

Table 4
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
Pratt & Whitney, Rocky Hill, Connecticut

Location ID	RH-SB-35						
Sample ID	1949035						
Sample Date	12/23/1999						
Sample Time	11:15						
Sample Depth	83' - 87'						
Laboratory	QUAN						
Lab. Number	A9L280164001						
Constituent	Units						
Depth of Well	FT						
Depth to Water	FT						
Specific Conductivity (field)	µmhos						
Water Elevation	FT						
pH (field)	SU						
Date Metals Analyzed	-	01/03/2000					
Date Organics Analyzed	-	01/03/2000					
Date Pesticides/Herbicides Analyzed	-						
Date Physical Analyzed	-	01/18/2000					
Date Semi-volatile Organics Analyzed	-						
Diallate	µg/l						
Dinoseb	µg/L						
Arsenic	mg/L	<0.0040 U					
Arsenic (Unfiltered)	mg/L						
Barium	mg/L	<0.2 U					
Barium (Unfiltered)	mg/L						
Beryllium	mg/L						
Beryllium (Unfiltered)	mg/L						
Cadmium	mg/L	<0.0050 U					
Cadmium (Unfiltered)	mg/L						
Chromium	mg/L	<0.0100 U					
Chromium (Unfiltered)	mg/L						
Chromium(VI)	mg/L						
Cobalt	mg/L	<0.0070 U					
Copper	mg/L						
Copper (Unfiltered)	mg/L						
Lead	mg/L	<0.0030 U					
Lead (Unfiltered)	mg/L						

Notes: 1. Printed on 02/17/00



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Laboratory	QUAN						
Lab. Number	A9L280164001						
Constituent	Units						
Mercury	mg/L	<0.00020 U					
Mercury (Unfiltered)	mg/L						
Nickel	mg/L	<0.0400 U					
Nickel (Unfiltered)	mg/L						
Selenium	mg/L	<0.0050 U					
Selenium (Unfiltered)	mg/L						
Silver	mg/L	<0.0050 U					
Silver (Unfiltered)	mg/L						
Sodium	mg/L						
Titanium	mg/L						
Zinc	mg/L	0.0259					
Zinc (Unfiltered)	mg/L						
Acetylaminofluorene,2-	µg/l						
Aramite	µg/L						
Benzene,hexachloro-	µg/l						
Chlorobenzilate	µg/l						
Dibromo-3-chloropropane,1,2-	µg/l						
Dimethoate	µg/l						
Disulfoton	µg/L						
Famphur	µg/L						
Hexachlorocyclopentadiene	µg/l						
Isodrin	µg/l						
Phorate	µg/L						
Tetraethyl Dithiopyrophosphate	µg/l						
Thionazin	µg/l						
Chloride	mg/L						
Cyanide (Unfiltered)	mg/l						
Total Petroleum Hydrocarbons	mg/l	<1.1 U					

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	Laboratory	QUAN					
	Lab. Number	A9L280164001					
Constituent	Units						
Acenaphthene	µg/l						
Acenaphthylene	µg/l						
Acetophenetidine,p-	µg/l						
Acetophenone	µg/l						
Aminobiphenyl,4-	µg/l						
Aniline	µg/l						
Anthracene	µg/l						
Azobenzene,4-dimethylamino-	µg/l						
Benz[a]anthracene	µg/l						
Benz[a]anthracene,7,12-dimethyl-	µg/l						
Benz[e]acephenanthrylene	µg/l						
Benzene,1,2,4,5-tetrachloro-	µg/l						
Benzene,1,3,5-trinitro-	µg/l						
Benzene,1,3-dinitro-	µg/l						
Benzene,nitro-	µg/l						
Benzidine,3,3'-dichloro-	µg/l						
Benzidine,3,3'-dimethyl-	µg/l						
Benzo[a]pyrene	µg/l						
Benzo[ghi]perylene	µg/l						
Benzo[k]fluoranthene	µg/l						
Benzyl Alcohol	µg/l						
Benzyl Butyl Phthalate	µg/l						
Bis(2-chloroethoxy)methane	µg/l						
Bis(2-chloroethyl)ether	µg/l						
Bis(2-chloroisopropyl)ether	µg/l						
Bis(2-ethylhexyl)phthalate	µg/l						
Bromophenyl Phenyl Ether,4-	µg/l						
Butylamine,n-nitroso-di-n-	µg/l						

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Laboratory	QUAN						
Lab. Number	A9L280164001						
Constituent	Units						
Carbazole	µg/L						
Chloroaniline,4-	µg/l						
Chlorophenyl Phenyl Ether,4-	µg/l						
Chrysene	µg/l						
Cresol,2-	µg/l						
Cresol,3-	µg/L						
Cresol,4-	µg/l						
Cresol,4-Chloro-m-	µg/l						
Di-n-butyl Phthalate	µg/l						
Di-n-octyl Phthalate	µg/l						
Dibenz[a,h]anthracene	µg/l						
Dibenzofuran	µg/l						
Dichloro-2-butylene,1,4-trans-	µg/l						
Diethyl Phthalate	µg/l						
Dimethyl Phthalate	µg/l						
Dimethylamine,n-nitroso-	µg/l						
Dimethylphenethylamine,alpha,alpha-	µg/L						
Dinitro-o-cresol,4,6-	µg/l						
Dinitrotoluene,2,4-	µg/l						
Dinitrotoluene,2,6-	µg/l						
Diphenylamine	µg/L						
Diphenylamine,n-nitroso-	µg/l						
Ethylamine,n-nitroso-	µg/l						
Ethylmethanesulfonate	µg/l						
Fluoranthene	µg/l						
Fluorene	µg/l						
Hexachlorobutadiene	µg/l						
Hexachloroethane	µg/l						



