Table 3.13-1
Soils Data Summary - Building 4 - Waste Water Sump Area (B4WW)
Former York Naval Ordnance Plant - York, PA

Location/ID Depth (ft.) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 ft (mg/kg)	MSC Direct Contact 2 - 15 ft (mg/kg)	EPA RSL Industrial Soil (mg/kg)	BLD3-Geo-14 9 - 9.5 7/21/2003	*BLD4-GEO-1 0 - 1 6/13/2003	BLD4-GEO-1 7 - 8 6/13/2003	BLD4-GEO-1 15 - 16 6/13/2003	*BLD4-GEO-2 0 - 1 6/13/2003	BLD4-GEO-2 7 - 8 6/13/2003	BLD4-GEO-2 11 - 12 6/13/2003	*BLD4-GEO-3 0 - 1 6/13/2003	BLD4-GEO-3 7 - 8 6/13/2003	BLD4-GEO-3 15 - 16 6/13/2003
Cyanide, Free														
Cyanide, Free	200	56000	190000	20000		0.32 U	0.28 U	0.28 U	0.3 U	3.39	0.3 U	0.37	1.31	0.3 U
Cyanide, Total														
Cyanide, Total	200	56000	190000	20000		3.7	1.34	0.68	0.3 U	52.9	0.83	51.3	21.1	0.3 U
Hexavalent Chromium														
Hexavalent Chromium	190	420	190000	200		6.5 U	5.6 U	5.7 U	6 U	5.9 U	5.9 U	6.2 U	5.9 U	6.1 U
Mercury														
Mercury	10	840	190000	24		0.03 J	0.05 J	0.05 J	0.04 J	0.02 J	0.03 J	0.04 J	0.03 J	0.02 J
Metal														
Antimony	27	1100	190000	410	1	2	0.9 J	0.8 J	1	0.5 J	0.5 J	0.05 J	1	1
Arsenic	150	53	190000	1.6	6	3	3	2 J	9	3	2	3	3	2 J
Beryllium	320	5600	190000	2000	0.6 J	0.7 J	0.3 J	0.5 J	0.7 J	0.4 J	0.2 J	1.1	0.3 J	0.4 J
Cadmium	38	210	190000	800	0 U	2.5	0.5 U	0.5 U	0.5 U	0.4 U	0.4 U	0.6	0.5 U	0.5 U
Chromium				1400	21.7	37.8	21.5	14.3	18.7	26	16	16.9	22.6	15.8
Copper	36000	100000	190000	41000	16	19	12	14	11	9	7	16	9	11
Lead	450	1000	190000	800	12	33	11	10	16	12	8	14	11	13
Mercury	10	840	190000	24	0.05 J									
Nickel	650	56000	190000	20000	19	33	1	13	8	80	17	386	157	12
Selenium	26	14000	190000	5100	0 U	1 J	2 U	0.8 J	1 J	0.9 J	0.6 J	2 U	0.7 J	1 J
Silver	84	14000	190000	5100	1	0.6 U	0.5 U	0.5 U	0.5 U	0.4 U	0.4 U	0.4 U	0.5 U	0.1 J
Thallium	14	200	190000	66	0 U	4 U	3 U	3 U	3 U	2 U	3 U	3 U	3 U	3 U
Zinc	12000	190000	190000	310000	51	145	36	47	37	2	18	47	24	38
Toxicity Characteristic Leaching Procedure - Mercury														
Mercury	10	840	190000	24										
Toxicity Characteristic Leaching Procedure - Metal														
Antimony	27	1100	190000	410										
Arsenic	150	53	190000	1.6										
Barium	8200	190000	190000	190000										
Beryllium	320	5600	190000	2000										
Cadmium	38	210	190000	800										
Chromium				1400										
Copper	36000	100000	190000	41000										
Lead	450	1000	190000	800										
Nickel	650	56000	190000	20000										
Selenium	26	14000	190000	5100										
Silver	84	14000	190000	5100										
Thallium	14	200	190000	66										
Zinc	12000	190000	190000	310000										
Total Solids														
Moisture						23.10%	10.70%	12.10%	16.70%	15.90%	16%	19.10%	15.70%	17.40%
Percent Solids						76.90%	89.30%	87.90%	83.30%	84.10%	84%	80.90%	84.30%	82.60%
Volatile Organic Compound														
1,1,1,2-Tetrachloroethane	18	3100	190000	9.8										
1,1,1-Trichloroethane	20	10000	10000	39000		0.0007 J	0.0018 U	0.0018 J	0.0022 U	0.0014 J	0.0021 U	0.0087	0.0022 U	0.0021 U
1,1,2,2-Tetrachloroethane	0.03	28	33	2.9		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
1,1,2-Trichloroethane	0.5	100	120	5.5		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
1,1,2-Trichlorotrifluoroethane	53000	190000	190000	180000										
1,1-Dichloroethane	11	1000	1200	17		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.00054 J	0.0022 U	0.0021 U
1,1-Dichloroethene	0.7	33	38	1100		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
1,2-Dibromo-3-Chloropropane	0.02	11	12	0.073		0.0051 U	0.0035 U	0.0041 U	0.0043 U	0.0041 U	0.0042 U	0.0042 U	0.0044 U	0.0042 U
1,2-Dibromoethane	0.005	0.93	8.6	0.17		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference. * = excavated location.

Table 3.13-1
Soils Data Summary - Building 4 - Waste Water Sump Area (B4WW)
Former York Naval Ordnance Plant - York, PA

Location/ID Depth (ft.) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 ft (mg/kg)	MSC Direct Contact 2 - 15 ft (mg/kg)	EPA RSL Industrial Soil (mg/kg)	BLD3-Geo-14 9 - 9.5 7/21/2003	*BLD4-GEO-1 0 - 1 6/13/2003	BLD4-GEO-1 7 - 8 6/13/2003	BLD4-GEO-1 15 - 16 6/13/2003	*BLD4-GEO-2 0 - 1 6/13/2003	BLD4-GEO-2 7 - 8 6/13/2003	BLD4-GEO-2 11 - 12 6/13/2003	*BLD4-GEO-3 0 - 1 6/13/2003	BLD4-GEO-3 7 - 8 6/13/2003	BLD4-GEO-3 15 - 16 6/13/2003
1,2-Dichloroethane	0.5	63	73	2.2		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
1,2-Dichloropropane	0.5	160	180	4.7		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
1,3-Dichloropropene	2.6	410	470	8.4										
1,4-Dioxane	2.4	210	240	160		0.0579 U	0.0394 U	0.0466 U	0.0489 U	0.0465 U	0.0477 U	0.0477 U	0.0491 U	0.0478 U
2-Butanone	580	10000	10000	190000		0.0278	0.007	0.0083 U	0.014	0.0083 U	0.0085 U	0.019	0.0087 U	0.0085 U
2-Chloroethyl Vinyl Ether														
2-Hexanone						0.0103 U	0.007 U	0.0083 U	0.0087 U	0.0083 U	0.0085 U	0.0085 U	0.0087 U	0.0085 U
4-Methyl-2-Pentanone	41	4300	4900	52000		0.0103 U	0.007 U	0.0083 U	0.0087 U	0.0083 U	0.0085 U	0.0085 U	0.0087 U	0.0085 U
Acetone	1000	10000	10000	610000		0.328	0.0112	0.0321	0.142	0.0147	0.0085 U	0.119	0.0057 J	0.0085 U
Acrolein	0.012	1.1	1.2	0.68										
Acrylonitrile	0.27	24	28	1.2										
Benzene	0.5	210	240	5.6		0.00042 J	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
Bromochloromethane	9	10000	10000			0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
Bromodichloromethane	10	45	51	1.4		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
Bromoform	10	1500	1700	220		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
Bromomethane	1	270	300	35		0.0051 U	0.0035 U	0.0041 U	0.0043 U	0.0041 U	0.0042 U	0.0042 U	0.0044 U	0.0042 U
Carbon Disulfide	410	10000	10000	3000		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
Carbon Tetrachloride	0.5	110	120	1.3		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
Chlorobenzene	10	10000	10000	1500		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
Chlorodibromomethane	10	61	70	3.4		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
Chloroethane	90	10000	10000	62000		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
Chloroform	10	17	19	1.5		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.00094 J
Chloromethane	0.3	920	1000	510		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
cis-1,2-Dichloroethene	7	1900	2100	10000		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
cis-1,3-Dichloropropene	2.6	410	470	8.4		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
Ethylbenzene	70	10000	10000	29		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
m,p-Xylene	1000	10000	10000	2600		0.0051 U	0.0035 U	0.0041 U	0.0043 U	0.0041 U	0.0042 U	0.0042 U	0.0044 U	0.0042 U
Methyl tert-butyl ether	2	3200	3700	190										
Methylene chloride	0.5	3500	4000	54		0.0017 J	0.0035 U	0.0041 U	0.00064 J	0.0005 J	0.00048 J	0.00077 J	0.00096 J	0.00051 J
o-Xylene	1000	10000	10000	23000		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
Styrene	24	10000	10000	38000		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
Tetrachloroethene	0.5	1500	3300	2.7		0.00066 J	0.0018 U	0.00026 J	0.0022 U	0.00099 J	0.0021 U	0.00047 J	0.0022 U	0.0021 U
Toluene	100	10000	10000	46000		0.0055	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
trans-1,2-Dichloroethene	10	3700	4300	500		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
trans-1,3-Dichloropropene	2.6	410	470	8.4		0.0026 U	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
Trichloroethene	0.5	970	1100	14		0.0195	0.0018 U	0.0021 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0021 U
Vinyl Chloride	0.2	53	220	1.7		0.0051 U	0.0035 U	0.0041 U	0.0043 U	0.0041 U	0.0042 U	0.0042 U	0.0044 U	0.0042 U
Xylenes (Total)	1000	10000	10000	2600		0.0077 U	0.0053 U	0.0062 U	0.0065 U	0.0062 U	0.0064 U	0.0064 U	0.0065 U	0.0064 U

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference. * = excavated location.

Table 3.13-1
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Former York Naval Ordnance Plant - York, PA

