

Table 7

Summary of Groundwater Miscellaneous Parameter Analytical Results

Former Raytheon Facility
Wayland, Massachusetts

Parameter	Sample I.D. Date Sampled Comments	MCP Reportable Concentrations GW-1	MW-33S 09-Jul-02 Low-Flow	MW-33M 09-Jul-02 Low-Flow	MW-33D 09-Jul-02 Low-Flow	MW-33B 09-Jul-02 Low-Flow	MW-43S 10-Jul-02 Low-Flow	MW-43D 10-Jul-02 Low-Flow	MW-45S 30-Jul-02 Low-Flow	MW-45M 30-Jul-02 Low-Flow	MW-45D 30-Jul-02 Low-Flow	MW-45B 30-Jul-02 Low-Flow	MW-47S 31-Jul-02 Low-Flow	MW-47M 31-Jul-02 Low-Flow	MW-47D 31-Jul-02 Low-Flow
Organics															
Glycol Organics (mg/L)	Compound Specific	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alcohol Organics (mg/L)	Compound Specific	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aldehyde (μ g/L)															
Formaldehyde	1,000	-	-	110	-	67	-	-	-	-	-	-	-	110	-
Polynuclear Aromatic Hydrocarbons (PAHs) (μ g/L)														-	-
Fluoranthene	200	-	-	-	-	-	-	-	-	-	-	0.54	-	-	-
Naphthalene	20										0.28	-			
Benzo (b) Fluoranthene	1										-	0.33			
Benzo (k) Fluoranthene	1										-	0.22			
Chrysene	2										-	0.25			
Phenanthrene	50										-	0.26			
Pyrene	200										-	0.38			
Benzo (e) Pyrene	NS										-	0.20			
Polychlorinated Biphenyls (PCBs) (μ g/L)	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics (mg/L)															
Boron, Total	NS	-	-	-	-	0.144	-	-	0.048	-	-	-	-	-	-
Chloride	NS	17	60	25	32	1,300	58	180	45	140	91	21	97	50	
Fluoride	NS	-	0.08	-	0.10	0.51	-	-	-	0.10	-	-	-	-	-
Ammonia, as Nitrogen	1	0.081	0.082	-	0.121	0.184	-	-	0.104	0.084	0.110	0.096	0.466	0.103	
Nitrate, as Nitrogen	NS	0.23	-	-	0.14	2.5	1.4	1.6	2.1	-	0.55	0.24	-	0.42	
Phosphorus, Total	NS	0.01	0.14	0.03	0.03	0.04	-	0.05	0.03	0.01	0.01	0.05	0.32	-	
Cyanide, Physiologically Available	0.01	-	-	-	-	-	-	-	-	0.005	-	-	-	-	

Notes:

- = Analytical result below the method detection limit.

NS = No Standard

μ g/L=micrograms per liter (parts per billion (ppb))

mg/L=milligrams per liter (parts per million (ppm))

Bold data indicates exceedence of MCP RCGW-1.

