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Appendix B

Drawings

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

RDMS Document ID# 1067

Facility Name: Pratt & Whitney (Pent Road)

Phase Classification: R-13

Document Title: Environmental Indicator (EI) Determination, Migration of Contaminated Groundwater Under Control (CA750YE) - Pratt & Whitney (Pent Road) [Part 1 of 2]

Date of Document: 01-06-2003

Document Type: EI Determination

Purpose of Target Sheet:

[x] **Oversized** [ ] **Privileged**

[ ] **Page(s) Missing** [ ] **Other** **(Please Provide Purpose Below)**

Comments: Drawing 1, Sheet 1 of 3: Exposure Areas and Sample Locations

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

RDMS Document ID# 1067

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Date of Document: 01-06-2003

Document Type: EI Determination

Purpose of Target Sheet:

[x] **Oversized** [ ] **Privileged**

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Comments: Drawing 2, Sheet 2 of 3: Sitewide Generalized Groundwater Contour Map

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

RDMS Document ID# 1067

Facility Name: Pratt & Whitney (Pent Road)

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Date of Document: 01-06-2003

Document Type: EI Determination

Purpose of Target Sheet:

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Comments: Drawing 3, Sheet 3 of 3: Willgoos Facility Location of Known Historic Releases

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

RDMS Document ID# 1067

Facility Name: Pratt & Whitney (Pent Road)

Phase Classification: R-13

Document Title: Environmental Indicator (EI) Determination, Migration of Contaminated Groundwater Under Control (CA750YE) - Pratt & Whitney (Pent Road) [Part 1 of 2]

Date of Document: 01-06-2003

Document Type: EI Determination

Purpose of Target Sheet:

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Comments: Drawing 4, Sheet 1 of 1: Plume Width Estimation for Dilution Attenuation Factor Calculation - Northwest Courtyard

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US EPA New England
RCRA Document Management System (RDMS)
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RDMS Document ID# 1067

Facility Name: Pratt & Whitney (Pent Road)

Phase Classification: R-13

Document Title: Environmental Indicator (EI) Determination, Migration of Contaminated Groundwater Under Control (CA750YE) - Pratt & Whitney (Pent Road) [Part 1 of 2]

Date of Document: 01-06-2003

Document Type: EI Determination

Purpose of Target Sheet:

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[ ] **Page(s) Missing** [ ] **Other** **(Please Provide Purpose Below)**

Comments: Drawing 5, Sheet 1 of 1: Plume Width Estimation for Dilution Attenuation Factor Calculation - Tank Farm Area

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RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA750)

Appendix C

Groundwater Monitoring in Support of
VCAP Risk Assessment
Pratt & Whitney Pent Road (Willgoos) Facility

GROUNDWATER MONITORING
IN SUPPORT OF
VCAP RISK ASSESSMENT

Pratt & Whitney
Pent Road
(Willgoos)
East Hartford, CT

NOTE: In the March 1999 original version of this report, Sample IDs #1833974 and 1833973 were mis-assigned to monitoring wells SW-MW-02 and SW-MW-06, respectively. The correct well assignments are as follows:

Sample ID	**Actual Well Sampled**
1833974	SW-MW-05
1833973	SW-MW-01

Additionally, monitoring wells SW-MW-B2 and SW-MW-D2 were mislabeled SW-MW-B02 and SW-MW-D02, respectively. The text, tables, and drawing have been revised in the following document to reflect these changes.

GROUNDWATER MONITORING
IN SUPPORT OF
VCAP RISK ASSESSMENT

Pratt & Whitney
Pent Road
(Willgoos)
East Hartford, CT

March 1999
Revised August 2001

Prepared for

PRATT & WHITNEY
400 Main Street
East Hartford, CT 06108

Prepared by

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Plainville, CT 06062

LEA Comm. # 68VC121

Table of Contents

	Page
1. SUMMARY	1
2. FACILITY INFORMATION	1
3. METHODOLOGY	1
4. RESULTS	2

TABLES

Table C1	Summary of Sampling and Analytical Information
Table C2	Summary of Sampling and Analytical Information (Detects)
Table C3	Summary of Analytical Results
Table C4a	Exceedances of P&W VCAP Risk Based Limits Based on Residential Air Inhalation
Table C4b	Exceedances of P&W VCAP Risk Based GW Limits Based on CT Surface Water

DRAWING

Drawing C1 Groundwater Sampling Locations

ATTACHMENT

Attachment C1 Letter from Lancaster Laboratories

1. SUMMARY

Groundwater monitoring was performed at the Pratt & Whitney, Pent Road (Willgoos) facility in East Hartford, Connecticut, in support of the Voluntary Corrective Action Program (VCAP) Risk Assessment. Groundwater samples were collected from 10 existing and 4 newly installed monitoring wells on site. The new monitoring wells were installed on the eastern and southern portion of the site to assess any potential migration of contamination off-site. The samples collected were analyzed for metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, plus nickel and zinc), total petroleum hydrocarbons (TPH) and volatile organic compounds (VOCs).

2. FACILITY INFORMATION

The Pent Road facility, also known as the Andrew Willgoos turbine laboratory, is located on Pent Road in East Hartford, Connecticut. The site occupies approximately 58 acres and lies to the east of the Connecticut River. The Pent Road facility is a jet engine test facility used for the experimental testing of jet engines and jet engine components.

3. METHODOLOGY

Four groundwater monitoring wells were installed with a Geoprobe® between January 13 and 18, 1999. All wells were installed using a 9-foot long pre-packed screen. Three of the wells were advanced to the top of the silt layer (SW-MW-11I, SW-MW-12, and NW-MW-11) while the fourth one was shallower.

Groundwater samples were collected by LEA personnel on January 20 and 22, 1999, from 8 existing and 4 newly installed monitoring wells. Two of the existing wells, NW-MW-04 and NW-MW-08, were not sampled on January 20 and 22 because they are located in the vicinity of a test cell and Pratt & Whitney conducted testing operations on those days. NW-MW-04 and NW-MW-08 were sampled on March 26, 1999 and the results are included in this report.

Prior to sampling, the depth to water and total depth of each monitoring well were recorded. From this information, the total volume of water contained in each monitoring well was calculated. The water was purged initially and parameters such as pH, temperature, and specific conductance were recorded. Once the initial volume of water was removed, the monitoring well was purged a minimum of three times the standing water volume. Samples were collected using dedicated polyethylene tubing (for metals and TPH) and dedicated disposable Teflon® bailers

(for VOCs). Samples collected for metals were filtered in the field using a dedicated 0.45 micron in-line filter assembly. The containers were sealed, placed in a cooler and shipped to Lancaster Laboratories under chain-of-custody procedures for analysis for metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, plus nickel and zinc), TPH, and VOCs.

In addition, two trip blanks, one equipment blank, one duplicate sample, and three performance evaluation samples were submitted for analysis for quality assurance/quality control (QA/QC) purposes.

4. RESULTS

The analytical results are summarized in the following paragraphs and are presented in tabular form in Tables C1 through C3. Table C1 presents a summary of sampling and analytical information; Table C2 presents a list of detected constituents; and Table C3 summarizes all analytical results obtained. The locations of existing and newly installed monitoring wells sampled are shown on Drawing C1.

The highest metal concentrations detected included arsenic at 0.0012 mg/l; barium at 0.0588 mg/l; nickel at 0.0231 mg/l; and zinc at 0.0492 mg/l. Arsenic was detected in monitoring well SW-MW-05 at trace levels (0.0012 mg/l). Trace levels of barium and zinc were detected in all wells sampled. Nickel was detected in three wells: NW-MW-09 (0.0092 mg/l), NW-MW-11 (0.0123 mg/l), and SW-MW-12 (0.0231 mg/l).

The highest TPH concentration detected was 3.43 mg/l, in groundwater from monitoring well SW-MW-B2. Low levels of TPH were detected in a number of monitoring wells sampled: NW-MW-04 (0.71 mg/l), NW-MW-05 (0.22 J mg/l), NW-MW-08 (0.87 mg/l), NW-MW-11 (0.50 J mg/l), SW-MW-05 (0.74 mg/l and 0.79 mg/l in the duplicate), SW-MW-01 (0.27 J mg/l), and SW-MW-12 (0.30 J mg/l). The qualifier "J" indicates an estimated concentration.