Location/ID Depth (ft.) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 ft (mg/kg)	MSC Direct Contact 2 - 15 ft (mg/kg)	EPA RSL Industrial Soil (mg/kg)	*BLD4-GEO-4 1 - 2 6/13/2003	BLD4-GEO-4 6 - 7 6/13/2003	BLD4-GEO-4 11 - 12 6/13/2003	*BLD4-GEO-5 0 - 1 6/12/2003	BLD4-GEO-5 7 - 8 6/12/2003	BLD4-GEO-5 15 - 16 6/12/2003	*BLD4-GEO-6 0 - 1 6/12/2003	BLD4-GEO-6 7 - 8 6/12/2003	BLD4-GEO-6 11 - 12 6/12/2003	*BLD4-GEO-7 0 - 1 6/12/2003
Cyanide, Free														
Cyanide, Free	200	56000	190000	20000	0.26 U	1.45	0.3 U	0.3 U	0.3 U	0.3 U	0.82	0.28	0.3 U	1.75
Cyanide, Total														
Cyanide, Total	200	56000	190000	20000	0.42	6.63	1.37	0.3 U	0.85	0.36	10.9	1.79	0.43	8.14
Hexavalent Chromium														
Hexavalent Chromium	190	420	190000	200	5.3 U	6 U	6 U	6 U	6.1 U	5.9 U	6.3 U	5.6 U	6.1 U	6
Mercury														
Mercury	10	840	190000	24	0.03 J	0.02 J	0.02 J	0.03 J	0.02 J	0.05 J	0.03 J	0.02 J	0.06 J	0.03 J
Metal														
Antimony	27	1100	190000	410	1	1	1 J	0.9 J	0.9 J	1	1	0.8 J	1	1
Arsenic	150	53	190000	1.6	2	3	2	2	3	0.9 J	2 J	2 J	14	2 J
Beryllium	320	5600	190000	2000	0.8 J	0.3 J	0.2 J	1 J	0.4 J	0.2 J	0.3 J	0.3 J	0.08 J	1.5
Cadmium	38	210	190000	800	1.5	1.3	0.5 U	0.5 U	0.6 U	0.4 U	16.2	0.5 U	0.7	1
Chromium				1400	50.9	33	20.9	11.7	22.8	12.4	10	14.4	23.8	18.6
Copper	36000	100000	190000	41000	15	11	9	5	8	6	9	7	26	14
Lead	450	1000	190000	800	33	10	10	7	11	13	321	7	22	9
Mercury	10	840	190000	24										
Nickel	650	56000	190000	20000	55	766	40	7	48	5	0.321	20	69	118
Selenium	26	14000	190000	5100	1 J	0.8 J	0.8 J	2 U	2 U	1 J	0.8 J	2 U	2 U	2 U
Silver	84	14000	190000	5100	0.5 U	0.5 U	0.5 U	0.2 J	0.2 J	0.4 U	0.6 U	0.5	3.6	0.2 J
Thallium	14	200	190000	66	3 U	3 U	3 U	3 U	4 U	3 U	4 U	3 U	4 U	3 U
Zinc	12000	190000	190000	310000	87	44	31	31	40	24	43	26	96	83
Toxicity Characteristic Leaching Procedure - Mercury														
Mercury	10	840	190000	24										
Toxicity Characteristic Leaching Procedure - Metal														
Antimony	27	1100	190000	410										
Arsenic	150	53	190000	1.6										
Barium	8200	190000	190000	190000										
Beryllium	320	5600	190000	2000										
Cadmium	38	210	190000	800										
Chromium				1400										
Copper	36000	100000	190000	41000										
Lead	450	1000	190000	800										
Nickel	650	56000	190000	20000										
Selenium	26	14000	190000	5100										
Silver	84	14000	190000	5100										
Thallium	14	200	190000	66										
Zinc	12000	190000	190000	310000										
Total Solids														
Moisture					4.90%	17%	16.20%	16.40%	17.90%	15.80%	20.80%	10.80%	18%	17.10%
Percent Solids					95.10%	83%	83.80%	83.60%	82.10%	84.20%	79.20%	89.20%	82%	82.90%
Volatile Organic Compound														
1,1,1,2-Tetrachloroethane	18	3100	190000	9.8										
1,1,1-Trichloroethane	20	10000	10000	39000	0.0022 U	0.0021 U	0.00017 J	0.0023 U	0.0021 U	0.0022 U	0.00079 J	0.0023 U	0.002 U	0.0021 U
1,1,2,2-Tetrachloroethane	0.03	28	33	2.9	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
1,1,2-Trichloroethane	0.5	100	120	5.5	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
1,1,2-Trichlorotrifluoroethane	53000	190000	190000	180000										
1,1-Dichloroethane	11	1000	1200	17	0.0022 J	0.0021 U	0.002 U	0.0023 U	0.0032	0.0025	0.0025 U	0.0023 U	0.0012 J	0.0021 U
1,1-Dichloroethene	0.7	33	38	1100	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
1,2-Dibromo-3-Chloropropane	0.02	11	12	0.073	0.0043 U	0.0043 U	0.004 U	0.0046 U	0.0041 U	0.0044 U	0.005 U	0.0045 U	0.004 U	0.0043 U
1,2-Dibromoethane	0.005	0.93	8.6	0.17	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference. * = excavated location.

Table 3.13-1
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Former York Naval Ordnance Plant - York, PA

Location/ID Depth (ft.) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 ft (mg/kg)	MSC Direct Contact 2 - 15 ft (mg/kg)	EPA RSL Industrial Soil (mg/kg)	*BLD4-GEO-4 1 - 2 6/13/2003	BLD4-GEO-4 6 - 7 6/13/2003	BLD4-GEO-4 11 - 12 6/13/2003	*BLD4-GEO-5 0 - 1 6/12/2003	BLD4-GEO-5 7 - 8 6/12/2003	BLD4-GEO-5 15 - 16 6/12/2003	*BLD4-GEO-6 0 - 1 6/12/2003	BLD4-GEO-6 7 - 8 6/12/2003	BLD4-GEO-6 11 - 12 6/12/2003	*BLD4-GEO-7 0 - 1 6/12/2003
1,2-Dichloroethane	0.5	63	73	2.2	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
1,2-Dichloropropane	0.5	160	180	4.7	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
1,3-Dichloropropene	2.6	410	470	8.4										
1,4-Dioxane	2.4	210	240	160	0.0488 U	0.0488 U	0.0452 U	0.0514 U	0.0466 U	0.0491 U	0.056 U	0.0507 U	0.0445 U	0.0482 U
2-Butanone	580	10000	10000	190000	0.0087 U	0.0102	0.008 U	0.0044 J	0.0083 U	0.0087 U	0.0135	0.0037 J	0.0079 U	0.004 J
2-Chloroethyl Vinyl Ether														
2-Hexanone					0.0087 U	0.0085 U	0.008 U	0.0091 U	0.0083 U	0.0087 U	0.01 U	0.009 U	0.0079 U	0.0086 U
4-Methyl-2-Pentanone	41	4300	4900	52000	0.0087 U	0.0085 U	0.008 U	0.0091 U	0.0083 U	0.0087 U	0.01 U	0.009 U	0.0079 U	0.0086 U
Acetone	1000	10000	10000	610000	0.0087 U	0.0485	0.0211	0.153	0.0083 U	0.0087 U	0.338	0.161	0.0512	0.145
Acrolein	0.012	1.1	1.2	0.68										
Acrylonitrile	0.27	24	28	1.2										
Benzene	0.5	210	240	5.6	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.00026 J	0.0023 U	0.002 U	0.0021 U
Bromochloromethane	9	10000	10000		0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
Bromodichloromethane	10	45	51	1.4	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
Bromoform	10	1500	1700	220	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
Bromomethane	1	270	300	35	0.0043 U	0.0043 U	0.004 U	0.0046 U	0.0041 U	0.0044 U	0.0025 U	0.0045 U	0.004 U	0.0043 U
Carbon Disulfide	410	10000	10000	3000	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0023	0.0022 U	0.0025 U	0.0023 U	0.0044	0.0021 U
Carbon Tetrachloride	0.5	110	120	1.3	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
Chlorobenzene	10	10000	10000	1500	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
Chlorodibromomethane	10	61	70	3.4	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
Chloroethane	90	10000	10000	62000	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
Chloroform	10	17	19	1.5	0.0022 U	0.00012 J	0.00032 J	0.0023 U	0.0021 U	0.0022 U	0.00019 J	0.0023 U	0.002 U	0.00012 J
Chloromethane	0.3	920	1000	510	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
cis-1,2-Dichloroethene	7	1900	2100	10000	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 J
cis-1,3-Dichloropropene	2.6	410	470	8.4	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
Ethylbenzene	70	10000	10000	29	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
m,p-Xylene	1000	10000	10000	2600	0.0043 U	0.0043 U	0.004 U	0.0046 U	0.0041 U	0.0044 U	0.005 U	0.0045 U	0.004 U	0.0043 U
Methyl tert-butyl ether	2	3200	3700	190										
Methylene chloride	0.5	3500	4000	54	0.0043 U	0.0043 U	0.004 U	0.00048 J	0.00054 J	0.00058 J	0.0032 J	0.002 J	0.00071 J	0.0017 J
o-Xylene	1000	10000	10000	23000	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
Styrene	24	10000	10000	38000	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
Tetrachloroethene	0.5	1500	3300	2.7	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
Toluene	100	10000	10000	46000	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.00049 J	0.00036 J	0.002 J	0.0021 U
trans-1,2-Dichloroethene	10	3700	4300	500	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
trans-1,3-Dichloropropene	2.6	410	470	8.4	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
Trichloroethene	0.5	970	1100	14	0.0022 U	0.0021 U	0.002 U	0.0023 U	0.0021 U	0.0022 U	0.0025 U	0.0023 U	0.002 U	0.0021 U
Vinyl Chloride	0.2	53	220	1.7	0.0043 U	0.0043 U	0.004 U	0.0046 U	0.0041 U	0.0044 U	0.005 U	0.0045 U	0.004 U	0.0043 U
Xylenes (Total)	1000	10000	10000	2600	0.0065 U	0.0064 U	0.006 U	0.0069 U	0.0062 U	0.0065 U	0.0075 U	0.0068 U	0.0059 U	0.0064 U

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference. * = excavated location.

Table 3.13-1
Soils Data Summary - Building 4 - Waste Water Sump Area (B4WW)
Former York Naval Ordnance Plant - York, PA

Location/ID Depth (ft.) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 ft (mg/kg)	MSC Direct Contact 2 - 15 ft (mg/kg)	EPA RSL Industrial Soil (mg/kg)	BLD4-GEO-7 6 - 7 6/12/2003	BLD4-GEO-7 10 - 11 6/12/2003	*BLD4-GEO-8 0 - 1 6/12/2003	BLD4-GEO-8 7 - 8 6/12/2003	BLD4-GEO-8 11 - 12 6/12/2003	*BLD4-GEO-9 1 - 2 6/12/2003	BLD4-GEO-9 7 - 8 6/12/2003	BLD4-GEO-9 15 - 16 6/12/2003	*BLD4-GEO-10 0 - 1 6/12/2003	*BLD4-GEO-10 6.5 - 7.5 6/12/2003
Cyanide, Free														
Cyanide, Free	200	56000	190000	20000	0.52	1.01	0.28 U	1.95	1.76	0.3 U	4.38	0.29 U	0.29 U	0.75
Cyanide, Total														
Cyanide, Total	200	56000	190000	20000	12	37.5	0.39	109	44.1	0.43	109	1.03	0.29	2.32
Hexavalent Chromium														
Hexavalent Chromium	190	420	190000	200	5.8	6.8 U	5.6 U	6.1 U	25.9	6.1 U	6 U	5.7 U	5.7 U	6.3 U
Mercury														
Mercury	10	840	190000	24	0.04 J	0.1	0.02 J	0.02 J	0.2	0.3 J	0.04 J	0.008 J	0.02 J	0.04 J
Metal														
Antimony	27	1100	190000	410	1	1 J	2	2	2	1 J	1	0.5 J	1	1
Arsenic	150	53	190000	1.6	5	40	2 J	13	20	2 J	22	7	4	12
Beryllium	320	5600	190000	2000	0.6 J	2.3	0.3 J	0.8 J	1.8 J	1.1 J	0.9 J	0.7 J	0.7 J	1.2
Cadmium	38	210	190000	800	7.4	8.6	0.3 J	22.9	8.7	1.2	11.2	0.4 U	0.5 U	1.6
Chromium				1400	58.6	126	11.4	119	364	13.8	52.8	12.5	25	46.3
Copper	36000	100000	190000	41000	11	71	115	17	53	7	16	14	13	23
Lead	450	1000	190000	800	16	127	6	20	43	14	21	9	16	20
Mercury	10	840	190000	24										
Nickel	650	56000	190000	20000	328	2440	45	1040	3410	73	127	26	18	302
Selenium	26	14000	190000	5100	2 U	3 U	2 U	2 U	3 U	0.7 J	2 U	2 U	2 U	2 U
Silver	84	14000	190000	5100	0.7	10.1	2.3	3.2	5.9	0.7	6.9	1.6	1.4	3.3
Thallium	14	200	190000	66	3 U	4 U	3 U	3 U	4 U	4 U	3 U	2 U	3 U	3 U
Zinc	12000	190000	190000	310000	67	255	49	273	339	252	185	69	58	95
Toxicity Characteristic Leaching Procedure - Mercury														
Mercury	10	840	190000	24										
Toxicity Characteristic Leaching Procedure - Metal														
Antimony	27	1100	190000	410										
Arsenic	150	53	190000	1.6										
Barium	8200	190000	190000	190000										
Beryllium	320	5600	190000	2000										
Cadmium	38	210	190000	800										
Chromium				1400										
Copper	36000	100000	190000	41000										
Lead	450	1000	190000	800										
Nickel	650	56000	190000	20000										
Selenium	26	14000	190000	5100										
Silver	84	14000	190000	5100										
Thallium	14	200	190000	66										
Zinc	12000	190000	190000	310000										
Total Solids														
Moisture					13.90%	26%	9.90%	17.90%	29.10%	17.80%	16.70%	12.30%	12.30%	20.30%
Percent Solids					86.10%	74%	90.10%	82.10%	70.90%	82.20%	83.30%	87.70%	87.70%	79.70%
Volatile Organic Compound														
1,1,1,2-Tetrachloroethane	18	3100	190000	9.8										
1,1,1-Trichloroethane	20	10000	10000	39000	0.0025 U	0.0028 U	0.0024 U	0.00034 J	0.0027 U	0.00022 J	0.00031 J	0.0019 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	0.03	28	33	2.9	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
1,1,2-Trichloroethane	0.5	100	120	5.5	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
1,1,2-Trichlorotrifluoroethane	53000	190000	190000	180000										
1,1-Dichloroethane	11	1000	1200	17	0.0011 J	0.0034	0.0024 U	0.00082 J	0.0093	0.0021 U	0.00054 J	0.0052	0.002 U	0.0012 J
1,1-Dichloroethene	0.7	33	38	1100	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
1,2-Dibromo-3-Chloropropane	0.02	11	12	0.073	0.0051 U	0.0057 U	0.0048 U	0.0042 U	0.0055 U	0.0041 U	0.0047 U	0.0038 U	0.0039 U	0.0039 U
1,2-Dibromoethane	0.005	0.93	8.6	0.17	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference. * = excavated location.

