

February 7, 2004

de maximis, inc.

200 Day Hill Road, Suite 200
Windsor, Connecticut 06095

Attention: John Hunt

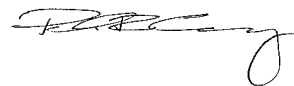
Subject: June 2004 Semiannual Groundwater Sampling Results
NMI Site, Concord, Massachusetts

Dear John:

GeoSyntec Consultants is pleased to provide you with the groundwater monitoring data from the June 2004 semiannual sampling round. Table 1 provides a summary of analytes detected during the February and June sampling rounds. Table 2 lists the results from the hydrant sample, and Table 3 provides a summary of the isotopic and total uranium results for the groundwater samples.

If you have any questions regarding this summary, please do not hesitate to contact either of the undersigned at (978) 263-9588.

Sincerely,



Paula R. Chang, M.S.E.
Project Engineer



Douglas G. Larson, Ph.D., P.E.
Associate

Attachments

Table 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
 June 2004 Radionuclides & VOCs in Hydrant Sample
 NMI Site, Concord, MA

Method Group	Parameter	Units	Hydrant-06092004
Radionuclides via EPA Method 901.1			
	Actinium-228	pCi/l	4.46/U
	Americium-241	pCi/l	6.99/U
	Antimony-124	pCi/l	-1.03/U
	Antimony-125	pCi/l	1.83/U
	Barium-133	pCi/l	-1.1/U
	Barium-140	pCi/l	1.26/U
	Beryllium-7	pCi/l	-7.01/U
	Bismuth-212	pCi/l	-4.81/U
	Bismuth-214	pCi/l	0/U
	Cerium-139	pCi/l	-0.764/U
	Cerium-141	pCi/l	1.75/U
	Cerium-144	pCi/l	0.538/U
	Cesium-134	pCi/l	0.838/U
	Cesium-136	pCi/l	-1.56/U
	Cesium-137	pCi/l	1.6/U
	Chromium-51	pCi/l	2.55/U
	Cobalt-56	pCi/l	1.05/U
	Cobalt-57	pCi/l	0.151/U
	Cobalt-58	pCi/l	0.26/U
	Cobalt-60	pCi/l	-1.07/U
	Europium-152	pCi/l	3.28/U
	Europium-154	pCi/l	4.47/U
	Europium-155	pCi/l	0.865/U
	Iridium-192	pCi/l	1.39/U
	Iron-59	pCi/l	1.53/U
	Lead-210	pCi/l	286/U
	Lead-212	pCi/l	4.01/U
	Lead-214	pCi/l	16.3/
	Manganese-54	pCi/l	0.237/U
	Mercury-203	pCi/l	0.688/U
	Neodymium-147	pCi/l	-3.59/U
	Neptunium-239	pCi/l	1.75/U
	Niobium-94	pCi/l	0.151/U
	Niobium-95	pCi/l	0.481/U
	Potassium-40	pCi/l	18.3/U
	Promethium-144	pCi/l	0.417/U
	Promethium-146	pCi/l	2.65/U
	Radium-226	pCi/l	22.2/
	Radium-228	pCi/l	4.46/U
	Ruthenium-106	pCi/l	-0.405/U
	Silver-110m	pCi/l	-1.13/U
	Sodium-22	pCi/l	1.61/U
	Thallium-208	pCi/l	2.27/U
	Thorium-230	pCi/l	22.2/
	Thorium-232	pCi/l	3.94/U
	Thorium-234	pCi/l	69/U
	Tin-113	pCi/l	-0.552/U
	U-235	pCi/l	-5.45/U
	U-238	pCi/l	69/U
	Yttrium-88	pCi/l	-0.162/U
	Zinc-65	pCi/l	-3.09/U
	Zirconium-95	pCi/l	1.07/U
Thorium via DOE EML HASL-300, "Th-01-RC Modified"			
	Thorium-228	pCi/l	0.0109/U
	Thorium-230	pCi/l	0.173/U
	Thorium-232	pCi/l	-0.00593/U

Notes: "J"—Compound detected below method quantitation limit, estimated value provided.
 "B"—Compound detected in Laboratory blank analysis.
 "U"—Compound not detected above method quantitation limit, quantitation limit provided.
 "H"—Analytical holding time exceeded
 "E" = Indicates compounds whose concentrations exceed the calibration range of the instrument
 Department of Energy (DOE) Environmental Measurement Laboratory (EML) Health and Safety Laboratory (HASL)
 Highlighted cells indicate negative detections reported by the laboratory (i.e., detections below background).
 GeoSyntec collected the groundwater samples on February 24 and 25, 2004. Laboratory analyses were performed by General Engineering Laboratories of Columbia, South Carolina.

