

**RCRA Corrective Action  
Environmental Indicator (EI) RCRIS code (CA725)**

**Appendix E**

***Special Groundwater Sampling Report  
For  
Pratt & Whitney Willgoos Facility***

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**SPECIAL GROUNDWATER SAMPLING REPORT**

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

**August 2001**

**Prepared for**

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### **DRAWING**

Drawing E1	LNAPL in Northwest Courtyard
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## 1. SUMMARY

On November 10, 1999, Pratt & Whitney (P&W) discovered evidence of a release of “Jet-A” fuel from an underground pipe in the vicinity of the Exhauster Building at the Andrew Willgoos Turbine Laboratory facility in East Hartford, Connecticut. The release area was located toward the west of the facility in relatively close proximity to the Connecticut River. It is estimated that approximately 50,000 – 75,000 gallons of “Jet-A” fuel was released.

During the initial emergency response in November and December 1999, groundwater monitoring wells were installed in an attempt to identify the leading edge of the separate phase “Jet-A” fuel plume. The majority of these wells were not sampled at the time because their primary purpose was to provide real-time identification of the extent of the spill. These wells were completed as groundwater monitoring wells to provide future groundwater recovery and/or elevation monitoring points.

Since the time that the release was detected, a groundwater and product recovery system has been installed. This system relies on a hydraulic containment system comprised of down-well, groundwater extraction pumps and a treatment system, and has been successful in preventing the release from reaching the Connecticut River. Some variations and additions have been made to the system to account for site variables, and the system is being monitored to ensure continued capture of the non-aqueous phase liquids (NAPL) associated with the product release.

Monitoring of the water/product levels throughout the product plume and peripheral areas has been ongoing since initiation of the initial emergency response. Wells downgradient of the containment system will continue to be monitored during operation of the recovery system at a frequency adequate to ensure effectiveness of the system. The parameters and frequency will routinely be evaluated to ensure that they are adequate to detect failure or breach of the system.

## 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. SAMPLE COLLECTION EVENTS

#### 3.1 November and December 1999 Sample Collection

During the initial emergency response in November 1999, groundwater samples were collected from three monitoring wells within the release area (NW-MW-10, NW-MW-40, and NW-MW-42). The locations of these monitoring wells are shown on Drawing E1. Groundwater samples collected from these wells were analyzed for volatile organic compounds (VOCs).

In addition, a groundwater sample was collected from the initial recovery well (NW-RW-01) and was analyzed for VOCs, semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), metals and other compounds in support of a State permit application for discharge of remediation wastewater to the municipal sanitary sewer. The location of this recovery well is shown on Drawing E1.

After the barrier well system had been established, and in order to evaluate whether dissolved phase concentrations of fuel constituents from the release had emanated beyond the barrier, groundwater samples were collected from five wells downgradient of the release area (NW-MW-09, NW-MW-10, NW-MW-21, NW-MW-25, NW-MW-42) on December 23, 1999 and one well NW-MW-43 on December 28, 1999. Groundwater samples collected from these wells were analyzed for VOCs.

Table E1 presents a summary of sampling and analytical information; Table E2 presents a list of detected constituents; and Table E3 summarizes all analytical results obtained. Tables E4 and E5 present identified exceedances over applicable VCAP screening levels.

#### 3.2 April 2001 through August 2001 Sample Collection

In response to comments provided by the USEPA concerning the development of the facility's "*Documentation of Environmental Indicator Determination*" reports, on April 12, 2001 groundwater samples were collected from wells NW-MW-05, NW-MW-08, NW-MW-09, NW-MW-10, NW-MW-21, NW-MW-39, and NW-MW-49 as part of a special sampling event targeted at high groundwater conditions to determine whether contamination from the "Jet-A" fuel spill has migrated beyond the treatment system barrier. The locations of these monitoring wells are shown on Drawing E1. A duplicate sample was collected from MW-09 for quality control measures. These groundwater samples were submitted for analysis of VOCs and methyl tertiary butyl ether (MTBE), total petroleum hydrocarbons (TPH), and total zinc.

Subsequently, and in response to additional comments from the USEPA, a supplemental groundwater monitoring round was performed on August 9 and 13, 2001. The intent of this



sampling event was to repeat the earlier April event during conditions of low groundwater elevation and include SVOCs analysis, which was not analyzed during the April event. A duplicate sample was collected from NW-MW-05 for quality control measures.

In June 2001, additional groundwater monitoring wells were installed to the south of the spill release area in an attempt to delineate suspected product in the vicinity of a 36-inch storm drain. These wells (NW-MW-58 through NW-MW-61) were sampled for groundwater and analyzed for VOCs. The locations of these monitoring wells are shown on Drawing E1.

In July 2001, additional groundwater monitoring wells were installed to the southwest of the spill release area to collect groundwater samples from a recently discovered oil/water separator. These wells (NW-MW-71, NW-MW-74, NW-MW-75, and NW-MW-79) were sampled for groundwater and analyzed for VOCs; two wells (NW-MW-71 and NW-MW-75) were also analyzed for SVOCs, PCBs, and TPH.

Table E6 presents a summary of sampling and analytical information; Table E7 presents a list of detected constituents; and Table E8 summarizes all analytical results obtained. Tables E9 and E10 present identified exceedances over applicable VCAP screening levels.

#### **4. EVALUATION OF RESULTS**

Comparison of the groundwater data against applicable VCAP screening levels indicated several exceedances over site-specific screening levels. 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*.

##### **4.1 November and December 1999 Sample Collection**

As presented in Tables E4 and E5 and based on a comparison of the results to the generic P&W screening criteria, one or more of the following compounds were detected above the VCAP screening levels from monitoring wells NW-MW-09, NW-MW-10, NW-MW-25, NW-MW-40, NW-MW-42 and/or NW-MW-43: acetone, dichlorodifluoromethane, vinyl chloride, xylene, and 1,1-dichloroethylene.