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Sample Depth	83' - 87'						
Laboratory	QUAN						
Lab. Number	A9L280164001						
Constituent	Units						
Hexachloropropylene	µg/l						
Indeno(1,2,3-cd)pyrene	µg/l						
Isophorone	µg/l						
Isosafrole	µg/l						
Methapyrilene	µg/l						
Methyl Methanesulfonate	µg/l						
Methylcholanthrene,3-	µg/l						
Methylethylamine,n-nitroso-	µg/l						
Morpholine,n-nitroso-	µg/l						
Naphthalene	µg/l						
Naphthalene,2-chloro-	µg/l						
Naphthalene,2-methyl-	µg/l						
Naphthoquinone,1,4-	µg/l						
Naphthylamine,alpha-	µg/l						
Naphthylamine,beta-	µg/l						
Nitro-o-toluidine,5-	µg/l						
Nitroaniline,2-	µg/l						
Nitroaniline,3-	µg/l						
Nitroaniline,4-	µg/l						
Nitroquinoline-1-oxide,4-	µg/l						
Phenanthrene	µg/l						
Phenol	µg/l						
Phenol,2,3,4,6-tetrachloro-	µg/l						
Phenol,2,4,5-trichloro-	µg/l						
Phenol,2,4,6-trichloro-	µg/l						
Phenol,2,4-dichloro-	µg/l						
Phenol,2,4-dinitro-	µg/l						
Phenol,2,6-dichloro-	µg/l						

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Sample Depth	83' - 87'						
Laboratory	QUAN						
Lab. Number	A9L280164001						
Constituent	Units						
Phenol,2-chloro-	µg/l						
Phenol,2-nitro-	µg/l						
Phenol,4-nitro-	µg/l						
Phenol,pentachloro-	µg/l						
Phenylenediamine,1,4-	µg/l						
Picoline,2-	µg/l						
Piperidine,n-nitroso-	µg/l						
Pronamide	µg/l						
Propylamine,n-nitroso-n-	µg/l						
Pyrene	µg/l						
Pyridine	µg/l						
Pyrrolidine,n-nitroso-	µg/l						
Safrole	µg/l						
Toluidine,o-	µg/l						
Triethyl Phosphorothioate,o,o,o-	µg/l						
Xylenol,2,4-	µg/l						
Acetone	µg/l	<100 U					
Acetonitrile	µg/l						
Acrolein	µg/l						
Acrylonitrile	µg/l						
Allyl Chloride	µg/l						
Benzene	µg/l	<1.0 U					
Benzene (screening)	µg/L						
Benzene,1,2,4-trichloro-	µg/l						
Benzene,1,2-dichloro-	µg/l						
Benzene,1,3-dichloro-	µg/l						
Benzene,1,4-dichloro-	µg/l						
Benzene,chloro-	µg/l	<5.0 U					

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	Sample Depth	83' - 87'					
	Laboratory	QUAN					
	Lab. Number	A9L280164001					
Constituent	Units						
Benzene,ethyl	µg/l	<5.0 U					
Benzene,ethyl (screening)	µg/L						
Benzene,pentachloro-	µg/l						
Benzene,pentachloronitro-	µg/l						
Bromoform	µg/l	<4.0 U					
Carbon Disulfide	µg/l	<5.0 U					
Carbon Tetrachloride	µg/l	<5.0 U					
Chloroethane	µg/l	<10 U					
Chloroform	µg/l	<5.0 U					
Chloroprene,beta-	µg/l						
Dibromochloromethane	µg/l	<0.50 U					
Dibromoethane,1,2-	µg/l						
Dibromomethane	µg/l						
Dichlorobromomethane	µg/l	<5.0 U					
Dichlorodifluoromethane	µg/l						
Dichloroethane,1,1-	µg/l	<5.0 U					
Dichloroethane,1,2-	µg/l	<1.0 U					
Dichloroethylene,1,1-	µg/l	<1.0 U					
Dichloroethylene,1,2-cis-	µg/l	<5.0 U					
Dichloroethylene,1,2-trans-	µg/l	<5.0 U					
Dichloropropane,1,2-	µg/l	<5.0 U					
Dichloropropylene,1,3-, NÖS	µg/l	<0.50 U					
Dichloropropylene,1,3-cis-	µg/l						
Dichloropropylene,1,3-trans-	µg/l						
Dioxane,1,4-	µg/l						
Ethylmethacrylate	µg/l						
Hexanone,2-	µg/l	<50 U					
Iodomethane	µg/l						

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Sample Depth	83' - 87'							
Laboratory	QUAN							
Lab. Number	A9L280164001							
Constituent	Units							
Isobutyl Alcohol	µg/l							
Methacrylonitrile	µg/l							
Methyl Bromide	µg/l	<10 U						
Methyl Chloride	µg/l	<10 U						
Methyl Ethyl Ketone	µg/l	<100 U						
Methyl Methacrylate	µg/l							
Methyl-2-pentanone,4-	µg/l	<5.0 U						
Methyl-tert-butyl Ether	µg/l							
Methylene Chloride	µg/l	<5.0 U						
Pentachloroethane	µg/L							
Propionitrile	µg/l							
Styrene	µg/l	<5.0 U						
Tetrachloroethane,1,1,1,2-	µg/l							
Tetrachloroethane,1,1,2,2-	µg/l	<0.50 U						
Tetrachloroethylene	µg/l	<5.0 U						
Tetrachloroethylene (screening)	µg/L							
Toluene	µg/l	<5.0 U						
Toluene (screening)	µg/L							
Trichloroethane,1,1,1-	µg/l	<5.0 U						
Trichloroethane,1,1,1- (screening)	µg/L							
Trichloroethane,1,1,2-	µg/l	<5.0 U						
Trichloroethylene	µg/l	<5.0 U						
Trichloroethylene (screening)	µg/L							
Trichloromonofluoromethane	µg/l							
Trichloropropane,1,2,3-	µg/l							
Vinyl Acetate	µg/l							
Vinyl Chloride	µg/l	<2.0 U						
Xylene,o- (screening)	µg/L							



