MACTEC

52337-1010

January 20, 2004

Mr. John Conant
Combustion Engineering, Inc.
2000 Day Hill Road
Windsor, Connecticut 06095

Subject: **Groundwater Sampling Program**
October 2003 Radiochemistry Results
CE Windsor Site
Windsor, Connecticut

Dear Mr. Conant:

This letter report provides groundwater sampling results from the quarterly groundwater sampling event at the Combustion Engineering, Inc. (CE) Site located at 2000 Day Hill Road in Windsor, Connecticut (Site or CE Windsor Site). Samples were collected between October 20 and 29, 2003 by MACTEC Engineering and Consulting, Inc. (MACTEC). The groundwater sampling program is being conducted to investigate the possibility of radiological residuals in groundwater at discrete Site locations and is described in the Radiological Groundwater Sampling Program Work Plan dated June 4, 2002.

Sample Collection

Groundwater samples were collected in October 2003 from a total of 77 monitoring locations, including 70 monitoring wells and seven well points in Site Brook.

Groundwater samples from all monitoring wells were collected using low-flow groundwater sampling methodology. Groundwater samples were collected from the well points within the Site brook by purging with a submersible pump. The monitoring locations are shown on Figure 1. The technical rationale for each location is presented in the Radiological Groundwater Sampling Program Work Plan.

Sample Analysis and Data Review

Groundwater samples were analyzed for gross alpha and gross beta activity using EPA Method 900.0. Four groundwater samples (MW-1201, WP-1403, WP-1403S, and WP-1403D) were also analyzed for cobalt-60 and cesium-137 by gamma spectroscopy using EPA Method 901.1 and uranium isotopes (U-234, U-235, and U-238) by alpha spectroscopy using DOE Method 300 U-04 (modified). All samples were analyzed by General Engineering Laboratories, Inc. of Charleston, South Carolina. Laboratory results were validated in accordance with the Science Applications International Corporation (SAIC) "Laboratory Validation Guidelines for Evaluating Radionuclide Analyses".

MACTEC Engineering and Consulting
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Findings

Tables 1 and 2 present validated results for the October 2003 sampling event. Table 3 groups the results from the five monitoring locations identified as background locations (MW-E01, MW-E03, MW-2401, MW-S02, and MW-W01) and provides summary statistics (i.e., minimum, maximum, mean, and median) for these wells. Laboratory results and associated total propagated uncertainty (TPU) for each sample analysis are provided in Attachment A. The results of this quarterly monitoring event are generally consistent with the results from the previous events.

Monitoring well MW-1201 is adjacent to industrial waste line manhole MH#5 and is known to be impacted with non-radiological contaminants (e.g., solvents) consistent with a historic release from the industrial line. Well points WP-1403S and WP-1403D are located in Site brook immediately downgradient from the former industrial waste outfall. These well points are hand-driven piezometers located in the sediment of Site brook known to be impacted by radiological materials. Samples collected from these well points are not representative of shallow groundwater conditions in the vicinity of the Site brook.

In May 2003, a new monitoring location (WP-1403) was installed to replace WP-1403S and WP-1403D. This replacement well point was installed on the west side of the Site brook, immediately upgradient of WP-1403S and WP-1403D. This new monitoring location was installed using direct push drilling techniques to allow collection of a water sample that is more representative of shallow groundwater conditions than the original hand-driven well points installed in the sediments within the Site brook. Results from the groundwater sample collected from the replacement well point WP-1403 indicate that uranium was not detected at concentrations above the minimum detectable concentration (MDC).

Cobalt-60 and cesium-137 were not detected at concentrations above the MDC in groundwater samples collected during the October 2003 event.

A review of the data indicate that the uranium results detected in groundwater collected from monitoring locations MW-1201, WP-1403S, and WP-1403D are consistent with previous events. Calculated total uranium levels for these locations are well below the USEPA drinking water maximum contaminant level (MCL) for uranium of 30 μg/L (see Attachment B for conversion calculation).

There continues to be a correlation between the results of gross alpha/beta and isotopes for those locations where both analyses were conducted. The sample results from well point WP-1403 for both gross alpha/beta and specific isotopes were non-detect (i.e., results were not detected above the MDC). The sample results from monitoring locations MW-1201, WP-1403D, and WP-1403S indicate detectable levels of gross alpha/beta, as well as elevated levels of activity for uranium isotopes. However, the samples collected from well points WP-1403S and WP-1403D, which are installed in the sediments of the Site brook, are not representative of shallow groundwater conditions in the vicinity of the Site brook.

The October 2003 gross alpha/beta results for the background monitoring locations (see Table 3) are similar to the two previous sampling events (April and August 2003).

As discussed previously, well points WP-1403S and WP-1403D are installed in the sediments of the Site brook. Samples collected from these well points are not representative of shallow groundwater conditions in the vicinity of the Site brook. A new monitoring location (WP-1403) was installed to replace WP-1403S and WP-1403D. This new monitoring location will allow collection of a water sample that is more representative of shallow groundwater conditions than the original hand-driven well points installed in the sediments within the Site brook. Therefore, starting with the January 2004 quarterly sampling event, well points WP-1403S and WP-1403D will be eliminated from the groundwater sampling program.

If you have any questions please call me at (207) 775-5401.

