more detections exist, the maximum concentration is used.
- If at least one detection and one or more nondetected results exist, the detected concentration is used.
- If only (two or more) nondetected results exist, the lowest detection limit is used.

3.3 Identify Action Levels

Action levels are derived from available sources of chemical-specific ARARs and default exposure assumptions. All sources of chemical-specific ARARs for each of the 105 analytes reported in the HEIS database for the 300 Area subregion are identified in Table 3-1.

For the COPC identification process, the action level is the lowest of the available values for protection of human health and aquatic receptors.

3.3.1 ARAR-Based Remediation Goals

The sources of the chemical-specific ARARs from federal regulations are:

- 40 CFR 141 National Primary Drinking Water Regulations, MCLs, secondary MCLs, and non-zero MCLGs established under the *Safe Drinking Water Act of 1974* (SDWA)
- National Recommended Water Quality Criteria, aquatic water quality criteria (AWQC) established under Section 304 of the *Clean Water Act of 1977*
- 40 CFR 131 water quality standards for states not complying with Section 303 of the *Clean Water Act of 1977*

The sources of the chemical-specific ARARs from Washington State regulations are :

- WAC 173-340-720, “Groundwater Cleanup Standards”
- WAC 173-340-730, “Surface Water Cleanup Standards”
- WAC 246-290-310, “Group A Public Water Supplies,” “Maximum Contaminant Levels (MCLs) and Maximum Residual Disinfectant Levels (MRDLs)”
- WAC 173-201A, “Water Quality Standards for Surface Waters of the State of Washington”

Derivation of State of Washington groundwater cleanup levels is provided in a separate calculation brief (ECF-100NPL-10-0462, *Calculation of Standard Method B Groundwater Cleanup Levels for Potable Groundwater for the 100 Areas and 300 Area Remedial Investigation/Feasibility Study Reports*). Derivation of State of Washington surface water cleanup levels in provided in a separate calculation brief (ECF-100NPL-10-0463, *Calculation of Standard Method B Surface Water Cleanup Levels for the 100 Areas and 300 Area Remedial Investigation/Feasibility Study Reports*).

3.4 Groundwater COPC Identification Process: Part 1

After extracting and processing the 300 Area subregion analytical data set from HEIS, a multi-step screening process was used to identify COPCs. The COPC identification process steps, and the numbers of records and numbers of analytes associated with each step, are depicted in Figure 3-2. The steps are:

- Apply exclusion criteria
- Identify nondetected analytes
- Identify analytes with maximum detected concentrations less than their respective action levels;
- Identify analytes with maximum detected concentrations greater than their respective action levels.

3.4.1 Apply Exclusion Criteria

The first step in the groundwater COPC identification process is to apply certain exclusion criteria. Analytes that meet one or more of the exclusion criteria were eliminated as COPCs. Analytes that did not meet any of the exclusion criteria were carried forward into the next step. The exclusion criteria are:

- Naturally occurring radionuclides associated with background radiation
- Radionuclides that have half-lives of less than 3 years and are not significant daughter products
- Essential nutrients (minerals)
- Analytes without known toxicity information

3.4.2 Identify Nondetected Analytes

The next step in the groundwater COPC identification process was to identify nondetected analytes. Chemicals and radionuclides that have been analyzed for, but not detected in any sample (collected from appropriate locations, with adequate detection limits), are eliminated as COPCs. All analytes detected at least once were carried forward to the next step.

3.4.3 Identify Analytes with Maximum Detected Concentrations Less Than Action Levels

This step identifies analytes with maximum concentrations less than action levels. In this initial screening, the maximum concentration of each analyte detected in groundwater was compared to its action level, to identify analytes not likely to contribute significantly to overall risk. If the maximum detected concentration of an analyte was less than its action level, the analyte was eliminated as a COPC, unless the uncertainty analysis indicated otherwise.

Uncertainty Analysis. An additional evaluation was performed on those analytes that were detected at concentrations that were near but did not exceed their respective action level (i.e., the maximum detected concentration was at least greater than one-tenth the action level, or one order of magnitude). This evaluation also included the additional analytes identified as historic COPCs in DOE/RL-2009-45, Table 1-4 (See Table 2-1).

The purpose of this evaluation is to determine if there is a potential for underestimating cumulative effects when the concentrations of analytes are only slightly less than their action levels. Additionally, method detection limits (MDLs) associated with these analytes were evaluated, to determine if the limits are adequate for confirming presence or absence of the analytes near their respective action levels.

3.4.4 Identify Analytes with Maximum Detected Concentrations Greater Than Action Levels

This step identifies analytes with maximum concentrations greater than their respective action levels. Such analytes are likely to contribute to overall risk. If the maximum detected concentration of an analyte

is greater than its action level, the analyte is carried forward for EPC calculation, unless the uncertainty analysis indicates otherwise.

Uncertainty Analysis. An additional evaluation was performed to distinguish two types of analytes that were detected infrequently:

- Analytes detected once, or a very few times, with high concentrations that are not consistent with the remainder of the dataset (are not reproducible). Such results can lead to overestimation of actual groundwater concentrations. Analytes with limited, non-reproducible results are not retained.
- Analytes that were detected infrequently overall, but more frequently at one or more locations, and that are associated with a significant local trend or may be associated with a continuing vadose source. Such results indicate a potential risk, and these analytes are retained.

3.5 Groundwater COPC Identification Process: Part 2

After identifying the set of groundwater analytes with maximum concentrations above action levels for the 300 Area subregion, a multi-step screening process is applied to the analytical dataset to further evaluate the analytes that will be carried forward for evaluation in the 300-FF-5 OU RI/FS.

Groundwater COPCs are identified by comparing 90th percentile values to their respective action levels. The sequential steps in the COPC identification process are:

- Perform statistical calculations to estimate 90th percentile values for the analytes.
- Identify analytes with 90th percentile values less than their respective action levels.
- Identify analytes with 90th percentile values greater than their respective action levels.
- Perform analyte-specific evaluations.

A flow-chart depicting the COPC identification process and the number of analytes associated with each process step is provided in Figure 3-3. The steps in the sequence are described below.

3.5.1 Calculate 90th Percentile Values for Each Analyte

Groundwater COPCs are identified by comparing statistical exposure point concentration (EPC) estimates (i.e., 90th percentile values) to action levels for each detected analyte. EPCs are estimated as the 90th percentile value for each analyte. In the 90th percentile value calculations, the MDL is used as the "detected" concentration for nondetect samples. A description of the methodology used to calculate the 90th percentile values is provided in ECF-300FF5-11-0130, *Calculation of Exposure Point Concentrations for the 300 Area Subregion of the 300-FF-5 Groundwater Operable Unit*.

3.5.2 Identify Analytes with 90th Percentile Values Less Than Action Levels

Groundwater analytes with 90th percentile values less than their respective action levels are identified. The 90th percentile values are compared to the lowest chemical-specific ARARs for protection of human health and aquatic receptors.

3.5.2.1 Analyte-Specific Evaluation

An analyte-specific evaluation step is conducted when the 90th percentile value for an analyte is less than its action level, but individual sample results indicate concentrations greater than the action level. A flow-chart depicting this analyte-specific evaluation is provided in Figure 3-4. This step is performed to

confirm that the analyte has not been inappropriately eliminated as a COPC, and takes into consideration specific attributes of the groundwater contamination plume, as described below.

- Is the analyte co-located with one or more COPCs, with some sample concentrations above its action level?
- Is the analyte associated with a significant local trend or continuing vadose source?
- Is the analyte associated with a discrete local exposure point, with some concentrations above its action level?

3.5.3 Identify Analytes with 90th Percentile Values Greater Than Action Levels

Groundwater analytes with 90th percentile values greater than their respective action levels are identified. The 90th percentile values are compared to the lowest chemical-specific ARARs for protection of human health and aquatic receptors.

3.5.3.1 Analyte Specific Evaluation

An analyte-specific evaluation is performed on analytes with 90th percentile values greater than their respective action levels. A flow-chart depicting this analyte-specific evaluation is provided in Figure 3-5. This step is performed to confirm that the 90th percentile value has not inappropriately identified a COPC, and takes into consideration the effects that data quality, naturally occurring levels of metals, and action level selection have on COPC identification.

- Is the analyte at or below background levels and thus a naturally occurring substance?
- Is the ARAR-based action level (Table 3-1) only a secondary MCL that is not enforceable?
- Are there data quality issues associated with the analyte?