The VOCs detected and their highest concentrations included: acetone (20 µg/l); benzene (14 µg/l); cis-1,2-dichloroethylene (6 µg/l); tetrachloroethylene (5 µg/l); trichloroethylene (96 µg/l); and total xylenes (21 µg/l). VOCs were detected in the following wells: NW-MW-05 (trichloroethylene: 4 J µg/l); NW-MW-08 (trichloroethylene: 1 J µg/l, chloroform: 1 J µg/l), NW-MW-10 (tetrachloroethylene: 1 J µg/l); SW-MW-12 (cis-1,2-dichloroethylene: 6 µg/l, tetrachloroethylene: 5 J µg/l, trichloroethylene: 96 µg/l); SW-MW-D2 (acetone: 20 J µg/l, benzene: 1 J µg/l; and total xylenes: 21 µg/l), and SW-MW-05 (benzene: 14 µg/l; and total xylenes: 2 J µg/l).

Comparison of the groundwater data obtained against applicable VCAP screening levels identified potential exceedances due to method detection limits. Specifically, the groundwater data were compared to the numeric criteria published in Tables 3-5 and 3-7 of the *Conceptual Site Models and Screening Levels for Pratt & Whitney's VCAP Connecticut Facilities*, prepared by Gradient Corporation, issued on December 19, 1997 revised on September 18, 1998 and finalized on September 15, 1999. Table 3-5 is titled, *Generic P&W Off-Site Groundwater Screening Levels (SLs) Based on Residential Indoor Air Inhalation, P&W VCAP, Connecticut Facilities* and Table 3-7 is titled, *Generic P&W Groundwater Screening Levels (SLs) Based on Surface Water Protection, P&W VCAP, Connecticut Facilities.*

The comparison did not indicate any exceedances of the tabulated criteria. However, acrylonitrile, ethylene dibromide, 1,1-dichloroethylene, vinyl chloride, isobutyl alcohol, propionitrile, and methacrylonitrile were reported by the analytical laboratories as "not detected" at concentrations below their respective method detection limits. The method detection limits were greater than applicable screening criteria (see Tables C4a and C4b). A letter from Lancaster Laboratories regarding the detection limits achieved is provided in Attachment C1. According to the letter, instrument sensitivity and purging characteristics may have limited the detection limits achieved for the compounds listed in Tables C4a and C4b.

A comparison of results from the duplicate samples collected indicated reasonable agreement. TPH, however, was detected in only one of the duplicate samples collected from well NW-MW-05. The relative percent differences observed ranged up to 30% (zinc: 0.0039 mg/l and 0.0053 mg/l in the duplicate). These relative percent differences, however, are to be expected at the low concentration levels reported.

Zinc was detected at trace levels (0.0035 mg/l) in the equipment blank collected. Methylene chloride at an estimated concentration of 3 J µg/l was reported in one of the two trip blank samples collected.

Three performance samples were collected. The first one (1833971) was submitted for analysis for VOCs, metals, and TPH on January 20, 1999. All VOCs were reported within vendor-specified acceptance limits with the exception of carbon tetrachloride, chloroform, ethylbenzene, and 1,1,1-trichloroethane. All of these compounds were biased high, consequently, the corresponding reported values of "not detected" for the samples submitted within the same sample delivery group (SDG) were accepted, and the detected values were estimated. TPH was reported below vendor-specified acceptance limits. Therefore, all corresponding reported values

of "not detected" within the same SDG were rejected, and all detected values were estimated. All inorganic results (metals) were within vendor-specified acceptance limits.

The second performance evaluation sample (1833793) was submitted for analysis for VOCs, metals, and PCBs on January 20, 1999. All target VOC, metal, and PCB compounds were within vendor-specified acceptance limits. This performance evaluation sample was submitted as part of an evaluation of several contracted laboratories which is beyond the scope of this report.

The third performance evaluation sample (1833984) was submitted for analysis for VOCs, metals, and TPH on January 22, 1999. All VOCs were reported within vendor-specified acceptance limits with the exception of carbon tetrachloride and 1,1,1-trichloroethane. All of these compounds were biased high; consequently, the corresponding reported values of "not detected" within the same SDG were accepted, and the corresponding detected values were estimated. TPH was reported below vendor-specified acceptance limits. Therefore, all reported values of "not detected" within the same SDG were rejected, and all detects were estimated. All inorganic results (metals) were within vendor-specified acceptance limits.

TABLES

Table C1
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION
Pratt & Whitney, East Hartford, CT (Willgoos) - Groundwater Monitoring

Sample Information						Analysis Information							
Location ID	Sample ID	Sample Date	From (ft)	To (ft)	Class	Portable GC	Volatile Organics	Semivolatile Organics	Herbicides	Pesticides	PCBs	Metals	Miscellaneous
EQUIPMENT	1833976	1/22/99			BKE		x					X	x
NW-MW-04	1836150	3/26/99	8.1	18.1	GW		x					X	X
NW-MW-05	1833978	1/22/99	14.40	24.40	GW		X					X	x
NW-MW-05	1833979	1/22/99	14.40	24.40	GW		X					X	X
NW-MW-08	1836151	3/26/99	9.0	19.0	GW		X					X	X
NW-MW-09	1833982	1/22/99	12.0	22.0	GW		x					X	x
NW-MW-10	1833980	1/22/99	12.0	22.0	GW		X					X	x
NW-MW-11	1833981	1/22/99	12.0	21.0	GW		x					X	X
SW-MW-01	1833973	1/22/99	-0.50	9.50	GW		x					X	X
SW-MW-04	1833972	1/22/99	3.0	18.0	GW		x					X	x
SW-MW-05	1833974	1/22/99	3.00	18.00	GW		X					X	X
SW-MW-11I	1833966	1/20/99	11.0	20.0	GW		x					X	x
SW-MW-11S	1833967	1/20/99	6.0	15.0	GW		x					X	x
SW-MW-12	1833975	1/22/99	11.0	20.0	GW		X					X	X
SW-MW-B2	1833969	1/20/99	2.5	12.5	GW		x					X	X
SW-MW-D2	1833968	1/20/99	1.0	10.0	GW		X					X	X
TRIP BLANK	1833970	1/20/99			BKT		x						
TRIP BLANK	1833977	1/22/99			BKT		X						
TRIP BLANK	1836152	3/26/99			BKT		x						
performance	1833793	1/20/99			PEW		X				X	X	
performance	1833971	1/20/99			PEW		X					X	X
performance	1833984	1/22/99			PEW		X					X	X

Notes: 1. Legend: x - mass, t - TCLP, s - SPLP, e - EPTOX, z - ZHE; Capitalized - at least one analyte detected
2. Printed on 08/29/01

Table C2
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	EQUIPMENT	NW-MW-04	NW-MW-05	NW-MW-05	NW-MW-08	NW-MW-09	NW-MW-10
	Sample ID	1833976	1836150	1833978	1833979	1836151	1833982	1833980
	Sample Date	01/22/1999	03/26/1999	01/22/1999	01/22/1999	03/26/1999	01/22/1999	01/22/1999
	Sample Time	11:20	07:00	12:45	12:45	08:00	13:45	13:10
	Sample Depth		8.1' - 18.1'	14.40' - 24.4	14.40' - 24.4	9.0' - 19.0'	12.0' - 22.0'	12.0' - 22.0'
	Laboratory	LANC	LANC	LANC	LANC	LANC	LANC	LANC
	Lab. Number	3077607	3119262	3077609	3077610	3119263	3077613	3077611
Constituent	Units							
Depth of Well	FT		19.70	23.55	23.55	18.50	21.89	22.00
Depth to Water	FT		13.89	15.75	15.75	12.93	16.36	16.90
Specific Conductivity (field)	µmhos		617	177.3	177.3	472	152.7	195.0
Water Elevation	FT		23.01	22.98	22.98	22.16	22.34	21.31
pH (field)	SU		6.63	6.58	6.58	5.87	5.89	6.19
Date PCBs Analyzed	-							
Date Metals Analyzed	-	02/02/1999	04/06/1999	02/02/1999	02/02/1999	04/06/1999	02/02/1999	02/02/1999
Date Organics Analyzed	-			02/01/1999	02/01/1999	04/07/1999		02/01/1999
Date Physical Analyzed	-		04/12/1999		01/28/1999	04/12/1999		
Arsenic	mg/L							
Barium	mg/L		0.0299 B	0.0098 B	0.0100 B	0.0237 B	0.0348 B	0.0169 B
Cadmium	mg/L							
Chromium	mg/L							
Lead	mg/L							
Mercury	mg/L							
Nickel	mg/L						0.0092 B	
Selenium	mg/L							
Silver	mg/L							
Zinc	mg/L	0.0035 B	0.0031 B	0.0039 B	0.0053 B	0.0123 B	0.0080 B	0.0073 B
PCB 1248	µg/l							
TPH	mg/l		0.71		0.22 J	0.87		
Acetone	µg/l							
Benzene	µg/l							
Chlorobenzene	µg/l							
Ethyl Benzene	µg/l							
Carbon Tetrachloride	µg/l							
1,1,1-Trichloroethane	µg/l							
1,1,2,2-Tetrachloroethane	µg/l							