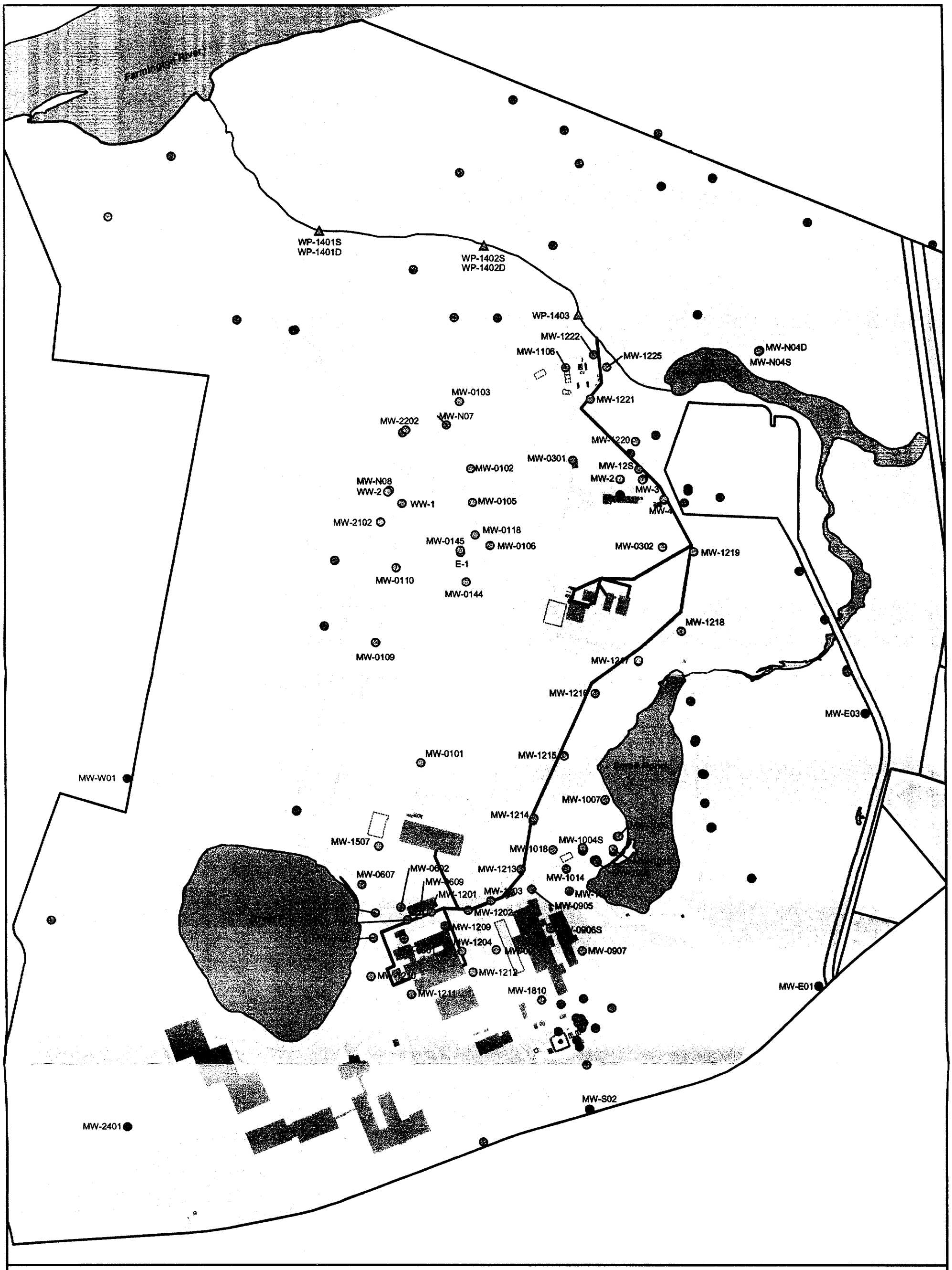
Sincerely,

MACTEC ENGINEERING AND CONSULTING, INC.

Nelson Walter, PE, LEP
Project Manager

Attachments

cc: Keith Knauerhase (CE)
Elaine Hammick (CE)
Rob Woodard (TLG)
Jay Adler (TLG)
Randy Ragland (USNRC Region I)
Ed Wilds (CTDEP)
Charles Petrillo (Town of Windsor)
Mark Otis (USACE)
William Taylor (USACE)



Legend

- Radiological Groundwater Sample Locations - Monitoring Wells
- Radiological Groundwater Sample Locations - Well Points
- Background Groundwater Sample Locations
- Groundwater Monitoring Well Locations (not sampled)

N

0 250 500 Feet

Prepared by BRP | Checked by APP

Figure 1
Radiological Groundwater Sampling Program
Monitoring Locations

CE Windsor Site
Windsor, Connecticut
MACTEC, Inc.