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Parameter	Sample I.D. Date Sampled Comments	MCP Reportable Concentrations GW-1	MADEP TEFs **	MW-33S 09-Jul-02 Low-Flow	MW-33M 09-Jul-02 Low-Flow	MW-33D 09-Jul-02 Low-Flow	MW-33B 09-Jul-02 Low-Flow	MW-43S 10-Jul-02 Low-Flow	MW-43D 10-Jul-02 Low-Flow	MW-45S 30-Jul-02 Low-Flow	MW-45M 30-Jul-02 Low-Flow	MW-45D 30-Jul-02 Low-Flow	MW-45B 30-Jul-02 Low-Flow	MW-47S 31-Jul-02 Low-Flow	MW-47M 31-Jul-02 Low-Flow	MW-47D 31-Jul-02 Low-Flow	
Dioxins																	
<i>Polychlorinated dibenzo-p-dioxins (PCDDs) (pg/L)</i>																	
2,3,7,8-TCDD		NS	1	-	-	0.54 *	-	-	-	-	2.9	-	-	-	-	-	-
1,2,3,7,8-PeCDD		NS	0.5	-	-	0.73 *	-	-	-	-	4.4 *	-	-	-	-	-	-
1,2,3,4,7,8-HxCDD		NS	0.1	-	-	-	-	-	-	-	3.2	-	-	-	-	-	-
1,2,3,6,7,8-HxCDD		NS	0.1	-	-	-	-	-	-	-	4.6	-	-	-	-	-	-
1,2,3,7,8,9-HxCDD		NS	0.1	-	-	-	-	-	-	-	4.7	-	-	1.8	-	-	-
1,2,3,4,6,7,8-HpCDD		NS	0.1	-	-	-	-	-	-	-	11.6	-	-	-	-	-	-
1,2,3,4,6,7,8,9-OCDD		NS	0.001	7.6	-	3.5	-	-	-	-	9.9	89.8	14.6	21.0	13.0 *	15.6	24.3
<i>Subtotal 2,3,7,8 TCDD Equivalent</i>				0.008	0.000	0.909	0.000	0.000	0.000	0.010	7.600	0.015	0.021	0.013	0.016	0.024	
<i>Polychlorinated dibenzo-p-dibenzofurans (PCDFs) (pg/L)</i>																	
2,3,7,8-TCDF		NS	0.1	-	-	0.61	-	-	-	-	-	-	-	-	-	-	-
1,2,3,7,8-PeCDF		NS	0.5	-	-	1.1 *	-	-	-	-	3.6 *	-	-	1.8	-	-	-
2,3,4,7,8-PeCDF		NS	0.5	-	-	0.96	-	-	-	-	3.1 *	-	-	-	1.4 *	-	-
1,2,3,4,7,8-HxCDF		NS	0.1	-	-	1.2	-	-	-	-	0.82 *	4.6	1.1 *	0.67 *	1.6	1.6 *	-
1,2,3,6,7,8-HxCDF		NS	0.1	-	-	0.49 *	-	-	-	-	3.6	-	-	1.3	0.76 *	-	-
2,3,4,6,7,8-HxCDF		NS	0.1	-	-	0.60	-	-	-	-	3.6	-	-	1.4	0.93	-	-
1,2,3,7,8,9-HxCDF		NS	0.1	-	-	0.38 *	-	-	-	-	3.8 *	-	-	2.3 *	1.1 *	-	-
1,2,3,4,6,7,8-HpCDF		NS	0.1	-	-	0.99	-	-	-	-	4.1	-	-	-	-	-	-
1,2,3,4,7,8,9-HpCDF		NS	0.1	-	-	-	-	-	-	-	3.7	-	-	-	-	-	-
1,2,3,4,6,7,8,9-OCDF		NS	0.001	-	-	1.2	-	-	-	-	5.3 *	-	-	-	3.8	-	-
<i>Subtotal 2,3,7,8 TCDD Equivalent</i>				0.000	0.000	1.458	0.000	0.000	0.000	0.082	5.695	0.110	0.067	1.560	1.143	0.000	
Total Dioxins (pg/L)																	
<i>Total 2,3,7,8 TCDD Equivalent</i>		30		0.008	0.000	2.367	0.000	0.000	0.000	0.092	13.295	0.125	0.088	1.573	1.158	0.024	

Notes:

- = Analytical result below the method detection limit.

NS = No Standard

pg/L=picograms per liter (parts per quadrillion (ppq)). 10-12g/L

* = Based on Estimated Maximum Possible Concentration

** TEF = Toxicity Equivalent Factor (MADEP)

| Bold data indicates exceedence of MCP RCGW-1.

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Parameter	Sample I.D. Date Sampled Comments	MCP Reportable Concentrations GW-1	MW-307 20-Sep-02 Low-Flow	MW-313S 19-Sep-02 Low-Flow	MW-313D 19-Sep-02 Low-Flow	MW-314S 19-Sep-02 Low-Flow	MW-314D 19-Sep-02 Low-Flow	MW-315S 19-Sep-02 Low-Flow	MW-315D 19-Sep-02 Low-Flow
Organics									
<i>Polynuclear Aromatic Hydrocarbons (PAHs) (µg/L)</i>	Compound Specific	-	-	-	-	-	-	-	-
<i>Polychlorinated Biphenyls (PCBs) (µg/L)</i>	0.3	-	-	-	-	-	-	-	-
Inorganics									
<i>PP13 Dissolved Metals (mg/L)</i>									
Arsenic	0.05	0.029	0.117	0.073	0.028	0.087	0.158	0.071	-
Zinc	0.9	-	-	-	0.10	-	0.05	-	-

Notes:

- = Analytical result below the method detection limit.

µg/L=micrograms per liter (parts per billion (ppb))

mg/L=milligrams per liter (parts per million (ppm))

Bold data indicates exceedence of MCP RCGW-1.