The acetone results reported as “not detected” at <2,000 µg/L for wells NW-MW-25 and NW-MW-40 are believed to be attributable to laboratory contamination.

In addition, zinc and several VOCs and SVOCs were reported at elevated concentrations that exceeded VCAP screening criteria for the sample collected from the initial groundwater/product recovery well NW-RW-01. Most of the VOCs and SVOCs exceedances are for constituents reported as “not detected” at elevated levels due to sample dilution. This sample was heavily contaminated, as it was collected from the initial recovery well located very near the spill source, and is not considered representative of groundwater outside of the spill release area. The elevated zinc concentration (1.8 mg/L) is associated with the heavy contamination of this sample by the “Jet A” fuel, which reportedly contains high concentrations of zinc in an additive.

#### **4.2 April 2001 through August 2001 Sample Collection**

As presented in Tables E9 and E10 and based on a comparison of the results to the generic P&W screening criteria, there were one or more of the following compounds were detected above the VCAP screening levels from monitoring wells NW-MW-19, NW-MW-21, NW-MW-39, NW-MW-49, NW-MW-58, NW-MW-59, NW-MW-60, NW-MW-61, and/or NW-MW-74: cis-1,2-dichloroethylene, MTBE, trichloroethylene, vinyl chloride, xylene, zinc, and 1,1-dichloroethylene.

In addition, method detection limits for select SVOCs were above Table 3-7 criteria for samples collected from monitoring wells NW-MW-05, NW-MW-08, NW-MW-09, NW-MW-10, NW-MW-21, NW-MW-39, and NW-MW-49 in the August 9, 2001 sampling event. The specific compounds are: hexachlorobenzene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, benzo(c)pyrene, and benzo(k)fluoranthene. These compounds were reported as being “not detected” at concentrations below their respective method detection limits, which were greater than applicable screening criteria (see Table E10).



## TABLES



**Table E1**  
**SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION**  
**Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Special Groundwater Sampling**

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
NW-MW-09	1949165	12/23/99	12.0	22.0	GW		X						
NW-MW-10	1947409	11/19/99	12.00	22.00	GW		X						
NW-MW-10	1949167	12/23/99	12.0	22.0	GW		X						
NW-MW-21	1949163	12/23/99			GW		X						
NW-MW-25	1949164	12/23/99			GW		X						
NW-MW-40	1947408	11/19/99			GW		X						
NW-MW-42	1947410	11/19/99			GW		X						
NW-MW-42	1949168	12/23/99			GW		X						
NW-MW-43	1950324	12/28/99			GW		X						
NW-RW-01	1947412	11/13/99			GW		X	X		x	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 08/30/01



**Table E2**  
**SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)**  
**Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Special Groundwater Sampling**

	Location ID	NW-MW-09	NW-MW-10	NW-MW-10	NW-MW-21	NW-MW-25	NW-MW-40	NW-MW-42
Sample ID		1949165	1947409	1949167	1949163	1949164	1947408	1947410
Sample Date		12/23/1999	11/19/1999	12/23/1999	12/23/1999	12/23/1999	11/19/1999	11/19/1999
Sample Time		12:20		13:15	11:25	11:50		
Sample Depth		12.0' - 22.0'	12.00' - 22.0	12.0' - 22.0'				
Laboratory		AEL	AEL	AEL	AEL	AEL	AEL	AEL
Lab. Number		AEL99014006	AEL99012874	AEL99014007	AEL99014004	AEL99014005	AEL99012873	AEL99012875
Constituent	Units							
Depth of Well	FT		22.50				19.03	16.55
Depth to Water	FT	18.81	18.09	18.87	18.57	15.15	18.16	10.24
Specific Conductivity (field)	µmhos	316		191	620			
Water Elevation	FT	19.89	20.12	19.34			-18.16	-10.24
pH (field)	SU	4.88		5.96	6.68			
Date Organics Analyzed	-	01/06/2000	11/24/1999	01/06/2000	01/06/2000	01/06/2000	11/24/1999	11/29/1999
Barium	mg/L							
Copper	mg/L							
Lead	mg/L							
Magnesium	mg/L							
Zinc	mg/L							
TPH	µg/L							
Phenol	µg/L							
Benzene	µg/L							
Ethyl Benzene	µg/L							
1,1,1-Trichloroethane	µg/l					1.2		
1,1-Dichloroethane	µg/l			1.1	3.0			
Methyl-tert-butyl Ether	µg/L			1.5	6.2			
1,1-Dichloroethylene	µg/l							
Vinyl Chloride	µg/L							
cis-1,2-Dichloroethylene	µg/L					39 J1		11
Tetrachloroethylene	µg/l		1.0					
Trichloroethylene	µg/l					4.8		
Dichlorodifluoromethane	µg/l	50 J1		49 J1	47 J1			
Toluene	µg/L	1.0				290		
Xylenes	µg/L	2.1				800	470	28

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



**Table E2**  
**SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)**  
**Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Special Groundwater Sampling**