Table 3.13-1
Soils Data Summary - Building 4 - Waste Water Sump Area (B4WW)
Former York Naval Ordnance Plant - York, PA

Location/ID Depth (ft.) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 ft (mg/kg)	MSC Direct Contact 2 - 15 ft (mg/kg)	EPA RSL Industrial Soil (mg/kg)	BLD4-GEO-7 6 - 7 6/12/2003	BLD4-GEO-7 10 - 11 6/12/2003	*BLD4-GEO-8 0 - 1 6/12/2003	BLD4-GEO-8 7 - 8 6/12/2003	BLD4-GEO-8 11 - 12 6/12/2003	*BLD4-GEO-9 1 - 2 6/12/2003	BLD4-GEO-9 7 - 8 6/12/2003	BLD4-GEO-9 15 - 16 6/12/2003	*BLD4-GEO-10 0 - 1 6/12/2003	*BLD4-GEO-10 6.5 - 7.5 6/12/2003
1,2-Dichloroethane	0.5	63	73	2.2	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
1,2-Dichloropropane	0.5	160	180	4.7	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
1,3-Dichloropropene	2.6	410	470	8.4										
1,4-Dioxane	2.4	210	240	160	0.0571 U	0.0639 U	0.054 U	0.0471 U	0.0614 U	0.0465 U	0.0527 U	0.0425 U	0.0441 U	0.0443 U
2-Butanone	580	10000	10000	190000	0.0101 U	0.003 J	0.003 J	0.0074 J	0.0109 J	0.0083	0.0094 U	0.0076 U	0.0078 U	0.0079 U
2-Chloroethyl Vinyl Ether														
2-Hexanone					0.0101 U	0.0114 U	0.0096 U	0.0084 U	0.0109 U	0.0083 U	0.0094 U	0.0076 U	0.0078 U	0.0079 U
4-Methyl-2-Pentanone	41	4300	4900	52000	0.0101 U	0.0114 U	0.0096 U	0.0084 U	0.0109 U	0.0083 U	0.0094 U	0.0076 U	0.0078 U	0.0079 U
Acetone	1000	10000	10000	610000	0.0791	0.0952	0.113	0.113	0.0531	0.24	0.013	0.0076 U	0.0597	0.0079 U
Acrolein	0.012	1.1	1.2	0.68										
Acrylonitrile	0.27	24	28	1.2										
Benzene	0.5	210	240	5.6	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.00017 J	0.0023 U	0.0019 U	0.002 U	0.002 U
Bromochloromethane	9	10000	10000		0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
Bromodichloromethane	10	45	51	1.4	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
Bromoform	10	1500	1700	220	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
Bromomethane	1	270	300	35	0.0051 U	0.0057 U	0.0048 U	0.0042 U	0.0055 U	0.0041 U	0.0047 U	0.0038 U	0.0039 U	0.0039 U
Carbon Disulfide	410	10000	10000	3000	0.0031	0.0019 J	0.0011 J	0.0027	0.004	0.0016 J	0.0013 J	0.00086 J	0.002 U	0.0093
Carbon Tetrachloride	0.5	110	120	1.3	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
Chlorobenzene	10	10000	10000	1500	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
Chlorodibromomethane	10	61	70	3.4	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
Chloroethane	90	10000	10000	62000	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
Chloroform	10	17	19	1.5	0.0025 U	0.0028 U	0.0024 U	0.00013 J	0.0027 J	0.00019 J	0.0023 U	0.00014 J	0.002 U	0.002 U
Chloromethane	0.3	920	1000	510	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
cis-1,2-Dichloroethene	7	1900	2100	10000	0.0002 J	0.0028 U	0.0024 U	0.0021 U	0.00035 J	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	2.6	410	470	8.4	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
Ethylbenzene	70	10000	10000	29	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
m,p-Xylene	1000	10000	10000	2600	0.0051 U	0.0057 U	0.0048 U	0.0042 U	0.0055 U	0.0041 U	0.0047 U	0.0038 U	0.0039 U	0.0039 U
Methyl tert-butyl ether	2	3200	3700	190										
Methylene chloride	0.5	3500	4000	54	0.0022 J	0.0028 J	0.0028 J	0.0018 J	0.0021 J	0.0041	0.0024 J	0.0019 J	0.0016 J	0.0023 J
o-Xylene	1000	10000	10000	23000	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
Styrene	24	10000	10000	38000	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
Tetrachloroethene	0.5	1500	3300	2.7	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
Toluene	100	10000	10000	46000	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0011 J	0.0023 U	0.0019 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	10	3700	4300	500	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	2.6	410	470	8.4	0.0025 U	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.0021 U	0.0023 U	0.0019 U	0.002 U	0.002 U
Trichloroethene	0.5	970	1100	14	0.0013 J	0.0028 U	0.0024 U	0.0021 U	0.0027 U	0.00045 J	0.00035 J	0.0019 U	0.002 U	0.002 U
Vinyl Chloride	0.2	53	220	1.7	0.0051 U	0.0057 U	0.0048 U	0.0042 U	0.0055 U	0.0041 U	0.0047 U	0.0038 U	0.0039 U	0.0039 U
Xylenes (Total)	1000	10000	10000	2600	0.0076 U	0.0085 U	0.0072 U	0.0063 U	0.0082 U	0.0062 U	0.007 U	0.0057 U	0.0059 U	0.0059 U

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference. * = excavated location.

Table 3.13-1
Soils Data Summary - Building 4 - Waste Water Sump Area (B4WW)
Former York Naval Ordnance Plant - York, PA

Location/ID Depth (ft.) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 ft (mg/kg)	MSC Direct Contact 2 - 15 ft (mg/kg)	EPA RSL Industrial Soil (mg/kg)	BLD4-GEO-10 15 - 16 6/12/2003	*BLD4-GEO-11 0 - 1 6/13/2003	*BLD4-GEO-11 7 - 8 6/13/2003	BLD4-GEO-11 13 - 14 6/13/2003	*BLD4-GEO-12 0 - 1 6/12/2003	*BLD4-GEO-12 7 - 8 6/12/2003	BLD4-GEO-12 15 - 16 6/12/2003	BLD4-GEO-13 8 7/21/2003	BLD4-GEO-13 15 7/21/2003
Cyanide, Free													
Cyanide, Free	200	56000	190000	20000	0.39	0.98	0.5	0.29 U	0.29 U	1.72	0.47		
Cyanide, Total													
Cyanide, Total	200	56000	190000	20000	1.16	4.06	1.64	1.11	0.29	0.55 U	0.36		
Hexavalent Chromium													
Hexavalent Chromium	190	420	190000	200	6.5 U	7 U	6.3 U	5.9 U	5.8 U	5.5 U	5.9 U		
Mercury													
Mercury	10	840	190000	24	0.02 J	0.05 J	0.02 J	0.06	0.03 J	0.03 J	0.01 J	0.03 J	0.05 J
Metal													
Antimony	27	1100	190000	410	0.8 J	2	0.7 J	0.3 J	2	2	1	1 J	0.5 J
Arsenic	150	53	190000	1.6	31	1 J	2 U	18	4	2	4	1 J	5
Beryllium	320	5600	190000	2000	1.2	1 J	0.9 U	1.1	0.7 J	0.5 J	0.5 J	0.3 J	1 J
Cadmium	38	210	190000	800	1.1	13.4	0.5 U	0.5 U	2.4	2.8	0.6 U	1.7	4.7
Chromium				1400	21.4	144	47.7	26	24.9	24.8	10.7	14	23.4
Copper	36000	100000	190000	41000	23	115	6	24	12	9	11	9	16
Lead	450	1000	190000	800	17	81	4	29	26	14	8	9	15
Mercury	10	840	190000	24									
Nickel	650	56000	190000	20000	830	115	551	1670	12	32	24	20	970
Selenium	26	14000	190000	5100	2 U	2 J	0.9 J	3	2 U	0.9 J	2 U	2 U	2 U
Silver	84	14000	190000	5100	8.5	0.2 J	0.5 U	2.8	1.1	1	1.4	0.4 J	1.3
Thallium	14	200	190000	66	3 U	4 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U
Zinc	12000	190000	190000	310000	114	303	17	101	78	68	43	41	160
Toxicity Characteristic Leaching Procedure - Mercury													
Mercury	10	840	190000	24									
Toxicity Characteristic Leaching Procedure - Metal													
Antimony	27	1100	190000	410									
Arsenic	150	53	190000	1.6									
Barium	8200	190000	190000	190000									
Beryllium	320	5600	190000	2000									
Cadmium	38	210	190000	800									
Chromium				1400									
Copper	36000	100000	190000	41000									
Lead	450	1000	190000	800									
Nickel	650	56000	190000	20000									
Selenium	26	14000	190000	5100									
Silver	84	14000	190000	5100									
Thallium	14	200	190000	66									
Zinc	12000	190000	190000	310000									
Total Solids													
Moisture					22.70%	28.60%	20.70%	14.80%	14%	9.60%	15.50%	11.70%	19.80%
Percent Solids					77.30%	71.40%	79.30%	85.20%	86%	90.40%	84.50%	88.30%	80.20%
Volatile Organic Compound													
1,1,1,2-Tetrachloroethane	18	3100	190000	9.8									
1,1,1-Trichloroethane	20	10000	10000	39000	0.0022 U	0.00027 J	0.00086 J	0.0022 U	0.0028 U	0.0025 U	0.0021 U		
1,1,2,2-Tetrachloroethane	0.03	28	33	2.9	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0025 U	0.0021 U		
1,1,2-Trichloroethane	0.5	100	120	5.5	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0025 U	0.0021 U		
1,1,2-Trichlorotrifluoroethane	53000	190000	190000	180000									
1,1-Dichloroethane	11	1000	1200	17	0.0011 J	0.0026 U	0.0023 U	0.00034 J	0.0028 U	0.0025 U	0.0021 U		
1,1-Dichloroethene	0.7	33	38	1100	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0025 U	0.0021 U		
1,2-Dibromo-3-Chloropropane	0.02	11	12	0.073	0.0044 U	0.0051 U	0.0045 U	0.0044 U	0.0055 U	0.005 U	0.0041 U		
1,2-Dibromoethane	0.005	0.93	8.6	0.17	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0025 U	0.0021 U		

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference. * = excavated location.