Notes: 1. Only Detects Shown
2. Printed on 08/29/01

Table C2
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	EQUIPMENT	NW-MW-04	NW-MW-05	NW-MW-05	NW-MW-08	NW-MW-09	NW-MW-10
	Sample ID	1833976	1836150	1833978	1833979	1836151	1833982	1833980
	Sample Date	01/22/1999	03/26/1999	01/22/1999	01/22/1999	03/26/1999	01/22/1999	01/22/1999
	Sample Time	11:20	07:00	12:45	12:45	08:00	13:45	13:10
	Sample Depth		8.1' - 18.1'	14.40' - 24.4	14.40' - 24.4	9.0' - 19.0'	12.0' - 22.0'	12.0' - 22.0'
	Laboratory	LANC	LANC	LANC	LANC	LANC	LANC	LANC
	Lab. Number	3077607	3119262	3077609	3077610	3119263	3077613	3077611
Constituent	Units							
1,1,2-Trichloroethane	µg/l							
1,2-Dichloroethane	µg/l							
1,1-Dichloroethylene	µg/l							
cis-1,2-Dichloroethylene	µg/l							
Tetrachloroethylene	µg/l							1 J
Trichloroethylene	µg/l			4 J	4 J	1 J		
Bromodichloromethane	µg/l							
Dibromochloromethane	µg/l							
Methylene Chloride	µg/l							
Bromoform	µg/l							
Chloroform	µg/l					1 J		
Methyl Isobutyl Ketone	µg/l							
Propylene Dichloride	µg/l							
Styrene	µg/l							
Toluene	µg/l							
Xylenes	µg/l							

Notes: 1. Only Detects Shown
2. Printed on 08/29/01

Table C2
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	NW-MW-11	SW-MW-01	SW-MW-04	SW-MW-05	SW-MW-11I	SW-MW-11S	SW-MW-12
	Sample ID	1833981	1833973	1833972	1833974	1833966	1833967	1833975
	Sample Date	01/22/1999	01/22/1999	01/22/1999	01/22/1999	01/20/1999	01/20/1999	01/22/1999
	Sample Time	13:40	10:35	10:25	10:50	14:20	14:28	11:05
	Sample Depth	12.0' - 21.0'	-0.50' - 9.50	3.0' - 18.0'	3.00' - 18.00	11.0' - 20.0'	6.0' - 15.0'	11.0' - 20.0'
	Laboratory	LANC	LANC	LANC	LANC	LANC	LANC	LANC
	Lab. Number	3077612	3077604	3077603	3077605	3076754	3076755	3077606
Constituent	Units							
Depth of Well	FT	20.04	19.95	20.00	19.54	19.57	13.33	19.45
Depth to Water	FT	16.08	11.04	12.25	11.90	10.95	5.29	17.55
Specific Conductivity (field)	µmhos	288	97.1	112.9	247	80.1	37.2	367
Water Elevation	FT	22.91	7.42	4.11	9.25	17.85	23.75	19.10
pH (field)	SU	5.93	5.28	5.27	5.65	6.05	6.31	6.48
Date PCBs Analyzed	-							
Date Metals Analyzed	-	02/02/1999	02/02/1999	02/02/1999	02/02/1999	02/02/1999	02/02/1999	02/02/1999
Date Organics Analyzed	-				02/01/1999			02/01/1999
Date Physical Analyzed	-	01/28/1999	01/28/1999		01/28/1999			01/28/1999
Arsenic	mg/L				0.0012 B			
Barium	mg/L	0.0539 B	0.0318 B	0.0286 B	0.0266 B	0.0255 B	0.0122 B	0.0335 B
Cadmium	mg/L							
Chromium	mg/L							
Lead	mg/L							
Mercury	mg/L							
Nickel	mg/L	0.0123 B						0.0231 B
Selenium	mg/L							
Silver	mg/L							
Zinc	mg/L	0.0134 B	0.0182 B	0.0275 P	0.0130 B	0.0118 B	0.0215 B	0.0068 B
PCB 1248	µg/l							
TPH	mg/l	0.50 J	0.27 J		0.79 J			0.30 J
Acetone	µg/l							
Benzene	µg/l				14			
Chlorobenzene	µg/l							
Ethyl Benzene	µg/l							
Carbon Tetrachloride	µg/l							
1,1,1-Trichloroethane	µg/l							
1,1,2,2-Tetrachloroethane	µg/l							

Notes: 1. Only Detects Shown
2. Printed on 08/29/01

Table C2
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	NW-MW-11	SW-MW-01	SW-MW-04	SW-MW-05	SW-MW-11I	SW-MW-11S	SW-MW-12
	Sample ID	1833981	1833973	1833972	1833974	1833966	1833967	1833975
	Sample Date	01/22/1999	01/22/1999	01/22/1999	01/22/1999	01/20/1999	01/20/1999	01/22/1999
	Sample Time	13:40	10:35	10:25	10:50	14:20	14:28	11:05
	Sample Depth	12.0' - 21.0'	-0.50' - 9.50	3.0' - 18.0'	3.00' - 18.00	11.0' - 20.0'	6.0' - 15.0'	11.0' - 20.0'
	Laboratory	LANC	LANC	LANC	LANC	LANC	LANC	LANC
	Lab. Number	3077612	3077604	3077603	3077605	3076754	3076755	3077606
Constituent	Units							
1,1,2-Trichloroethane	µg/l							
1,2-Dichloroethane	µg/l							
1,1-Dichloroethylene	µg/l							
cis-1,2-Dichloroethylene	µg/l							6
Tetrachloroethylene	µg/l							5 J
Trichloroethylene	µg/l							96
Bromodichloromethane	µg/l							
Dibromochloromethane	µg/l							
Methylene Chloride	µg/l							
Bromoform	µg/l							
Chloroform	µg/l							
Methyl Isobutyl Ketone	µg/l							
Propylene Dichloride	µg/l							
Styrene	µg/l							
Toluene	µg/l							
Xylenes	µg/l				2 J			

Notes: 1. Only Detects Shown
2. Printed on 08/29/01

Table C2
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	SW-MW-B2	SW-MW-D2	TRIP BLANK	performance	performance	performance	
	Sample ID	1833969	1833968	1833977	1833793	1833971	1833984	
	Sample Date	01/20/1999	01/20/1999	01/22/1999	01/20/1999	01/20/1999	01/22/1999	
	Sample Time	14:57	14:30	11:20	17:00	17:00	15:37	
	Sample Depth	2.5' - 12.5'	1.0' - 10.0'					
	Laboratory	LANC	LANC	LANC	LANC	LANC	LANC	
	Lab. Number	3076757	3076756	3077608	3076760	3076759	3077614	
Constituent	Units							
Depth of Well	FT	12.45	10.15					
Depth to Water	FT	10.32	8.92					
Specific Conductivity (field)	µmhos	158.9	1148					
Water Elevation	FT	21.40	21.88					
pH (field)	SU	6.00	5.50					
Date PCBs Analyzed	-				01/27/1999			
Date Metals Analyzed	-	02/02/1999	02/02/1999		02/02/1999	02/02/1999	02/02/1999	
Date Organics Analyzed	-		01/31/1999	02/01/1999	01/31/1999	01/31/1999	02/01/1999	
Date Physical Analyzed	-	01/28/1999	01/28/1999			01/28/1999	01/28/1999	
Arsenic	mg/L				0.176 F	0.0804 F	0.0602 F	
Barium	mg/L	0.0361 B	0.0588 B			0.557 P	0.293 P	
Cadmium	mg/L					0.0708 P	0.0839 P	
Chromium	mg/L					0.484 P	0.799 P	
Lead	mg/L				0.472	0.274	0.477	
Mercury	mg/L					0.0082 C	0.0048 C	
Nickel	mg/L					0.177 P	0.389 P	
Selenium	mg/L					0.0685 P	0.0929 P	
Silver	mg/L					0.0735 P	0.101 P	
Zinc	mg/L	0.0099 B	0.0492 P		0.0109 B	0.432 P	0.219 P	
PCB 1248	µg/l				1.3			
TPH	mg/l	3.43 J	0.74 J			18	26.6	
Acetone	µg/l		20 J					
Benzene	µg/l		1 J			130	92	
Chlorobenzene	µg/l					87	120	
Ethyl Benzene	µg/l					56	130	
Carbon Tetrachloride	µg/l					220	20	
1,1,1-Trichloroethane	µg/l				23	73	44	
1,1,2,2-Tetrachloroethane	µg/l					87		