	Location ID	NW-MW-42	NW-MW-43	NW-RW-01			
	Sample ID	1949168	1950324	1947412			
	Sample Date	12/23/1999	12/28/1999	11/13/1999			
	Sample Time	13:30	12:25				
	Sample Depth						
	Laboratory	AEL	AEL	AEL			
	Lab. Number	AEL99014008	AEL99014028	AEL990012573			
Constituent	Units						
Depth of Well	FT						
Depth to Water	FT	9.94					
Specific Conductivity (field)	µmhos	354					
Water Elevation	FT	-9.94					
pH (field)	SU	5.59					
Date Organics Analyzed	-	01/06/2000	01/06/2000				
Barium	mg/L			0.050			
Copper	mg/L			0.030			
Lead	mg/L			0.0259			
Magnesium	mg/L			2.68			
Zinc	mg/L			1.8			
TPH	µg/L			11500			
Phenol	µg/L			21			
Benzene	µg/L		5.8	280			
Ethyl Benzene	µg/L		22 J1	390			
1,1,1-Trichloroethane	µg/l	1.3					
1,1-Dichloroethane	µg/l	2.6					
Methyl-tert-butyl Ether	µg/L	3.6		170			
1,1-Dichloroethylene	µg/l	4.0					
Vinyl Chloride	µg/L		3.3	120			
cis-1,2-Dichloroethylene	µg/L	37 J1		190			
Tetrachloroethylene	µg/l	1.5					
Trichloroethylene	µg/l	70 J1					
Dichlorodifluoromethane	µg/l	60 J1					
Toluene	µg/L		49 J1	2100			
Xylenes	µg/L	3.7	220 J1	2800			

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



**Table E3**  
**SUMMARY OF ANALYTICAL RESULTS**  
**Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Special Groundwater Sampling**

	Location ID	NW-MW-09	NW-MW-10	NW-MW-10	NW-MW-21	NW-MW-25	NW-MW-40	NW-MW-42
Sample ID		1949165	1947409	1949167	1949163	1949164	1947408	1947410
Sample Date		12/23/1999	11/19/1999	12/23/1999	12/23/1999	12/23/1999	11/19/1999	11/19/1999
Sample Time		12:20		13:15	11:25	11:50		
Sample Depth		12.0' - 22.0'	12.00' - 22.0	12.0' - 22.0'				
Laboratory		AEL	AEL	AEL	AEL	AEL	AEL	AEL
Lab. Number		AEL99014006	AEL99012874	AEL99014007	AEL99014004	AEL99014005	AEL99012873	AEL99012875
Constituent	Units							
Depth of Well	FT		22.50				19.03	16.55
Depth to Water	FT	18.81	18.09	18.87	18.57	15.15	18.16	10.24
Specific Conductivity (field)	µmhos	316		191	620			
Water Elevation	FT	19.89	20.12	19.34			-18.16	-10.24
pH (field)	SU	4.88		5.96	6.68			
Date Organics Analyzed	-	01/06/2000	11/24/1999	01/06/2000	01/06/2000	01/06/2000	11/24/1999	11/29/1999
Arsenic	mg/L							
Barium	mg/L							
Cadmium	mg/L							
Chromium	mg/L							
Chromium, hexavalent	mg/L							
Cobalt	mg/L							
Copper	mg/L							
Lead	mg/L							
Magnesium	mg/L							
Mercury	mg/L							
Nickel	mg/L							
Selenium	mg/L							
Tin	mg/L							
Vanadium	mg/L							
Zinc	mg/L							
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							



**Table E3**  
**SUMMARY OF ANALYTICAL RESULTS**  
**Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Special Groundwater Sampling**

	Location ID	NW-MW-09	NW-MW-10	NW-MW-10	NW-MW-21	NW-MW-25	NW-MW-40	NW-MW-42
Sample ID		1949165	1947409	1949167	1949163	1949164	1947408	1947410
Sample Date		12/23/1999	11/19/1999	12/23/1999	12/23/1999	12/23/1999	11/19/1999	11/19/1999
Sample Time		12:20		13:15	11:25	11:50		
Sample Depth		12.0' - 22.0'	12.00' - 22.0	12.0' - 22.0'				
Laboratory		AEL	AEL	AEL	AEL	AEL	AEL	AEL
Lab. Number		AEL99014006	AEL99012874	AEL99014007	AEL99014004	AEL99014005	AEL99012873	AEL99012875
Constituent	Units							
Hexachlorobenzene	µg/L							
Hexachlorocyclopentadiene	µg/L							
TPH	µg/L							
Acenaphthylene	µg/L							
Acenaphthalene	µg/L							
Anthracene	µg/L							
Benzo[a]anthracene	µg/L							
Benzo[b]fluoranthene	µg/L							
Nitrobenzene	µg/L							
Benidine	µg/L							
3,3'-Dichlorobenzidine	µg/L							
Benzo[a]pyrene	µg/L							
Benzo[ghi]perylene	µg/L							
Benzo[k]fluoranthene	µg/L							
Hexachlorobutadiene	µg/L							
Chrysene	µg/L							
Dinitro-o-cresol	µg/L							
p-Chloro-m-cresol	µg/L							
Dibenz(a,h)anthracene	µg/L							
n-Nitrosodimethylamine	µg/L							
n-Nitrosodiphenylamine	µg/L							
n-Nitrosodipropylamine	µg/L							
Hexachloroethane	µg/L							
4-Bromophenyl Phenyl Ether	µg/L							
4-Chlorophenyl phenyl ether	µg/L							
Dichlorodiisopropyl ether	µg/L							
Dichloroethyl Ether	µg/L							
Fluoranthene	µg/L							



**Table E3**  
**SUMMARY OF ANALYTICAL RESULTS**  
**Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Special Groundwater Sampling**