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TABLE 1
OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	E-1			MW-0101			MW-0102			MW-0103		
		Sample ID	E00001R			MW0101R			MW0102R			MW0103R		
		Date Sampled	10/28/03			10/23/03			10/22/03			10/22/03		
		Sample Type	FS			FS			FS			FS		
Method	**Analysis**	**Units**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**
Gross Alpha	Alpha Activity	pCi/L	2.07	U		1.7	U		1.51	U		1.48	U	
Gross Beta	Beta Activity	pCi/L	2.13	U		1.72	U		3.6	U		3.45	U	

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results is sample minimal detectable concentration (MDC)
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

TABLE 1
OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-0105			MW-0106			MW-0109			MW-0110		
		Sample ID	MW0105R			MW0106R			MW0109R			MW0110R		
		Date Sampled	10/24/03			10/27/03			10/22/03			10/22/03		
		Sample Type	FS			FS			FS			FS		
Method	**Analysis**	**Units**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**
Gross Alpha	Alpha Activity	pCi/L	1.45	U		1.79	U		3.48	U		1.43	U	
Gross Beta	Beta Activity	pCi/L	1.31	U		1.86	U		5.28	U		3.55	U	

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results is sample minimal detectable concentration (MDC)
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

TABLE 1
OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-0118			MW-0144			MW-0145			WW-1		
		Sample ID	MW0118R			MW0144R			MW0145R			MWWW1R		
		Date Sampled	10/27/03			10/27/03			10/28/03			10/23/03		
		Sample Type	FS			FS			FS			FS		
Method	Analysis	Units	Result	Qual	TPU	Result	Qual	TPU	Result	Qual	TPU	Result	Qual	TPU
Gross Alpha	Alpha Activity	pCi/L	1.85	U		1.26	U		2.08	U		1.58	U	
Gross Beta	Beta Activity	pCi/L	2.14	U		1.68	U		2.2	U		3.03	U	

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results is sample minimal detectable concentration (MDC)
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

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TABLE 1
OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	WW-2			MW-0301			MW-0302			MW-12S		
		Sample ID	MWWW2R			MW0301R			MW0302R			MW12SR		
		Date Sampled	10/23/03			10/27/03			10/28/03			10/28/03		
		Sample Type	FS			FS			FS			FS		
Method	**Analysis**	**Units**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**
Gross Alpha	Alpha Activity	pCi/L	1.45	U		2.76	U		2.05	U		2	U	
Gross Beta	Beta Activity	pCi/L	1.8	U		2.63	J	1.32	2.45	U		1.79	U	

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results is sample minimal detectable concentration (MDC)
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

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TABLE 1
OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-2			MW-3			MW-3			MW-4		
		Sample ID	MW2R			MW3DUPR			MW3R			MW4R		
		Date Sampled	10/28/03			10/28/03			10/28/03			10/28/03		
		Sample Type	FS			FD			FS			FS		
Method	**Analysis**	**Units**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**
Gross Alpha	Alpha Activity	pCi/L	3.44	U		2.14	U		2.64	U		4.74	U	
Gross Beta	Beta Activity	pCi/L	3.47	J	1.34	1.82	U		2.63	J	1.18	5.51	J	2.39

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results is sample minimal detectable concentration (MDC)
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VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-0601			MW-0602			MW-0603			MW-0607		
		Sample ID	MW0601R			MW0602R			MW0603R			MW0607R		
		Date Sampled	10/28/03			10/28/03			10/28/03			10/22/03		
		Sample Type	FS			FS			FS			FS		
Method	**Analysis**	**Units**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**
Gross Alpha	Alpha Activity	pCi/L	2.31	U		2.28	U		2.1	U		1.63	U	
Gross Beta	Beta Activity	pCi/L	1.46	U		1.9	U		2.06	U	1.15	3.44	U	

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results is sample minimal detectable concentration (MDC)
pCi/L = picocurie per liter
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TABLE 1
OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-0608			MW-0609			MW-0904			MW-0905		
		Sample ID	MW0608R			MW0609R			MW0904R			MW0905R		
		Date Sampled	10/21/03			10/23/03			10/23/03			10/23/03		
		Sample Type	FS			FS			FS			FS		
Method	**Analysis**	**Units**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**
Gross Alpha	Alpha Activity	pCi/L	2.97	U		3.94	U		1.95	U		4.94	J	2.38
Gross Beta	Beta Activity	pCi/L	4.32	U		16.7		3.05	3.39	J	1.03	7.56		1.97

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results is sample minimal detectable concentration (MDC)
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

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OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-0906S			MW-0907			MW-1004S			MW-1005		
		Sample ID	MW0906SR			MW0907R			MW1004SR			MW1005SR		
		Date Sampled	10/23/03			10/23/03			10/28/03			10/28/03		
		Sample Type	FS			FS			FS			FS		
Method	**Analysis**	**Units**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**
Gross Alpha	Alpha Activity	pCi/L	2.8	U		2.16	U		1.93	U		1.72	U	
Gross Beta	Beta Activity	pCi/L	2.07	U		1.98	U		2.15	U		1.86	U	0.984

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results is sample minimal detectable concentration (MDC)
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

TABLE 1
OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-1006			MW-1007			MW-1014			MW-1016		
		Sample ID	MW1006SR			MW1007SR			MW1014R			MW1016R		
		Date Sampled	10/29/03			10/29/03			10/24/03			10/24/03		
		Sample Type	FS			FS			FS			FS		
Method	Analysis	Units	Result	Qual	TPU	Result	Qual	TPU	Result	Qual	TPU	Result	Qual	TPU
Gross Alpha	Alpha Activity	pCi/L	2.74	U		2.11	U		2.1	U		2.04	J	0.962
Gross Beta	Beta Activity	pCi/L	2.61	J	1.15	2.36	J	1.12	2.05	J	0.875	3.1	J	0.833