Notes: 1. Only Detects Shown
2. Printed on 08/29/01

Table C2
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	SW-MW-B2	SW-MW-D2	TRIP BLANK	performance	performance	performance	
	Sample ID	1833969	1833968	1833977	1833793	1833971	1833984	
	Sample Date	01/20/1999	01/20/1999	01/22/1999	01/20/1999	01/20/1999	01/22/1999	
	Sample Time	14:57	14:30	11:20	17:00	17:00	15:37	
	Sample Depth	2.5' - 12.5'	1.0' - 10.0'					
	Laboratory	LANC	LANC	LANC	LANC	LANC	LANC	
	Lab. Number	3076757	3076756	3077608	3076760	3076759	3077614	
Constituent	Units							
1,1,2-Trichloroethane	µg/l					39		
1,2-Dichloroethane	µg/l					73	30	
1,1-Dichloroethylene	µg/l					1 J	160	
cis-1,2-Dichloroethylene	µg/l							
Tetrachloroethylene	µg/l				97	68	83	
Trichloroethylene	µg/l					44	120	
Bromodichloromethane	µg/l					73	18	
Dibromochloromethane	µg/l					18	100	
Methylene Chloride	µg/l			3 J	24	72	28	
Bromoform	µg/l					100	120	
Chloroform	µg/l					120	72	
Methyl Isobutyl Ketone	µg/l					65	74	
Propylene Dichloride	µg/l						8	
Styrene	µg/l						63	
Toluene	µg/l					94	36	
Xylenes	µg/l		21			180		

Notes: 1. Only Detects Shown
2. Printed on 08/29/01

Table C3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	EQUIPMENT	NW-MW-04	NW-MW-05	NW-MW-05	NW-MW-08	NW-MW-09	NW-MW-10
	Sample ID	1833976	1836150	1833978	1833979	1836151	1833982	1833980
	Sample Date	01/22/1999	03/26/1999	01/22/1999	01/22/1999	03/26/1999	01/22/1999	01/22/1999
	Sample Time	11:20	07:00	12:45	12:45	08:00	13:45	13:10
	Sample Depth		8.1' - 18.1'	14.40' - 24.4	14.40' - 24.4	9.0' - 19.0'	12.0' - 22.0'	12.0' - 22.0'
	Laboratory	LANC	LANC	LANC	LANC	LANC	LANC	LANC
	Lab. Number	3077607	3119262	3077609	3077610	3119263	3077613	3077611
Constituent	Units							
Depth of Well	FT		19.70	23.55	23.55	18.50	21.89	22.00
Depth to Water	FT		13.89	15.75	15.75	12.93	16.36	16.90
Specific Conductivity (field)	µmhos		617	177.3	177.3	472	152.7	195.0
Water Elevation	FT		23.01	22.98	22.98	22.16	22.34	21.31
pH (field)	SU		6.63	6.58	6.58	5.87	5.89	6.19
Date PCBs Analyzed	-							
Date Metals Analyzed	-	02/02/1999	04/06/1999	02/02/1999	02/02/1999	04/06/1999	02/02/1999	02/02/1999
Date Organics Analyzed	-	02/01/1999	04/07/1999	02/01/1999	02/01/1999	04/07/1999	02/01/1999	02/01/1999
Date Physical Analyzed	-	01/28/1999	04/12/1999	01/28/1999	01/28/1999	04/12/1999	01/28/1999	01/28/1999
Arsenic	mg/L	<0.00100 U	<0.00100 U	<0.00100 U	<0.00100 U	<0.00100 U	<0.00100 U	<0.00100 U
Barium	mg/L	<0.0015 U	0.0299 B	0.0098 B	0.0100 B	0.0237 B	0.0348 B	0.0169 B
Cadmium	mg/L	<0.0017 U	<0.00063 U	<0.0017 U	<0.0017 U	<0.00063 U	<0.0017 U	<0.0017 U
Chromium	mg/L	<0.0054 U	<0.0054 U	<0.0054 U	<0.0054 U	<0.0054 U	<0.0054 U	<0.0054 U
Lead	mg/L	<0.0065 U	<0.0019 U	<0.0065 U	<0.0065 U	<0.0019 U	<0.0065 U	<0.0065 U
Mercury	mg/L	<0.000042 U	<0.000042 U	<0.000042 U	<0.000042 U	<0.000042 U	<0.000042 U	<0.000042 U
Nickel	mg/L	<0.0054 U	<0.0054 U	<0.0054 U	<0.0054 U	<0.0054 U	0.0092 B	<0.0054 U
Selenium	mg/L	<0.0059 U	<0.0016 U	<0.0059 U	<0.0059 U	<0.0016 U	<0.0059 U	<0.0059 U
Silver	mg/L	<0.0057 U	<0.0057 U	<0.0057 U	<0.0057 U	<0.0057 U	<0.0057 U	<0.0057 U
Zinc	mg/L	0.0035 B	0.0031 B	0.0039 B	0.0053 B	0.0123 B	0.0080 B	0.0073 B
PCB 1016	µg/l							
PCB 1221	µg/l							
PCB 1232	µg/l							
PCB 1242	µg/l							
PCB 1248	µg/l							
PCB 1254	µg/l							
PCB 1260	µg/l							
1,2-Dibromo-3-chloropropane	µg/l	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U
TPH	mg/l	<0.16 UR	0.71	<0.16 UR	0.22 J	0.87	<0.16 UR	<0.16 UR

Notes: 1. Printed on 08/29/01

Table C3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	EQUIPMENT	NW-MW-04	NW-MW-05	NW-MW-05	NW-MW-08	NW-MW-09	NW-MW-10
	Sample ID	1833976	1836150	1833978	1833979	1836151	1833982	1833980
	Sample Date	01/22/1999	03/26/1999	01/22/1999	01/22/1999	03/26/1999	01/22/1999	01/22/1999
	Sample Time	11:20	07:00	12:45	12:45	08:00	13:45	13:10
	Sample Depth		8.1' - 18.1'	14.40' - 24.4	14.40' - 24.4	9.0' - 19.0'	12.0' - 22.0'	12.0' - 22.0'
	Laboratory	LANC	LANC	LANC	LANC	LANC	LANC	LANC
	Lab. Number	3077607	3119262	3077609	3077610	3119263	3077613	3077611
Constituent	Units							
trans-1,4-Dichloro-2-butylene	µg/l	<15 U	<15 U	<15 U	<15 U	<15 U	<15 U	<15 U
Vinyl Acetate	µg/l	<2 U	<2 UJ	<2 U	<2 U	<2 UJ	<2 U	<2 U
Acetone	µg/l	<6 U	<6 UR	<6 U	<6 U	<6 UR	<6 U	<6 U
Acetonitrile	µg/l	<25 UR	<25 UR	<25 UR	<25 UR	<25 UR	<25 UR	<25 UR
Acrolein	µg/l	<40 UR	<40 UR	<40 UR	<40 UR	<40 UR	<40 UR	<40 UR
Acrylonitrile	µg/l	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Benzene	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Chlorobenzene	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Ethyl Benzene	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
beta-Chloroprene	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
2-Butanone	µg/l	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U
Carbon Disulfide	µg/l	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U
Carbon Tetrachloride	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Dioxane	µg/l	<70 UR	<70 UR	<70 UR	<70 UR	<70 UR	<70 UR	<70 UR
1,1,1,2-Tetrachloroethane	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
1,1,1-Trichloroethane	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
1,1,2,2-Tetrachloroethane	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,1,2-Trichloroethane	µg/l	<2 U	<2 UJ	<2 U	<2 U	<2 U	<2 U	<2 U
1,1-Dichloroethane	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Ethylene Dibromide	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
1,2-Dichloroethane	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Chloroethane	µg/l	<3 UJ	<3 U	<3 UJ	<3 UJ	<3 U	<3 UJ	<3 UJ
Methyl-tert-butyl Ether	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,1-Dichloroethylene	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Vinyl Chloride	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
cis-1,2-Dichloroethylene	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Tetrachloroethylene	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	1 J
trans-1,2-Dichloroethylene	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U