	Location ID	NW-MW-09	NW-MW-10	NW-MW-10	NW-MW-21	NW-MW-25	NW-MW-40	NW-MW-42
	Sample ID	1949165	1947409	1949167	1949163	1949164	1947408	1947410
	Sample Date	12/23/1999	11/19/1999	12/23/1999	12/23/1999	12/23/1999	11/19/1999	11/19/1999
	Sample Time	12:20		13:15	11:25	11:50		
	Sample Depth	12.0' - 22.0'	12.00' - 22.0	12.0' - 22.0'				
	Laboratory	AEL	AEL	AEL	AEL	AEL	AEL	AEL
	Lab. Number	AEL99014006	AEL99012874	AEL99014007	AEL99014004	AEL99014005	AEL99012873	AEL99012875
Constituent	Units							
Fluorene	µg/L							
1,2-Diphenylhydrazine	µg/L							
Indeno(1,2,3-cd)pyrene	µg/L							
Isophorone	µg/L							
bis(2-Chloroethoxy)methane	µg/L							
Naphthalene	µg/L							
2-Chloronaphthalene	µg/L							
Phenanthrene	µg/L							
Phenol	µg/L							
2,4,6-Trichlorophenol	µg/L							
2,4-Dichlorophenol	µg/L							
2,4-Dinitrophenol	µg/L							
o-Chlorophenol	µg/L							
o-Nitrophenol	µg/L							
p-Nitrophenol	µg/L							
Pentachlorophenol	µg/L							
Butyl Benzyl Phthalate	µg/L							
bis(2-Ethylhexyl)phthalate	µg/L							
Di-n-butyl Phthalate	µg/L							
Di-n-octyl Phthalate	µg/L							
Diethyl Phthalate	µg/L							
Dimethyl Phthalate	µg/L							
Pyrene	µg/L							
2,4-Dinitrotoluene	µg/L							
2,6-Dinitrotoluene	µg/L							
2,4-Xylenol	µg/L							
Vinyl Acetate	µg/l	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U
Acetone	µg/l	<20 U	<20 U	<20 U	<20 U	<2000 U	<2000 U	<200 U

Notes: 1. Printed on 08/30/01

**Table E3**  
**SUMMARY OF ANALYTICAL RESULTS**  
**Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Special Groundwater Sampling**

	Location ID	NW-MW-09	NW-MW-10	NW-MW-10	NW-MW-21	NW-MW-25	NW-MW-40	NW-MW-42
	Sample ID	1949165	1947409	1949167	1949163	1949164	1947408	1947410
	Sample Date	12/23/1999	11/19/1999	12/23/1999	12/23/1999	12/23/1999	11/19/1999	11/19/1999
	Sample Time	12:20		13:15	11:25	11:50		
	Sample Depth	12.0' - 22.0'	12.00' - 22.0	12.0' - 22.0'				
	Laboratory	AEL	AEL	AEL	AEL	AEL	AEL	AEL
	Lab. Number	AEL99014006	AEL99012874	AEL99014007	AEL99014004	AEL99014005	AEL99012873	AEL99012875
Constituent	Units							
Acrolein	µg/L	<6 U	<6 U	<6 U	<6 U	<6 U	<6 U	<6 U
Acrylonitrile	µg/L	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Benzene	µg/L	<1 U	<1 U	<1 UN	<1 U	<1 UN	<1 U	<1 U
1,2,4-Trichlorobenzene	µg/L							
o-Dichlorobenzene	µg/L	<1 U	<1 U	<1 U	<1 UN	<1 U	<1 U	<1 U
m-Dichlorobenzene	µg/L	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
p-Dichlorobenzene	µg/L	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Bromobenzene	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	<1 U	<1 U	<1 U	<1 U	<1 UN	<1 UN	<1 U
2-Butanone	µg/l	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U	<3 U
Carbon Disulfide	µg/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Carbon Tetrachloride	µg/L	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
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	1.2	<1 U	<1 U	<1 U
1,1,2,2-Tetrachloroethane	µg/L	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1,2-Trichloroethane	µg/L	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
1,1-Dichloroethane	µg/L	<1 U	<1 U	1.1	3.0	<1 U	<1 U	<1 U
1,2-Dichloroethane	µg/L	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Chloroethane	µg/L	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
2-Chloroethyl Vinyl ether	µg/L	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Methyl-tert-butyl Ether	µg/L	<1 U	<1 U	1.5	6.2	<1 UN	<1 U	<1 U
1,1-Dichloroethylene	µg/L	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Vinyl Chloride	µg/L	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
cis-1,2-Dichloroethylene	µg/L	<1 U	<1 U	<1 U	39 JI	<1 U	<1 U	11
Tetrachloroethylene	µg/L	<1 U	1.0	<1 U	<1 U	<1 U	<1 U	<1 U
trans-1,2-Dichloroethylene	µg/L	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
Trichloroethylene	µg/L	<1 U	<1 U	<1 U	4.8	<1 U	<1 U	<1 UN

Notes: 1. Printed on 08/30/01





**Table E3**  
**SUMMARY OF ANALYTICAL RESULTS**  
**Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Special Groundwater Sampling**

	Location ID	NW-MW-42	NW-MW-43	NW-RW-01			
Sample ID	1949168	1950324	1947412				
Sample Date	12/23/1999	12/28/1999	11/13/1999				
Sample Time	13:30	12:25					
Sample Depth							
Laboratory	AEL	AEL	AEL				
Lab. Number	AEL99014008	AEL99014028	AEL990012573				
Constituent	Units						
Depth of Well	FT						
Depth to Water	FT	9.94					
Specific Conductivity (field)	µmhos	354					
Water Elevation	FT	-9.94					
pH (field)	SU	5.59					
Date Organics Analyzed	-	01/06/2000	01/06/2000				
Arsenic	mg/L			<0.004			
Barium	mg/L			0.050			
Cadmium	mg/L			<0.005			
Chromium	mg/L			<0.015			
Chromium, hexavalent	mg/L			<0.010			
Cobalt	mg/L			<0.020			
Copper	mg/L			0.030			
Lead	mg/L			0.0259			
Magnesium	mg/L			2.68			
Mercury	mg/L			<0.0004			
Nickel	mg/L			<0.025			
Selenium	mg/L			<0.010			
Tin	mg/L			<0.25			
Vanadium	mg/L			<0.050			
Zinc	mg/L			1.8			
PCB 1016	µg/L			<1.1			
PCB 1221	µg/L			<5.5			
PCB 1232	µg/L			<1.6			
PCB 1242	µg/L			<1.1			
PCB 1248	µg/L			<2.2			
PCB 1254	µg/L			<0.55			
PCB 1260	µg/L			<0.55			