Table 3.13-1
Soils Data Summary - Building 4 - Waste Water Sump Area (B4WW)
Former York Naval Ordnance Plant - York, PA

Location/ID Depth (ft.) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 ft (mg/kg)	MSC Direct Contact 2 - 15 ft (mg/kg)	EPA RSL Industrial Soil (mg/kg)	BLD4-GEO-10 15 - 16 6/12/2003	*BLD4-GEO-11 0 - 1 6/13/2003	*BLD4-GEO-11 7 - 8 6/13/2003	BLD4-GEO-11 13 - 14 6/13/2003	*BLD4-GEO-12 0 - 1 6/12/2003	*BLD4-GEO-12 7 - 8 6/12/2003	BLD4-GEO-12 15 - 16 6/12/2003	BLD4-GEO-13 8 7/21/2003	BLD4-GEO-13 15 7/21/2003
1,2-Dichloroethane	0.5	63	73	2.2	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0025 U	0.0021 U		
1,2-Dichloropropane	0.5	160	180	4.7	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0025 U	0.0021 U		
1,3-Dichloropropene	2.6	410	470	8.4									
1,4-Dioxane	2.4	210	240	160	0.0494 U	0.0574 U	0.0507 U	0.0496 U	0.0621 U	0.0565 U	0.0463 U		
2-Butanone	580	10000	10000	190000	0.0088 U	0.0213	0.0111	0.0174	0.0229	0.01 U	0.0082 U		
2-Chloroethyl Vinyl Ether													
2-Hexanone					0.0088 U	0.0102 U	0.009 U	0.0088 U	0.011 U	0.01 U	0.0082 U		
4-Methyl-2-Pentanone	41	4300	4900	52000	0.0088 U	0.0102 U	0.009 U	0.0088 U	0.011 U	0.01 U	0.0082 U		
Acetone	1000	10000	10000	610000	0.0088 U	0.237	0.0966	0.105	0.445	0.0812	0.0082 U		
Acrolein	0.012	1.1	1.2	0.68									
Acrylonitrile	0.27	24	28	1.2									
Benzene	0.5	210	240	5.6	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0028 U	0.0021 U		
Bromochloromethane	9	10000	10000		0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0028 U	0.0021 U		
Bromodichloromethane	10	45	51	1.4	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0028 U	0.0021 U		
Bromoform	10	1500	1700	220	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0028 U	0.0021 U		
Bromomethane	1	270	300	35	0.0044 U	0.0051 U	0.0045 U	0.0044 U	0.0055 U	0.005 U	0.0041 U		
Carbon Disulfide	410	10000	10000	3000	0.0054	0.0026 U	0.0023 U	0.0061	0.0028 U	0.0025 U	0.0012 J		
Carbon Tetrachloride	0.5	110	120	1.3	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0025 U	0.0021 U		
Chlorobenzene	10	10000	10000	1500	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0025 U	0.0021 U		
Chlorodibromomethane	10	61	70	3.4	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0025 U	0.0021 U		
Chloroethane	90	10000	10000	62000	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0025 U	0.0021 U		
Chloroform	10	17	19	1.5	0.00017 J	0.0026 U	0.0023 U	0.0022 U	0.00021 J	0.0025 J	0.00021 J		
Chloromethane	0.3	920	1000	510	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0025 U	0.0021 U		
cis-1,2-Dichloroethene	7	1900	2100	10000	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0025 U	0.0021 U		
cis-1,3-Dichloropropene	2.6	410	470	8.4	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0025 U	0.0021 U		
Ethylbenzene	70	10000	10000	29	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0025 U	0.0021 U		
m,p-Xylene	1000	10000	10000	2600	0.0044 U	0.0051 U	0.0045 U	0.0044 U	0.0055 U	0.005 U	0.0041 U		
Methyl tert-butyl ether	2	3200	3700	190									
Methylene chloride	0.5	3500	4000	54	0.0034 J	0.0051 U	0.0045 U	0.0044 U	0.0067	0.002 J	0.0019 J		
o-Xylene	1000	10000	10000	23000	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0025 U	0.0021 U		
Styrene	24	10000	10000	38000	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0025 U	0.0021 U		
Tetrachloroethene	0.5	1500	3300	2.7	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0025 U	0.0021 U		
Toluene	100	10000	10000	46000	0.0022 U	0.00018 J	0.0023 U	0.0022 U	0.0028 U	0.00053 J	0.0021 U		
trans-1,2-Dichloroethene	10	3700	4300	500	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0025 U	0.0021 U		
trans-1,3-Dichloropropene	2.6	410	470	8.4	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.0025 U	0.0021 U		
Trichloroethene	0.5	970	1100	14	0.0022 U	0.0026 U	0.0023 U	0.0022 U	0.0028 U	0.001 J	0.0021 U		
Vinyl Chloride	0.2	53	220	1.7	0.0044 U	0.0051 U	0.0045 U	0.0044 U	0.0055 U	0.005 U	0.0041 U		
Xylenes (Total)	1000	10000	10000	2600	0.0066 U	0.0077 U	0.0068 U	0.0066 U	0.0083 U	0.0075 U	0.0062 U		

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference. * = excavated location.

Table 3.13-1
Soils Data Summary - Building 4 - Waste Water Sump Area (B4WW)
Former York Naval Ordnance Plant - York, PA

Location/ID Depth (ft.) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 ft (mg/kg)	MSC Direct Contact 2 - 15 ft (mg/kg)	EPA RSL Industrial Soil (mg/kg)	BLD4-GEO-13 20 7/21/2003	BLD4-GEO-14 9 7/21/2003	BLD4-GEO-14 15 7/21/2003	BLD4-GEO-14 19 7/21/2003	BLD4-GEO-15 8 7/21/2003	BLD4-GEO-15 14 7/21/2003	BLD4-GEO-16 9 7/21/2003	BLD4-GEO-16 Dup 9 - 9.5 7/21/2003	BLD4-GEO-16 15 7/21/2003
Cyanide, Free													
Cyanide, Free	200	56000	190000	20000									
Cyanide, Total													
Cyanide, Total	200	56000	190000	20000									
Hexavalent Chromium													
Hexavalent Chromium	190	420	190000	200									
Mercury													
Mercury	10	840	190000	24	0.03 J	0.05 J	0.03 J	0.009 J	0.08	0.03 J	0.21	0.06	0.11
Metal													
Antimony	27	1100	190000	410	0.4 J	1	0.1	0.7 J	0.7 J	1 J	0.8 J	0.9 J	1 J
Arsenic	150	53	190000	1.6	11	6	0.6	5	7	5	4	2 J	11
Beryllium	320	5600	190000	2000	1.3	0.6 J	0.1	0.8 J	0.7 J	0.9 J	0.5 J	0.3 J	2.1
Cadmium	38	210	190000	800	2.4	0.6 U	0.1	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	5.8
Chromium				1400	26.8	21.7	7.1	15.5	21.7	14	15.5	11.4	34.8
Copper	36000	100000	190000	41000	20	16	3	16	19	19	16	10	30
Lead	450	1000	190000	800	25	12	3	9	14	9	17	16	51
Mercury	10	840	190000	24									
Nickel	650	56000	190000	20000	144	19	120	38	17	23	15	12	372
Selenium	26	14000	190000	5100	2 U	2 U	0.2 U	2 U	2 U	2 U	2 U	2 U	2 U
Silver	84	14000	190000	5100	3.2	1	0.07	1.2	3.6	1.6	1	0.4 J	3.5
Thallium	14	200	190000	66	3 U	3 U	0.3 U	3 U	3 U	3 U	3 U	3 U	4 U
Zinc	12000	190000	190000	310000	108	51	11	82	2	76	52	2	155
Toxicity Characteristic Leaching Procedure - Mercury													
Mercury	10	840	190000	24									
Toxicity Characteristic Leaching Procedure - Metal													
Antimony	27	1100	190000	410									
Arsenic	150	53	190000	1.6									
Barium	8200	190000	190000	190000									
Beryllium	320	5600	190000	2000									
Cadmium	38	210	190000	800									
Chromium				1400									
Copper	36000	100000	190000	41000									
Lead	450	1000	190000	800									
Nickel	650	56000	190000	20000									
Selenium	26	14000	190000	5100									
Silver	84	14000	190000	5100									
Thallium	14	200	190000	66									
Zinc	12000	190000	190000	310000									
Total Solids													
Moisture					11.80%	16.40%	21.90%	13.80%	11.30%	13.40%	6.30%	11%	24.40%
Percent Solids					88.20%	83.60%	78.10%	86.20%	88.70%	86.60%	93.70%	89%	75.60%
Volatile Organic Compound													
1,1,1,2-Tetrachloroethane	18	3100	190000	9.8									
1,1,1-Trichloroethane	20	10000	10000	39000									
1,1,2,2-Tetrachloroethane	0.03	28	33	2.9									
1,1,2-Trichloroethane	0.5	100	120	5.5									
1,1,2-Trichlorotrifluoroethane	53000	190000	190000	180000									
1,1-Dichloroethane	11	1000	1200	17									
1,1-Dichloroethene	0.7	33	38	1100									
1,2-Dibromo-3-Chloropropane	0.02	11	12	0.073									
1,2-Dibromoethane	0.005	0.93	8.6	0.17									

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference. * = excavated location.

Table 3.13-1
Soils Data Summary - Building 4 - Waste Water Sump Area (B4WW)
Former York Naval Ordnance Plant - York, PA

Location/ID Depth (ft.) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 ft (mg/kg)	MSC Direct Contact 2 - 15 ft (mg/kg)	EPA RSL Industrial Soil (mg/kg)	BLD4-GEO-13 20 7/21/2003	BLD4-GEO-14 9 7/21/2003	BLD4-GEO-14 15 7/21/2003	BLD4-GEO-14 19 7/21/2003	BLD4-GEO-15 8 7/21/2003	BLD4-GEO-15 14 7/21/2003	BLD4-GEO-16 9 7/21/2003	BLD4-GEO-16 Dup 9 - 9.5 7/21/2003	BLD4-GEO-16 15 7/21/2003
1,2-Dichloroethane	0.5	63	73	2.2									
1,2-Dichloropropane	0.5	160	180	4.7									
1,3-Dichloropropene	2.6	410	470	8.4									
1,4-Dioxane	2.4	210	240	160									
2-Butanone	580	10000	10000	190000									
2-Chloroethyl Vinyl Ether													
2-Hexanone													
4-Methyl-2-Pentanone	41	4300	4900	52000									
Acetone	1000	10000	10000	610000									
Acrolein	0.012	1.1	1.2	0.68									
Acrylonitrile	0.27	24	28	1.2									
Benzene	0.5	210	240	5.6									
Bromochloromethane	9	10000	10000										
Bromodichloromethane	10	45	51	1.4									
Bromoform	10	1500	1700	220									
Bromomethane	1	270	300	35									
Carbon Disulfide	410	10000	10000	3000									
Carbon Tetrachloride	0.5	110	120	1.3									
Chlorobenzene	10	10000	10000	1500									
Chlorodibromomethane	10	61	70	3.4									
Chloroethane	90	10000	10000	62000									
Chloroform	10	17	19	1.5									
Chloromethane	0.3	920	1000	510									
cis-1,2-Dichloroethene	7	1900	2100	10000									
cis-1,3-Dichloropropene	2.6	410	470	8.4									
Ethylbenzene	70	10000	10000	29									
m,p-Xylene	1000	10000	10000	2600									
Methyl tert-butyl ether	2	3200	3700	190									
Methylene chloride	0.5	3500	4000	54									
o-Xylene	1000	10000	10000	23000									
Styrene	24	10000	10000	38000									
Tetrachloroethene	0.5	1500	3300	2.7									
Toluene	100	10000	10000	46000									
trans-1,2-Dichloroethene	10	3700	4300	500									
trans-1,3-Dichloropropene	2.6	410	470	8.4									
Trichloroethene	0.5	970	1100	14									
Vinyl Chloride	0.2	53	220	1.7									
Xylenes (Total)	1000	10000	10000	2600									

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference. * = excavated location.