Notes: 1. Printed on 08/29/01

Table C3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	EQUIPMENT	NW-MW-04	NW-MW-05	NW-MW-05	NW-MW-08	NW-MW-09	NW-MW-10
	Sample ID	1833976	1836150	1833978	1833979	1836151	1833982	1833980
	Sample Date	01/22/1999	03/26/1999	01/22/1999	01/22/1999	03/26/1999	01/22/1999	01/22/1999
	Sample Time	11:20	07:00	12:45	12:45	08:00	13:45	13:10
	Sample Depth		8.1' - 18.1'	14.40' - 24.4	14.40' - 24.4	9.0' - 19.0'	12.0' - 22.0'	12.0' - 22.0'
	Laboratory	LANC	LANC	LANC	LANC	LANC	LANC	LANC
	Lab. Number	3077607	3119262	3077609	3077610	3119263	3077613	3077611
Constituent	Units							
Trichloroethylene	µg/l	<1 U	<1 U	4 J	4 J	1 J	<1 U	<1 U
Ethylmethacrylate	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
2-Hexanone	µg/l	<7 U	<7 U	<7 U	<7 U	<7 U	<7 U	<7 U
Bromomethane	µg/l	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U
Bromodichloromethane	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Chloromethane	µg/l	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U
Dibromomethane	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Dibromochloromethane	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Methylene Chloride	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Dichlorodifluoromethane	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Iodomethane	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Bromoform	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Chloroform	µg/l	<1 U	<1 U	<1 U	<1 U	1 J	<1 U	<1 U
Fluorotrichloromethane	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Methyl Methacrylate	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Methyl Isobutyl Ketone	µg/l	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
1,2,3-Trichloropropane	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Propylene Dichloride	µg/l	<1 U	<1 U	<1 U	<1 U	<1 UR	<1 U	<1 U
Isobutyl Alcohol	µg/l	<100 UR	<100 UR	<100 UR	<100 UR	<100 U	<100 UR	<100 UR
Propionitrile	µg/l	<30 UR	<30 UR	<30 UR	<30 UR	<30 UR	<30 UR	<30 UR
3-Chloropropylene	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
cis-1,3-Dichloropropylene	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
trans-1,3-Dichloropropylene	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Methacrylonitrile	µg/l	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Styrene	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Toluene	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Xylenes	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U

Notes: 1. Printed on 08/29/01

Table C3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	NW-MW-11	SW-MW-01	SW-MW-04	SW-MW-05	SW-MW-11I	SW-MW-11S	SW-MW-12
	Sample ID	1833981	1833973	1833972	1833974	1833966	1833967	1833975
	Sample Date	01/22/1999	01/22/1999	01/22/1999	01/22/1999	01/20/1999	01/20/1999	01/22/1999
	Sample Time	13:40	10:35	10:25	10:50	14:20	14:28	11:05
	Sample Depth	12.0' - 21.0'	-0.50' - 9.50	3.0' - 18.0'	3.00' - 18.00	11.0' - 20.0'	6.0' - 15.0'	11.0' - 20.0'
	Laboratory	LANC	LANC	LANC	LANC	LANC	LANC	LANC
	Lab. Number	3077612	3077604	3077603	3077605	3076754	3076755	3077606
Constituent	Units							
Depth of Well	FT	20.04	19.95	20.00	19.54	19.57	13.33	19.45
Depth to Water	FT	16.08	11.04	12.25	11.90	10.95	5.29	17.55
Specific Conductivity (field)	µmhos	288	97.1	112.9	247	80.1	37.2	367
Water Elevation	FT	22.91	7.42	4.11	9.25	17.85	23.75	19.10
pH (field)	SU	5.93	5.28	5.27	5.65	6.05	6.31	6.48
Date PCBs Analyzed	-							
Date Metals Analyzed	-	02/02/1999	02/02/1999	02/02/1999	02/02/1999	02/02/1999	02/02/1999	02/02/1999
Date Organics Analyzed	-	02/01/1999	01/31/1999	01/31/1999	02/01/1999	01/31/1999	01/31/1999	02/01/1999
Date Physical Analyzed	-	01/28/1999	01/28/1999	01/28/1999	01/28/1999	01/28/1999	01/28/1999	01/28/1999
Arsenic	mg/L	<0.00100 U	<0.00100 U	<0.00100 U	0.0012 B	<0.00100 U	<0.00100 U	<0.00100 U
Barium	mg/L	0.0539 B	0.0318 B	0.0286 B	0.0266 B	0.0255 B	0.0122 B	0.0335 B
Cadmium	mg/L	<0.0017 U	<0.0017 U	<0.0017 U	<0.0017 U	<0.0017 U	<0.0017 U	<0.0017 U
Chromium	mg/L	<0.0054 U	<0.0054 U	<0.0054 U	<0.0054 U	<0.0054 U	<0.0054 U	<0.0054 U
Lead	mg/L	<0.0065 U	<0.0065 U	<0.0065 U	<0.0065 U	<0.0065 U	<0.0065 U	<0.0065 U
Mercury	mg/L	<0.000042 U	<0.000042 U	<0.000042 U	<0.000042 U	<0.000042 U	<0.000042 U	<0.000042 U
Nickel	mg/L	0.0123 B	<0.0054 U	<0.0054 U	<0.0054 U	<0.0054 U	<0.0054 U	0.0231 B
Selenium	mg/L	<0.0059 U	<0.0059 U	<0.0059 U	<0.0059 U	<0.0059 U	<0.0059 U	<0.0059 U
Silver	mg/L	<0.0057 U	<0.0057 U	<0.0057 U	<0.0057 U	<0.0057 U	<0.0057 U	<0.0057 U
Zinc	mg/L	0.0134 B	0.0182 B	0.0275 P	0.0130 B	0.0118 B	0.0215 B	0.0068 B
PCB 1016	µg/l							
PCB 1221	µg/l							
PCB 1232	µg/l							
PCB 1242	µg/l							
PCB 1248	µg/l							
PCB 1254	µg/l							
PCB 1260	µg/l							
1,2-Dibromo-3-chloropropane	µg/l	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U
TPH	mg/l	0.50 J	0.27 J	<0.16 UR	0.79 J	<0.16 UR	<0.16 UR	0.30 J

Notes: 1. Printed on 08/29/01

Table C3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	NW-MW-11	SW-MW-01	SW-MW-04	SW-MW-05	SW-MW-11I	SW-MW-11S	SW-MW-12
	Sample ID	1833981	1833973	1833972	1833974	1833966	1833967	1833975
	Sample Date	01/22/1999	01/22/1999	01/22/1999	01/22/1999	01/20/1999	01/20/1999	01/22/1999
	Sample Time	13:40	10:35	10:25	10:50	14:20	14:28	11:05
	Sample Depth	12.0' - 21.0'	-0.50' - 9.50	3.0' - 18.0'	3.00' - 18.00	11.0' - 20.0'	6.0' - 15.0'	11.0' - 20.0'
	Laboratory	LANC	LANC	LANC	LANC	LANC	LANC	LANC
	Lab. Number	3077612	3077604	3077603	3077605	3076754	3076755	3077606
Constituent	Units							
trans-1,4-Dichloro-2-butylene	µg/l	<15 U	<15 U	<15 U	<15 U	<15 U	<15 U	<15 U
Vinyl Acetate	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 UR	<2 U
Acetone	µg/l	<6 U	<6 U	<6 U	<6 U	<6 U	<6 U	<6 U
Acetonitrile	µg/l	<25 UR	<25 UR	<25 UR	<25 UR	<25 UR	<25 UR	<25 UR
Acrolein	µg/l	<40 UR	<40 UR	<40 UR	<40 UR	<40 UR	<40 UR	<40 UR
Acrylonitrile	µg/l	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Benzene	µg/l	<1 U	<1 U	<1 U	14	<1 U	<1 U	<1 U
Chlorobenzene	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Ethyl Benzene	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
beta-Chloroprene	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
2-Butanone	µg/l	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U
Carbon Disulfide	µg/l	<3 U	<3 U	<3 U	<3 U	<3 U	<3 UR	<3 U
Carbon Tetrachloride	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Dioxane	µg/l	<70 UR	<70 UR	<70 UR	<70 UR	<70 UR	<70 UR	<70 UR
1,1,1,2-Tetrachloroethane	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
1,1,1-Trichloroethane	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
1,1,2,2-Tetrachloroethane	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,1,2-Trichloroethane	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,1-Dichloroethane	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Ethylene Dibromide	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
1,2-Dichloroethane	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Chloroethane	µg/l	<3 UJ	<3 UJ	<3 UJ	<3 UJ	<3 UJ	<3 UJ	<3 UJ
Methyl-tert-butyl Ether	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,1-Dichloroethylene	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Vinyl Chloride	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
cis-1,2-Dichloroethylene	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	6
Tetrachloroethylene	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	5 J
trans-1,2-Dichloroethylene	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U