**Table E3**  
**SUMMARY OF ANALYTICAL RESULTS**  
**Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Special Groundwater Sampling**

	Location ID	NW-MW-42	NW-MW-43	NW-RW-01			
Sample ID	1949168	1950324	1947412				
Sample Date	12/23/1999	12/28/1999	11/13/1999				
Sample Time	13:30	12:25					
Sample Depth							
Laboratory	AEL	AEL	AEL				
Lab. Number	AEL99014008	AEL99014028	AEL990012573				
Constituent	Units						
Hexachlorobenzene	µg/L			<10			
Hexachlorocyclopentadiene	µg/L			<10			
TPH	µg/L			11500			
Acenaphthylene	µg/L			<10			
Acenaphthalene	µg/L			<10			
Anthracene	µg/L			<10			
Benzo[a]anthracene	µg/L			<10			
Benzo[b]fluoranthene	µg/L			<10			
Nitrobenzene	µg/L			<10			
Benzidine	µg/L			<10			
3,3'-Dichlorobenzidine	µg/L			<10			
Benzo[a]pyrene	µg/L			<10			
Benzo[ghi]perylene	µg/L			<10			
Benzo[k]fluoranthene	µg/L			<10			
Hexachlorobutadiene	µg/L			<10			
Chrysene	µg/L			<10			
Dinitro-o-cresol	µg/L			<10			
p-Chloro-m-cresol	µg/L			<10			
Dibenz(a,h)anthracene	µg/L			<10			
n-Nitrosodimethylamine	µg/L			<10			
n-Nitrosodiphenylamine	µg/L			<10			
n-Nitrosodipropylamine	µg/L			<10			
Hexachloroethane	µg/L			<10			
4-Bromophenyl Phenyl Ether	µg/L			<10			
4-Chlorophenyl phenyl ether	µg/L			<10			
Dichlorodiisopropyl ether	µg/L			<10			
Dichloroethyl Ether	µg/L			<10			
Fluoranthene	µg/L			<10			

**Table E3**  
**SUMMARY OF ANALYTICAL RESULTS**  
**Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Special Groundwater Sampling**

	Location ID	NW-MW-42	NW-MW-43	NW-RW-01			
Sample ID	1949168	1950324	1947412				
Sample Date	12/23/1999	12/28/1999	11/13/1999				
Sample Time	13:30	12:25					
Sample Depth							
Laboratory	AEL	AEL	AEL				
Lab. Number	AEL99014008	AEL99014028	AEL990012573				
Constituent	Units						
Fluorene	µg/L			<10			
1,2-Diphenylhydrazine	µg/L			<10			
Indeno(1,2,3-cd)pyrene	µg/L			<10			
Isophorone	µg/L			<10			
bis(2-Chloroethoxy)methane	µg/L			<10			
Naphthalene	µg/L			<10			
2-Chloronaphthalene	µg/L			<10			
Phenanthrene	µg/L			<10			
Phenol	µg/L			21			
2,4,6-Trichlorophenol	µg/L			<10			
2,4-Dichlorophenol	µg/L			<10			
2,4-Dinitrophenol	µg/L			<10			
o-Chlorophenol	µg/L			<10			
o-Nitrophenol	µg/L			<10			
p-Nitrophenol	µg/L			<10			
Pentachlorophenol	µg/L			<10			
Butyl Benzyl Phthalate	µg/L			<10			
bis(2-Ethylhexyl)phthalate	µg/L			<10			
Di-n-butyl Phthalate	µg/L			<10			
Di-n-octyl Phthalate	µg/L			<10			
Diethyl Phthalate	µg/L			<10			
Dimethyl Phthalate	µg/L			<10			
Pyrene	µg/L			<10			
2,4-Dinitrotoluene	µg/L			<10			
2,6-Dinitrotoluene	µg/L			<10			
2,4-Xylenol	µg/L			<10			
Vinyl Acetate	µg/l	<3 U	<3 U				
Acetone	µg/l	<20 U	<20 U				



**Table E3**  
**SUMMARY OF ANALYTICAL RESULTS**  
**Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Special Groundwater Sampling**

	Location ID	NW-MW-42	NW-MW-43	NW-RW-01			
	Sample ID	1949168	1950324	1947412			
	Sample Date	12/23/1999	12/28/1999	11/13/1999			
	Sample Time	13:30	12:25				
	Sample Depth						
	Laboratory	AEL	AEL	AEL			
	Lab. Number	AEL99014008	AEL99014028	AEL990012573			
Constituent	Units						
Acrolein	µg/L	<6 U	<6 U	<600			
Acrylonitrile	µg/L	<2 U	<2 U	<200			
Benzene	µg/L	<1 U	5.8	280			
1,2,4-Trichlorobenzene	µg/L			<10			
o-Dichlorobenzene	µg/L	<1 U	<1 U	<10			
m-Dichlorobenzene	µg/L	<1 U	<1 U	<10			
p-Dichlorobenzene	µg/L	<1 U	<1 U	<10			
Bromobenzene	µg/l	<1 U	<1 U				
Chlorobenzene	µg/L	<1 U	<1 U	<100			
Ethyl Benzene	µg/L	<1 U	22 JI	390			
2-Butanone	µg/l	<3 U	<3 U				
Carbon Disulfide	µg/l	<1 U	<1 U				
Carbon Tetrachloride	µg/L	<1 U	<1 U	<100			
1,1,1,2-Tetrachloroethane	µg/l	<1 U	<1 U				
1,1,1-Trichloroethane	µg/L	1.3	<1 U	<100			
1,1,2,2-Tetrachloroethane	µg/L	<0.5 U	<0.5 U	<50			
1,1,2-Trichloroethane	µg/L	<1 U	<1 U	<100			
1,1-Dichloroethane	µg/L	2.6	<1 UN	<100			
1,2-Dichloroethane	µg/L	<1 U	<1 U	<100			
Chloroethane	µg/L	<1 UN	<1 U	<100			
2-Chloroethyl Vinyl ether	µg/L	<1 U	<1 U	<100			
Methyl-tert-butyl Ether	µg/L	3.6	<1 U	170			
1,1-Dichloroethylene	µg/L	4.0	<1 U	<100			
Vinyl Chloride	µg/L	<1 U	3.3	120			
cis-1,2-Dichloroethylene	µg/L	37 JI	<1 UN	190			
Tetrachloroethylene	µg/L	1.5	<1 U	<100			
trans-1,2-Dichloroethylene	µg/L	<1 U	<1 U	<100			
Trichloroethylene	µg/L	70 JI	<1 U	<100			