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results is sample minimal detectable concentration (MDC)
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OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-1018			MW-1106			MW-1201			MW-1202		
		Sample ID	MW1018R			MW1106R			MW1201R			MW1202R		
		Date Sampled	10/23/03			10/22/03			10/28/03			10/28/03		
		Sample Type	FS			FS			FS			FS		
Method	**Analysis**	**Units**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**
Gross Alpha	*Alpha Activity*	pCi/L	6.33	U	10.5	1.56	U		7.93		3.14	2.9	U	
Gross Beta	Beta Activity	pCi/L	4.9	U	6.94	3.51	U		13		2.17	2.1	U	

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results is sample minimal detectable concentration (MDC)
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

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TABLE 1
OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-1203			MW-1204			MW-1208			MW-1209		
		Sample ID	MW1203R			MW1204R			MW1208R			MW1209R		
		Date Sampled	10/28/03			10/28/03			10/27/03			10/27/03		
		Sample Type	FS			FS			FS			FS		
Method	Analysis	Units	Result	Qual	TPU	Result	Qual	TPU	Result	Qual	TPU	Result	Qual	TPU
Gross Alpha	Alpha Activity	pCi/L	1.9	U		1.78	U		3.41	J	1.83	2.48	J	1.24
Gross Beta	Beta Activity	pCi/L	1.71	U		1.93	U		6.26		1.38	2.28	J	1.01

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results is sample minimal detectable concentration (MDC)
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

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TABLE 1
OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-1210			MW-1211			MW-1212			MW-1213		
		Sample ID	MW1210R			MW1211R			MW1212R			MW1213R		
		Date Sampled	10/24/03			10/27/03			10/24/03			10/24/03		
		Sample Type	FS			FS			FS			FS		
Method	**Analysis**	**Units**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**
Gross Alpha	Alpha Activity	pCi/L	3.96	U		3.03	U		2.04	U		1.55	U	
Gross Beta	Beta Activity	pCi/L	3.51	U		2.49	J	1.21	1.51	U		3.35	J	0.882

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results is sample minimal detectable concentration (MDC)
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

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TABLE 1
OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-1214			MW-1215			MW-1216			MW-1217		
		Sample ID	MW1214R			MW1215R			MW1216R			MW1217R		
		Date Sampled	10/24/03			10/24/03			10/24/03			10/24/03		
		Sample Type	FS			FS			FS			FS		
Method	**Analysis**	**Units**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**
Gross Alpha	Alpha Activity	pCi/L	1.24	U		1.27	U		3.14	J	1.09	1.02	U	
Gross Beta	Beta Activity	pCi/L	1.14	U		1.16	U		2.43	J	0.778	1.25	J	0.692

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
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U = not detected; results is sample minimal detectable concentration (MDC)
pCi/L = picocurie per liter
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TABLE 1
OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-1218			MW-1219			MW-1220			MW-1221		
		Sample ID	MW1218R			MW1219R			MW1220R			MW1221R		
		Date Sampled	10/24/03			10/23/03			10/24/03			10/23/03		
		Sample Type	FS			FS			FS			FS		
Method	Analysis	Units	Result	Qual	TPU	Result	Qual	TPU	Result	Qual	TPU	Result	Qual	TPU
Gross Alpha	Alpha Activity	pCi/L	1.45	U		1.9	U		1.63	U		1.44	J	0.838
Gross Beta	Beta Activity	pCi/L	1.73	U		1.63	U		1.36	U		1.61	U	

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results is sample minimal detectable concentration (MDC)
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

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TABLE 1
OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-1222			MW-1225			WP-1403			WP-1401D		
		Sample ID	MW1222R			MW1225R			WP1403R			WP1401DR		
		Date Sampled	10/22/03			10/22/03			10/22/03			10/23/03		
		Sample Type	FS			FS			FS			FS		
Method	**Analysis**	**Units**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**
Gross Alpha	Alpha Activity	pCi/L	2.05	U		2.2	U		1.49	U		1.52	U	
Gross Beta	Beta Activity	pCi/L	3.47	U		3.53	U		2.92	U		1.75	U	

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results is sample minimal detectable concentration (MDC)
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

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TABLE 1
OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	WP-1401S			WP-1402D			WP-1402S			WP-1403D		
		Sample ID	WP1401SR			WP1402DR			WP1402SR			WP1403DR		
		Date Sampled	10/23/03			10/23/03			10/23/03			10/22/03		
		Sample Type	FS			FS			FS			FS		
Method	**Analysis**	**Units**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**
Gross Alpha	*Alpha Activity*	pCi/L	2.15	U		1.44	U		1.37	U		1.62	U	
Gross Beta	Beta Activity	pCi/L	1.84	U		2.29	J	0.94	1.85	J	0.925	3.12	U	

Notes:

Sample Type = FS (Field Sample); *FD (Field Duplicate)*
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results is sample minimal detectable concentration (MDC)
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

Well points WP-1403S and WP-1403D are installed in the sediments of the Site brook. Samples collected from these well points are not representative of shallow groundwater conditions in the vicinity of the Site brook.