Table 6
SUMMARY OF EXCEEDANCES OF GROUNDWATER SCREENING CRITERIA FOR DERMAL CONTACT
Pratt & Whitney, Rocky Hill, Connecticut

Notes: 1. Only Exceedances Shown
2. Printed on 10/29/99



Table 7
Summary of Analytical Data Qualifiers
Pratt & Whitney Rocky Hill, Connecticut

Source of Qualifier	Abbreviated Name	Data Qualifier	Analyte Class	Definition
Accutest	Accu	J	All	Estimated value
Accutest	Accu	U	All	Non-detect
Averill Environmental Laboratory, Inc.	AEL	*	Inorganic	Duplicate analysis not within control limits
Averill Environmental Laboratory, Inc.	AEL	N1	Organic	Spectral evidence confirms the presence of this compound at a concentration below the calibration range
Lancaster Laboratories, Inc.	LANC	*	Inorganic	Duplicate analysis not within control limits
Lancaster Laboratories, Inc.	LANC	B	Organic	TIC is a possible aldol-condensation product
Lancaster Laboratories, Inc.	LANC	B	Inorganic	Value is < CRDL but > IDL
Lancaster Laboratories, Inc.	LANC	C	Organic	Analyte was also detected in the blank
Lancaster Laboratories, Inc.	LANC	D	Organic	Pesticide result confirmed by GC/MS
Lancaster Laboratories, Inc.	LANC	E	Organic	Compound quantified on a diluted sample
Lancaster Laboratories, Inc.	LANC	F	Organic	Concentration exceeds the calibration range of the instrument
Lancaster Laboratories, Inc.	LANC	J	Organic	Estimated value
Lancaster Laboratories, Inc.	LANC	N	Organic	Presumptive evidence of a compounds (TOCs only)
Lancaster Laboratories, Inc.	LANC	N	Inorganic	Spike sample not within control limits
Lancaster Laboratories, Inc.	LANC	P	Organic	Concentration difference between primary and confirmation columns >25%
Lancaster Laboratories, Inc.	LANC	S	Inorganic	Method of standard additions (MSA) used for calculation
Loureiro Engineering Associates, Inc.	N/A	J	All	The associated numerical is an estimated quantity
Loureiro Engineering Associates, Inc.	N/A	R	All	Data are unusable. The associated numerical is rejected



Loureiro Engineering Associates, Inc.

February 14, 2000

United Technologies Corp.
United Technologies Building
One Financial Plaza
Hartford, CT 06103

Attn.: Phil Sheridan, M/S 518

**RE: Deep Soil Boring Installation Summary Report
Pratt & Whitney, Rocky Hill, Connecticut
LEA Comm. No. 68VE134**

Dear Mr. Sheridan:

On December 13, 1999, Loureiro Engineering Associates, Inc. (LEA) initiated the installation of deep soil borings inside the Pratt & Whitney (P&W) Rocky Hill, Connecticut, facility. The original intent of the soil boring program was to advance two soil borings in the area downgradient of monitoring well RH-MW-17S in order to determine whether there had been migration of the carbon disulfide previously noted in that well. Both soil borings were intended to be advanced to the top of a till layer, originally estimated to be approximately 100 feet below grade, previously noted in deep monitoring well RH-MW-17D, located south of the proposed boring locations. The specific locations for the soil borings were reviewed in the field with Mr. Ernest Waterman of the US Environmental Protection Agency (EPA) on December 14, 1999. The locations of the soil borings are presented on Figure 1, included in Attachment 1 to this letter.

Both of the soil borings were advanced using LEA's Geoprobe® direct-push soil boring system. The Geoprobe® system consists of a hydraulically operated hammer unit mounted on a diesel-powered pick-up truck. The system was equipped with Macro-Core® soil sampling units and monitoring well installation tooling.

The Macro-Core® soil sampling unit consisted of a 4 foot long, 2-inch diameter stainless-steel barrel equipped with a steel drive shoe and provided with disposable, polyethylene terephthalate (PETG) plastic liners. The unit was equipped with a retractable drive point which was locked in place during placement to keep unwanted materials out of the sampler. After the unit was driven to the top of the desired sampling interval, the drive point is retracted and the unit was driven to bottom of the sampling interval. After the sampling unit was retrieved, the soil-filled liner was removed and the soil sample was collected, sampled, and logged by the attending LEA geologist. A copy of the geologic boring log is included in Attachment 2 to this letter. The final depth of the soil boring was approximately 90 feet below grade. Material encountered at and near the final depth was described as a dense silt and gravelly sands.



As the intent of the boring program was to determine whether soil contamination by volatile organic compounds (VOCs) was present, aliquots of all soil samples were field headspace screened for the possible presence of VOCs. In order to quantify any contamination detected, aliquots of all soil samples collected were submitted to the LEA Analytical Laboratory for analysis of screening VOCs, including benzene (BZ); chlorobenzene (CBZ); ethylbenzene (EBZ); tetrachloroethylene (PCE); toluene (TL); 1,1,1-trichloroethane (TCA); trichloroethylene (TCE); and, xylenes (XYL), using a gas chromatograph (GC). In addition, aliquots of the soil samples were also submitted to Quanterra Inc. (Quanterra). All soil samples were submitted on "hold" to Quanterra, and selected soil samples were later removed from hold for specific analyses, as described below.