4 Assumptions and Inputs

4.1 Groundwater Data Set Used for COPC Identification

The groundwater data set used for COPC identification consists of sampling and analysis data collected from 15 monitoring wells within the boundaries of the 300 Area subregion. All are either monitoring wells or compliance wells. A list of the wells used in this evaluation is provided in Table 4-1. Figure 4-1 shows the location of each well.

The sampling and analysis data were collected over a 6-month period between June 4, 2010 and December 14, 2010. Three sampling events are used to capture the effects that temporal fluctuations in river stage have on groundwater conditions. Samples collected in June 2010 represent aquifer conditions when the river stage is at its highest elevation. Samples collected in November to mid-December 2010 represent aquifer conditions when the river is at its lowest elevation. Samples collected in August represent aquifer conditions when the river is transitioning from high to low river stage. A total of 8,978 records were obtained from HEIS, and a total of 105 analytes were included in the data set prior to analytical data processing. After analytical data processing (as described in Section 3.2), the final data set used for the COPC identification process contained a total of 4,645 records, with 105 analytes included in the data set.

5 Software Applications

Software used for this analysis includes HEIS, Microsoft Access[1] database software, and Microsoft Excel[2]. HEIS is a central repository for storing and maintaining access to environmental data collected for the Hanford Site. Microsoft Access is used to query and sort the data downloaded from HEIS. Microsoft Excel is used to present the groundwater data and other information in spreadsheets.

6 Calculation

Groundwater COPCs for the 300 Area subregion are identified using the methodology presented in Section 3 and the groundwater data set described in Section 4. Results for each step of the COPC identification process are summarized in the text and tables in Section 7.

The methodology used to calculate 90th percentile values and the results are provided in ECF-300FF5-11-0130.

7 Results/Conclusions

7.1 Groundwater COPC Identification Process: Part 1

This section summarizes the results of the COPC identification process.

7.1.1 Apply Exclusion Criteria

The following subsections summarize the results of the exclusion criteria screening step. A total of 20 analytes met the exclusion criteria; they are listed in Table 7-1. Sampling dates, minimum and maximum detected concentrations, minimum and maximum MDLs, and the bases for their exclusion are also provided in Table 7-1.

7.1.1.1 Background Radiation

No analytes were reported that are associated with naturally occurring radiation.

7.1.1.2 Radionuclides with Half-lives of Less than 3 Years

No radionuclides were reported with half-lives less than 3 years.

7.1.1.3 Essential Nutrients

Essential nutrients are those analytes considered essential for human nutrition. The essential nutrients calcium, magnesium, potassium, and sodium were detected in the groundwater in the 300 Area subregion, but are excluded from further consideration as COPCs.

7.1.1.4 Analytes without Action Levels or Toxicity Values

Some analytes do not have an action level, because a promulgated chemical-specific ARAR is not available in any of the sources listed in Table 3-1. For some analytes without an action level, there is also no available toxicological information that could be considered in assessing any risks they may present. Sixteen analytes were eliminated from further consideration as COPCs because they do not have an action level and they do not have available toxicological information. The eliminated analytes are listed in Table 7-1.

1 Access is a trademark of Microsoft Corporation, Redmond, Washington.
2 Excel is a trademark of Microsoft Corporation, Redmond, Washington.

The MCL for gross beta is 4 mrem/yr annual dose and is used to indicate the presence of a group of beta-emitters. Although there is an MCL for gross beta, gross beta is reported by the laboratory in units of activity (pCi/L) and would require a conversion from activity to an annual dose rate (mrem/yr). Beta-emitting radioisotopes such as uranium and tritium are detected and are compared to their isotope specific standard, which is based on a 4 mrem/yr annual dose. This type of comparison is considered more protective than the overall standard for gross beta. For the purpose of this environmental calculation, gross beta is used to confirm the presence of beta-emitters.

7.1.2 Identify Nondetected Analytes

A total of 46 analytes were not detected in the 300 Area subregion samples. They are listed in Table 7-2, each with sampling dates, minimum and maximum MDLs, the action level, the basis of the action level, and the level of exceedance. The action levels in this table are the lowest of chemical-specific ARARs available for protection of human and aquatic receptors (Table 3-1). The level of exceedance in Table 7-2 is used to identify analytes with MDLs that did not meet the action level. The level of exceedance is calculated by dividing the minimum MDL by the action level.

Table 7-3 lists historic COPCs in DOE/RL-2009-45 not identified as groundwater COPCs for the 300 Area subregion because they were not detected.

Table 7-3. Summary of Historic COPCs from DOE/RL-2009-45 Not Identified as Groundwater COPCs for the 300 Area Subregion

COPC	Reason for Inclusion in the SAP (DOE/RL-2009-45)	Reason for Exclusion as COPC
Antimony	Max concentration and MDLs greater than action level	Not detected in data set; all MDLs less than action level.
Cadmium	Max concentration and MDLs greater than action level	Not detected in data set; all MDLs less than action level.
Mercury	Max concentration and MDLs greater than action level	Not detected in data set; all MDLs less than the QL listed in DOE/RL-2009-45[a].
Nitrite	Max concentration and greater than action level	Not detected in data set; all MDLs less than action level.
Strontium-90	Max concentration and greater than action level	Not detected in data set; all MDLs less than action level.
Vinyl chloride	Max concentration and MDLs greater than action level	Not detected in data set; all MDLs less than the QL listed in DOE/RL-2009-45[a].

a. When the action level is less than the quantitation limit (QL) reported in DOE/RL-2009-45, the action level defaults to the QL.

Antimony was identified as an historic COPC in DOE/RL-2009-45 because it was detected in groundwater samples between 1992 and 2008, and the maximum concentration and MDLs were greater than the action level. Antimony was not detected in the current 300 Area subregion samples and all MDLs are less than the action level of 5.6 µg/L. Therefore, antimony is not identified as a COPC; its elimination is not expected to lead to underestimation of cumulative health effects.

Cadmium was identified as an historic COPC in DOE/RL-2009-45 because it was detected in groundwater samples between 1992 and 2008, and the maximum concentration and MDLs were greater than the action level. Cadmium was not detected in the current 300 Area subregion samples and all MDLs are less than the action level of 0.25 µg/L. Therefore, cadmium is not identified as a COPC; its elimination is not expected to lead to underestimation of cumulative health effects.

Mercury was identified as an historic COPC in DOE/RL-2009-45 because it was detected in groundwater samples between 1992 and 2008, and the maximum concentration and MDLs were greater than the action level. Mercury was not detected in the current 300 Area subregion samples. All MDLs for mercury ranged between 0.05 and 0.10 µg/L. When the action level is less than the quantitation limit (QL) reported in DOE/RL-2009-45, the action level defaults to the QL. The QL of 0.5 µg/L reported in DOE/RL-2009-45 and all MDLs are greater than the action level of 0.012 µg/L. All MDLs are less than the QL listed in DOE/RL-2009-45.

Nitrite was identified as an historic COPC in DOE/RL-2009-45 because it was detected in groundwater samples between 1992 and 2008, and maximum concentrations were greater than the action level. Nitrite was not detected in the current 300 Area subregion samples and all MDLs are less than the action level of 3,300 µg/L. Therefore, nitrite is not identified as a COPC; its elimination is not expected to lead to underestimation of cumulative health effects.

Strontium-90 was identified as an historic COPC in DOE/RL-2009-45 because it was detected in groundwater samples between 1992 and 2008, and maximum concentrations were greater than the action level. Stontium-90 was not detected in the current 300 Area subregion samples and all MDLs are less than the action level of 8 pCi/L. Therefore, strontium-90 is not identified as a COPC; its elimination is not expected to lead to underestimation of cumulative health effects.

Vinyl chloride was identified as an historic COPC in DOE/RL-2009-45 because it was detected in groundwater samples between 1992 and 2008, and the maximum concentration and MDLs were greater than the action level. Vinyl chloride was not detected in the current 300 Area subregion samples. All MDLs for vinyl chloride are 0.084 µg/L. When the action level is less than the QL reported in DOE/RL-2009-45, the action level defaults to the QL. The QL of 5 µg/L reported in DOE/RL-2009-45 and all MDLs are greater than the action level of 0.025 µg/L. All MDLs are less than the QL listed in DOE/RL-2009-45.

7.1.2.1 Uncertainty Analysis

Seven analytes were not detected and were reported with all MDLs greater than their respective action levels. This indicates that the analytical method selected is unable to detect the analyte at or below the action level. With the exceptions of mercury and vinyl chloride, these seven analytes that are not detected are not known or suspected to be associated with releases at the 300-FF-1 or 300-FF-2 source OUs.