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checked by: APP

TABLE 1
OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	WP-1403S			MW-1507			MW-1603			MW-1603		
		Sample ID	WP1403SR			MW1507R			MW1603DUPR			MW1603R		
		Date Sampled	10/23/03			10/22/03			10/27/03			10/27/03		
		Sample Type	FS			FS			FD			FS		
Method	**Analysis**	**Units**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**
Gross Alpha	Alpha Activity	pCi/L	14.8		2.66	1.48	U		1.55	U		1.62	U	
Gross Beta	Beta Activity	pCi/L	3.03	U		3.11	U		1.78	U		1.78	U	

Notes:

Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results is sample minimal detectable concentration (MDC)
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

Well points WP-1403S and WP-1403D are installed in the sediments of the Site brook. Samples collected from these well points are not representative of shallow groundwater conditions in the vicinity of the Site brook.

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TABLE 1
OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-1810			MW-2102			MW-2401			MW-E01		
		Sample ID	MW1810R			MW2102R			MW2401R			MW0E01R		
		Date Sampled	10/23/03			10/21/03			10/20/01			10/21/03		
		Sample Type	FS			FS			FS			FS		
Method	**Analysis**	**Units**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**
Gross Alpha	Alpha Activity	pCi/L	1.66	U		1.55	U		1.51	U		1.37	U	
Gross Beta	Beta Activity	pCi/L	1.83	U		3.14	U		2.98	U		3.07	U	

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results is sample minimal detectable concentration (MDC)
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

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TABLE 1
OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-E03			MW-N04D			MW-N04S			MW-N07		
		Sample ID	MW0E03R			MW0N04DR			MW0N04SR			MW0N07R		
		Date Sampled	10/23/03			10/20/03			10/20/03			10/21/03		
		Sample Type	FS			FS			FS			FS		
Method	Analysis	Units	Result	Qual	TPU	Result	Qual	TPU	Result	Qual	TPU	Result	Qual	TPU
Gross Alpha	Alpha Activity	pCi/L	1.46	U		1.77	U		2.68	U		1.39	U	
Gross Beta	Beta Activity	pCi/L	3.12	U		3.82	J	1.68	3.76	U		2.9	U	

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results is sample minimal detectable concentration (MDC)
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

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TABLE 1
OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-N08			MW-S02			MW-W01		
		Sample ID	MW0N08R			MW0S02R			MW0W01R		
		Date Sampled	10/21/03			10/20/03			10/20/03		
		Sample Type	FS			FS			FS		
Method	**Analysis**	**Units**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**
Gross Alpha	Alpha Activity	pCi/L	1.84	U		2.91	J	1.61	2.62	U	
Gross Beta	Beta Activity	pCi/L	3.2	U		7.5		2.41	3.99	U	

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results is sample minimal detectable concentration (MDC)
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

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TABLE 2
OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
VALIDATED RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-1201			WP-1403			WP-1403D			WP-1403S		
		Sample ID	MW1201R			WP1403R			WP1403DR			WP1403SR		
		Date Sampled	10/28/03			10/22/03			10/22/03			10/23/03		
		Sample Type	FS			FS			FS			FS		
Method	**Analysis**	**Units**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**	**Result**	**Qual**	**TPU**
Alpha	Uranium, Calculated Total - Alpha	pCi/L	7.575			1.451			2.992			21.4		
Alpha	Uranium-234	pCi/L	6.63		1.51	0.59	U		2.06		0.803	20		3.64
Alpha	Uranium-235	pCi/L	0.428	U		0.455	U		0.512	U		1.09		0.531
Alpha	Uranium-238	pCi/L	0.517	J	0.355	0.406	U		0.42	U		0.31	U	
Gamma	Cesium-137	pCi/L	n/a				R		3.18	U		3.19	U	
Gamma	Cobalt-60	pCi/L	n/a			5.04	U		3.35	U		3.6	U	

Notes:

Uranium, Total / Calculation = sum of U-isotopes
If U-isotope was not detected, the minimum detectable concentration (MDC) was used in the calculation

Sample Type = FS (Field Samples); FD (Field Duplicate)
Gamma = EPA Method 901.1
Alpha = DOE EML HASL Method 300 U-04
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results represents sample MDC
R = rejected due to low abundance
n/a = not analyzed
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

Well points WP-1403S and WP-1403D are installed in the sediments of the Site brook. Samples collected from these well points are not representative of shallow groundwater conditions in the vicinity of the Site brook.

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TABLE 3
OCTOBER 2003 GROUNDWATER SAMPLING PROGRAM
BACKGROUND LOCATIONS RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-2401			MW-E01			MW-E03			MW-S02			MW-W01		
		Sample ID	MW2401R			MW0E01R			MW0E03R			MW0S02R			MW0W01R		
		Date Sampled	10/20/01			10/21/03			10/23/03			10/20/03			10/20/03		
		Sample Type	FS			FS			FS			FS			FS		
Method	Analysis	Units	Result	Qual	TPU	Result	Qual	TPU	Result	Qual	TPU	Result	Qual	TPU	Result	Qual	TPU
Gross Alpha	Alpha Activity	pCi/L	1.51	U		1.37	U		1.46	U		2.91	J	1.61	2.62	U	
Gross Beta	Beta Activity	pCi/L	2.98	U		3.07	U		3.12	U		7.5		2.41	3.99	U	

Notes:

Summary Statistics for Background Well Samples

Analysis	Method	Units	Frequency	Min	Max	Mean	Median
Gross Alpha	Alpha Activity	pCi/L	1/5	1.37	2.91	1.97	1.51
Gross Beta	Beta Activity	pCi/L	1/5	2.98	7.50	4.13	3.12

Uranium, Total / Calculation = sum of U-isotopes
If U-isotope was not detected, the minimum detectable concentration (MDC) was used in the calculation

Sample Type = FS (Field Samples); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
Qual = data qualifier code:
J = results is an estimated value
U = not detected; results represents sample minimal detectable concentration (MDC)
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

Frequency = frequency of detections; sample population includes 5 samples
Min = minimum result observed
Max = maximum result observed
Mean = arithmetic average of results
Median = arithmetic middle of the result series

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ATTACHMENT A

LABORATORY RESULTS

OCTOBER 2003
GROUNDWATER SAMPLING PROGRAM - LABORATORY RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	E-1		MW-0101		MW-0102		MW-0103		MW-0105		MW-0106		MW-0109	
		Sample ID	E00001R		MW0101R		MW0102R		MW0103R		MW0105R		MW0106R		MW0109R	
		Date Sampled	10/28/03		10/23/03		10/22/03		10/22/03		10/24/03		10/27/03		10/22/03	
		Sample Type	FS		FS		FS		FS		FS		FS		FS	
Method	Analysis	Units	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU
Gross Alpha	Alpha Activity	pCi/L	1.86	1.24	0.0736	0.738	0.453	0.734	0.414	0.726	0.334	0.736	0.00954	0.758	0.417	1.5
Gross Beta	Beta Activity	pCi/L	0.777	1.0	0.958	0.856	1.6	1.7	0.815	1.58	0.95	0.706	0.927	0.909	1.3	2.35

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

OCTOBER 2003
GROUNDWATER SAMPLING PROGRAM - LABORATORY RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-0110		MW-0118		MW-0144		MW-0145		WW-1		WW-2		MW-0301	
		Sample ID	MW0110R		MW0118R		MW0144R		MW0145R		MWWW1R		MWWW2R		MW0301R	
		Date Sampled	10/22/03		10/27/03		10/27/03		10/28/03		10/23/03		10/23/03		10/27/03	
		Sample Type	FS		FS		FS		FS		FS		FS		FS	
Method	Analysis	Units	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU
Gross Alpha	Alpha Activity	pCi/L	0.973	0.813	0.68	0.91	0.847	0.706	1.76	1.24	-0.000855	0.689	0.294	0.661	1.87	1.5
Gross Beta	Beta Activity	pCi/L	2.51	1.73	-0.072	0.952	-0.0179	0.743	1.56	1.11	1.19	1.42	-0.019	0.811	2.63	1.32

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

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GROUNDWATER SAMPLING PROGRAM - LABORATORY RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-0302		MW-12S		MW-2		MW-3		MW-3		MW-4		MW-0601	
		Sample ID	MW0302R		MW12SR		MW2R		MW3DUPR		MW3R		MW4R		MW0601R	
		Date Sampled	10/28/03		10/28/03		10/28/03		10/28/03		10/28/03		10/28/03		10/28/03	
		Sample Type	FS		FS		FS		FD		FS		FS		FS	
Method	Analysis	Units	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU
Gross Alpha	Alpha Activity	pCi/L	0.973	1.04	-0.486	0.881	1.35	1.71	0.314	1.09	-0.051	1.27	0.233	2.34	2.23	1.5
Gross Beta	Beta Activity	pCi/L	-0.251	1.04	0.231	0.927	3.47	1.34	1.76	1.05	2.63	1.18	5.51	2.39	1.41	0.914

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

OCTOBER 2003
GROUNDWATER SAMPLING PROGRAM - LABORATORY RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-0602		MW-0603		MW-0607		MW-0608		MW-0609		MW-0904		MW-0905	
		Sample ID	MW0602R		MW0603R		MW0607R		MW0608R		MW0609R		MW0904R		MW0905R	
		Date Sampled	10/28/03		10/28/03		10/22/03		10/21/03		10/23/03		10/23/03		10/23/03	
		Sample Type	FS		FS		FS		FS		FS		FS		FS	
Method	Analysis	Units	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU
Gross Alpha	Alpha Activity	pCi/L	2.24	1.45	0.639	1.13	1.41	0.977	0.53	1.32	2.67	2.1	0.737	0.966	4.94	2.38
Gross Beta	Beta Activity	pCi/L	1.09	1.04	2.06	1.15	1.99	1.65	3.34	2.14	16.7	3.05	3.39	1.03	7.56	1.97

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

OCTOBER 2003
GROUNDWATER SAMPLING PROGRAM - LABORATORY RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-0906S		MW-0907		MW-1004S		MW-1005		MW-1006		MW-1007		MW-1014	
		Sample ID	MW0906SR		MW0907R		MW1004SR		MW1005SR		MW1006SR		MW1007SR		MW1014R	
		Date Sampled	10/23/03		10/23/03		10/28/03		10/28/03		10/29/03		10/29/03		10/24/03	
		Sample Type	FS		FS		FS		FS		FS		FS		FS	
Method	Analysis	Units	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU
Gross Alpha	Alpha Activity	pCi/L	-0.41	1.19	1.54	1.19	1.64	1.22	1.5	1.08	1.26	1.51	0.562	1.12	0.592	1.07
Gross Beta	Beta Activity	pCi/L	0.935	1.01	0.927	0.971	-0.118	1.08	1.86	0.984	2.61	1.15	2.36	1.12	2.05	0.875