Advancement of the boreholes was initiated by coring through the concrete floor. For the first four attempts, a core saw equipped with a 12-inch diameter core barrel was used. The core saw was used to provide a sufficiently large initial opening so that a concrete pad could be installed if the borehole was completed as a monitoring well. For the final attempts, the coring was initiated using only the Geoprobe[®] concrete bit.

Coring through the floor and advancement of the initial borehole, identified as RH-SB-34, was begun on December 13, 1999. In each of six attempts, refusal was met at a depth of approximately 5 feet below the existing grade. Further investigation revealed that there may have been a basement existing from the time of the previous occupants in the general vicinity of the borehole. According to P&W personnel, the basement was discovered while excavating for the anodizing line located immediately east of the proposed boring location. The areal extent of the basement area was not known. Two additional attempts, located approximately halfway between the proposed boring location and monitoring well RH-MW-17S were made, however, both of the attempts met refusal at approximately 5 feet. Further attempts to advance a borehole in this area were abandoned.

A second boring location was chosen, identified as RH-SB-35, in the general vicinity of soil boring RH-SB-26. This soil boring was advanced, after coring through the floor using only the Geoprobe[®] concrete coring bit, to a final depth of approximately 90 feet below grade. At a depth of approximately 12 feet a reddish brown, silty clay layer was encountered, which was described as having a "noticeable odor." In order to prevent the possible downward migration of contaminants in the borehole while drilling, a 3-inch diameter polyvinyl chloride (PVC) casing was manually advanced to a depth of 12 feet and sealed in-place using a cement-bentonite grout. After the grout had been allowed to set, the boring was advanced to the final depth of 90 feet.

A total of 41 soil samples collected from soil boring RH-SB-35 were submitted for analysis to the LEA Analytical Laboratory. In addition, a total of 4 soil samples collected from the boring were submitted to Quanterra for analysis of VOCs, metals (including arsenic, barium, cadmium, chromium, lead, mercury, nickel, selenium, silver, and zinc), and total petroleum hydrocarbons (TPH). The soil samples submitted to Quanterra were selected on the basis of the geologic descriptions provided by the attending geologist, the field description of the materials, and the



results of the LEA Analytical Laboratory analyses. Soil samples were selected from soil boring RH-SB-35 from depth intervals of 12 to 14 feet, 62 to 64 feet, 80 to 82 feet, and 82 to 84 feet.

Table 1 in Attachment 3 to this report presents soil sampling and analytical information regarding the soil samples collected from soil boring RH-SB-35 and submitted to the LEA Analytical Laboratory and Quanterra. Table 2 presents a summary of the constituents detected in the soil samples submitted for analysis.

Analytical data from the LEA Analytical Laboratory indicated no VOCs were detected in any of the soil samples collected and submitted for analysis. Analytical data from Quanterra indicated that selected metals, including, arsenic, barium, chromium, copper, lead, nickel, and zinc, were detected.

In addition to the soil samples, 2 groundwater samples were collected in soil boring RH-SB-35. These samples were collected at each major change in lithology. Groundwater samples were collected using a Geoprobe® Screen-Point sampling system. One groundwater sample (LEA Sample Identifier 1949030) was collected from a depth interval of 24 to 28 feet below grade, the second groundwater sample (LEA Sample Identifier 1949035) was collected from a depth interval of 83 to 87 feet below grade. Groundwater samples were submitted to Quanterra for analysis of VOCs, metals (including arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, and zinc), and TPH. Quanterra accidentally analyzed the groundwater samples for cobalt instead of copper.

Table 3 in Attachment 3 to this report presents sampling and analytical information regarding the groundwater samples collected from soil boring RH-SB-35 and submitted to Quanterra. Table 4 presents a summary of the constituents detected in the groundwater samples submitted for analysis.

No VOCs were detected in the groundwater samples submitted for analysis. Selected metals, including arsenic, barium, chromium, cobalt, lead, nickel, and zinc, and TPH were detected in the groundwater sample collected from 24 to 28 feet below grade.

If you have any questions or comments concerning this information, please contact Jeff Klapheke or me at (860) 747-6181.

Sincerely,
LOUREIRO ENGINEERING ASSOCIATES, INC.