Table 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
 June 2004 Radionuclides & VOCs in Hydrant Sample
 NMI Site, Concord, MA

Method Group	Parameter	Units	Hydrant-06092004	Hydrant-06092004-Rerun
Volatile Organic Compounds via USEPA Method 8260				
	1,1,1-Trichloroethane	mg/L	0.5/U	
	1,1,2,2-Tetrachloroethane	mg/L	0.5/U	
	1,1,2-Trichloroethane	mg/L	0.5/U	
	1,1-Dichloroethane	mg/L	0.5/U	
	1,1-Dichloroethene	mg/L	0.5/U	
	1,2,4-Trimethylbenzene	mg/L	0.5/U	
	1,2-Dichlorobenzene	mg/L	0.5/U	
	1,2-Dichloroethane	mg/L	0.5/U	
	1,2-Dichloropropane	mg/L	0.5/U	
	1,3,5-Trimethylbenzene	mg/L	0.5/U	
	1,3-Dichlorobenzene	mg/L	0.5/U	
	1,4-Dichlorobenzene	mg/L	0.5/U	
	2-Butanone (MEK)	mg/L	1/U	
	2-Hexanone	mg/L	1/U	
	Acetone	mg/L	0.0011/J	
	Benzene	mg/L	0.5/U	
	Bromodichloromethane	mg/L	0.0005/J	
	Bromofluorobenzene	mg/L	0.0048/	
	Bromoform	mg/L	0.00072/J	
	Carbon disulfide	mg/L	1/U	
	Carbon tetrachloride	mg/L	0.5/U	
	Chlorobenzene	mg/L	0.5/U	
	Chloroethane	mg/L	0.5/U	
	Chloroform	mg/L	0.00031/J	
	Chloromethane	mg/L	0.5/U	
	cis-1,2-Dichloroethene	mg/L	0.5/U	
	cis-1,3-Dichloropropene	mg/L	0.5/U	
	Dibromochloromethane	mg/L	0.001/J	
	Dibromofluoromethane	mg/L	0.0051/	
	Dichloromethane (Methylene chloride)	mg/L	0.5/U	
	Ethyl benzene	mg/L	0.5/U	
	Ethylene dibromide	mg/L	0.5/U	
	Freon-11	mg/L	0.5/U	
	Freon-12	mg/L	0.5/U	
	m&p-Xylene	mg/L	0.5/U	
	Methyl Bromide	mg/L	0.5/U	
	Methyl Isobutyl Ketone (MIBK)	mg/L	1/U	
	Methyl tert-butyl ether (MTBE)	mg/L	0.5/U	
	o-Xylene	mg/L	0.5/U	
	Styrene	mg/L	0.5/U	
	Tetrachloroethene	mg/L	0.5/U	
	Toluene	mg/L	0.5/U	
	Toluene-D8	mg/L	0.0048/	
	trans-1,2-Dichloroethene	mg/L	0.5/U	
	trans-1,3-Dichloropropene	mg/L	0.5/U	
	Trichloroethene	mg/L	0.5/U	
	Vinyl acetate	mg/L	1/U	
	Vinyl Chloride	mg/L	0.5/U	
	Xylenes (unspecified)	mg/L	0.5/U	
Volatile Organic Compounds via USEPA Method SW846 8270C				
	1,2,4-Trichlorobenzene	ug/L	9.9/U	9.6/U
	1,4-Dioxane	ug/L	9.9/U	9.6/U
	2,4,5-Trichlorophenol	ug/L	9.9/U	9.6/U
	2,4,6-Tribromophenol	ug/L	71/	73.6/
	2,4,6-Trichlorophenol	ug/L	9.9/U	9.6/U
	2,4-Dichlorophenol	ug/L	9.9/U	9.6/U
	2,4-Dimethylphenol	ug/L	9.9/U	9.6/U
	2,4-Dinitrophenol	ug/L	19.8/U	19.2/U
	2,4-Dinitrotoluene	ug/L	9.9/U	9.6/U
	2,6-Dinitrotoluene	ug/L	9.9/U	9.6/U
	2-Chloronaphthalene	ug/L	0.99/U	0.96/U