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

OCTOBER 2003
GROUNDWATER SAMPLING PROGRAM - LABORATORY RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-1016		MW-1018		MW-1106		MW-1201		MW-1202		MW-1203		MW-1204	
		Sample ID	MW1016R		MW1018R		MW1106R		MW1201R		MW1202R		MW1203R		MW1204R	
		Date Sampled	10/24/03		10/23/03		10/22/03		10/28/03		10/28/03		10/28/03		10/28/03	
		Sample Type	FS		FS		FS		FS		FS		FS		FS	
Method	Analysis	Units	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU
Gross Alpha	Alpha Activity	pCi/L	2.04	0.962	6.33	10.5	0.356	0.74	7.93	3.14	0.0202	1.42	-0.0196	0.898	0.894	1.03
Gross Beta	Beta Activity	pCi/L	3.1	0.833	4.9	6.94	0.0571	1.56	13	2.17	1.3	1.16	0.361	0.89	0.525	1.02

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

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GROUNDWATER SAMPLING PROGRAM - LABORATORY RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-1208		MW-1209		MW-1210		MW-1211		MW-1212		MW-1213		MW-1214	
		Sample ID	MW1208R		MW1209R		MW1210R		MW1211R		MW1212R		MW1213R		MW1214R	
		Date Sampled	10/27/03		10/27/03		10/24/03		10/27/03		10/24/03		10/24/03		10/24/03	
		Sample Type	FS		FS		FS		FS		FS		FS		FS	
Method	Analysis	Units	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU
Gross Alpha	Alpha Activity	pCi/L	3.41	1.83	2.48	1.24	1.31	2.07	0.639	1.49	0.343	1.03	0.593	0.824	-0.273	0.554
Gross Beta	Beta Activity	pCi/L	6.26	1.38	2.28	1.01	0.696	1.79	2.49	1.21	-0.19	0.745	3.35	0.882	0.837	0.617

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

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CE Windsor Site
Windsor, Connecticut

		Location ID	MW-1215		MW-1216		MW-1217		MW-1218		MW-1219		MW-1220		MW-1221	
		Sample ID	MW1215R		MW1216R		MW1217R		MW1218R		MW1219R		MW1220R		MW1221R	
		Date Sampled	10/24/03		10/24/03		10/24/03		10/24/03		10/23/03		10/24/03		10/23/03	
		Sample Type	FS		FS		FS		FS		FS		FS		FS	
Method	**Analysis**	**Units**	**Result**	**TPU**	**Result**	**TPU**	**Result**	**TPU**	**Result**	**TPU**	**Result**	**TPU**	**Result**	**TPU**	**Result**	**TPU**
Gross Alpha	Alpha Activity	pCi/L	0.107	0.626	3.14	1.09	0.301	0.563	0.498	0.74	-0.287	0.768	-0.629	0.736	1.44	0.838
Gross Beta	Beta Activity	pCi/L	0.689	0.615	2.43	0.778	1.25	0.692	-0.447	0.734	0.397	0.766	-0.283	0.657	0.884	0.803

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
pCi/L = *picocurie per liter*
TPU = total propagated uncertainty (95%)

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GROUNDWATER SAMPLING PROGRAM - LABORATORY RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-1222		MW-1225		WP-1403		WP-1401D		WP-1401S		WP-1402D		WP-1402S	
		Sample ID	*MW1222R*		*MW1225R*		WP1403R		WP1401DR		WP1401SR		WP1402DR		WP1402SR	
		Date Sampled	10/22/03		10/22/03		10/22/03		10/23/03		10/23/03		10/23/03		10/23/03	
		Sample Type	*FS*		*FS*		*FS*		*FS*		*FS*		*FS*		*FS*	
Method	Analysis	Units	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU
Gross Alpha	Alpha Activity	pCi/L	1.13	1.09	0.627	1.03	0.264	0.715	1.1	0.9	0.0369	0.963	1.18	0.845	1.16	0.81
Gross Beta	Beta Activity	pCi/L	1.91	1.67	2.68	1.73	1.24	1.38	1.26	0.894	1.52	0.954	2.29	0.94	1.85	0.925

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

OCTOBER 2003
GROUNDWATER SAMPLING PROGRAM - LABORATORY RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	WP-1403D		WP-1403S		MW-1507		MW-1603		MW-1603		MW-1810		MW-2102	
		Sample ID	WP1403DR		WP1403SR		MW1507R		MW1603DUPR		MW1603R		MW1810R		MW2102R	
		Date Sampled	10/22/03		10/23/03		10/22/03		10/27/03		10/27/03		10/23/03		10/21/03	
		Sample Type	FS		FS		FS		FD		FS		FS		FS	
Method	Analysis	Units	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU
Gross Alpha	Alpha Activity	pCi/L	1.02	0.919	14.8	2.66	-0.189	0.657	0.411	0.731	0.299	0.735	0.757	0.852	1.14	0.973
Gross Beta	Beta Activity	pCi/L	1.06	1.45	1.65	1.47	0.657	1.42	-0.0399	0.781	0.0789	0.792	0.689	0.882	2.13	1.54

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

Well points WP-1403S and WP-1403D are installed in the sediments of the Site brook. Samples collected from these well points are not representative of shallow groundwater conditions in the vicinity of the Site brook.