Thomas J. Salimeno, P.E.
Senior Project Manager

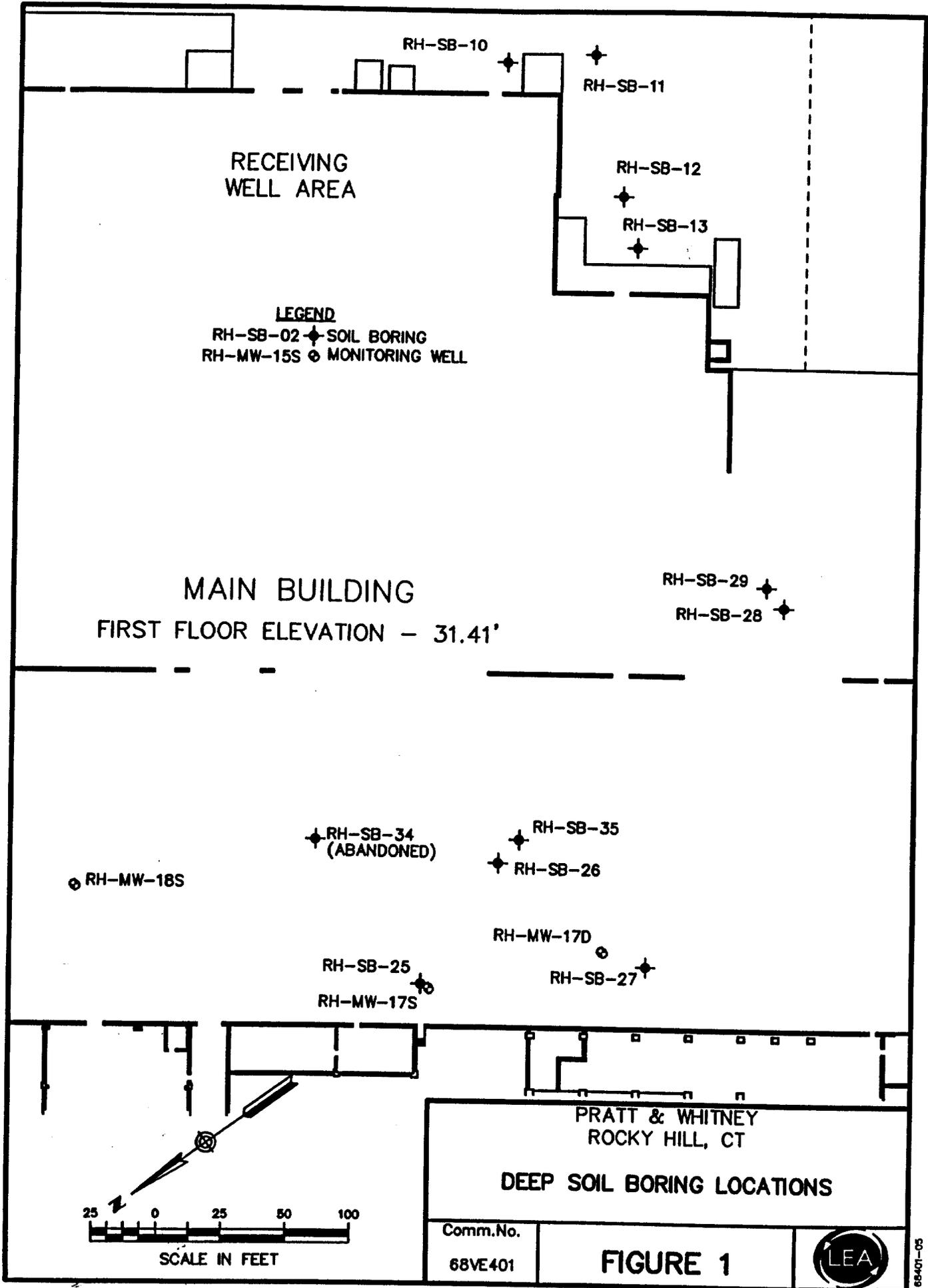
cc: Lauren Levine, P&W

Attachments

ATTACHMENT 1

Figure 1– Sampling Locations

**Pratt & Whitney
Deep Soil Boring Installation
Rocky Hill, Connecticut
LEA Comm. No. 68VE134**



ATTACHMENT 2

Geologic Boring Log

**Pratt & Whitney
Deep Soil Boring Installation
Rocky Hill, Connecticut
LEA Comm. No. 68VE134**

GEOLOGIC BORING LOG

Project: Interior Soil Borings	Start Date 12/15/1999	Boring ID RH-SB-35
LEA Commission Number: 68VE134.001	End Date 12/15/1999	
Client: Pratt & Whitney East Hartford-RC		
Location: P&W Rocky Hill		

Drilling Contractor: Loureiro Engineering Associates, Inc.	Logged by: James Lardie
Drilling Method: Direct push	Drilling Foreman: Jason Miller
Sampling Method: Macro Core	Drill Rig: Geoprobe 5400 - LEA 95
Groundwater Observation	Surface Elevation:
Depth: 24.8 at: Hours ,	Northing:
Depth: at: Hours &	Easting:

Depth	Sample Information			Soil Description Color, Primary Grain Size, Secondary Grain Sizes, Moisture, Sorting, Sphericity Angularity, Sedimentary Structure, Density, Cohesiveness, Other	PID/FID ppm
	Sample No.	Recovery %	Blows /6"		
0	1948821	63		0" - 10" concrete floor [may or may not be in sample?] brown fine SAND to ? light grey fine SAND, some Silt, moderately dense, slightly moist	1.0
2	1948822	63		light greyish brown fine SAND to 3' reddish brown medium to fine SAND, little Silt, little medium Gravel, moderately dense, moist	1.0
4	1948823	77		light greyish brown fine SAND to 5' light brown fine SAND, some SILT layer approximately less than 1/2" thick moderately dense, slightly moist,	0.2
6	1948824	77		light brown fine SAND to 6.2' brown fine silty SAND to 6.4' then fine SAND with fine silty Sand layers at 7 and 7.5', little medium to coarse Gravel 6.5' to 7.0'	0.2
8	1948825	83		reddish brown silty CLAY to 8.8' with fine Sand layers less than 0.5 at approximately 8.8 approximately 9.2 9.6' Sand layers lenses different colour	0.6
10	1948826	83		As above, with some Sand layrs stained iron oxide (?) red odour (?)	0.2
12	1948827	83		reddish brown silty CLAY with fine reddish brown Sand layers at 13.5', 13.25', and 12.8' each less than 0.5" thick, dense, moist	34.0
14	1948828	83		reddish brown CLAY saturated to 15.8' reddish brown silty SAND medium to fine dry, loose, slight odour	5.4
16	1948829	77		reddish brown silty CLAY to 16.4' reddish brown medium to fine SAND, trace Silt, little medium to fine Gravel, little coarse Sand, loose, moist	11.5
18	1948830	77		reddish brown fine SAND, little medium Sand, 0.5" silty Clay layer at 19.0', little fine Gravel, little coarse Sand below silty Clay, loose, moist	15.6
20	1948831	69		reddish brown medium to fine SAND, trace fine Gravel, trace coarse Sand, trace Silt, moist, loose	4.4



LOUREIRO ENGINEERING ASSOCIATES, Inc.