7.1.3 Identify Analytes with Maximum Detected Concentrations Less than Action Levels

Twenty-two analytes were detected at least once and had maximum detected concentrations less than their respective action levels. A list of these analytes is presented in Table 7-4. Table 7-4 also provides sampling dates, minimum and maximum MDLs, minimum and maximum detected concentrations, the action levels, and the bases of the action levels.

Table 7-5 lists the historic COPCs from DOE/RL-2009-45 that are not identified as groundwater COPC for the 300 Area subregion, because their maximum concentrations are not greater than their respective action levels.

Table 7-5. Summary of Historic COPCs from DOE/RL-2009-45 Not Identified as Groundwater COPCs for the 300 Area Subregion

COPC	Reason for Inclusion in the SAP (DOE/RL-2009-45)	Reason for Exclusion as COPC
Chloroform	Maximum concentration greater than action level	All detects and MDLs less than action level
Chromium	Maximum concentration greater than action level	All detects and MDLs less than action level
cis-1,2-Dichloroethylene	Maximum concentration greater than action level	All detects and MDLs less than action level
Cobalt	Maximum concentration and MDLs greater than action level	All detects and MDLs less than action level
Cyanide	Not detected. All MDLs greater than action level.	All detects and MDLs less than action level
Fluoride	Maximum concentration greater than action level	All detects and MDLs less than action level
Manganese	Maximum concentration and MDLs greater than action level	All detects and MDLs less than action level
Nickel	Maximum concentration greater than action level	All detects and MDLs less than action level
Silver	Maximum concentration greater than action level	All detects and MDLs less than action level
Sulfate	Maximum concentration greater than action level	All detects and MDLs less than action level
Tritium	Maximum concentration greater than action level	All detects and MDLs less than action level

Chloroform was detected in 12 of 45 water samples (27 percent frequency). Chloroform concentrations ranged from 0.13 to 0.87 µg/L, which are below the action level of 1.4 µg/L. In addition, all MDLs were below the action level. Results of this evaluation indicate that chloroform concentrations are consistently below the action level and the elimination of this analyte would not likely lead to underestimation of cumulative health effects.

Chromium was detected in 44 of 45 water samples (98 percent frequency). Chromium concentrations ranged from 1.4 to 17 µg/L, which are below the action level of 65 µg/L. In addition, all MDLs were below the action level. Results of this evaluation indicate that chromium concentrations are consistently below the action level and the elimination of this analyte would not likely lead to underestimation of cumulative health effects.

Cis-1,2-Dichloroethylene was detected in 11 of 45 water samples (24 percent frequency). Cis-1,2-Dichloroethylene concentrations ranged from 0.12 to 0.69 µg/L, which are below the action level of 70 µg/L. In addition, all MDLs were below the action level. Results of this evaluation indicate that cic-1,2-dichloroethylene concentrations are consistently below the action level and the elimination of this analyte would not likely lead to underestimation of cumulative health effects.

Cobalt was detected in 12 of 45 water samples (27 percent frequency). Cobalt concentrations ranged from 0.14 to 0.16 µg/L, which are below the action level of 2.6 µg/L. In addition, all MDLs were below the action level. Results of this evaluation indicate that cobalt concentrations are consistently below the action level and the elimination of this analyte would not likely lead to underestimation of cumulative health effects.

Cyanide was detected in 1 of 45 water samples (2.2 percent frequency). Cyanide was detected at concentration of 3.7 µg/L, which is below the action level of 5.2 µg/L. In addition, all MDLs were below the action level. Results of this evaluation indicate that cyanide concentrations are consistently below the

action level and the elimination of this analyte would not likely lead to underestimation of cumulative health effects.

Fluoride was detected in 43 of 45 water samples (96 percent frequency). Fluoride concentrations ranged from 86 to 340 µg/L, which are below the action level of 960 µg/L. In addition, all MDLs were below the action level. Result of this evaluation indicate that fluoride concentrations are consistently below the action level and the elimination of this analyte would not likely lead to underestimation of cumulative health effects.

Manganese was detected in 3 of 45 water samples (6.7 percent frequency). Manganese concentrations ranged from 6.0 to 12/L, which are below the action level of 50 µg/L. In addition, all MDLs were below the action level. Results of this evaluation indicate that manganese concentrations are consistently below the action level and the elimination of this analyte would not likely lead to underestimation of cumulative health effects.

Nickel was detected in 11 of 45 water samples (24 percent frequency). Nickel concentrations ranged from 4.0 to 12 µg/L, which are below the action level of 52 µg/L. In addition, all MDLs were below the action level. Results of this evaluation indicate that nickel concentrations are consistently below the action level and the elimination of this analyte would not likely lead to underestimation of cumulative health effects.

Silver was detected in 2 of 45 water samples (4.4 percent frequency). Silver concentrations ranged from 0.01 to 0.72 µg/L, which are below the action level of 2.6 µg/L. In addition, all MDLs were below the action level. Results of this evaluation indicate that silver concentrations are consistently below the action level and the elimination of this analyte would not likely lead to underestimation of cumulative health effects.

Sulfate was detected in all water samples (100 percent frequency). Sulfate concentrations ranged from 25,700 to 59,500 µg/L, which are below the action level of 250,000 µg/L. Results of this evaluation indicate that sulfate concentrations are consistently below the action level and the elimination of this analyte would not likely lead to underestimation of cumulative health effects.

Tritium was detected in 39 of 45 water samples (87 percent frequency). Tritium concentrations ranged from 180 to 7,700 pCi/L, which are below the action level of 20,000 pCi/L. In addition, all MDLs were below the action level. Results of this evaluation indicate that tritium concentrations are consistently below the action level and the elimination of this analyte would not likely lead to underestimation of cumulative health effects.

7.1.3.1 Uncertainty Analysis

The analytes detected at concentrations that are near but do not exceed their respective action levels (i.e., with maximum detected concentrations greater than one-tenth of their respective action level, or one order of magnitude) are chloroform, chloride, chromium, cyanide, fluoride, manganese, nickel, silver, sulfate, tritium, and vanadium. Among these chloroform, chromium, cyanide, fluoride, manganese, nickel, silver, sulfate, and tritium were identified as historic COPCs in DOE/RL-2009-45 and are evaluated above.

Chloride and vanadium were not identified as historic COPCs, but are considered below to determine if any have concentrations that are only slightly less than their action levels and if there is thus a potential for underestimating cumulative effects by their elimination as COPCs. MDLs associated with these

analytes are also evaluated, to determine if the limits are adequate for confirming presence or absence of the analytes near their respective action levels. Neither of these analytes were retained as a COPC.

Chloride was detected in all water samples (100 percent frequency). Chloride concentrations ranged from 6,890 to 29,000 µg/L, which are below the action level of 230,000 µg/L. Results of this evaluation indicate that chloride concentrations are consistently below the action level and elimination of this analyte would not likely lead to underestimation of cumulative health effects.

Vanadium was detected in 10 of 45 water samples (22 percent frequency). Vanadium concentrations ranged from 12 to 34 µg/L, which are below the action level of 80 µg/L. In addition, all MDLs were below the action level. Results of this evaluation indicate that vanadium concentrations are consistently below the action level and elimination of this analyte would not likely lead to underestimation of cumulative health effects.

7.1.4 Identify Analytes with Maximum Detected Concentrations Greater than Action levels

Seventeen analytes were detected at least once, with maximum detected concentrations greater than their respective action levels. Eleven of these 17 analytes were identified as historic COPCs in DOE/RL-2009-45. Table 7-6 provides a summary of the 17 analytes, providing for each, sampling dates, minimum and maximum MDLs, minimum and maximum detected concentrations, the action level, and the basis of the action level.

Table 7-7 lists the 11 historic COPCs from DOE/RL-2009-45 that are carried forward for EPC calculation for the 300 Area subregion, because their maximum concentrations are greater than their respective action levels.

Table 7-7. Summary of Historic COPCs from DOE/RL-2009-45 Carried Forward for EPC Calculation

Arsenic	Carbon tetrachloride	Copper	Lead
Nitrate	Selenium	Tetrachloroethene	Thallium
Trichloroethene	Uranium	Zinc	

In addition to the 11 analytes listed on Table 7-7, acrolein, aluminum, bromodichloromethane, gross alpha, iron, and lithium are also carried forward for EPC calculation, because they have a maximum concentration greater than their respective action levels.