Notes: "J"=Compound detected below method quantitation limit, estimated value provided.
 "B"=Compound detected in Laboratory blank analysis.
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 "H"=Analytical holding time exceeded
 "E" = Indicates compounds whose concentrations exceed the calibration range of the instrument

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SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
 June 2004 Radionuclides & VOCs in Hydrant Sample
 NMI Site, Concord, MA

Method Group	Parameter	Units	Hydrant-06092004	Hydrant-06092004-Rerun
	2-Chlorophenol	ug/L	9.9/U	9.6/U
	2-Fluorobiphenyl	ug/L	40/	32.9/
	2-Fluorophenol	ug/L	15.4/	29.6/
	2-Methylnaphthalene	ug/L	0.99/U	0.96/U
	2-Methylphenol	ug/L	9.9/U	9.6/U
	2-Nitroaniline	ug/L	9.9/U	9.6/U
	3,3'-Dichlorobenzidine	ug/L	9.9/U	9.6/U
	4-Chloroaniline	ug/L	9.9/U	9.6/U
	Acenaphthene	ug/L	0.99/U	0.96/U
	Acenaphthylene	ug/L	0.99/U	0.96/U
	Anthracene	ug/L	0.99/U	0.96/U
	Benzo(a)anthracene	ug/L	0.99/U	0.96/U
	Benzo(a)pyrene	ug/L	0.99/U	0.96/U
	Benzo(b)fluoranthene	ug/L	0.99/U	0.96/U
	Benzo(g,h,i)perylene	ug/L	0.99/U	0.96/U
	Benzo(k)fluoranthene	ug/L	0.99/U	0.96/U
	Benzoic acid	ug/L	19.8/U	19.2/U
	Bis(2-Chloro-1-methylethyl)Ether	ug/L	9.9/U	9.6/U
	bis(2-Chloroethyl) ether	ug/L	9.9/U	9.6/U
	bis(2-Ethylhexyl) phthalate	ug/L	9.9/U	9.6/U
	Butylbenzylphthalate	ug/L	9.9/U	9.6/U
	Carbazole	ug/L	9.9/U	9.6/U
	Chrysene	ug/L	0.99/U	0.96/U
	Deuterated Nitrobenzene	ug/L	37.6/	28.9/
	Dibenzo(a,h)anthracene	ug/L	0.99/U	0.96/U
	Dibenzofuran	ug/L	9.9/U	9.6/U
	Diethylphthalate	ug/L	9.9/U	9.6/U
	Dimethylphthalate	ug/L	9.9/U	9.6/U
	Di-n-butylphthalate	ug/L	9.9/U	9.6/U
	Di-n-octylphthalate	ug/L	9.9/U	9.6/U
	Diphenylamine	ug/L	9.9/U	9.6/U
	Fluoranthene	ug/L	0.99/U	0.96/U
	Fluorene	ug/L	0.99/U	0.96/U
	Hexachlorobenzene	ug/L	9.9/U	9.6/U
	Hexachlorobutadiene	ug/L	9.9/U	9.6/U
	Hexachlorocyclopentadiene	ug/L	9.9/U	9.6/U
	Hexachloroethane	ug/L	9.9/U	9.6/U
	Indeno(1,2,3-cd)pyrene	ug/L	0.99/U	0.96/U
	Isophorone	ug/L	9.9/U	9.6/U
	m,p-Cresols	ug/L	9.9/U	9.6/U
	Naphthalene	ug/L	0.99/U	0.96/U
	Nitrobenzene	ug/L	9.9/U	9.6/U
	N-Nitroso-di-n-propylamine	ug/L	9.9/U	9.6/U
	Pentachlorophenol	ug/L	9.9/U	9.6/U
	Phenanthrene	ug/L	0.99/U	0.96/U
	Phenol	ug/L	9.9/U	9.6/U
	Phenol-D5	ug/L	1.3/	15/
	p-Terphenyl-d14	ug/L	52.3/	55.2/
	Pyrene	ug/L	0.99/U	0.96/U
	1,1-Biphenyl	ug/L	182/	
Volatile Organic Compounds via USEPA Method SW846 8310				
	Acenaphthene	ug/L	0.485/U	
	Acenaphthylene	ug/L	0.485/U	
	Anthracene	ug/L	0.485/U	
	Benzo(a)anthracene	ug/L	0.0485/U	
	Benzo(a)pyrene	ug/L	0.0485/U	
	Benzo(b)fluoranthene	ug/L	0.0485/U	
	Benzo(g,h,i)perylene	ug/L	0.0485/U	
	Benzo(k)fluoranthene	ug/L	0.0243/U	
	Chrysene	ug/L	0.0485/U	
	Dibenzo(a,h)anthracene	ug/L	0.0485/U	
	Fluoranthene	ug/L	0.0485/U	
	Fluorene	ug/L	0.485/U	
	Indeno(1,2,3-cd)pyrene	ug/L	0.0485/U	
	Naphthalene	ug/L	0.485/U	
	Phenanthrene	ug/L	0.485/U	
	Pyrene	ug/L	0.0485/U	