100 Northwest Drive, Plainville, Connecticut 06062

Phone (860) 747-6181 Fax (860) 747-8822

GEOLOGIC BORING LOG

Project: Interior Soil Borings				Start Date 12/15/1999	Boring ID RH-SB-35
LEA Commission Number: 68VE134.001				End Date 12/15/1999	
Client: Pratt & Whitney East Hartford-RC					
Location: P&W Rocky Hill					
Drilling Contractor: Loureiro Engineering Associates, Inc.			Logged by: James Lardie		
Drilling Method: Direct push			Drilling Foreman: Jason Miller		
Sampling Method: Macro Core			Drill Rig: Geoprobe 5400 - LEA 95		
Groundwater Observation			Surface Elevation:		
Depth: 24.8	at:	Hours	Northing:		
Depth:	at:	Hours &	Easting:		

Depth	Sample Information			Soil Description Color, Primary Grain Size, Secondary Grain Sizes, Moisture, Sorting, Sphericity Angularity, Sedimentary Structure, Density, Cohesiveness, Other	PID/FID ppm
	Sample No.	Recovery %	Blows /6"		
22	1948832	69		reddish brown medium to fine SAND, trace fine Gravel, trace coarse Gravel, trace coarse Sand, trace Silt, moist, loose	12.1
24	1948833	73		reddish brown medium to fine SAND, trace fine Gravel, trace coarse Gravel, trace coarse Sand, trace Silt, moist, loose 24.8' wet	9.9
26	1948834	73		reddish brown medium to fine SAND, trace fine Gravel, trace coarse Gravel, trace coarse Sand, trace Silt, wet, loose	3.6
28	1948835	79		reddish brown medium to fine SAND, trace fine Gravel, trace coarse Gravel, trace coarse Sand, trace Silt, wet, loose	2.9
30	1948836	79		reddish brown medium to fine SAND, trace fine Gravel, trace coarse Gravel, trace coarse Sand, trace Silt, wet, loose	5.1
32	1948837	40		reddish brown medium to fine SAND, trace fine Gravel, trace coarse Gravel, trace coarse Sand, trace Silt, wet, loose piece of gravel caught in tip	7.7
36	1948838	79		reddish brown medium to fine SAND, trace fine Gravel, trace coarse Gravel, trace coarse Sand, trace Silt, wet, loose to 37' reddish brown coarse to medium SAND and fine to coarse GRAVEL, trace Silt, loose	3.3
38	1948839	79		reddish brown coarse to medium SAND and fine to coarse GRAVEL to 39' reddish brown medium to fine SAND, trace Silt, trace fine Gravel, loose	12.3
40	1948840	75		reddish brown coarse to fine SAND, little Silt, little medium to fine Gravel, loose, wet	0
42	1948841	75		reddish brown coarse to fine SAND, little Silt, little medium to fine Gravel, loose, wet to reddish brown coarse to fine SAND and medium to fine GRAVEL, loose, wet	0
44	1948842	33		reddish brown coarse to fine SAND, little medium to fine Gravel, little Silt, loose	0



LOUREIRO ENGINEERING ASSOCIATES, Inc.

100 Northwest Drive, Plainville, Connecticut 06062

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GEOLOGIC BORING LOG

Project: Interior Soil Borings				Start Date 12/15/1999	Boring ID RH-SB-35
LEA Commission Number: 68VE134.001				End Date 12/15/1999	
Client: Pratt & Whitney East Hartford-RC					
Location: P&W Rocky Hill					
Drilling Contractor: Loureiro Engineering Associates, Inc.			Logged by: James Lardie		
Drilling Method: Direct push			Drilling Foreman: Jason Miller		
Sampling Method: Macro Core			Drill Rig: Geoprobe 5400 - LEA 95		
Groundwater Observation			Surface Elevation:		
Depth: 24.8	at:	Hours ,	Northing:		
Depth:	at:	Hours &	Easting:		

Depth	Sample Information			Soil Description Color, Primary Grain Size, Secondary Grain Sizes, Moisture, Sorting, Sphericity Angularity, Sedimentary Structure, Density, Cohesiveness, Other	PID/FID ppm
	Sample No.	Recovery %	Blows /6"		
48	1948843	81		reddish brown medium to fine SAND, trace Silt, loose, wet	0
50	1948844	81		reddish brown medium to fine SAND, trace Silt, loose, wet to 51 reddish brown coarse to fine SAND and coarse to fine GRAVEL, trace Silt, loose, wet	0
52				No sample	
56	1948845	85		reddish brown medium to fine SAND, moderately dense, wet	0
58	1948846	85		reddish brown medium to fine SAND, moderately dense, wet	0
60	1948847	88		reddish brown medium to fine SAND, trace Silt, moderately dense, wet	0.7
62	1948848	88		reddish brown medium to fine SAND, trace Silt, trace coarse Sand, trace fine Gravel, moderately dense, wet	4.8
64	1948849, 1948850	83		reddish brown medium to fine SAND, trace Silt, moderately dense, wet	0.9
66	1948851	83		reddish brown medium to fine SAND, trace Silt, little coarse Sand, little medium to fine Gravel at 67.85', moderately dense, wet	0