7.2 Groundwater COPC Identification Process: Part 2

This section summarizes the COPC identification process.

7.2.1 Calculate 90th Percentile Values for Each Analyte

Groundwater COPCs are identified by comparing calculated EPC estimates (i.e., 90th percentile values) to action levels for each detected analyte. (The 90th percentile value is used as an estimate of the exposure point concentration.) The 90th percentile value is calculated for each analyte from the groundwater data set. In the calculations, the MDL is taken as the “detected” concentration for nondetect samples. Documentation of the calculations is provided in a separate environmental calculation (ECF-300FF5-11-0130). Results of the calculations are summarized in Table 7-8.

7.2.2 Identify Analytes with 90th Percentile Values Less Than the Action Levels

The 90th percentile values are compared to the lowest available chemical-specific ARARs for protection of human health and aquatic receptors (i.e., action levels). Analytes with 90th percentile values less than their respective action levels are listed in Table 7-9, and are discussed below in the analyte-specific evaluation.

Table 7-9. Summary of Analytes with 90th Percentile Values Less than Action Levels

Acrolein	Aluminum	Bromodichloromethane
Carbon tetrachloride	Copper	Iron
Lead	Lithium	Nitrate
Selenium	Thallium	Zinc[a]

a. Retained as COPC as a result of localized contamination.

7.2.2.1 Analyte Specific Evaluation

An analyte-specific evaluation step is conducted when the 90th percentile value for an analyte is less than its action level, but one or more individual sample results are greater than the action level. This step is performed to confirm that the analyte has not been inappropriately eliminated and takes into consideration specific attributes of the groundwater contamination plume, as described below.

- Is the analyte co-located with one or more COPCs, with some sample concentrations above its action level?
- Is the analyte associated with a significant local trend?
- Is the analyte associated with a discrete local exposure point, with some concentrations above its action level?

Twelve analytes have been detected at least once in groundwater and have 90th percentile values less than their respective action levels (Table 7-8). Of the 12, all but zinc are eliminated as COPCs.

Acrolein's 90th percentile value is 2.8 µg/L, which is below the action level of 3.0 µg/L. Acrolein was detected in one of 45 samples (2.2 percent frequency). Acrolein was detected only once with a concentration greater than the action level. At monitoring well 399-1-12, acrolein was detected at a concentration of 3.8 µg/L. This detection was flagged with a "J" indicating that the result is an estimated value. Acrolein was not detected at this well during the low and transitional river stages. All MDLs are less than the action level. The results of this evaluation indicated that acrolein is not associated with a local trend or a continuing local source; therefore the 90th percentile value is considered a reasonable estimate of groundwater concentrations.

Aluminum's 90th percentile value is 10 µg/L, which is below the action level of 50 µg/L. Aluminum was detected in 4 of 45 samples (8.9 percent frequency). Aluminum was detected only once with a concentration greater than the action level. At monitoring well 399-3-6, aluminum was detected at a concentration of 99.5 µg/L. This detection was flagged with a "BD" indicating that the analyte was detected at a value less than the contract required detection limit, but greater than or equal to the instrument detection limit (i.e. it is an estimated concentration); and the analyte was reported at a secondary dilution factor. Aluminum was not detected at this well during the high and transitional river stages. All MDLs are less than the action level. The results of this evaluation indicated that aluminum is

not associated with a local trend or a continuing local source; therefore the 90th percentile value is considered a reasonable estimate of groundwater concentrations.

Bromodichloromethane's 90th percentile value is 0.088 µg/L, which is below the action level of 0.27 µg/L. When the action level is less than the QL reported in DOE/RL-2009-45, the action level defaults to the QL. The QL of 5.0 µg/L reported in DOE/RL-2009-45 is greater than the action level of 0.27 µg/L. All MDLs for bromodichloromethane are 0.088 µg/L. Trichloroethene was detected in 3 of 45 samples analyzed (6.7 percent frequency), with concentrations ranging from 0.68 to 0.69 µg/L. The results of this evaluation indicate that the 90th percentile value for bromodichloromethane is less than the QL reported in DOE/RL-2009-45; therefore bromodichloromethane is not identified as a final COPC.

Carbon tetrachloride's 90th percentile value is 0.12 µg/L, which is below the action level of 0.23 µg/L. When the action level is less than the QL reported in DOE/RL-2009-45, the action level defaults to the QL. The QL of 2.0 µg/L reported in DOE/RL-2009-45 is greater than the action level of 0.23 µg/L. All MDLs for carbon tetrachloride are 0.12 µg/L. Carbon tetrachloride was detected in 3 of 45 samples analyzed (6.7 percent frequency), with concentrations ranging from 0.13 to 0.59 µg/L. The results of this evaluation indicate that the 90th percentile value for carbon tetrachloride is less than the QL reported in DOE/RL-2009-45; therefore carbon tetrachloride is not identified as a final COPC.

Copper's 90th percentile value is 1.4 µg/L, which is below the action level of 9.0 µg/L. Copper was detected in 23 of 45 samples (51 percent frequency). Copper was detected only once with a concentration greater than the action level. At monitoring well 399-4-12, copper was detected at a concentration of 31 µg/L. This detection was flagged with a "D" indicating that the analyte was reported at a secondary dilution factor. Sampling rounds during the low and high river stage at monitoring well 699-4-12 reported detected concentrations less than the action level. All MDLs are less than the action level. The results of this evaluation indicate that copper is not associated with a local trend or a continuing local source; therefore the 90th percentile value is considered a reasonable estimate of groundwater concentrations.

Iron's 90th percentile value is 106 µg/L, which is less than the action level of 300 µg/L. Iron was detected in 19 of 45 samples (42 percent frequency). Iron was detected in three samples with concentrations greater than the action level. At monitoring well 399-3-12, iron was detected at concentrations of 372 µg/L, 508 µg/L, and 647 µg/L. In DOE/RL-96-61, *Hanford site Background: Part 3, Groundwater Background*, background concentrations have been established for filtered (dissolved) concentrations of water constituents. Minimum, maximum, and 90th percentile (filtered) background concentrations of iron are 6, 7,225, and 570 µg/L, respectively. All but one of the iron concentrations are below the 90th percentile (filtered) background concentration and are considered to be naturally occurring. The results of this evaluation indicate that iron is not associated with a local trend or a continuing local source; therefore the 90th percentile value is considered a reasonable estimate of groundwater concentrations.

Lead's 90th percentile value is 0.2 µg/L, which is below the action level of 2.1 µg/L. Lead was detected in 3 of 45 samples (6.7 percent frequency). Lead was detected only once with a concentration greater than the action level. At monitoring well 399-4-12, lead was detected at a concentration of 3.5 µg/L. This detection was flagged with a "D" indicating that the analyte was reported at a secondary dilution factor. Sampling rounds during the low and high river stage at monitoring well 699-4-12 reported detected concentrations less than the action level. All MDLs are less than the action level. The results of this evaluation indicate that lead is not associated with a local trend or a continuing local source; therefore the 90th percentile value is considered a reasonable estimate of groundwater concentrations.

Lithium's 90th percentile value is 25 µg/L, which is below the action level of 32 µg/L. Lithium was detected in 33 of 45 samples (73 percent frequency). Lithium was detected only once with a

concentration greater than the action level. At monitoring well 399-1-17A, lithium was detected at a concentration of 33 µg/L. Sampling rounds during the low and transitional river stage at monitoring well 699-1-17A reported detected concentrations less than the action level. All MDLs are less than the action level. The results of this evaluation indicate that lead is not associated with a local trend or a continuing local source; therefore the 90th percentile value is considered a reasonable estimate of groundwater concentrations.

Nitrate's 90th percentile value is 31,250 µg/L, which is below the action level of 45,000 µg/L. Nitrate was detected in all samples (100 percent frequency). Nitrate was detected only once with a concentration greater than the action level. At monitoring well 399-4-12, nitrate was detected at a concentration of 62,000 µg/L. This detection was flagged with a "D" indicating that the analyte was reported at a secondary dilution factor. Sampling rounds during the high and transitional river stage at monitoring well 699-4-12 reported detected concentrations less than the action level. The results of this evaluation indicate that nitrate is not associated with a local trend or a continuing local source; therefore the 90th percentile value is considered a reasonable estimate of groundwater concentrations.