Notes: "J"=Compound detected below method quantitation limit, estimated value provided.
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 "H"=Analytical holding time exceeded
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Table 3
Summary of Uranium Concentrations Detected in Groundwater Samples
February and June 2004 Sampling Round
NMI Site, Concord, MA

Sample Location	U ²³⁴ µg/L Feb-04	U ²³⁴ µg/L Jun-04	U ²³⁵ µg/L Feb-04	U ²³⁵ µg/L Jun-04	U ²³⁸ µg/L Feb-04	U ²³⁸ µg/L Jun-04	Total U µg/L Feb-04	Total U µg/L Jun-04	Total U (ICP) µg/L Feb-04	U ²³⁸ /U ²³⁵ Ratio Feb-04	U ²³⁸ /U ²³⁵ Ratio Jun-04	U ²³⁸ % Feb-04	U ²³⁸ % Jun-04	U ²³⁵ % Feb-04	U ²³⁵ % 4-Jun
GZW-10	0.00513	0.00506	0.565	1.285	62.20	71.43	62.77	72.72		110.01	56.13	99.09	98.226	0.90	1.75
GZW-10-DUPp	0.00469		0.500		57.14		57.65			114.29		99.12		0.87	
GZW-6-3	0.00482		0.687		69.05		69.74	67.7		100.52		99.01		0.98	
GZW-7-1	0.00087	0.00084	0.461	0.738	126.19	136.61	126.65	137.35		273.60	186.96	99.64	99.462	0.36	0.53
GZW-7-1-DUP		0.00108		0.818		129.76		130.58			160.28		99.373		0.62
GZW-7S	0.00081	0.00081	0.345	0.743	113.69	108.93	114.04	109.67		329.23	148.02	99.70	99.322	0.30	0.67
HB-10	0.00001	0.00002	-0.016	0.039	0.17	0.32	0.15	0.36		-	8.42	110.42	89.270	-	10.60
HB-10S	0.00002	0.00013	-0.021	0.057	1.09	2.32	1.07	2.38		-	40.66	101.95	97.576	-	2.40
HB-12	0.04132	0.01350	24.393	6.729	5892.86	1886.905	5917.29	1893.65		241.58	283.08	99.59	99.644	0.41	0.35
HB-12-HYDRASL		0.01161		6.075		1633.93		1640.01			271.47		99.629		0.37
HB-7	0.00063	0.00049	0.221	0.228	86.90	77.68	87.13	77.91		394.02	343.82	99.75	99.707	0.25	0.29
HBPZ-2R	0.01833	0.01569	8.084	11.028	2880.95	2473.21	2889.05	2484.26		356.37	226.26	99.72	99.555	0.28	0.44
ML-1-3		0.00066		0.175		11.46		11.63			66.10		98.488		1.49
HYDRANT		0.00003		0.075				0.07			0.00		0.000		41.00
MW-8A	0.00294	0.00537	1.411	6.776	422.62	601.19	424.03	607.97	534	299.47	89.90	99.67	98.885	0.33	1.10

Notes:

1. Natural uranium is roughly 0.7% U²³⁵, and the U²³⁸/U²³⁵ ratio is approximately 130 to 180.
2. Depleted uranium is roughly 0.2% U²³⁵, and the U²³⁸/U²³⁵ ratio is approximately 400 to 500.
3. GZW-10 and GZW-6-3 are both bedrock wells; the others are overburden wells.
4. Highlighted cells indicate negative detection of U-235 (picoCuries per Liter [pCi/L]) reported by the laboratory (i.e., detections below background)
5. Negative U-235 detection are indicated by dashes in the U-235 ratio and percentage columns.
6. GZW-6-3 was not sampled in June 2004 due to damage to the Barcad equipment.

µg/L - micrograms per liter

U - uranium

ICP - inductively coupled plasma

HYDRSL - hydrasleeve sampling device

DUP - duplicate sample