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RH-SB-35

GEOLOGIC BORING LOG

Project: Interior Soil Borings			Start Date 12/15/1999	Boring ID RH-SB-35
LEA Commission Number: 68VE134.001			End Date 12/15/1999	
Client: Pratt & Whitney East Hartford-RC				
Location: P&W Rocky Hill				
Drilling Contractor: Loureiro Engineering Associates, Inc.			Logged by: James Lardie	
Drilling Method: Direct push			Drilling Foreman: Jason Miller	
Sampling Method: Macro Core			Drill Rig: Geoprobe 5400 - LEA 95	
Groundwater Observation			Surface Elevation:	
Depth: 24.8	at:	Hours ,	Northing:	
Depth:	at:	Hours &	Easting:	

Depth	Sample Information			Soil Description Color, Primary Grain Size, Secondary Grain Sizes, Moisture, Sorting, Sphericity Angularity, Sedimentary Structure, Density, Cohesiveness, Other	PID/FID ppm
	Sample No.	Recovery %	Blows /6"		
68	1948852	83		reddish brown medium to fine (+) SAND, trace Silt, moderately dense, wet	0
70	1948853	83		reddish brown medium to fine (+) SAND, trace Silt, moderately dense, wet	0
72	1948854	79		reddish brown medium to fine (+) SAND, trace Silt, moderately dense, wet	0
74	1948855	79		reddish brown medium to fine (+) SAND, trace Silt, moderately dense, wet	0
76	1948856			reddish brown medium to fine (+) SAND, trace Silt, moderately dense, wet	0
78	1948857			reddish brown medium to fine (+) SAND, trace Silt, moderately dense, wet	0
80	1948858	75		reddish brown medium to fine SAND, little Silt, dark brown staining visible at 80.75', 81.25' very faint odour (?), moderately dense, wet	8.1
82	1948859	75		reddish brown medium to fine SAND, little Silt, trace coarse Sand, trace medium to fine Gravel, moderately dense starting at 83.5', wet	10.4
84	1948860	71		reddish brown medium to fine SAND, little Silt, trace coarse Sand, trace medium to fine Gravel, moderately dense, wet	0
86	1948861	71		reddish brown medium to fine SAND, little Silt, trace coarse Sand, trace medium to fine Gravel, moderately dense, wet	0
88	1948862	58		reddish brown fine SAND, some very dense SILT, trace coarse Sand	0



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ATTACHMENT 3

Summary Data Tables and Analytical Results

**Pratt & Whitney
Deep Soil Boring Installation
Rocky Hill, Connecticut
LEA Comm. No. 68VE134**

Table 1
SUMMARY OF SOIL SAMPLING AND ANALYTICAL INFORMATION
Deep Soil borings, Pratt & Whitney, Rocky Hill, Connecticut

Location ID	Sample Information				Analysis Information									
	Sample ID	Sample Date	From (ft)	To (ft)	Class	Portable GC	Volatile Organics	Semivolatile Organics	Herbicides	Pesticides	PCBs	Metals	Extractions	Miscellaneous
RH-SB-34	1948816	12/14/99	1.5	4	SB	x								
RH-SB-34	1948817	12/14/99	4	5	SB	x								
RH-SB-35	1948821	12/15/99	0	2	SB	x								
RH-SB-35	1948822	12/15/99	2	4	SB	x								
RH-SB-35	1948823	12/15/99	4	6	SB	x								
RH-SB-35	1948824	12/15/99	6	8	SB	x								
RH-SB-35	1948825	12/15/99	8	10	SB	x								
RH-SB-35	1948826	12/15/99	10	12	SB	x								
RH-SB-35	1948827	12/17/99	12	14	SB		x					X		x
RH-SB-35	1948848	12/21/99	62	64	SB		x					X		x
RH-SB-35	1948858	12/22/99	80	82	SB		x					X		x
RH-SB-35	1948859	12/22/99	82	84	SB		x					X		x

Notes: 1. Legend: X - Analysed; at least one analyte over the detection limit; x - Analysed, no analytes in group over the detection limit
2. Printed on 02/08/00



Table 3
SUMMARY OF GROUNDWATER SAMPLING AND ANALYTICAL INFORMATION
Deep Soil Borings, Pratt & Whitney, Rocky Hill, Connecticut

Location ID	Sample Information				Analysis Information									
	Sample ID	Sample Date	From (ft)	To (ft)	Class	Portable GC	Volatile Organics	Semivolatile Organics	Herbicides	Pesticides	PCBs	Metals	Extractions	Miscellaneous
RH-SB-35	1949030	12/20/99	24	28	GW		x					X		X
RH-SB-35	1949035	12/23/99	24.0	28.0	GW		x					X		x

Notes: 1. Legend: X - Analysed; at least one analyte over the detection limit; x - Analysed, no analytes in group over the detection limit
2. Printed on 02/08/00



**US EPA New England
RCRA Document Management System (RDMS)
Image Target Sheet**

RDMS Document ID# 729

Facility Name: <u>Pratt & Whitney Rocky Hill</u>
Phase Classification: <u>R-13</u>
Document Title: <u>Environmental Indicator (EI) Determination, Current Human Exposures Under Control (CA 725YE) - Pratt & Whitney Rocky Hill</u>
Date of Document: <u>9/11/00</u>
Document Type: <u>EI Determination</u>
Purpose of Target Sheet:
<input checked="" type="checkbox"/> Oversized <input type="checkbox"/> Privileged
<input type="checkbox"/> Page(s) Missing <input type="checkbox"/> Other (Please Provide Purpose Below)

Comments:
<u>Oversized Map of Generalized Geological Cross Section</u>

* Please Contact the EPA New England RCRA Records Center to View This Document *

DATE COLLECTED	DATE RECEIVED	DATE COMPLETED	SAMPLE CODE
11/18/88	12/02/88	12/12/88	82020



CUSTOMER ADDRESS
 HYDRO GROUP - RANNEY DIV.
 ATTN: JIM FRENCH
 2 NORTH STATE
 WESTERVILLE, OH 43081-

DEALER ADDRESS
 Pratt & Whitney
 Collector
 Rocky Hill Connecticut

DRINKING WATER ANALYSIS RESULTS

NOTE: "*" indicates that maximum levels have been exceeded, or in the case of pH are either too high OR too low.