Notes: 1. Printed on 08/29/01

Table C3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	NW-MW-11	SW-MW-01	SW-MW-04	SW-MW-05	SW-MW-11I	SW-MW-11S	SW-MW-12
	Sample ID	1833981	1833973	1833972	1833974	1833966	1833967	1833975
	Sample Date	01/22/1999	01/22/1999	01/22/1999	01/22/1999	01/20/1999	01/20/1999	01/22/1999
	Sample Time	13:40	10:35	10:25	10:50	14:20	14:28	11:05
	Sample Depth	12.0' - 21.0'	-0.50' - 9.50	3.0' - 18.0'	3.00' - 18.00	11.0' - 20.0'	6.0' - 15.0'	11.0' - 20.0'
	Laboratory	LANC	LANC	LANC	LANC	LANC	LANC	LANC
	Lab. Number	3077612	3077604	3077603	3077605	3076754	3076755	3077606
Constituent	Units							
Trichloroethylene	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	96
Ethylmethacrylate	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
2-Hexanone	µg/l	<7 U	<7 U	<7 U	<7 U	<7 U	<7 U	<7 U
Bromomethane	µg/l	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U
Bromodichloromethane	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Chloromethane	µg/l	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U
Dibromomethane	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Dibromochloromethane	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Methylene Chloride	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Dichlorodifluoromethane	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Iodomethane	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Bromoform	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Chloroform	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Fluorotrichloromethane	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Methyl Methacrylate	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Methyl Isobutyl Ketone	µg/l	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
1,2,3-Trichloropropane	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Propylene Dichloride	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Isobutyl Alcohol	µg/l	<100 UR	<100 UR	<100 U	<100 UR	<100 UR	<100 UR	<100 UR
Propionitrile	µg/l	<30 UR	<30 UR	<30 UR	<30 UR	<30 UR	<30 UR	<30 UR
3-Chloropropylene	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
cis-1,3-Dichloropropylene	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
trans-1,3-Dichloropropylene	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Methacrylonitrile	µg/l	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Styrene	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Toluene	µg/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Xylenes	µg/l	<1 U	<1 U	<1 U	2 J	<1 U	<1 U	<1 U

Notes: 1. Printed on 08/29/01

Table C3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	SW-MW-B2	SW-MW-D2	TRIP BLANK	TRIP BLANK	TRIP BLANK	performance	performance
	Sample ID	1833969	1833968	1833970	1833977	1836152	1833793	1833971
	Sample Date	01/20/1999	01/20/1999	01/20/1999	01/22/1999	03/26/1999	01/20/1999	01/20/1999
	Sample Time	14:57	14:30	17:00	11:20	08:15	17:00	17:00
	Sample Depth	2.5' - 12.5'	1.0' - 10.0'					
	Laboratory	LANC	LANC	LANC	LANC	LANC	LANC	LANC
	Lab. Number	3076757	3076756	3076758	3077608	3119264	3076760	3076759
Constituent	Units							
Depth of Well	FT	12.45	10.15					
Depth to Water	FT	10.32	8.92					
Specific Conductivity (field)	µmhos	158.9	1148					
Water Elevation	FT	21.40	21.88					
pH (field)	SU	6.00	5.50					
Date PCBs Analyzed	-						01/27/1999	
Date Metals Analyzed	-	02/02/1999	02/02/1999				02/02/1999	02/02/1999
Date Organics Analyzed	-	01/31/1999	01/31/1999	01/31/1999	02/01/1999	04/07/1999	01/31/1999	01/31/1999
Date Physical Analyzed	-	01/28/1999	01/28/1999					01/28/1999
Arsenic	mg/L	<0.00100 U	<0.00100 U				0.176 F	0.0804 F
Barium	mg/L	0.0361 B	0.0588 B				<0.0015 U	0.557 P
Cadmium	mg/L	<0.0017 U	<0.0017 U				<0.0017 U	0.0708 P
Chromium	mg/L	<0.0054 U	<0.0054 U				<0.0054 U	0.484 P
Lead	mg/L	<0.0065 U	<0.0065 U				0.472	0.274
Mercury	mg/L	<0.000042 U	<0.000042 U				<0.000042 U	0.0082 C
Nickel	mg/L	<0.0054 U	<0.0054 U				<0.0054 U	0.177 P
Selenium	mg/L	<0.0059 U	<0.0059 U				<0.0059 U	0.0685 P
Silver	mg/L	<0.0057 U	<0.0057 U				<0.0057 U	0.0735 P
Zinc	mg/L	0.0099 B	0.0492 P				0.0109 B	0.432 P
PCB 1016	µg/l						<0.099 U	
PCB 1221	µg/l						<0.099 U	
PCB 1232	µg/l						<0.099 U	
PCB 1242	µg/l						<0.099 U	
PCB 1248	µg/l						1.3	
PCB 1254	µg/l						<0.099 U	
PCB 1260	µg/l						<0.099 U	
1,2-Dibromo-3-chloropropane	µg/l	<30 U	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U
TPH	mg/l	3.43 J	0.74 J					18

Notes: 1. Printed on 08/29/01

Table C3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	SW-MW-B2	SW-MW-D2	TRIP BLANK	TRIP BLANK	TRIP BLANK	performance	performance
	Sample ID	1833969	1833968	1833970	1833977	1836152	1833793	1833971
	Sample Date	01/20/1999	01/20/1999	01/20/1999	01/22/1999	03/26/1999	01/20/1999	01/20/1999
	Sample Time	14:57	14:30	17:00	11:20	08:15	17:00	17:00
	Sample Depth	2.5' - 12.5'	1.0' - 10.0'					
	Laboratory	LANC	LANC	LANC	LANC	LANC	LANC	LANC
	Lab. Number	3076757	3076756	3076758	3077608	3119264	3076760	3076759
Constituent	Units							
trans-1,4-Dichloro-2-butylene	µg/l	<150 U	<15 U	<15 U	<15 U	<15 U	<15 U	<15 U
Vinyl Acetate	µg/l	<20 U	<2 U	<2 U	<2 U	<2 UJ	<2 U	<2 U
Acetone	µg/l	<60 U	20 J	<6 U	<6 U	<6 UR	<6 U	<6 U
Acetonitrile	µg/l	<250 UR	<25 UR	<25 UR	<25 UR	<25 UR	<25 U	<25 U
Acrolein	µg/l	<400 UR	<40 UR	<40 UR	<40 UR	<40 UR	<40 U	<40 U
Acrylonitrile	µg/l	<100 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Benzene	µg/l	<10 U	1 J	<1 U	<1 U	<1 U	<1 U	130
Chlorobenzene	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	<1 U	87
Ethyl Benzene	µg/l	<20 U	<2 U	<2 U	<2 U	<2 U	<2 U	56
beta-Chloroprene	µg/l	<20 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
2-Butanone	µg/l	<30 U	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U
Carbon Disulfide	µg/l	<30 U	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U
Carbon Tetrachloride	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	<1 U	220
Dioxane	µg/l	<700 UR	<70 UR	<70 UR	<70 UR	<70 UR	<70 U	<70 U
1,1,1,2-Tetrachloroethane	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
1,1,1-Trichloroethane	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	23	73
1,1,2,2-Tetrachloroethane	µg/l	<20 U	<2 U	<2 U	<2 U	<2 U	<2 U	87
1,1,2-Trichloroethane	µg/l	<20 U	<2 U	<2 U	<2 U	<2 U	<2 U	39
1,1-Dichloroethane	µg/l	<20 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Ethylene Dibromide	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
1,2-Dichloroethane	µg/l	<20 U	<2 U	<2 U	<2 U	<2 U	<2 U	73
Chloroethane	µg/l	<30 UJ	<3 UJ	<3 UJ	<3 UJ	<3 U	<3 U	<3 U
Methyl-tert-butyl Ether	µg/l	<20 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,1-Dichloroethylene	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	<1 U	1 J
Vinyl Chloride	µg/l	<20 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
cis-1,2-Dichloroethylene	µg/l	<20 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Tetrachloroethylene	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	97	68
trans-1,2-Dichloroethylene	µg/l	<20 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U