Selenium's 90th percentile value is 3.7 µg/L, which is below the action level of 5.0 µg/L. Selenium was detected in all samples (100 percent frequency). Selenium was detected only once with a concentration greater than the action level. At monitoring well 399-1-17A, selenium was detected at a concentration of 5.8 µg/L. This detection was flagged with a "C" indicating that the analyte was reported in both the sample and the QC blank. Sampling rounds during the high and low river stage at monitoring well 699-1-17A reported detected concentrations less than the action level. The results of this evaluation indicate that selenium is not associated with a local trend or a continuing local source; therefore the 90th percentile value is considered a reasonable estimate of groundwater concentrations.

Thallium's 90th percentile value is 0.1 µg/L, which is below the action level of 0.24 µg/L. Thallium was detected in one of 45 samples (2.2 percent frequency). Thallium was detected only once with a concentration greater than the action level. At monitoring well 399-1-17A, thallium was detected at a concentration of 1.2 µg/L. This detection was flagged with a "BC" indicating that the analyte was detected at a value less than the contract required detection limit but greater than the MDL, and the analyte was reported in both the sample and the QC blank. Sampling rounds during the high and low river stage at monitoring well 699-1-17A reported nondetected concentrations less than the action level. All MDLs are less than the action level. The results of this evaluation indicate that thallium is not associated with a local trend or a continuing local source; therefore the 90th percentile value is considered a reasonable estimate of groundwater concentrations.

Zinc's 90th percentile value is 42 µg/L, which is below the action level of 91 µg/L. Zinc was detected in 12 of 45 samples (27 percent frequency). Zinc was detected at concentrations greater than the action level in all three sampling events at monitoring well 399-3-20. The detections at well 399-3-20 ranged in concentration from 334 to 456 µg/L. The results of this evaluation indicate that zinc is potentially associated with a local trend or continuing local source; therefore zinc is identified as a COPC.

Conclusions from Analyte-Specific Evaluation

Table 7-10 provides a summary of the historic COPCs identified in DOE/RL-2009-45 that were eliminated in this evaluation as COPCs for the 300 Area subregion.

Table 7-10. Summary of Historic COPCs from DOE/RL-2009-45 Not Identified as Groundwater COPCs for the 300 Area Subregion

COPC	Reason for Inclusion in the SAP (DOE/RL-2009-45)	Reason for Exclusion as COPC
Carbon tetrachloride	Maximum concentration and MDLs greater than action level	90th percentile less than EQL listed in DOE/RL-2009-45[a].
Copper	Maximum concentration and MDLs greater than action level	90th percentile less than action level; detected results not part of long-term trend or local exposure point.
Lead	Maximum concentration and MDLs greater than action level	90th percentile less than action level; detected results not part of long-term trend or local exposure point.
Nitrate (as N)	Maximum concentration greater than action level	90th percentile less than action level; detected results not part of long-term trend or local exposure point.
Selenium	Maximum concentration and MDLs greater than action level	90th percentile less than action level; detected results not part of long-term trend or local exposure point.
Thallium	Maximum concentration and MDLs greater than action level	90th percentile less than action level; detected results not part of long-term trend or local exposure point.

a. When the action level is less than the quantitation limit (QL) reported in DOE/RL-2009-45, the action level defaults to the QL.

7.2.3 Identify Analytes with 90th Percentile Values Greater Than Action Levels

Five analytes have 90th percentile values that are greater than their respective action levels. Gross alpha, trichloroethene, and uranium are retained as COPCS; they are discussed in section 7.3. A summary is provided in Table 7-11.

Table 7-11. Summary of Analytes with 90th Percentile Values Greater than Action Levels

Arsenic	Gross alpha	Tetrachloroethene
Trichloroethene	Uranium	

7.2.3.1 Analyte-Specific Evaluation

An analyte-specific evaluation is performed on the analytes that have 90th percentile values greater than the action level. This evaluation considers the effects of data quality, naturally occurring levels of metals, long-term trends, and action levels on the identification of COPCs.

Arsenic's 90th percentile value is 5.2 µg/L, which is greater than the action level of 0.018 µg/L. Arsenic was detected in 43 of 45 samples, with concentrations ranging between 0.93 µg/L and 6.5 µg/L. Thus, all detected concentrations of arsenic are above the action level. In DOE/RL-96-61, background concentrations have been established for filtered (dissolved) concentrations of water constituents. Minimum, maximum, and 90th percentile concentrations for (filtered) background concentrations of arsenic are 0.5, 8.8, and 7.85 µg/L, respectively. All arsenic concentrations are below the 90th percentile background (filtered) concentration and are considered to be naturally occurring; therefore, arsenic is not identified as a COPC.

Tetrachloroethene's 90th percentile value is 0.18 µg/L, which is greater than the action level of 0.081 µg/L. When the action level is less than the QL reported in DOE/RL-2009-45, the action level defaults to the QL. The QL of 5.0 µg/L reported in DOE/RL-2009-45 is greater than the action level of 0.081 µg/L. All MDLs for tetrachloroethene are 0.18 µg/L. Tetrachloroethene was detected in 3 of 45 samples

analyzed (6.7 percent frequency), with concentrations ranging from 0.19 to 0.38 µg/L. The three detected concentrations were flagged with a "J" indicating that the results are estimated concentrations. The results of this evaluation indicate that the 90th percentile value for tetrachloroethene is less than the QL reported in DOE/RL-2009-45; therefore tetrachloroethene is not identified as a COPC.

Conclusions from Analyte-Specific Evaluation

Table 7-12 lists the analytes that are excluded as COPCs for the 300 Area subregion.

Table 7-12. Summary of Analytes Excluded as Groundwater COPCs for the 300 Area Subregion

COPC	Reason for Inclusion in the SAP (DOE/RL-2009-45)	Reason for Exclusion as COPC
Arsenic	Maximum concentration and MDLs greater than action level	Naturally occurring
Tetrachloroethene	Maximum concentration and MDLs greater than action level	90th percentile less than QL listed in DOE/RL-2009-45[a]

a. When the action level is less than the quantitation limit (QL) reported in DOE/RL-2009-45, the action level defaults to the QL.

7.3 Summary of Groundwater COPCs

Fifteen monitoring wells were determined to be spatially representative of the groundwater conditions at the 300 Area subregion. Thirty-two historic COPCs were identified in DOE/RL-2009-45. The monitoring wells were analyzed for all 32 COPCs, using a method based analytical approach. Three sampling events are used to capture the effects that temporal fluctuations in river stage have on groundwater conditions. Samples collected in June 2010 represent aquifer conditions when the river stage is at its highest elevation. Samples collected in November to mid-December 2010 represent aquifer conditions when the river is at its lowest elevation. Samples collected in August 2010 represent aquifer conditions when the river is transitioning from high to low river stage.

The COPCs are the contaminants most likely to contribute to overall risk.

1. In general, analytes with exposure point concentrations[3] above an action level [see Section 3.3 for a complete list of chemical-specific applicable or relevant and appropriate requirements (ARARs)] were retained as COPCs.
2. Exceptions to this general rule are made for analytes that have exposure point concentrations that *are not* above their action level (which are calculated for the subregion as a whole), but exist locally at concentrations above the action level (i.e., are localized contaminants that represent a potential threat to human health or the environment).

Based on the results of the COPC identification process, four analytes are identified as COPCs for the 300 Area subregion.

A summary list is presented in Table 7-13. A list of the monitoring wells that reported concentrations greater than action levels is provided in Table 7-14.

[3] Exposure point concentrations are estimated as the 90th percentile value. See ECF-300FF5-11-0130.

Table 7-13. Summary of Groundwater COPCs Identified for the 300 Area Subregion

Metals	VOCs	Radionuclides
Uranium	Trichloroethene	Gross alpha
Zinc[a]		

a. EPC did not exceed action level, but was retained as a COPC due to localized contamination.

Gross alpha's 90th percentile value is 71 pCi/L, which is greater than the action level of 15 pCi/L. Gross alpha was detected in all samples analyzed (100 percent frequency), with concentrations ranging from 3.4 to 77 pCi/L. Gross alpha was detected at concentrations greater than the action level in 10 of 15 monitoring wells.

Trichloroethene's 90th percentile value is 2.2 µg/L, which is greater than the action level of 0.49 µg/L. When the action level is less than the MDL reported in DOE/RL-2009-45, the action level defaults to the EQL. The EQL of 2.0 µg/L reported in DOE/RL-2009-45 is greater than the action level of 0.49 µg/L. All MDLs for trichloroethene ranged between 0.21 and 0.25 µg/L. Trichloroethene was detected in 35 of 45 samples analyzed (87 percent frequency), with concentrations ranging from 0.31 to 3.0 µg/L. Trichloroethene was detected at concentrations greater than the action level in 11 of 15 monitoring wells.