Table 3.13-1
Soils Data Summary - Building 4 - Waste Water Sump Area (B4WW)
Former York Naval Ordnance Plant - York, PA

Location/ID Depth (ft.) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 ft (mg/kg)	MSC Direct Contact 2 - 15 ft (mg/kg)	EPA RSL Industrial Soil (mg/kg)	BLD4-GEO-16 19 7/21/2003	BLD4-GEO-17 7 7/21/2003	BLD4-GEO-17 15 7/21/2003	BLD4-GEO-17 19 7/21/2003	BLD4-GEO-18 8 7/21/2003	BLD4-GEO-18 Dup 8 7/21/2003	BLD4-GEO-18 13 7/21/2003	BLD4-GEO-18 19 7/21/2003	BLD4-GEO-19 8 7/21/2003
Cyanide, Free													
Cyanide, Free	200	56000	190000	20000									
Cyanide, Total													
Cyanide, Total	200	56000	190000	20000									
Hexavalent Chromium													
Hexavalent Chromium	190	420	190000	200									
Mercury													
Mercury	10	840	190000	24	0.01 J	0.05	0.15	0.05 J	0.02 J	0.01 J	0.1	0.1	0.03 J
Metal													
Antimony	27	1100	190000	410	0.5 J	0.8 J	2	0.5 J	1	1	0.8 J	0.6 J	1
Arsenic	150	53	190000	1.6	14	4	13	14	3	3	10	35	5
Beryllium	320	5600	190000	2000	1	0.4 J	2.5	2.1	0.4 J	0.4 J	1.4	1.7	0.7 J
Cadmium	38	210	190000	800	2	0.5 U	5.3	0.4 J	1.5	1.5	0.8	2.8	0.06 J
Chromium				1400	23.7	22.5	25.5	23.8	17.2	18.6	19.1	19.3	23.3
Copper	36000	100000	190000	41000	25	8	30	24	11	12	23	31	15
Lead	450	1000	190000	800	17	8	35	24	8	8	27	30	16
Mercury	10	840	190000	24									
Nickel	650	56000	190000	20000	59	8	117	64	33	37	45	80	17
Selenium	26	14000	190000	5100	2 U	2 U	3 U	2 U	2 U	2 U	2 U	2 U	2 U
Silver	84	14000	190000	5100	4.5	0.7	3.2	3.1	0.4 J	0.4 J	3.4	9.7	1.2
Thallium	14	200	190000	66	2 U	3 U	4 U	4 U	3 U	3 U	3 U	3 U	3 U
Zinc	12000	190000	190000	310000	2	27	139	142	34	34	86	184	40
Toxicity Characteristic Leaching Procedure - Mercury													
Mercury	10	840	190000	24									
Toxicity Characteristic Leaching Procedure - Metal													
Antimony	27	1100	190000	410									
Arsenic	150	53	190000	1.6									
Barium	8200	190000	190000	190000									
Beryllium	320	5600	190000	2000									
Cadmium	38	210	190000	800									
Chromium				1400									
Copper	36000	100000	190000	41000									
Lead	450	1000	190000	800									
Nickel	650	56000	190000	20000									
Selenium	26	14000	190000	5100									
Silver	84	14000	190000	5100									
Thallium	14	200	190000	66									
Zinc	12000	190000	190000	310000									
Total Solids													
Moisture					21.80%	12.60%	24%	18.10%	9.80%	10.20%	20.80%	26.90%	18.70%
Percent Solids					78.20%	87.40%	76%	81.90%	90.20%	89.80%	79.20%	73.10%	81.30%
Volatile Organic Compound													
1,1,1,2-Tetrachloroethane	18	3100	190000	9.8									
1,1,1-Trichloroethane	20	10000	10000	39000									
1,1,2,2-Tetrachloroethane	0.03	28	33	2.9									
1,1,2-Trichloroethane	0.5	100	120	5.5									
1,1,2-Trichlorotrifluoroethane	53000	190000	190000	180000									
1,1-Dichloroethane	11	1000	1200	17									
1,1-Dichloroethene	0.7	33	38	1100									
1,2-Dibromo-3-Chloropropane	0.02	11	12	0.073									
1,2-Dibromoethane	0.005	0.93	8.6	0.17									

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference. * = excavated location.

Table 3.13-1
Soils Data Summary - Building 4 - Waste Water Sump Area (B4WW)
Former York Naval Ordnance Plant - York, PA

Location/ID Depth (ft.) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 ft (mg/kg)	MSC Direct Contact 2 - 15 ft (mg/kg)	EPA RSL Industrial Soil (mg/kg)	BLD4-GEO-16 19 7/21/2003	BLD4-GEO-17 7 7/21/2003	BLD4-GEO-17 15 7/21/2003	BLD4-GEO-17 19 7/21/2003	BLD4-GEO-18 8 7/21/2003	BLD4-GEO-18 Dup 8 7/21/2003	BLD4-GEO-18 13 7/21/2003	BLD4-GEO-18 19 7/21/2003	BLD4-GEO-19 8 7/21/2003
1,2-Dichloroethane	0.5	63	73	2.2									
1,2-Dichloropropane	0.5	160	180	4.7									
1,3-Dichloropropene	2.6	410	470	8.4									
1,4-Dioxane	2.4	210	240	160									
2-Butanone	580	10000	10000	190000									
2-Chloroethyl Vinyl Ether													
2-Hexanone													
4-Methyl-2-Pentanone	41	4300	4900	52000									
Acetone	1000	10000	10000	610000									
Acrolein	0.012	1.1	1.2	0.68									
Acrylonitrile	0.27	24	28	1.2									
Benzene	0.5	210	240	5.6									
Bromochloromethane	9	10000	10000										
Bromodichloromethane	10	45	51	1.4									
Bromoform	10	1500	1700	220									
Bromomethane	1	270	300	35									
Carbon Disulfide	410	10000	10000	3000									
Carbon Tetrachloride	0.5	110	120	1.3									
Chlorobenzene	10	10000	10000	1500									
Chlorodibromomethane	10	61	70	3.4									
Chloroethane	90	10000	10000	62000									
Chloroform	10	17	19	1.5									
Chloromethane	0.3	920	1000	510									
cis-1,2-Dichloroethene	7	1900	2100	10000									
cis-1,3-Dichloropropene	2.6	410	470	8.4									
Ethylbenzene	70	10000	10000	29									
m,p-Xylene	1000	10000	10000	2600									
Methyl tert-butyl ether	2	3200	3700	190									
Methylene chloride	0.5	3500	4000	54									
o-Xylene	1000	10000	10000	23000									
Styrene	24	10000	10000	38000									
Tetrachloroethene	0.5	1500	3300	2.7									
Toluene	100	10000	10000	46000									
trans-1,2-Dichloroethene	10	3700	4300	500									
trans-1,3-Dichloropropene	2.6	410	470	8.4									
Trichloroethene	0.5	970	1100	14									
Vinyl Chloride	0.2	53	220	1.7									
Xylenes (Total)	1000	10000	10000	2600									

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference. * = excavated location.

Table 3.13-1
Soils Data Summary - Building 4 - Waste Water Sump Area (B4WW)
Former York Naval Ordnance Plant - York, PA

Location/ID Depth (ft.) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 ft (mg/kg)	MSC Direct Contact 2 - 15 ft (mg/kg)	EPA RSL Industrial Soil (mg/kg)	BLD4-GEO-19 14 7/21/2003	BLD4-GEO-19 19 7/21/2003	BLD4-GEO-20 8 7/21/2003	BLD4-GEO-20 15 7/21/2003	BLD4-GEO-20 19 7/21/2003	BLD4-GEO-21 8 7/21/2003	BLD4-GEO-21 14 7/21/2003	BLD4-GEO-21 19 7/21/2003	BLD4-GEO-22 7 - 8 7/21/2003	BLD4-GEO-22 14 7/21/2003
Cyanide, Free														
Cyanide, Free	200	56000	190000	20000										
Cyanide, Total														
Cyanide, Total	200	56000	190000	20000										
Hexavalent Chromium														
Hexavalent Chromium	190	420	190000	200										
Mercury														
Mercury	10	840	190000	24	0.09	0.06 J	0.09	0.09	0.13	0.05 J	0.03 J	0.05 J	0.03 J	0.009 J
Metal														
Antimony	27	1100	190000	410	1 J	1 J	0.9 J	1 J	1 J	1	1	1 J	1 J	0.7 J
Arsenic	150	53	190000	1.6	6	4	10	29	20	7	6	8	4	6
Beryllium	320	5600	190000	2000	1.2	2.9	0.8 J	2.1	3.5	0.5 J	1 J	0.7 J	0.4 J	0.9 J
Cadmium	38	210	190000	800	2.4	4.8	0.6 U	1.2	20.2	0.5 U	3.9	0.5 U	0.2 J	0.1 J
Chromium				1400	37.2	50.8	13	12.8	48.6	13	19	18.6	16.3	17.5
Copper	36000	100000	190000	41000	17	34	23	28	48	15	24	18	11	15
Lead	450	1000	190000	800	20	41	23	39	60	16	17	13	13	17
Mercury	10	840	190000	24										
Nickel	650	56000	190000	20000	1170	103	25	70	304	16	66	28	33	32
Selenium	26	14000	190000	5100	2 U	3 U	2 U	2 U	4 U	2 U	2 U	2 U	2 U	3 U
Silver	84	14000	190000	5100	1.2	1.6	3.8	4.9	5.9	0.9	2.7	2.5	0.8	1
Thallium	14	200	190000	66	3 U	4 U	3 U	3 U	5 U	3 U	4 U	3 U	3 U	4 U
Zinc	12000	190000	190000	310000	171	3	76	159	166	44	98	91	36	41
Toxicity Characteristic Leaching Procedure - Mercury														
Mercury	10	840	190000	24										
Toxicity Characteristic Leaching Procedure - Metal														
Antimony	27	1100	190000	410										
Arsenic	150	53	190000	1.6										
Barium	8200	190000	190000	190000										
Beryllium	320	5600	190000	2000										
Cadmium	38	210	190000	800										
Chromium				1400										
Copper	36000	100000	190000	41000										
Lead	450	1000	190000	800										
Nickel	650	56000	190000	20000										
Selenium	26	14000	190000	5100										
Silver	84	14000	190000	5100										
Thallium	14	200	190000	66										
Zinc	12000	190000	190000	310000										
Total Solids														
Moisture					18.70%	28.90%	16.10%	20.70%	49.70%	8.10%	20.70%	16.40%	14.50%	20.60%
Percent Solids					81.30%	71.10%	83.90%	79.30%	50.30%	91.90%	79.30%	83.60%	85.50%	79.40%
Volatile Organic Compound														
1,1,1,2-Tetrachloroethane	18	3100	190000	9.8										
1,1,1-Trichloroethane	20	10000	10000	39000										
1,1,2,2-Tetrachloroethane	0.03	28	33	2.9										
1,1,2-Trichloroethane	0.5	100	120	5.5										
1,1,2-Trichlorotrifluoroethane	53000	190000	190000	180000										
1,1-Dichloroethane	11	1000	1200	17										
1,1-Dichloroethene	0.7	33	38	1100										
1,2-Dibromo-3-Chloropropane	0.02	11	12	0.073										
1,2-Dibromoethane	0.005	0.93	8.6	0.17										

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference. * = excavated location.