Notes: 1. Printed on 08/29/01

Table C3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	SW-MW-B2	SW-MW-D2	TRIP BLANK	TRIP BLANK	TRIP BLANK	performance	performance
	Sample ID	1833969	1833968	1833970	1833977	1836152	1833793	1833971
	Sample Date	01/20/1999	01/20/1999	01/20/1999	01/22/1999	03/26/1999	01/20/1999	01/20/1999
	Sample Time	14:57	14:30	17:00	11:20	08:15	17:00	17:00
	Sample Depth	2.5' - 12.5'	1.0' - 10.0'					
	Laboratory	LANC	LANC	LANC	LANC	LANC	LANC	LANC
	Lab. Number	3076757	3076756	3076758	3077608	3119264	3076760	3076759
Constituent	Units							
Trichloroethylene	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	<1 U	44
Ethylmethacrylate	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
2-Hexanone	µg/l	<70 U	<7 U	<7 U	<7 U	<7 U	<7 U	<7 U
Bromomethane	µg/l	<30 U	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U
Bromodichloromethane	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	<1 U	73
Chloromethane	µg/l	<30 U	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U
Dibromomethane	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Dibromochloromethane	µg/l	<20 U	<2 U	<2 U	<2 U	<2 U	<2 U	18
Methylene Chloride	µg/l	<20 U	<2 U	<2 U	3 J	<2 U	24	72
Dichlorodifluoromethane	µg/l	<20 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Iodomethane	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Bromoform	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	<1 U	100
Chloroform	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	<1 U	120
Fluorotrichloromethane	µg/l	<20 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Methyl Methacrylate	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Methyl Isobutyl Ketone	µg/l	<50 U	<5 U	<5 U	<5 U	<5 U	<5 U	65
1,2,3-Trichloropropane	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Propylene Dichloride	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Isobutyl Alcohol	µg/l	<1000 UR	<100 UR	<100 UR	<100 UR	<100 UR	<100 U	<100 U
Propionitrile	µg/l	<300 UR	<30 UR	<30 UR	<30 UR	<30 UR	<30 U	<30 U
3-Chloropropylene	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
cis-1,3-Dichloropropylene	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
trans-1,3-Dichloropropylene	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Methacrylonitrile	µg/l	<100 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U
Styrene	µg/l	<10 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Toluene	µg/l	<20 U	<2 U	<2 U	<2 U	<2 U	<2 U	94
Xylenes	µg/l	<10 U	21	<1 U	<1 U	<1 U	<1 U	180

Notes: 1. Printed on 08/29/01

Table C3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	performance						
	Sample ID	1833984						
	Sample Date	01/22/1999						
	Sample Time	15:37						
	Sample Depth							
	Laboratory	LANC						
	Lab. Number	3077614						
Constituent	Units							
Depth of Well	FT							
Depth to Water	FT							
Specific Conductivity (field)	µmhos							
Water Elevation	FT							
pH (field)	SU							
Date PCBs Analyzed	-							
Date Metals Analyzed	-	02/02/1999						
Date Organics Analyzed	-	02/01/1999						
Date Physical Analyzed	-	01/28/1999						
Arsenic	mg/L	0.0602 F						
Barium	mg/L	0.293 P						
Cadmium	mg/L	0.0839 P						
Chromium	mg/L	0.799 P						
Lead	mg/L	0.477						
Mercury	mg/L	0.0048 C						
Nickel	mg/L	0.389 P						
Selenium	mg/L	0.0929 P						
Silver	mg/L	0.101 P						
Zinc	mg/L	0.219 P						
PCB 1016	µg/l							
PCB 1221	µg/l							
PCB 1232	µg/l							
PCB 1242	µg/l							
PCB 1248	µg/l							
PCB 1254	µg/l							
PCB 1260	µg/l							
1,2-Dibromo-3-chloropropane	µg/l	<3 U						
TPH	mg/l	26.6						

Notes: 1. Printed on 08/29/01

Table C3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	performance						
	Sample ID	1833984						
	Sample Date	01/22/1999						
	Sample Time	15:37						
	Sample Depth							
	Laboratory	LANC						
	Lab. Number	3077614						
Constituent	Units							
trans-1,4-Dichloro-2-butylene	µg/l	<15 U						
Vinyl Acetate	µg/l	<2 U						
Acetone	µg/l	<6 U						
Acetonitrile	µg/l	<25 U						
Acrolein	µg/l	<40 U						
Acrylonitrile	µg/l	<10 U						
Benzene	µg/l	92						
Chlorobenzene	µg/l	120						
Ethyl Benzene	µg/l	130						
beta-Chloroprene	µg/l	<2 U						
2-Butanone	µg/l	<3 U						
Carbon Disulfide	µg/l	<3 U						
Carbon Tetrachloride	µg/l	20						
Dioxane	µg/l	<70 U						
1,1,1,2-Tetrachloroethane	µg/l	<1 U						
1,1,1-Trichloroethane	µg/l	44						
1,1,2,2-Tetrachloroethane	µg/l	<2 U						
1,1,2-Trichloroethane	µg/l	<2 U						
1,1-Dichloroethane	µg/l	<2 U						
Ethylene Dibromide	µg/l	<1 U						
1,2-Dichloroethane	µg/l	30						
Chloroethane	µg/l	<3 U						
Methyl-tert-butyl Ether	µg/l	<2 U						
1,1-Dichloroethylene	µg/l	160						
Vinyl Chloride	µg/l	<2 U						
cis-1,2-Dichloroethylene	µg/l	<2 U						
Tetrachloroethylene	µg/l	83						
trans-1,2-Dichloroethylene	µg/l	<2 U						

Notes: 1. Printed on 08/29/01

Table C3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	performance						
	Sample ID	1833984						
	Sample Date	01/22/1999						
	Sample Time	15:37						
	Sample Depth							
	Laboratory	LANC						
	Lab. Number	3077614						
Constituent	Units							
Trichloroethylene	µg/l	120						
Ethylmethacrylate	µg/l	<1 U						
2-Hexanone	µg/l	<7 U						
Bromomethane	µg/l	<3 U						
Bromodichloromethane	µg/l	18						
Chloromethane	µg/l	<3 U						
Dibromomethane	µg/l	<1 U						
Dibromochloromethane	µg/l	100						
Methylene Chloride	µg/l	28						
Dichlorodifluoromethane	µg/l	<2 U						
Iodomethane	µg/l	<1 U						
Bromoform	µg/l	120						
Chloroform	µg/l	72						
Fluorotrichloromethane	µg/l	<2 U						
Methyl Methacrylate	µg/l	<1 U						
Methyl Isobutyl Ketone	µg/l	74						
1,2,3-Trichloropropane	µg/l	<1 U						
Propylene Dichloride	µg/l	8						
Isobutyl Alcohol	µg/l	<100 U						
Propionitrile	µg/l	<30 U						
3-Chloropropylene	µg/l	<1 U						
cis-1,3-Dichloropropylene	µg/l	<1 U						
trans-1,3-Dichloropropylene	µg/l	<1 U						
Methacrylonitrile	µg/l	<10 U						
Styrene	µg/l	63						
Toluene	µg/l	36						
Xylenes	µg/l	<1 U						

Notes: 1. Printed on 08/29/01

Table C4a
EXCEEDANCES OF P & W VCAP RISK BASED LIMITS BASED ON RESIDENTIAL AIR INHALATION
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	NW-MW-04	NW-MW-05	NW-MW-05	NW-MW-08	NW-MW-09	NW-MW-10	NW-MW-11
	Sample ID	1836150	1833978	1833979	1836151	1833982	1833980	1833981
	Sample Date	03/26/1999	01/22/1999	01/22/1999	03/26/1999	01/22/1999	01/22/1999	01/22/1999
	Sample Time	07:00	12:45	12:45	08:00	13:45	13:10	13:40
	Sample Depth	8.1' - 18.1'	14.40' - 24.4	14.40' - 24.4	9.0' - 19.0'	12.0' - 22.0'	12.0' - 22.0'	12.0' - 21.0'
	Laboratory	LANC	LANC	LANC	LANC	LANC	LANC	LANC
	Lab. Number	3119262	3077609	3077610	3119263	3077613	3077611	3077612
Constituent	Units							
Depth of Well	FT	19.70	23.55	23.55	18.50	21.89	22.00	20.04
Depth to Water	FT	13.89	15.75	15.75	12.93	16.36	16.90	16.08
Water Elevation	FT	23.01	22.98	22.98	22.16	22.34	21.31	22.91
Date Organics Analyzed	-	04/07/1999	02/01/1999	02/01/1999	04/07/1999	02/01/1999	02/01/1999	02/01/1999
Ethylene Dibromide	µg/l							
1,1-Dichloroethylene	µg/l							
Vinyl Chloride	µg/l							
Isobutyl Alcohol	µg/l							
Methacrylonitrile	µg/l	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U