Uranium's 90th percentile value is 114 µg/L, which is greater than the action level of 30 µg/L. Uranium was detected in all samples analyzed (100 percent frequency), with concentrations ranging from 6.4 to 177 µg/L. Uranium was detected at concentrations greater than the action level in 11 of 15 monitoring wells.

Zinc's 90th percentile value is 42 µg/L, which is less than the action level of 91 µg/L. Zinc was detected in 12 of 45 samples analyzed (27 percent frequency), with concentrations ranging from 4.0 to 456 µg/L. Zinc was detected at concentrations greater than the action level in 1 of 15 monitoring wells. The presence of zinc at well 399-3-20 is potentially associated with a local trend or continuing local source.

8 References

40 CFR 141, "National Primary Drinking Water Regulations," *Code of Federal Regulations*. Available at: http://www.access.gpo.gov/nara/cfr/waisidx_09/40cfr141_09.html.

40 CFR 143, "National Secondary Drinking Water Regulations," *Code of Federal Regulations*. Available at: http://www.access.gpo.gov/nara/cfr/waisidx_09/40cfr143_09.html.

Clean Water Act of 1977, 33 USC 1251, et seq.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 USC 9601, et seq.

DOE/RL-96-61, 1997, *Hanford Site Background Part Three Groundwater Background*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-2009-30, 2010, *300 Area Remedial Investigation/Feasibility Study Work Plan for the 300-FF-1, 300-FF-2, and 300-FF-5 Operable Units*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-2009-45, 2010, *300 Area Remedial Investigation/Feasibility Study Sampling and Analysis Plan for the 300-FF-1, 300-FF-2, and 300-FF-5 Operable Units*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-2010-99, 2011, *Remedial Investigation/Feasibility Study for the 300-FF-1, 300-FF-2, and 300-FF-5 Operable Units*, Draft A, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

ECF-300FF5-11-0130, 2011, *Calculation of Exposure Point Concentrations for the 300 Area Subregion of the 300-FF-5 Groundwater Operable Unit*, Draft, CH2M HILL Plateau Remediation Company, Richland, Washington.

ECF-100NPL-10-0462, 2011, *Calculation of Standard Method B Groundwater Cleanup Levels for Potable Groundwater for the 100 Areas and 300 Area Remedial Investigation/Feasibility Study Reports*, Rev. 1, CH2M HILL Plateau Remediation Company, Richland, Washington.

ECF-100NPL-10-0463, 2011, *Calculation of Standard Method B Surface Water Cleanup Levels for the 100 Areas and 300 Area Remedial Investigation/Feasibility Study Reports*, Draft, CH2M HILL Plateau Remediation Company, Richland, Washington.

EPA/540/1-89/002, 1989, *Risk Assessment Guidance for Superfund Volume I Human Health Evaluation Manual, (Part A) Interim Final*, OSWER 9285.7-02B, U.S. Environmental Protection Agency, Washington, D.C. Available at: http://epa-prgs.ornl.gov/radionuclides/HHEMA.pdf

EPA/600/4-79/020, 1983, *Methods of Chemical Analysis of Water and Wastes*, Office of Research and Development, U.S. Environmental Protection Agency, Cincinnati, Ohio.

Safe Drinking Water Act of 1974, 42 USC 300, et seq.

SW-846, 2007, *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, Third Edition; Final Update IV-B*, as amended, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, Washington, D.C.

WAC 173-201A, "Water Quality Standards for Surface Waters of the State of Washington," Washington Administrative Code, Olympia, Washington. Available at: http://www.ecy.wa.gov/pubs/wac173201a.pdf

WAC 173-340, "Model Toxics Control Act -- Cleanup," Washington Administrative Code, Olympia, Washington. Available at: http://apps.leg.wa.gov/WAC/default.aspx?cite=173-340

WAC 173-340-720, "Ground Water Cleanup Standards," Washington Administrative Code, Olympia, Washington.Available at: http://apps.leg.wa.gov/WAC/default.aspx?cite=173-340-720

WAC 173-340-720(3), "Method A Cleanup Levels for Potable Ground Water," Washington Administrative Code, Olympia, Washington.

WAC 173-340-720(4), "Method B Cleanup Levels for Potable Ground Water," Washington Administrative Code, Olympia, Washington.

WAC 173-340-730, "Surface Water Cleanup Standards," Washington Administrative Code, Olympia, Washington.Available at: http://apps.leg.wa.gov/WAC/default.aspx?cite=173-340-730

WAC 173-340-730(3), "Method B Surface Water Cleanup Levels," Washington Administrative Code, Olympia, Washington.

WAC 246-290-310, "Maximum Contaminant Levels (MCLs) and Maximum Residual Disinfectant Levels (MRDLs)," Washington Administrative Code, Olympia, Washington.

Woolford, James E. and John E. Reeder, 2009, "Summary of Key Existing EPA CERCLA Policies for Groundwater Restoration" (memorandum to Superfund National Policy Managers, Regions 1 – 10), OSWER Directive 9283.1-33, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, Washington, D.C., June 26. Available at: http://www.epa.gov/superfund/health/conmedia/gwdocs/pdfs/9283_1-33.pdf.

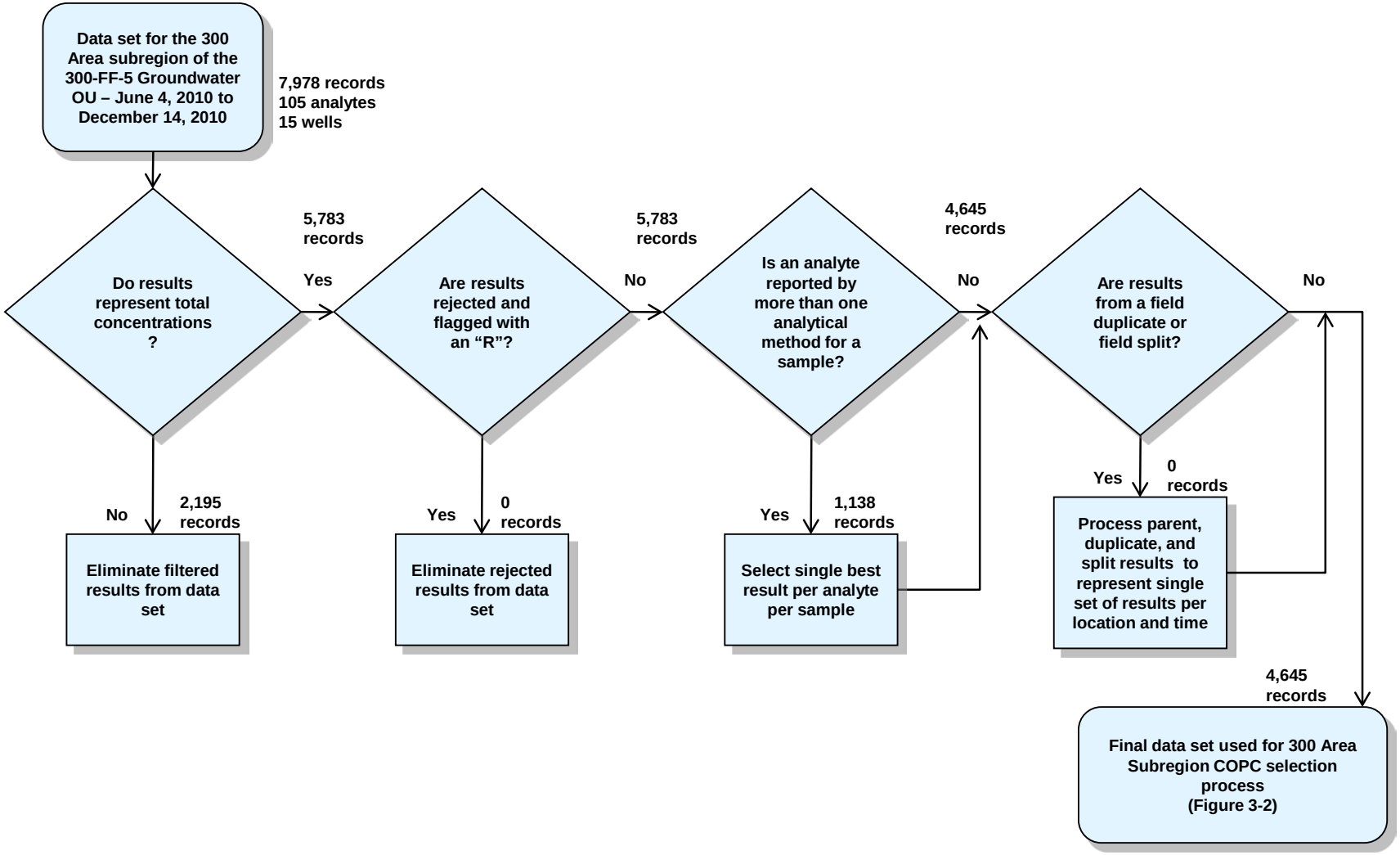

Figure 3-1. Data Processing and Reduction Steps for the 300 Area Subregion Data Set