Table 3.13-1
Soils Data Summary - Building 4 - Waste Water Sump Area (B4WW)
Former York Naval Ordnance Plant - York, PA

Location/ID Depth (ft.) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 ft (mg/kg)	MSC Direct Contact 2 - 15 ft (mg/kg)	EPA RSL Industrial Soil (mg/kg)	BLD4-GEO-19 14 7/21/2003	BLD4-GEO-19 19 7/21/2003	BLD4-GEO-20 8 7/21/2003	BLD4-GEO-20 15 7/21/2003	BLD4-GEO-20 19 7/21/2003	BLD4-GEO-21 8 7/21/2003	BLD4-GEO-21 14 7/21/2003	BLD4-GEO-21 19 7/21/2003	BLD4-GEO-22 7 - 8 7/21/2003	BLD4-GEO-22 14 7/21/2003
1,2-Dichloroethane	0.5	63	73	2.2										
1,2-Dichloropropane	0.5	160	180	4.7										
1,3-Dichloropropene	2.6	410	470	8.4										
1,4-Dioxane	2.4	210	240	160										
2-Butanone	580	10000	10000	190000										
2-Chloroethyl Vinyl Ether														
2-Hexanone														
4-Methyl-2-Pentanone	41	4300	4900	52000										
Acetone	1000	10000	10000	610000										
Acrolein	0.012	1.1	1.2	0.68										
Acrylonitrile	0.27	24	28	1.2										
Benzene	0.5	210	240	5.6										
Bromochloromethane	9	10000	10000											
Bromodichloromethane	10	45	51	1.4										
Bromoform	10	1500	1700	220										
Bromomethane	1	270	300	35										
Carbon Disulfide	410	10000	10000	3000										
Carbon Tetrachloride	0.5	110	120	1.3										
Chlorobenzene	10	10000	10000	1500										
Chlorodibromomethane	10	61	70	3.4										
Chloroethane	90	10000	10000	62000										
Chloroform	10	17	19	1.5										
Chloromethane	0.3	920	1000	510										
cis-1,2-Dichloroethene	7	1900	2100	10000										
cis-1,3-Dichloropropene	2.6	410	470	8.4										
Ethylbenzene	70	10000	10000	29										
m,p-Xylene	1000	10000	10000	2600										
Methyl tert-butyl ether	2	3200	3700	190										
Methylene chloride	0.5	3500	4000	54										
o-Xylene	1000	10000	10000	23000										
Styrene	24	10000	10000	38000										
Tetrachloroethene	0.5	1500	3300	2.7										
Toluene	100	10000	10000	46000										
trans-1,2-Dichloroethene	10	3700	4300	500										
trans-1,3-Dichloropropene	2.6	410	470	8.4										
Trichloroethene	0.5	970	1100	14										
Vinyl Chloride	0.2	53	220	1.7										
Xylenes (Total)	1000	10000	10000	2600										

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference. * = excavated location.

Table 3.13-1
Soils Data Summary - Building 4 - Waste Water Sump Area (B4WW)
Former York Naval Ordnance Plant - York, PA

Location/ID Depth (ft.) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 ft (mg/kg)	MSC Direct Contact 2 - 15 ft (mg/kg)	EPA RSL Industrial Soil (mg/kg)	BLD4-GEO-22 17.8 7/21/2003	BLD4-HSA-1 10 - 12 6/13/2003	BLD4-HSA-1 16 - 18 6/13/2003	BLD4-HSA-2 6 - 8 6/13/2003	BLD4-HSA-2 16 - 18 6/13/2003	BLD4-HSA-3 2 - 4 6/13/2003	BLD4-HSA-3 16 - 18 6/13/2003	Bldg4-Tank-1 2 - 10/5/2005	Bldg4-Tank-1 6 - 9/30/2005	Bldg4-Tank-2 6 - 10/5/2005
Cyanide, Free														
Cyanide, Free	200	56000	190000	20000		0.29 U	0.29 U	0.31 U	0.32 U	0.3 U	0.91		0.39	0.5 U
Cyanide, Total														
Cyanide, Total	200	56000	190000	20000		0.75	0.29 U	1.26	0.32 U	0.42	0.28 U		0.51	0.5 U
Hexavalent Chromium														
Hexavalent Chromium	190	420	190000	200		5.8 U	5.8 U	6.3 U	6.4 U	6 U	5.7 U			
Mercury														
Mercury	10	840	190000	24	0.04 J	0.03 J	0.04 J	0.07	0.05	0.02 J	0.02 J		0.05	0.06
Metal														
Antimony	27	1100	190000	410	0.8 J	1 J	0.5 J	1 J	1 J	1 J	0.6 J		2.2 B	2.4 B
Arsenic	150	53	190000	1.6	17	4	12	6	10	3	4		4.5	12.8
Beryllium	320	5600	190000	2000	0.9 J	0.4 J	0.8 J	0.4 J	2.7	0.7 J	0.3 J		0.49	2.4
Cadmium	38	210	190000	800	0.2 J	0.6 U	0.4 J	0.6 U	0.3 J	0.6 U	0.6 U		0.098 U	0.11 U
Chromium				1400	14.3	17.1	27.5	27.8	17.9	17.4	22.1		18.7	33.1
Copper	36000	100000	190000	41000	26	12	21	18	22	8	13		17.8	34.2
Lead	450	1000	190000	800	21	10	17	11	45	18	10		9	35.6
Mercury	10	840	190000	24										
Nickel	650	56000	190000	20000	33	13	25	13	46	10	11		24.3	52.5
Selenium	26	14000	190000	5100	2 U	2 U	0.7 J	2	2 U	1 J	0.7 J		1 U	1.7
Silver	84	14000	190000	5100	3.6	0.6 U	0.5 J	0.6	0.6 U	0.6 U	0.6 U		0.34 U	0.39 U
Thallium	14	200	190000	66	4 U	3 U	3 U	4	4 U	3 U	3 U		1.2 U	1.3 U
Zinc	12000	190000	190000	310000	109	40	89	46	197	55	42		36.5	115
Toxicity Characteristic Leaching Procedure - Mercury														
Mercury	10	840	190000	24									0.0001 mg/L U	0.0001 mg/L U
Toxicity Characteristic Leaching Procedure - Metal														
Antimony	27	1100	190000	410									0.0058 mg/L U	0.0058 mg/L U
Arsenic	150	53	190000	1.6									0.004 mg/L B	0.0032 mg/L U
Barium	8200	190000	190000	190000									0.03 mg/L B	0.005 mg/L B
Beryllium	320	5600	190000	2000									0.0003 mg/L U	0.0003 mg/L U
Cadmium	38	210	190000	800									0.0004 mg/L U	0.0004 mg/L U
Chromium				1400									0.003 mg/L B	0.0016 mg/L U
Copper	36000	100000	190000	41000									0.01 mg/L B	0.0037 mg/L U
Lead	450	1000	190000	800									0.0027 mg/L U	0.0027 mg/L U
Nickel	650	56000	190000	20000									0.02 mg/L B	0.006 mg/L B
Selenium	26	14000	190000	5100									0.0042 mg/L U	0.0042 mg/L U
Silver	84	14000	190000	5100									0.0014 mg/L U	0.0014 mg/L U
Thallium	14	200	190000	66									0.0047 mg/L U	0.0047 mg/L U
Zinc	12000	190000	190000	310000									0.03 mg/L B	0.009 mg/L B
Total Solids														
Moisture					17.70%	13.50%	14.10%	20.40%	2.40%	16.90%	12.30%			
Percent Solids					82.30%	86.50%	85.90%	79.60%	77.60%	83.10%	87.70%			
Volatile Organic Compound														
1,1,1,2-Tetrachloroethane	18	3100	190000	9.8										
1,1,1-Trichloroethane	20	10000	10000	39000		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U	0.0056 U		
1,1,2,2-Tetrachloroethane	0.03	28	33	2.9		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U	0.0011 U		
1,1,2-Trichloroethane	0.5	100	120	5.5		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U	0.0034 U		
1,1,2-Trichlorotrifluoroethane	53000	190000	190000	180000										
1,1-Dichloroethane	11	1000	1200	17		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U	0.0056 U		
1,1-Dichloroethene	0.7	33	38	1100		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U	0.0023 U		
1,2-Dibromo-3-Chloropropane	0.02	11	12	0.073		0.0039 U	0.0037 U	0.0042 U	0.0046 U	0.0043 U	0.0039 U			
1,2-Dibromoethane	0.005	0.93	8.6	0.17		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U			

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference. * = excavated location.

Table 3.13-1
Soils Data Summary - Building 4 - Waste Water Sump Area (B4WW)
Former York Naval Ordnance Plant - York, PA

Location/ID Depth (ft.) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 ft (mg/kg)	MSC Direct Contact 2 - 15 ft (mg/kg)	EPA RSL Industrial Soil (mg/kg)	BLD4-GEO-22 17.8 7/21/2003	BLD4-HSA-1 10 - 12 6/13/2003	BLD4-HSA-1 16 - 18 6/13/2003	BLD4-HSA-2 6 - 8 6/13/2003	BLD4-HSA-2 16 - 18 6/13/2003	BLD4-HSA-3 2 - 4 6/13/2003	BLD4-HSA-3 16 - 18 6/13/2003	Bldg4-Tank-1 2 - 10/5/2005	Bldg4-Tank-1 6 - 9/30/2005	Bldg4-Tank-2 6 - 10/5/2005
1,2-Dichloroethane	0.5	63	73	2.2		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U	0.0023 U		
1,2-Dichloropropane	0.5	160	180	4.7						0.0021 U	0.0019 U	0.0011 U		
1,3-Dichloropropene	2.6	410	470	8.4										
1,4-Dioxane	2.4	210	240	160		0.0435 U	0.0412 U	0.0476 U	0.0514 U	0.048 U	0.0437 U			
2-Butanone	580	10000	10000	190000		0.0019 U	0.0073 U	0.0085 U	0.0091 U	0.016	0.0073 J	0.0056 U		
2-Chloroethyl Vinyl Ether														
2-Hexanone						0.0077 U	0.0073 U	0.0085 U	0.0091 U	0.0085 U	0.0078 U	0.0056 U		
4-Methyl-2-Pentanone	41	4300	4900	52000		0.0077 U	0.0073 U	0.0085 U	0.0091 U	0.0085 U	0.0078 U	0.0056 U		
Acetone	1000	10000	10000	610000		0.0077 U	0.013	0.0303	0.0623	0.153	0.0419	0.057		
Acrolein	0.012	1.1	1.2	0.68										
Acrylonitrile	0.27	24	28	1.2										
Benzene	0.5	210	240	5.6		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.00034 J	0.0011 U		
Bromochloromethane	9	10000	10000			0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U			
Bromodichloromethane	10	45	51	1.4		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U	0.0011 U		
Bromoform	10	1500	1700	220		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U	0.0045 U		
Bromomethane	1	270	300	35		0.0019 U	0.0037 U	0.0042 U	0.0046 U	0.0043 U	0.0039 U	0.0056 U		
Carbon Disulfide	410	10000	10000	3000		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U	0.0056 U		
Carbon Tetrachloride	0.5	110	120	1.3		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U	0.0023 U		
Chlorobenzene	10	10000	10000	1500		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U	0.0056 U		
Chlorodibromomethane	10	61	70	3.4		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U	0.0056 U		
Chloroethane	90	10000	10000	62000		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U	0.0056 U		
Chloroform	10	17	19	1.5		0.0019 U	0.00012 J	0.0021 U	0.0023 U	0.0021 U	0.0019 U	0.0056 U		
Chloromethane	0.3	920	1000	510		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U	0.0056 U		
cis-1,2-Dichloroethene	7	1900	2100	10000		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U	0.0056 U		
cis-1,3-Dichloropropene	2.6	410	470	8.4						0.0021 U	0.0019 U	0.0056 U		
Ethylbenzene	70	10000	10000	29		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U	0.0045 U		
m,p-Xylene	1000	10000	10000	2600		0.0039 U	0.0037 U	0.0042 U	0.0046 U	0.0043 U	0.0039 U			
Methyl tert-butyl ether	2	3200	3700	190										
Methylene chloride	0.5	3500	4000	54		0.0039 U	0.0018 U	0.0042 U	0.0046 U	0.0043 U	0.0039 U	0.0034 U		
o-Xylene	1000	10000	10000	23000		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U			
Styrene	24	10000	10000	38000		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U	0.0056 U		
Tetrachloroethene	0.5	1500	3300	2.7		0.0019 U	0.0018 U	0.00053 J	0.00043 J	0.004	0.0019 U	0.0011 U		
Toluene	100	10000	10000	46000		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.00018 J	0.0056 U		
trans-1,2-Dichloroethene	10	3700	4300	500		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U	0.0056 U		
trans-1,3-Dichloropropene	2.6	410	470	8.4						0.0021 U	0.0019 U	0.0056 U		
Trichloroethene	0.5	970	1100	14		0.0019 U	0.0018 U	0.0021 U	0.0023 U	0.0021 U	0.0019 U	0.0022		
Vinyl Chloride	0.2	53	220	1.7		0.0039 U	0.0037 U	0.0042 U	0.0046 U	0.0043 U	0.0039 U	0.0056 U		
Xylenes (Total)	1000	10000	10000	2600		0.0058 U	0.0055 U	0.0063 U	0.0069 U	0.0064 U	0.0058 U	0.0056 U		

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference. * = excavated location.