Notes: 1. Only Exceedances Shown
2. Printed on 08/30/01

Table C4a
EXCEEDANCES OF P & W VCAP RISK BASED LIMITS BASED ON RESIDENTIAL AIR INHALATION
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	SW-MW-01	SW-MW-04	SW-MW-05	SW-MW-11I	SW-MW-11S	SW-MW-12	SW-MW-B2
	Sample ID	1833973	1833972	1833974	1833966	1833967	1833975	1833969
	Sample Date	01/22/1999	01/22/1999	01/22/1999	01/20/1999	01/20/1999	01/22/1999	01/20/1999
	Sample Time	10:35	10:25	10:50	14:20	14:28	11:05	14:57
	Sample Depth	-0.50' - 9.50	3.0' - 18.0'	3.00' - 18.00	11.0' - 20.0'	6.0' - 15.0'	11.0' - 20.0'	2.5' - 12.5'
	Laboratory	LANC	LANC	LANC	LANC	LANC	LANC	LANC
	Lab. Number	3077604	3077603	3077605	3076754	3076755	3077606	3076757
Constituent	Units							
Depth of Well	FT	19.95	20.00	19.54	19.57	13.33	19.45	12.45
Depth to Water	FT	11.04	12.25	11.90	10.95	5.29	17.55	10.32
Water Elevation	FT	7.42	4.11	9.25	17.85	23.75	19.10	21.40
Date Organics Analyzed	-	01/31/1999	01/31/1999	02/01/1999	01/31/1999	01/31/1999	02/01/1999	01/31/1999
Ethylene Dibromide	µg/l							<10 U
1,1-Dichloroethylene	µg/l							<10 U
Vinyl Chloride	µg/l							<20 U
Isobutyl Alcohol	µg/l							<1000 UR
Methacrylonitrile	µg/l	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	<100 U

Notes: 1. Only Exceedances Shown
2. Printed on 08/30/01

Table C4a
EXCEEDANCES OF P & W VCAP RISK BASED LIMITS BASED ON RESIDENTIAL AIR INHALATION
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	SW-MW-D2						
	Sample ID	1833968						
	Sample Date	01/20/1999						
	Sample Time	14:30						
	Sample Depth	1.0' - 10.0'						
	Laboratory	LANC						
	Lab. Number	3076756						
Constituent	Units							
Depth of Well	FT	10.15						
Depth to Water	FT	8.92						
Water Elevation	FT	21.88						
Date Organics Analyzed	-	01/31/1999						
Ethylene Dibromide	µg/l							
1,1-Dichloroethylene	µg/l							
Vinyl Chloride	µg/l							
Isobutyl Alcohol	µg/l							
Methacrylonitrile	µg/l	<10 U						

Notes: 1. Only Exceedances Shown
2. Printed on 08/30/01

Table C4b
EXCEEDANCES OF P & W VCAP RISK BASED GW LIMITS BASED ON CT SURFACE WATER
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	NW-MW-04	NW-MW-05	NW-MW-05	NW-MW-08	NW-MW-09	NW-MW-10	NW-MW-11
	Sample ID	1836150	1833978	1833979	1836151	1833982	1833980	1833981
	Sample Date	03/26/1999	01/22/1999	01/22/1999	03/26/1999	01/22/1999	01/22/1999	01/22/1999
	Sample Time	07:00	12:45	12:45	08:00	13:45	13:10	13:40
	Sample Depth	8.1' - 18.1'	14.40' - 24.4	14.40' - 24.4	9.0' - 19.0'	12.0' - 22.0'	12.0' - 22.0'	12.0' - 21.0'
	Laboratory	LANC	LANC	LANC	LANC	LANC	LANC	LANC
	Lab. Number	3119262	3077609	3077610	3119263	3077613	3077611	3077612
Constituent	Units							
Depth of Well	FT	19.70	23.55	23.55	18.50	21.89	22.00	20.04
Depth to Water	FT	13.89	15.75	15.75	12.93	16.36	16.90	16.08
Water Elevation	FT	23.01	22.98	22.98	22.16	22.34	21.31	22.91
Date Organics Analyzed	-	04/07/1999	02/01/1999	02/01/1999	04/07/1999	02/01/1999	02/01/1999	02/01/1999
Acrylonitrile	µg/l							
Ethylene Dibromide	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Isobutyl Alcohol	µg/l							
Propionitrile	µg/l							
Methacrylonitrile	µg/l							

Notes: 1. Only Exceedances Shown
2. Printed on 08/30/01

Table C4b
EXCEEDANCES OF P & W VCAP RISK BASED GW LIMITS BASED ON CT SURFACE WATER
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	SW-MW-01	SW-MW-04	SW-MW-05	SW-MW-11I	SW-MW-11S	SW-MW-12	SW-MW-B2
	Sample ID	1833973	1833972	1833974	1833966	1833967	1833975	1833969
	Sample Date	01/22/1999	01/22/1999	01/22/1999	01/20/1999	01/20/1999	01/22/1999	01/20/1999
	Sample Time	10:35	10:25	10:50	14:20	14:28	11:05	14:57
	Sample Depth	-0.50' - 9.50	3.0' - 18.0'	3.00' - 18.00	11.0' - 20.0'	6.0' - 15.0'	11.0' - 20.0'	2.5' - 12.5'
	Laboratory	LANC	LANC	LANC	LANC	LANC	LANC	LANC
	Lab. Number	3077604	3077603	3077605	3076754	3076755	3077606	3076757
Constituent	Units							
Depth of Well	FT	19.95	20.00	19.54	19.57	13.33	19.45	12.45
Depth to Water	FT	11.04	12.25	11.90	10.95	5.29	17.55	10.32
Water Elevation	FT	7.42	4.11	9.25	17.85	23.75	19.10	21.40
Date Organics Analyzed	-	01/31/1999	01/31/1999	02/01/1999	01/31/1999	01/31/1999	02/01/1999	01/31/1999
Acrylonitrile	µg/l							<100 U
Ethylene Dibromide	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<10 U
Isobutyl Alcohol	µg/l							<1000 UR
Propionitrile	µg/l							<300 UR
Methacrylonitrile	µg/l							<100 U

Notes: 1. Only Exceedances Shown
2. Printed on 08/30/01

Table C4b
EXCEEDANCES OF P & W VCAP RISK BASED GW LIMITS BASED ON CT SURFACE WATER
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Groundwater Monitoring

	Location ID	SW-MW-D2						
	Sample ID	1833968						
	Sample Date	01/20/1999						
	Sample Time	14:30						
	Sample Depth	1.0' - 10.0'						
	Laboratory	LANC						
	Lab. Number	3076756						
Constituent	Units							
Depth of Well	FT	10.15						
Depth to Water	FT	8.92						
Water Elevation	FT	21.88						
Date Organics Analyzed	-	01/31/1999						
Acrylonitrile	µg/l							
Ethylene Dibromide	µg/l	<1 U						
Isobutyl Alcohol	µg/l							
Propionitrile	µg/l							
Methacrylonitrile	µg/l							

Notes: 1. Only Exceedances Shown
2. Printed on 08/30/01

LIST OF QUALIFIERS

Organic Qualifiers

A	Tentatively Identified Compound (TIC) is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentation exceeds the calibration range of the instrument
J	Estimated value
N	Presumptive evidence of a compound (TOCs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is < contract required detection limit CRDL, but > instrument detection limit II
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

DRAWING

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RCRA Document Management System (RDMS)
Image Target Sheet

RDMS Document ID# 1067

Facility Name: Pratt & Whitney (Pent Road)

Phase Classification: R-13

Document Title: Environmental Indicator (EI) Determination, Migration of Contaminated Groundwater Under Control (CA750YE) - Pratt & Whitney (Pent Road) [Part 1 of 2]

Date of Document: 01-06-2003

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[ ] **Page(s) Missing** [ ] **Other** **(Please Provide Purpose Below)**

Comments: Drawing C1, Sheet 1 of 1: Groundwater Sampling Locations

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

ATTACHMENT C1

Letter from Lancaster Laboratories

Lancaster Laboratories
A division of Thermo Analytical Inc.
Where quality is a science.

October 14, 1999

Mr. Nick Skoularikis
Loureiro Engineering Associates, Inc.
100 Northwest Drive
Plainville, CT 06062

Dear Mr. Skoularikis:

I am writing in regards to Pratt & Whitney projects where Lancaster Laboratories' detection limits exceed VCAP screening levels. We are currently reporting our method detection limits (MDL) for all analytes of interest. MDLs are statistically derived limits that we can routinely meet for each analyte. Instrument sensitivity and purging characteristics limit the ability to achieve the VCAP limits for some volatile compounds. Dilutions due to high target or nontarget compounds and dry weight correction may increase limits in all analytes. In some cases this may result in detection limits above the VCAP limits.

If you have any further questions regarding this issue, please contact me at 717-656-2308, Ext. 1524.

Sincerely,

Duane A. Luckenbill, B.S.
Group Leader
GC/MS Volatiles

DAL/ala

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