Notes: 1. Printed on 08/30/01







**Table E5**  
**EXCEEDANCES OF P&W VCAP RISK-BASED GW LIMITS BASED ON CT SURFACE WATER**  
**Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Special Groundwater Sampling**

	Location ID	NW-MW-25	NW-MW-40	NW-MW-42	NW-MW-43	NW-RW-01	
Sample ID	1949164	1947408	1949168	1950324	1947412		
Sample Date	12/23/1999	11/19/1999	12/23/1999	12/28/1999	11/13/1999		
Sample Time	11:50		13:30	12:25			
Laboratory	AEL	AEL	AEL	AEL	AEL		
Lab. Number	AEL99014005	AEL99012873	AEL99014008	AEL99014028	AEL990012573		
Constituent	Units						
Depth of Well	FT		19.03				
Depth to Water	FT	15.15	18.16	9.94			
Water Elevation	FT		-18.16	-9.94			
Date Organics Analyzed	-	01/06/2000	11/24/1999	01/06/2000	01/06/2000		
Lead	mg/L					0.0259	
Zinc	mg/L					1.8	
PCB, Total	µg/L					<	
Hexachlorobenzene	µg/L					<10	
Benzo[a]anthracene	µg/L					<10	
Benzo[b]fluoranthene	µg/L					<10	
Benzo[a]pyrene	µg/L					<10	
Benzo[ghi]perylene	µg/L					<10	
Benzo[k]fluoranthene	µg/L					<10	
Acetone	µg/l	<2000 U	<2000 U				
Acrylonitrile	µg/L					<200	
1,1-Dichloroethane	µg/L					<100	
Methyl-tert-butyl Ether	µg/L					170	
1,1-Dichloroethylene	µg/L					<100	
cis-1,2-Dichloroethylene	µg/L					190	
Tetrachloroethylene	µg/L					<100	
trans-1,2-Dichloroethylene	µg/L					<100	
Bromodichloromethane	µg/L					<100	
Dichlorodifluoromethane	µg/l			60 J1			
Xylenes	µg/L	800	470		220 J1	2800	

Notes: 1. Only Exceedances Shown  
2. Printed on 08/31/01



**Table E6**  
**SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION**  
**Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Special Groundwater Sampling**

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
NW-MW-05	1992953	4/12/01	14.40	24.40	GW	X						x	x
NW-MW-05	2001038	8/ 9/01	14.40	24.40	GW	X		x				X	x
NW-MW-05	2001046	8/ 9/01	14.40	24.40	GW	X		x				x	x
NW-MW-08	1992954	4/12/01	9.00	19.00	GW	x						x	x
NW-MW-08	2001042	8/ 9/01	9.00	19.00	GW			x				X	x
NW-MW-08	2001048	8/13/01	9.00	19.00	GW	x							
NW-MW-09	1992956	4/12/01	12.00	22.00	GW	X						x	x
NW-MW-09	1992963	4/12/01	12.00	22.00	GW	x						x	x
NW-MW-09	2001043	8/ 9/01	12.00	22.00	GW			x				X	x
NW-MW-09	2001049	8/13/01	12.00	22.00	GW	x							
NW-MW-10	1992955	4/12/01	12.00	22.00	GW	x						x	x
NW-MW-10	2001044	8/ 9/01	12.00	22.00	GW			x				X	x
NW-MW-10	2001097	8/13/01	12.00	22.00	GW	X							
NW-MW-19	1996925	6/ 7/01	11.50	22.50	GW		X						
NW-MW-21	1992951	4/12/01			GW	x						X	X
NW-MW-21	2001039	8/ 9/01			GW	X		x					
NW-MW-39	1992958	4/12/01			GW	X						x	X
NW-MW-39	2001040	8/ 9/01			GW	X		X				X	X
NW-MW-49	1992957	4/12/01			GW	X						X	X
NW-MW-49	2001041	8/ 9/01			GW			x				X	x
NW-MW-49	2001045	8/13/01			GW	X							
NW-MW-58	1996924	6/ 7/01	10.00	20.00	GW		X						
NW-MW-59	1996921	6/ 7/01	10.00	20.00	GW		X						
NW-MW-60	1996922	6/ 7/01	10.00	20.00	GW		X						
NW-MW-61	1996923	6/ 7/01	10.00	20.00	GW		X						
NW-MW-71	1998813	7/19/01	4.0	14.0	GW		X	x			x		x
NW-MW-74	1998814	7/19/01	4.0	9.0	GW		X						x
NW-MW-75	1998815	7/19/01	3.0	13.0	GW		X	x			x		x
NW-MW-79	1998816	7/19/01	2.0	7.0	GW		X						

Notes: 1. Legend: x - mass, t - TCLP, s - SPLP, e - EPTOX, z - ZHE; Capitalized - at least one analyte detected  
2. Printed on 08/30/01



**Table E7**  
**SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)**  
**Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Special Groundwater Sampling**