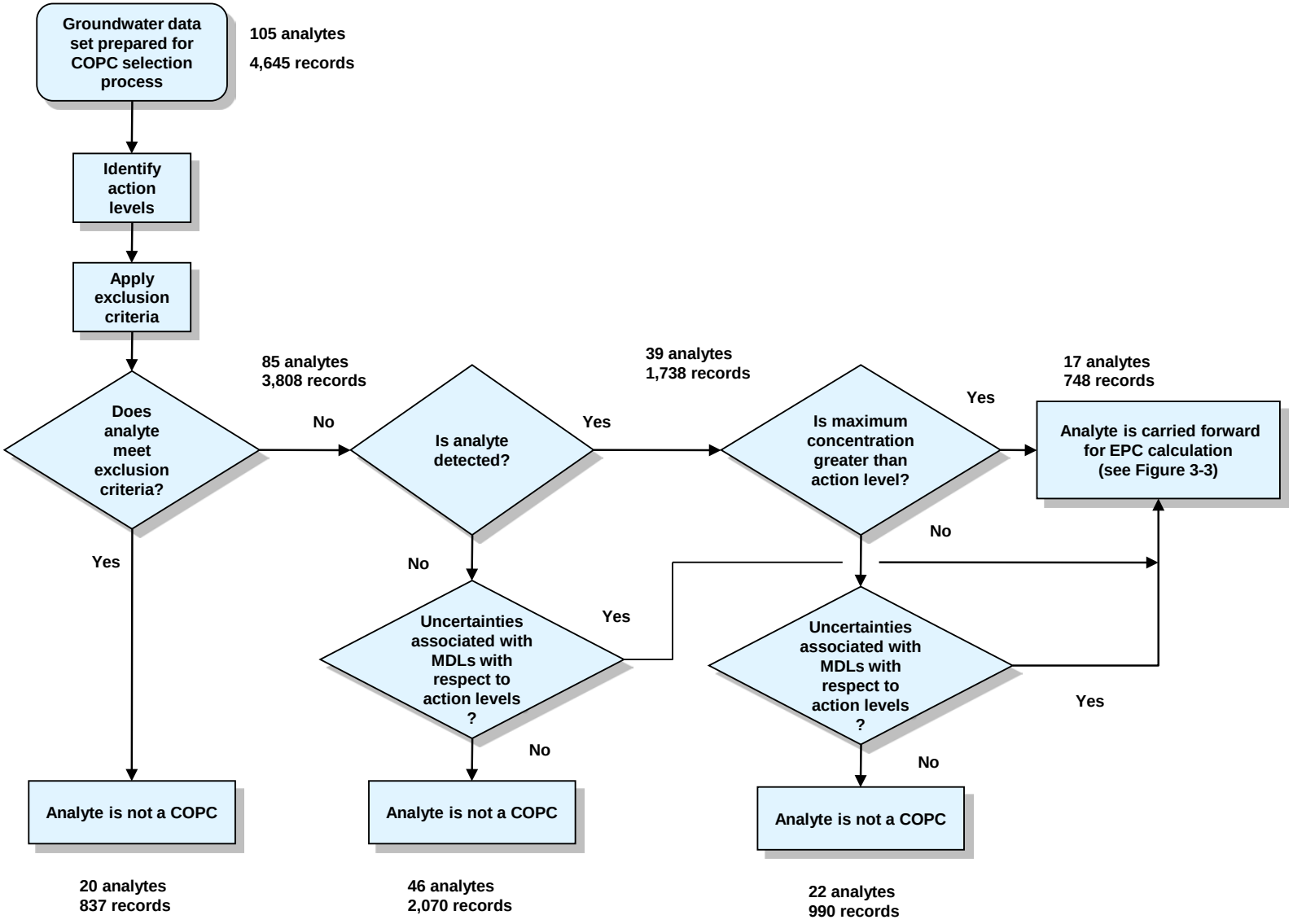

Figure 3-2. COPC Identification Process for the 300 Area Subregion of the 300-FF-5 Groundwater OU: Part 1

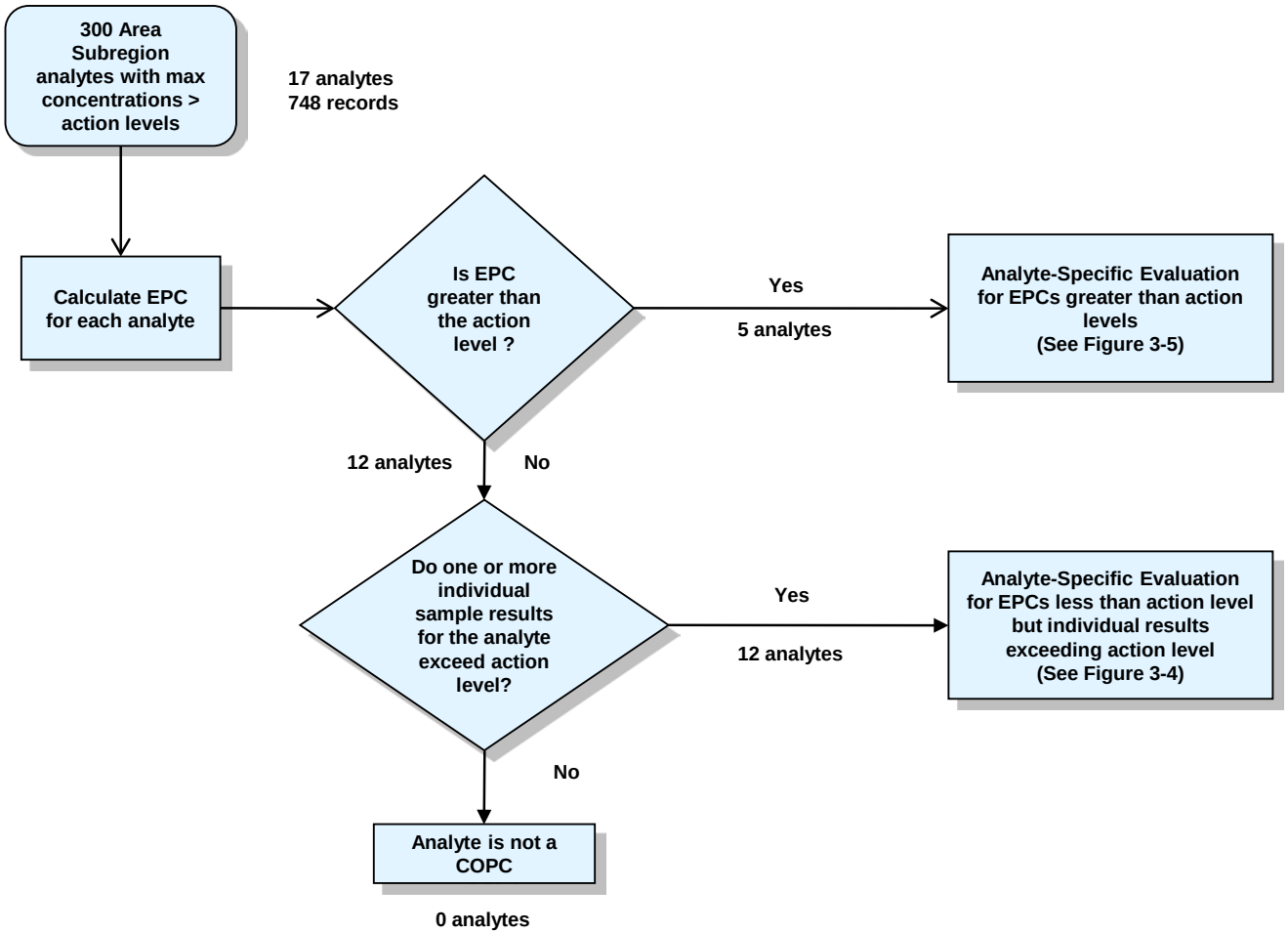

Figure 3-3. COPC Identification Process for the 300 Area Subregion of the 300-FF-5 Groundwater OU: Part 2