OCTOBER 2003
GROUNDWATER SAMPLING PROGRAM - LABORATORY RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-2401		MW-E01		MW-E03		MW-N04D		MW-N04S		MW-N07		MW-N08	
		Sample ID	MW2401R		MW0E01R		MW0E03R		MW0N04DR		MW0N04SR		MW0N07R		MW0N08R	
		Date Sampled	10/20/01		10/21/03		10/23/03		10/20/03		10/20/03		10/21/03		10/21/03	
		Sample Type	FS		FS		FS		FS		FS		FS		FS	
Method	Analysis	Units	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU	Result	TPU
Gross Alpha	Alpha Activity	pCi/L	0.176	0.694	0.511	0.738	0.369	0.743	0.266	0.855	0.443	1.2	0.854	0.761	0.0988	0.773
Gross Beta	Beta Activity	pCi/L	0.795	1.37	1.72	1.48	1.59	1.49	3.82	1.68	1.56	1.76	0.92	1.34	0.667	1.46

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

OCTOBER 2003
GROUNDWATER SAMPLING PROGRAM - LABORATORY RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-S02		MW-W01	
		Sample ID	MW0S02R		MW0W01R	
		Date Sampled	10/20/03		10/20/03	
		Sample Type	FS		FS	
Method	Analysis	Units	Result	TPU	Result	TPU
Gross Alpha	Alpha Activity	pCi/L	2.91	1.61	0.581	1.19
Gross Beta	Beta Activity	pCi/L	7.5	2.41	-0.122	1.77

Notes:
Sample Type = FS (Field Sample); FD (Field Duplicate)
Gross Alpha = EPA Method 900.0
Gross Beta = EPA Method 900.0
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)

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Checked By: APP

OCTOBER 2003
GROUNDWATER SAMPLING PROGRAM - LABORATORY RADIOCHEMISTRY RESULTS

CE Windsor Site
Windsor, Connecticut

		Location ID	MW-1201		WP-1403		WP-1403D		WP-1403S	
		Sample ID	MW1201R		WP1403R		WP1403DR		WP1403SR	
		Date Sampled	10/28/03		10/22/03		10/22/03		10/23/03	
		Sample Type	FS		FS		FS		FS	
Method	Analysis	Units	Result	TPU	Result	TPU	Result	TPU	Result	TPU
Alpha	Uranium-234	pCi/L	6.63	1.51	0.282	0.327	2.06	0.803	20	3.64
Alpha	Uranium-235	pCi/L	0.254	0.262	0.346	0.323	0.0705	0.199	1.09	0.531
Alpha	Uranium-238	pCi/L	0.517	0.355	0.034	0.135	0.103	0.193	0.28	0.262
Gamma	Cesium-137	pCi/L	n/a		0	4.39	0.0744	1.77	-0.506	1.82
Gamma	Cobalt-60	pCi/L	n/a		1.12	2.53	-1.22	2.02	-0.275	1.96

Notes:
Sample Type = *FS (Field Samples); FD (Field Duplicate)*
Gamma = EPA Method 901.1
Alpha = DOE EML HASL Method 300 U-04
pCi/L = picocurie per liter
TPU = total propagated uncertainty (95%)
n/a = not analyzed

Well points WP-1403S and WP-1403D are installed in the sediments of the Site brook. Samples collected from these well points are not representative of shallow groundwater conditions in the vicinity of the Site brook.

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ATTACHMENT B

CONVERSION CALCULATION FOR URANIUM

CONVERSION CALCULATOR - URANIUM pCi/L to ug/L

MW-1201				
Isotope	Sample Activity (pCi/L of Water)	Specific Activity (pCi/g)	% Activity	Mass Abundance (ug/L)
U-234	6.630	6.24E+09	87.52%	0.001
U-235	0.428	2.16E+06	5.65%	0.198
U-238	0.517	3.35E+05	6.83%	1.542
Total U	7.575		100.00%	1.741

WP-1403S				
Isotope	Sample Activity (pCi/L of Water)	Specific Activity (pCi/g)	% Activity	Mass Abundance (ug/L)
U-234	20.000	6.24E+09	93.46%	0.003
U-235	1.090	2.16E+06	5.09%	0.504
U-238	0.310	3.35E+05	1.45%	0.925
Total U	21.400		100.00%	1.432

WP-1403D				
Isotope	Sample Activity (pCi/L of Water)	Specific Activity (pCi/g)	% Activity	Mass Abundance (ug/L)
U-234	2.060	6.24E+09	68.85%	0.000
U-235	0.512	2.16E+06	17.11%	0.237
U-238	0.420	3.35E+05	14.04%	1.253
Total U	2.992		100.00%	1.490

Notes:
Uranium Drinking Water Maximum Contaminant Level = 30 ug/L
pCi/L = picocurries per liter
pCi/g = picocurries per gram
ug/L = micrograms per liter

Well points WP-1403S and WP-1403D are installed in the sediments of the Site brook. Samples collected from these well points are not representative of shallow groundwater conditions in the vicinity of the Site brook.