	Location ID	NW-MW-05	NW-MW-05	NW-MW-05	NW-MW-05	NW-MW-05	NW-MW-08	NW-MW-09
	Sample ID	1992953	2001038	2001038	2001038	2001046	2001042	1992956
	Sample Date	04/12/2001	08/09/2001	08/09/2001	08/09/2001	08/09/2001	08/09/2001	04/12/2001
	Sample Time	11:20	10:50	10:50	10:50	10:50	13:40	11:56
	Sample Depth	14.40' - 24.4	14.40' - 24.4	14.40' - 24.4	14.40' - 24.4	14.40' - 24.4	9.00' - 19.00	12.00' - 22.0
	Laboratory	PREM						
	Lab. Number	534001626	534069835	534071135	E108432-53	534069828	534071149	534001641
Constituent	Units							
Depth of Well	FT	23.82	23.82	23.82	23.82	23.82	18.83	22.17
Depth to Water	FT	16.33	17.53	17.53	17.53	17.53	14.89	17.17
Specific Conductivity (field)	µmhos	389	192	192	192	192	295	170.8
Water Elevation	FT	22.40	21.20	21.20	21.20	21.20	20.20	21.53
pH (field)	SU	6.01	6.93	6.93	6.93	6.93	7.08	5.47
Date Metals Analyzed	-			08/14/2001			08/14/2001	
Date Organics Analyzed	-	04/17/2001	08/10/2001			08/10/2001		04/17/2001
Date Physical Analyzed	-							
Date Semi-volatile Organics Analyzed	-							
Zinc	mg/l			0.028	0.028			
Zinc (Unfiltered)	mg/L						0.029	
Total Petroleum Hydrocarbons EPA 413	mg/l							
TPH	mg/l							
n-Propylbenzene	µg/l							
Cymene	µg/l							
Naphthalene	µg/l							
2-Methylnaphthalene	µg/l							
Benzene	µg/l							
1,2,4-Trimethylbenzene	µg/l							
o-Dichlorobenzene	µg/l							
1,3,5-Trimethylbenzene	µg/l							
p-Dichlorobenzene	µg/l							
Ethyl Benzene	µg/l							
1,1,1-Trichloroethane	µg/l							
1,1-Dichloroethane	µg/l							
1,2-Dichloroethane	µg/l							
Chloroethane	µg/l							
Methyl-tert-butyl Ether	µg/l							

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





**Table E7**  
**SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)**  
**Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Special Groundwater Sampling**

	Location ID	NW-MW-09	NW-MW-10	NW-MW-10	NW-MW-19	NW-MW-21	NW-MW-21	NW-MW-21
	Sample ID	2001043	2001044	2001097	1996925	1992951	1992951	2001039
	Sample Date	08/09/2001	08/09/2001	08/13/2001	06/07/2001	04/12/2001	04/12/2001	08/09/2001
	Sample Time	14:50	15:45	08:15	15:30	10:35	10:35	11:35
	Sample Depth	12.00' - 22.0	12.00' - 22.0	12.00' - 22.0	11.50' - 22.5			
	Laboratory	PREM	PREM	PREM	AEL	PREM	PREM	PREM
	Lab. Number	534071151	534071153	534070760	AEL01005492	534001618	534001620	534069838
Constituent	Units							
Depth of Well	FT	22.04	22.23	22.23	21.19	19.89	19.89	19.23
Depth to Water	FT	19.88	19.26	19.21	18.17	17.62	17.62	18.73
Specific Conductivity (field)	µmhos	198	237	258	364	604	604	207
Water Elevation	FT	18.82	18.95	19.00				
pH (field)	SU	6.91	6.98	7.01	7.31	5.10	5.10	6.92
Date Metals Analyzed	-	08/14/2001	08/14/2001			04/19/2001		
Date Organics Analyzed	-			08/21/2001	06/08/2001			08/10/2001
Date Physical Analyzed	-						04/13/2001	
Date Semi-volatile Organics Analyzed	-							
Zinc	mg/l					0.38		
Zinc (Unfiltered)	mg/L	0.075	0.079					
Total Petroleum Hydrocarbons EPA 413	mg/l							
TPH	mg/l						3.3	
n-Propylbenzene	µg/l							
Cymene	µg/l							
Naphthalene	µg/l							
2-Methylnaphthalene	µg/l							
Benzene	µg/l				2.2 L			
1,2,4-Trimethylbenzene	µg/l							
o-Dichlorobenzene	µg/l							
1,3,5-Trimethylbenzene	µg/l							
p-Dichlorobenzene	µg/l							
Ethyl Benzene	µg/l							1.6
1,1,1-Trichloroethane	µg/l				1.7 L			
1,1-Dichloroethane	µg/l				1.9 L			
1,2-Dichloroethane	µg/l							
Chloroethane	µg/l							
Methyl-tert-butyl Ether	µg/l				13			

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





**Table E7**  
**SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)**  
**Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Special Groundwater Sampling**

	Location ID	NW-MW-39						
	Sample ID	1992958	1992958	2001040	2001040	2001040	2001040	2001040
	Sample Date	04/12/2001	04/12/2001	08/09/2001	08/09/2001	08/09/2001	08/09/2001	08/09/2001
	Sample Time	12:20	12:20	12:00	12:00	12:00	12:00	12:00
	Sample Depth							
	Laboratory	PREM						
	Lab. Number	534001650	534001651	534069840	534069842	534069843	534071141	534071143
Constituent	Units							
Depth of Well	FT	21.70	21.70	21.74	21.74	21.74	21.74	21.74
Depth to Water	FT	17.90	17.90	20.59	20.59	20.59	20.59	20.59
Specific Conductivity (field)	µmhos	298	298	301	301	301	301	301
Water Elevation	FT							
pH (field)	SU	5.38	5.38	6.61	6.61	6.61	6.61	6.61
Date Metals Analyzed	-						08/14/2001	08/14/2001
Date Organics Analyzed	-		04/17/2001			08/10/2001		
Date Physical Analyzed	-	04/13/2001			08/16/2001			
Date Semi-volatile Organics Analyzed	-			08/13/2001				
Zinc	mg/l						0.094	
Zinc (Unfiltered)	mg/L							0.049
Total Petroleum Hydrocarbons EPA 413	mg/l				5.9			
TPH	mg/l	4.4						
n-Propylbenzene	µg/l							
Cymene	µg/l							
Naphthalene	µg/l			49				
2-Methylnaphthalene	µg/l			62				
Benzene	µg/l							
1,2,4-Trimethylbenzene	µg/l							
o-Dichlorobenzene	µg/l							
1,3,5-Trimethylbenzene	µg/l							
p-Dichlorobenzene	µg/l							
Ethyl Benzene	µg/l		1.4					
1,1,1-Trichloroethane	µg/l							
1,1-Dichloroethane	µg/l							
1,2-Dichloroethane	µg/l							
Chloroethane	µg/l							
Methyl-tert-butyl Ether	µg/l							