Table 3.13-1
Soils Data Summary - Building 4 - Waste Water Sump Area (B4WW)
Former York Naval Ordnance Plant - York, PA

Location/ID Depth (ft.) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 ft (mg/kg)	MSC Direct Contact 2 - 15 ft (mg/kg)	EPA RSL Industrial Soil (mg/kg)	Bldg4-Tank-2 6 - 10/5/2005	Bldg4-Tank-3 6 - 10/5/2005	Bldg4-Tank-3 6 - 10/5/2005	Bldg4-Tank-4 6 - 10/5/2005	Bldg4-Tank-4 6 - 10/5/2005	Bldg4-Tank-5 6 - 10/6/2005	Bldg4-Tank-6 6 - 10/6/2005	Bldg4-Tank-7A 8 - 10/11/2005	Bldg4-Tank-7B Dup 8 - 10/11/2005
Cyanide, Free													
Cyanide, Free	200	56000	190000	20000		1.2		0.78		0.5 U	0.5 U	0.5 U	0.5 U
Cyanide, Total													
Cyanide, Total	200	56000	190000	20000		2.6		2.6		32.8	8.7	0.023	2.1
Hexavalent Chromium													
Hexavalent Chromium	190	420	190000	200									
Mercury													
Mercury	10	840	190000	24		0.06		0.02 U		0.05	0.09	0.017 U	0.021 U
Metal													
Antimony	27	1100	190000	410		1.4 B		2.5		1.3 B	2.3 B	1.4 U	1.5 U
Arsenic	150	53	190000	1.6		6		11.3		9.3	26.3	19.9	12.2
Beryllium	320	5600	190000	2000		0.62		1.2		0.82	2	1.2	0.95
Cadmium	38	210	190000	800		1.9		14.4		0.6 B	2.8	5.7	25.4
Chromium				1400		93		191		120	165	247	239
Copper	36000	100000	190000	41000		16.6		26.4		14.9	38.9	32.1	17.3
Lead	450	1000	190000	800		12		18.8		9.3	43.4	23.1	17.2
Mercury	10	840	190000	24									
Nickel	650	56000	190000	20000		347		1740		1460	2590	1600	1930
Selenium	26	14000	190000	5100		0.94 U		1 U		0.98 U	1.1 U	1 U	1.1 U
Silver	84	14000	190000	5100		0.31 U		0.34 U		0.33 U	0.38 B	0.33 U	0.35 U
Thallium	14	200	190000	66		1 U		1.1 U		1.1 U	1.3 U	1.7 U	1.8 U
Zinc	12000	190000	190000	310000		112		257		63.5	127	118	218
Toxicity Characteristic Leaching Procedure - Mercury													
Mercury	10	840	190000	24		0.0001 mg/L U		0.0001 mg/L U		0.0003 mg/L	0.002 mg/L	0.0001 mg/L U	0.0001 mg/L U
Toxicity Characteristic Leaching Procedure - Metal													
Antimony	27	1100	190000	410		0.0058 mg/L U		0.0058 mg/L U					
Arsenic	150	53	190000	1.6		0.01 mg/L		0.008 mg/L B		0.04 mg/L	0.21 mg/L	0.007 mg/L B	0.04 mg/L
Barium	8200	190000	190000	190000		0.005 mg/L B		0.006 mg/L B		0.44 mg/L	1.6 mg/L	0.02 mg/L B	0.02 mg/L B
Beryllium	320	5600	190000	2000		0.0003 mg/L U		0.0003 mg/L U					
Cadmium	38	210	190000	800		0.0004 mg/L U		0.002 mg/L B		0.004 mg/L B	0.05 mg/L	0.0006 mg/L U	0.002 mg/L B
Chromium				1400		0.007 mg/L B		0.06 mg/L		0.6 mg/L	2.1 mg/L	0.009 mg/L B	0.02 mg/L
Copper	36000	100000	190000	41000		0.006 mg/L B		0.008 mg/L B					
Lead	450	1000	190000	800		0.0027 mg/L U		0.0027 mg/L U		0.03 mg/L B	0.41 mg/L	0.0027 mg/L U	0.0027 mg/L U
Nickel	650	56000	190000	20000		0.12 mg/L		0.24 mg/L		7.4 mg/L	39.3 mg/L	0.08 mg/L	0.12 mg/L
Selenium	26	14000	190000	5100		0.0042 mg/L U		0.0042 mg/L U		0.0049 mg/L U	0.025 mg/L U	0.0049 mg/L U	0.0049 mg/L U
Silver	84	14000	190000	5100		0.0014 mg/L U		0.0014 mg/L U		0.0025 mg/L U	0.013 mg/L U	0.0025 mg/L U	0.0025 mg/L U
Thallium	14	200	190000	66		0.0047 mg/L U		0.0047 mg/L U					
Zinc	12000	190000	190000	310000		0.03 mg/L B		0.05 mg/L					
Total Solids													
Moisture													
Percent Solids													
Volatile Organic Compound													
1,1,1,2-Tetrachloroethane	18	3100	190000	9.8						0.0071 U	0.0059 U	0.0052 U	0.0054 U
1,1,1-Trichloroethane	20	10000	10000	39000	0.0063 U		0.0043 U		0.0006 J	0.0027 J	0.0027 J	0.0052 U	0.029
1,1,2,2-Tetrachloroethane	0.03	28	33	2.9	0.0012 U		0.0009 U		0.001 U	0.0014 U	0.0012 U	0.001 U	0.0011 U
1,1,2-Trichloroethane	0.5	100	120	5.5	0.0038 U		0.0026 U		0.003 U	0.0042 U	0.0036 U	0.0031 U	0.0032 U
1,1,2-Trichlorotrifluoroethane	53000	190000	190000	180000									
1,1-Dichloroethane	11	1000	1200	17	0.0011 J		0.0043 U		0.0014 J	0.0071 U	0.0022 J	0.0007 J	0.0008 J
1,1-Dichloroethene	0.7	33	38	1100	0.0025 U		0.0017 U		0.0022	0.0028 U	0.001 J	0.0021 U	0.017
1,2-Dibromo-3-Chloropropane	0.02	11	12	0.073									
1,2-Dibromoethane	0.005	0.93	8.6	0.17						0.0071 U	0.0059 U	0.0052 U	0.0054 U

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference. * = excavated location.

Table 3.13-1
Soils Data Summary - Building 4 - Waste Water Sump Area (B4WW)
Former York Naval Ordnance Plant - York, PA

Location/ID Depth (ft.) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 ft (mg/kg)	MSC Direct Contact 2 - 15 ft (mg/kg)	EPA RSL Industrial Soil (mg/kg)	Bldg4-Tank-2 6 - 10/5/2005	Bldg4-Tank-3 6 - 10/5/2005	Bldg4-Tank-3 6 - 10/5/2005	Bldg4-Tank-4 6 - 10/5/2005	Bldg4-Tank-4 6 - 10/5/2005	Bldg4-Tank-5 6 - 10/6/2005	Bldg4-Tank-6 6 - 10/6/2005	Bldg4-Tank-7A 8 - 10/11/2005	Bldg4-Tank-7B Dup 8 - 10/11/2005
1,2-Dichloroethane	0.5	63	73	2.2	0.0025 U		0.0017 U		0.002 U	0.0028 U	0.0024 U	0.0021 U	0.0022 U
1,2-Dichloropropane	0.5	160	180	4.7	0.0012 U		0.0009 U		0.001 U	0.0014 U	0.0012 U	0.001 U	0.0011 U
1,3-Dichloropropene	2.6	410	470	8.4									
1,4-Dioxane	2.4	210	240	160						1.4 U	1.2 U	1 U	1.1 U
2-Butanone	580	10000	10000	190000	0.012		0.011		0.0051 U	0.0071 U	0.0059 U	0.0052 U	0.0054 U
2-Chloroethyl Vinyl Ether													
2-Hexanone					0.0063 U		0.0043 U		0.0051 U	0.0071 U	0.0059 U	0.0052 U	0.0054 U
4-Methyl-2-Pentanone	41	4300	4900	52000	0.0063 U		0.0043 U		0.0051 U	0.0071 U	0.0059 U	0.0052 U	0.0054 U
Acetone	1000	10000	10000	610000	0.11		0.06		0.021	0.0071 U	0.0028	0.016 B	0.0054 U
Acrolein	0.012	1.1	1.2	0.68									
Acrylonitrile	0.27	24	28	1.2						0.071 U	0.059 U	0.052 U	0.054 U
Benzene	0.5	210	240	5.6	0.0012 U		0.0009 U		0.001 U	0.0014 U	0.0012 U	0.001 U	0.0011 U
Bromochloromethane	9	10000	10000							0.0071 U	0.0059 U	0.0052 U	0.0054 U
Bromodichloromethane	10	45	51	1.4	0.0012 U		0.0009 U		0.001 U	0.0014 U	0.0012 U	0.001 U	0.0011 U
Bromoform	10	1500	1700	220	0.005 U		0.0034 U		0.004 U	0.0057 U	0.0048 U	0.0041 U	0.0043 U
Bromomethane	1	270	300	35	0.0063 U		0.0043 U		0.0051 U	0.0071 U	0.0059 U	0.0052 U	0.0054 U
Carbon Disulfide	410	10000	10000	3000	0.0063 U		0.0043 U		0.0051 U	0.0071 U	0.0022 J	0.0052 U	0.0054 U
Carbon Tetrachloride	0.5	110	120	1.3	0.0025 U		0.0017 U		0.002 U	0.0028 U	0.0024 U	0.0021 U	0.0022 U
Chlorobenzene	10	10000	10000	1500	0.0063 U		0.0043 U		0.0051 U	0.0071 U	0.0059 U	0.0052 U	0.0054 U
Chlorodibromomethane	10	61	70	3.4	0.0063 U		0.0043 U		0.0051 U	0.0071 U	0.0059 U	0.0052 U	0.0054 U
Chloroethane	90	10000	10000	62000	0.0063 U		0.0043 U		0.0051 U	0.0071 U	0.0059 U	0.0052 U	0.0054 U
Chloroform	10	17	19	1.5	0.0063 U		0.0043 U		0.0051 U	0.0071 U	0.0059 U	0.0052 U	0.0054 U
Chloromethane	0.3	920	1000	510	0.0063 U		0.0043 U		0.0051 U	0.0071 U	0.0059 U	0.0052 U	0.0054 U
cis-1,2-Dichloroethene	7	1900	2100	10000	0.0063 U		0.0043 U		0.0051 U	0.0071 U	0.0059 U	0.0052 U	0.0054 U
cis-1,3-Dichloropropene	2.6	410	470	8.4	0.0063 U		0.0043 U		0.0051 U	0.0071 U	0.0059 U	0.0052 U	0.0054 U
Ethylbenzene	70	10000	10000	29	0.005 U		0.0034 U		0.004 U	0.0057 U	0.0048 U	0.0041 U	0.0043 U
m,p-Xylene	1000	10000	10000	2600									
Methyl tert-butyl ether	2	3200	3700	190						0.0071 U	0.0059 U	0.0052 U	0.0054 U
Methylene chloride	0.5	3500	4000	54	0.0038 U		0.0026 U		0.0012 JB	0.0021	0.0006 U	0.0005 U	0.0011 B
o-Xylene	1000	10000	10000	23000									
Styrene	24	10000	10000	38000	0.0063 U		0.0043 U		0.0051 U	0.0071 U	0.0059 U	0.0052 U	0.0054 U
Tetrachloroethene	0.5	1500	3300	2.7	0.0012 U		0.0009 U		0.001 U	0.0014 U	0.0012 U	0.001 U	0.0011 U
Toluene	100	10000	10000	46000	0.0063 U		0.0043 U		0.0051 U	0.0071 U	0.0059 U	0.0052 U	0.0054 U
trans-1,2-Dichloroethene	10	3700	4300	500	0.0063 U		0.0043 U		0.0051 U	0.0071 U	0.0059 U	0.0052 U	0.0054 U
trans-1,3-Dichloropropene	2.6	410	470	8.4	0.0063 U		0.0043 U		0.0051 U	0.0071 U	0.0059 U	0.0052 U	0.0054 U
Trichloroethene	0.5	970	1100	14	0.0012 U		0.0009 U		0.001 U	0.0014 U	0.0012 U	0.001 U	0.0009 J
Vinyl Chloride	0.2	53	220	1.7	0.0063 U		0.0043 U		0.0051 U	0.0071 U	0.0059 U	0.0052 U	0.0054 U
Xylenes (Total)	1000	10000	10000	2600	0.0063 U		0.0043 U		0.0051 U	0.0071 U	0.0059 U	0.0052 U	0.0054 U

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference. * = excavated location.