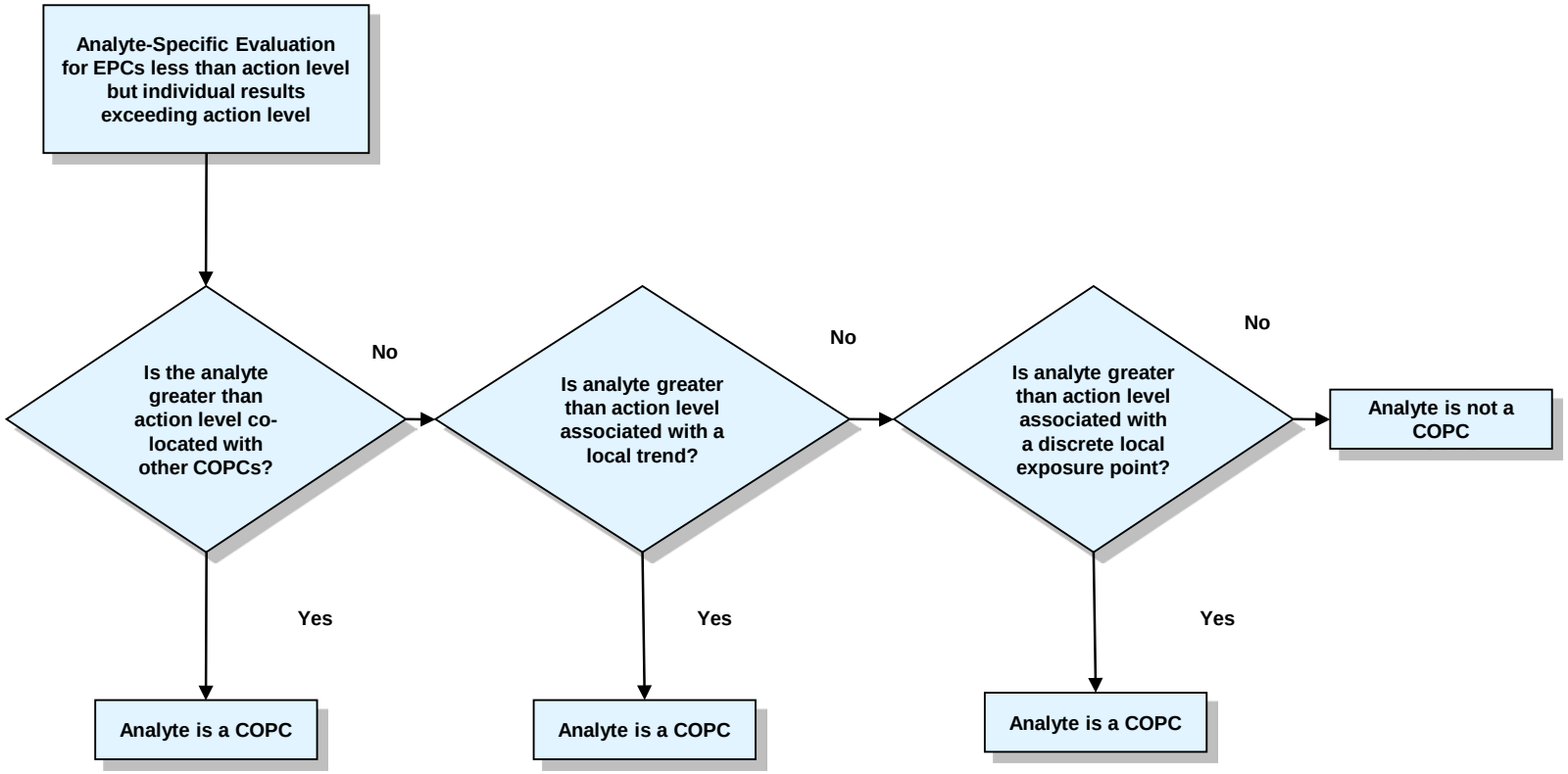

Figure 3-4. Analyte Specific Evaluation Process for EPCs Less Than Action Levels

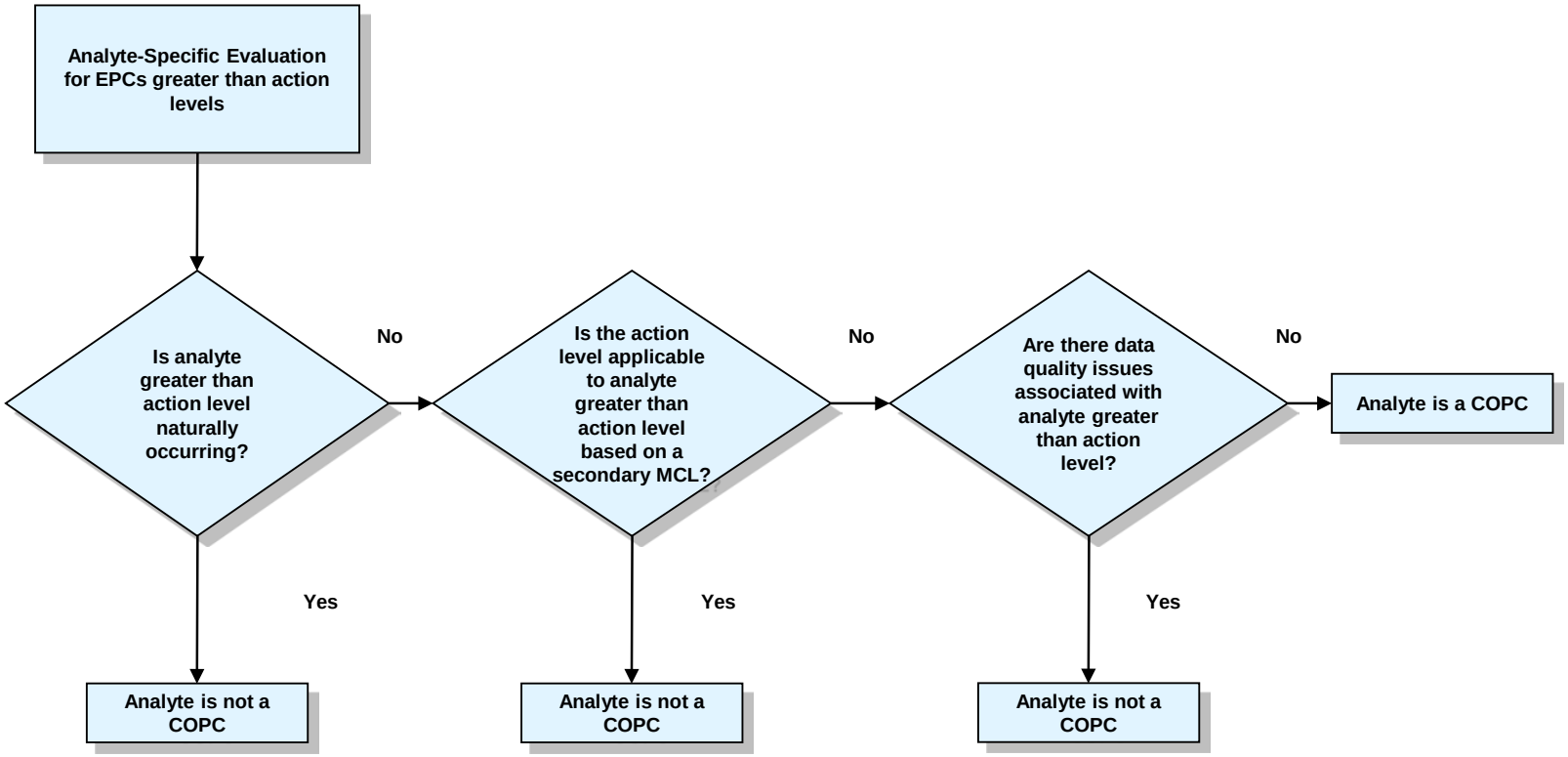

Figure 3-5. Analyte Specific Evaluation Process for EPCs Greater Than Action Levels