"nd" indicates that none of this contamination has been detected at or above our detection level.

Analysis performed	MCL (ag/l)	Detection Level	Level Detected
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Microbiological:

Total coliform (organism/100ml)	0	0.0	**
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Inorganic chemicals - metals:

Arsenic	0.05	0.002	nd
Barium	1.0	0.30	nd
Cadmium	0.01	0.002	nd
Chromium	0.05	0.004	nd
Copper	1.0	0.004	0.019
Iron	0.3	0.020	0.210
Lead	0.02	0.010	nd
Manganese	0.05	0.004	0.061 *
Mercury	0.002	0.0002	nd
Nickel	0.15	0.02	nd
Selenium	0.01	0.002	nd
Silver	0.05	0.002	nd
Sodium	--	1.0	14.0
Zinc	5.0	0.004	0.009

Inorganic chemicals - other, and physical factors:

Alkalinity (Total as CaCO3)	--	2.0	50
Chloride	250	10.0	30
Fluoride	2.0	0.1	nd
Nitrate as N	10	1.0	8
Sulfate	250	20.0	nd
Hardness (as CaCO3)	--	20.0	30
pH (Standard Units)	6.5-8.5	--	8.00
Total Dissolved Solids	500	20.0	100
Turbidity (Turbidity units)	1.0	0.1	0.5

Organic chemicals - trihalomethanes:

Bromoform	--	0.004	nd
Bromodichloromethane	--	0.002	nd
Chloroform	--	0.002	0.002
Dibromochloromethane	--	0.004	nd
Total THMs (sum of four above)	0.1	0.002	0.002

Organic chemicals - volatiles

Benzene	0.005	0.0005	nd
Vinyl chloride	0.002	0.0005	nd
Carbon Tetrachloride	0.005	0.0005	nd
1,2-Dichloroethane	0.005	0.0005	nd
Trichloroethylene	0.005	0.0005	nd
1,4-Dichlorobenzene	0.075	0.0005	nd
1,1-Dichloroethylene	0.007	0.0005	nd

** Bacteria not tested due to kit arrival at lab more than 48 hours after collection.

Analysis performed	MCL (mg/l)	Detection Level	Level (Detected)
1,1,1-Trichloroethane	0.20	0.0005	nd
Acrolein		0.005	nd
Acrylonitrile		0.005	nd
Bromobenzene	0.010	0.0005	nd
Bromomethane	0.005	0.0005	nd
Chlorobenzene	0.6	0.0005	nd
Chloroethane	0.003	0.0005	nd
Chloroethylvinyl ether		0.003	nd
Chloromethane	0.01	0.0005	nd
1,1-Chlorotoluene	0.005	0.0005	nd
1,3-Chlorotoluene	0.005	0.0005	nd
Dibromochloropropane (DBCP)	0.025	0.0005	nd
Dibromomethane	0.005	0.0005	nd
1,2-Dichlorobenzene	0.62	0.0005	nd
1,3-Dichlorobenzene	0.62	0.0005	nd
Dichlorodifluoromethane		0.005	nd
1,1-Dichloroethane		0.002	nd
Trans-1,2-Dichloroethylene	0.07	0.0005	nd
Cis-1,2-Dichloroethylene	0.07	0.0005	nd
Dichloromethane	0.350	0.0005	nd
1,2-Dichloropropane	0.005	0.0005	nd
Trans 1,3-Dichloropropane	0.005	0.0005	nd
Cis 1,3-Dichloropropane	0.005	0.0005	nd
2,2-Dichloropropane	0.005	0.0005	nd
1,1-Dichloropropene		0.002	nd
Cis-1,3-Dichloropropene		0.002	nd
Ethylbenzene	0.68	0.0005	nd
Ethylenedibromide (EDB)	0.11	0.0005	nd
Styrene	0.14	0.0005	nd
1,1,1,2-Tetrachloroethane	0.005	0.0005	nd
1,1,2,2-Tetrachloroethane	0.005	0.0005	nd
Tetrachloroethylene	0.005	0.0005	nd
Trichlorobenzene(s)		0.0005	nd
1,1,2-Trichloroethane	0.2	0.0005	nd
Trichlorofluoromethane		0.0005	nd
1,2,3-Trichloropropane	0.005	0.0005	nd
Toluene	2.0	0.0005	nd
Xylene	0.44	0.0005	nd

NOTE: The MCLs shown above and on page one of this report were derived from data published in following sources:
 * EPA National Primary or Secondary Drinking Water Regulations or Health Advisories. Where no recommended level was available, we have used the minimum detection level generally available using approved analytical methods.

I certify that the analyses performed for this report are accurate, and that the laboratory tests were conducted by methods approved by the U.S. Environmental Protection Agency and other appropriate regulatory agencies.

Peter W. Roberts

Director of Laboratories NATIONAL TESTING LABORATORY