Table 3.13-1
Soils Data Summary - Building 4 - Waste Water Sump Area (B4WW)
Former York Naval Ordnance Plant - York, PA

Location/ID Depth (ft.) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 ft (mg/kg)	MSC Direct Contact 2 - 15 ft (mg/kg)	EPA RSL Industrial Soil (mg/kg)	Bldg4-Tank-7B 8 - 10/11/2005	*Bldg4-Tank-8 8 - 10/12/2005	Bldg4-Tank-9A 10 - 10/19/2005	Bldg4-Tank-9B 10 - 10/19/2005	Bldg4-Tank-9C 9 - 10/19/2005	FPV-69 0 8/14/2003	FPV-69 6 8/14/2003	MW-48 0 5/14/1990
Cyanide, Free												
Cyanide, Free	200	56000	190000	20000	0.5 U	0.5 U	0.5 U	0.53	0.5 U	1.31	5.39	
Cyanide, Total												
Cyanide, Total	200	56000	190000	20000	0.99	0.072	7.73	2.3	3.1	11.3	64.1	
Hexavalent Chromium												
Hexavalent Chromium	190	420	190000	200								
Mercury												
Mercury	10	840	190000	24	0.02 U	0.04 B	0.02 U	0.018 U	0.017 U	0.04 J	0.01 J	
Metal												
Antimony	27	1100	190000	410	1.4 U	2.2 U	1.2 U	1.2 U	1.1 U	2 J	1 J	10 U
Arsenic	150	53	190000	1.6	15	8.7	3.5	3.2	7.5	4	2 J	6.7
Beryllium	320	5600	190000	2000	1.1	1.1	0.49 B	0.69	0.81	0.9 J	0.3 J	0.5 U
Cadmium	38	210	190000	800	28.3	2	0.31 B	0.4 B	1.4	1.1	0.5 U	1 U
Chromium				1400	264	160	39.5	54.6	34.1	33.6	16.4	7
Copper	36000	100000	190000	41000	21.7	23.4	10.2	10.3	14.4	15	22	4
Lead	450	1000	190000	800	18.4	14.9	10.8	16.6	15.8	32	9	15 U
Mercury	10	840	190000	24								0.25 U
Nickel	650	56000	190000	20000	2000	1530	37.4	26.3	23.7	91	70	4
Selenium	26	14000	190000	5100	1 U	1.2 U	1.2 U	1.2 U	1.1 U	2 U	2 U	1 U
Silver	84	14000	190000	5100	0.34 U	0.63 U	0.29 U	0.3 U	0.28 U	1.3	1.2	2 U
Thallium	14	200	190000	66	1.7 U	1.6 U	1.2 U	1.2 U	1.1 U	3 U	3 U	20 U
Zinc	12000	190000	190000	310000	193	129	42	46.8	108	153	29	10
Toxicity Characteristic Leaching Procedure - Mercury												
Mercury	10	840	190000	24	0.0001 mg/L U	0.0001 mg/l U	0.0001 mg/L U	0.0001 mg/L U	0.0001 mg/L U			
Toxicity Characteristic Leaching Procedure - Metal												
Antimony	27	1100	190000	410								
Arsenic	150	53	190000	1.6	0.01 mg/L	0.006 mg/l B	0.0047 mg/L U	0.0047 mg/L U	0.0047 mg/L U			
Barium	8200	190000	190000	190000	0.02 mg/L B	0.14 mg/l B	0.05 mg/L B	0.03 mg/L B	0.01 mg/L B			
Beryllium	320	5600	190000	2000								
Cadmium	38	210	190000	800	0.002 mg/L B	0.0006 mg/l U	0.0006 mg/L U	0.0006 mg/L U	0.0006 mg/L U			
Chromium				1400	0.03 mg/L	0.08 mg/l	0.02 mg/L	0.02 mg/L	0.02 mg/L			
Copper	36000	100000	190000	41000								
Lead	450	1000	190000	800	0.003 mg/L B	0.008 mg/l B	0.0027 mg/L U	0.0027 mg/L U	0.0027 mg/L U			
Nickel	650	56000	190000	20000	0.21 mg/L		0.004 mg/L B	0.0024 mg/L U	0.0024 mg/L U			
Selenium	26	14000	190000	5100	0.0049 mg/L U	0.0049 mg/l U	0.0049 mg/L U	0.0049 mg/L U	0.0049 mg/L U			
Silver	84	14000	190000	5100	0.0025 mg/L U	0.0025 mg/l U	0.0025 mg/L U	0.0025 mg/L U	0.0025 mg/L U			
Thallium	14	200	190000	66								
Zinc	12000	190000	190000	310000								
Total Solids												
Moisture										15.90%	6.40%	
Percent Solids										84.10%	93.60%	
Volatile Organic Compound												
1,1,1,2-Tetrachloroethane	18	3100	190000	9.8	0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U			
1,1,1-Trichloroethane	20	10000	10000	39000	0.029	0.0058 U	0.0054 U	0.0051 U	0.005 U	1.9 J	2 U	0.005 U
1,1,2,2-Tetrachloroethane	0.03	28	33	2.9	0.001 U	0.0012 U	0.0011 U	0.001 U	0.001 U	2.1 U	2 U	0.005 U
1,1,2-Trichloroethane	0.5	100	120	5.5	0.003 U	0.0035 U	0.0033 U	0.003 U	0.003 U	2.1 U	2 U	0.005 U
1,1,2-Trichlorotrifluoroethane	53000	190000	190000	180000								0.005 U
1,1-Dichloroethane	11	1000	1200	17	0.0008 J	0.0058 U	0.0054 U	0.0051 U	0.005 U	2.1 U	2 U	0.005 U
1,1-Dichloroethene	0.7	33	38	1100	0.012	0.0023 U	0.0022 U	0.002 U	0.002 U	2.1 U	2 U	0.005 U
1,2-Dibromo-3-Chloropropane	0.02	11	12	0.073								
1,2-Dibromoethane	0.005	0.93	8.6	0.17	0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U			

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference. * = excavated location.

Table 3.13-1
Soils Data Summary - Building 4 - Waste Water Sump Area (B4WW)
Former York Naval Ordnance Plant - York, PA

Location/ID Depth (ft.) Sample Date Parameter	MSC Soil to GW Used Aquifer (mg/kg)	MSC Direct Contact 0 - 2 ft (mg/kg)	MSC Direct Contact 2 - 15 ft (mg/kg)	EPA RSL Industrial Soil (mg/kg)	Bldg4-Tank-7B 8 - 10/11/2005	*Bldg4-Tank-8 8 - 10/12/2005	Bldg4-Tank-9A 10 - 10/19/2005	Bldg4-Tank-9B 10 - 10/19/2005	Bldg4-Tank-9C 9 - 10/19/2005	FPV-69 0 8/14/2003	FPV-69 6 8/14/2003	MW-48 0 5/14/1990
1,2-Dichloroethane	0.5	63	73	2.2	0.002 U	0.0023 U	0.0022 U	0.002 U	0.002 U	2.1 U	2 U	0.005 U
1,2-Dichloropropane	0.5	160	180	4.7	0.001 U	0.0012 U	0.0011 U	0.001 U	0.001 U	2.1 U	2 U	0.005 U
1,3-Dichloropropene	2.6	410	470	8.4						4.2 U	3.9 U	0.005 U
1,4-Dioxane	2.4	210	240	160	1 U	1.2 U	1.1 U	1 U	1 U			
2-Butanone	580	10000	10000	190000	0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U	11.2	4.6 J	
2-Chloroethyl Vinyl Ether										2.1 U	2 U	0.05 U
2-Hexanone					0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U			
4-Methyl-2-Pentanone	41	4300	4900	52000	0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U			
Acetone	1000	10000	10000	610000	0.0051 U	0.014 B	0.019 B	0.02 B	0.023 B			
Acrolein	0.012	1.1	1.2	0.68						21 U	20 U	
Acrylonitrile	0.27	24	28	1.2	0.051 U	0.058 U	0.054 U	0.051 U	0.05 U	8.5 U	7.8 U	
Benzene	0.5	210	240	5.6	0.001 U	0.0012 U	0.0011 U	0.001 U	0.001 U	0.17 J	2 U	0.01 U
Bromochloromethane	9	10000	10000		0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U			
Bromodichloromethane	10	45	51	1.4	0.001 U	0.0012 U	0.0011 U	0.001 U	0.001 U	2.1 U	2 U	0.005 U
Bromoform	10	1500	1700	220	0.004 U	0.0047 U	0.0044 U	0.004 U	0.004 U	2.1 U	2 U	0.01 U
Bromomethane	1	270	300	35	0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U	4.2 U	3.9 U	0.025 U
Carbon Disulfide	410	10000	10000	3000	0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U			
Carbon Tetrachloride	0.5	110	120	1.3	0.002 U	0.0023 U	0.0022 U	0.002 U	0.002 U	2.1 U	2 U	0.005 U
Chlorobenzene	10	10000	10000	1500	0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U	2.1 U	2 U	0.005 U
Chlorodibromomethane	10	61	70	3.4	0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U	2.1 U	2 U	0.01 U
Chloroethane	90	10000	10000	62000	0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U	2.1 U	2 U	0.005 U
Chloroform	10	17	19	1.5	0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U	2.1 U	2 U	0.005 U
Chloromethane	0.3	920	1000	510	0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U	2.1 U	2 U	0.025 U
cis-1,2-Dichloroethene	7	1900	2100	10000	0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U			
cis-1,3-Dichloropropene	2.6	410	470	8.4	0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U			
Ethylbenzene	70	10000	10000	29	0.004 U	0.0047 U	0.0044 U	0.004 U	0.004 U	2.1 U	2 U	0.005 U
m,p-Xylene	1000	10000	10000	2600								
Methyl tert-butyl ether	2	3200	3700	190	0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U			
Methylene chloride	0.5	3500	4000	54	0.0011 B	0.0006 U	0.0005 U	0.0005 U	0.0012 B	4.2 U	3.9 U	0.01 U
o-Xylene	1000	10000	10000	23000								
Styrene	24	10000	10000	38000	0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U			
Tetrachloroethene	0.5	1500	3300	2.7	0.001 U	0.0012 U	0.0011 U	0.001 U	0.001 U	1.8 J	2 U	0.005 U
Toluene	100	10000	10000	46000	0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U	0.33 J	2 U	0.01 U
trans-1,2-Dichloroethene	10	3700	4300	500	0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U	2.1 U	2 U	0.01 U
trans-1,3-Dichloropropene	2.6	410	470	8.4	0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U			
Trichloroethene	0.5	970	1100	14	0.001 U	0.0012 U	0.0011 U	0.001 U	0.001 U	3.3	2 U	0.005 U
Vinyl Chloride	0.2	53	220	1.7	0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U	4.2 U	3.9 U	0.005 U
Xylenes (Total)	1000	10000	10000	2600	0.0051 U	0.0058 U	0.0054 U	0.0051 U	0.005 U			

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference. * = excavated location.