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





**Table E7**  
**SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)**  
**Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Special Groundwater Sampling**

	Location ID	NW-MW-39	NW-MW-49	NW-MW-49	NW-MW-49	NW-MW-49	NW-MW-49	NW-MW-49
Sample ID	2001040	1992957	1992957	1992957	1992957	2001041	2001041	2001045
Sample Date	08/09/2001	04/12/2001	04/12/2001	04/12/2001	04/12/2001	08/09/2001	08/09/2001	08/13/2001
Sample Time	12:00	01:03	01:03	01:03	01:03	12:45	12:45	07:22
Sample Depth								
Laboratory	PREM	PREM	PREM	PREM	PREM	PREM	PREM	PREM
Lab. Number	E108432-55	534001643	534001645	534001646	534071145	E108432-57	534070757	
Constituent	Units							
Depth of Well	FT	21.74	20.59	20.59	20.59	21.71	21.71	21.70
Depth to Water	FT	20.59	16.79	16.79	16.79	18.01	18.01	17.54
Specific Conductivity (field)	µmhos	301	330	330	330	286	286	312
Water Elevation	FT							
pH (field)	SU	6.61	5.41	5.41	5.41	6.62	6.62	6.89
Date Metals Analyzed	-		04/19/2001			08/14/2001		
Date Organics Analyzed	-				04/17/2001			08/21/2001
Date Physical Analyzed	-			04/13/2001				
Date Semi-volatile Organics Analyzed	-							
Zinc	mg/l	0.094	0.14			0.08	0.080	
Zinc (Unfiltered)	mg/L							
Total Petroleum Hydrocarbons EPA 413	mg/l							
TPH	mg/l			3.6				
n-Propylbenzene	µg/l							
Cymene	µg/l							
Naphthalene	µg/l							
2-Methylnaphthalene	µg/l							
Benzene	µg/l				2.1			
1,2,4-Trimethylbenzene	µg/l							
o-Dichlorobenzene	µg/l							1.4
1,3,5-Trimethylbenzene	µg/l							
p-Dichlorobenzene	µg/l				0.78			2.8
Ethyl Benzene	µg/l							
1,1,1-Trichloroethane	µg/l							
1,1-Dichloroethane	µg/l				0.71			
1,2-Dichloroethane	µg/l							
Chloroethane	µg/l							
Methyl-tert-butyl Ether	µg/l							

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





**Table E7**  
**SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)**  
**Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Special Groundwater Sampling**

	Location ID	NW-MW-58	NW-MW-59	NW-MW-60	NW-MW-61	NW-MW-71	NW-MW-74	NW-MW-75
Sample ID	1996924	1996921	1996922	1996923	1998813	1998814	1998815	
Sample Date	06/07/2001	06/07/2001	06/07/2001	06/07/2001	07/19/2001	07/19/2001	07/19/2001	
Sample Time	15:15	14:10	14:40	15:00	09:10	15:00	12:00	
Sample Depth	10.00' - 20.0	10.00' - 20.0	10.00' - 20.0	10.00' - 20.0	4.0' - 14.0'	4.0' - 9.0'	3.0' - 13.0'	
Laboratory	AEL	AEL	AEL	AEL	PREM	PREM	PREM	
Lab. Number	AEL01005491	AEL01005488	AEL01005489	AEL01005490	534056975	534056987	534056984	
Constituent	Units							
Depth of Well	FT	19.41	19.80	19.55	19.74	15.05	9.28	13.00
Depth to Water	FT	16.84	15.80	16.23	19.70	10.41	8.18	11.39
Specific Conductivity (field)	µmhos	294	654	399	372	201	435	321
Water Elevation	FT	-16.84	-15.80	-16.23		-10.41	-8.18	-11.39
pH (field)	SU	6.91	7.10	7.83	7.64	6.29	6.32	6.49
Date Metals Analyzed	-							
Date Organics Analyzed	-	06/11/2001	06/11/2001	06/11/2001	06/11/2001	07/24/2001	07/24/2001	07/24/2001
Date Physical Analyzed	-							
Date Semi-volatile Organics Analyzed	-							
Zinc	mg/l							
Zinc (Unfiltered)	mg/L							
Total Petroleum Hydrocarbons EPA 413	mg/l							
TPH	mg/l							
n-Propylbenzene	µg/l							
Cymene	µg/l							
Naphthalene	µg/l							
2-Methylnaphthalene	µg/l							
Benzene	µg/l	25 H						
1,2,4-Trimethylbenzene	µg/l							
o-Dichlorobenzene	µg/l							
1,3,5-Trimethylbenzene	µg/l							
p-Dichlorobenzene	µg/l							
Ethyl Benzene	µg/l							
1,1,1-Trichloroethane	µg/l	26 L	2.5	1.9	1.4			
1,1-Dichloroethane	µg/l	19 H	1.7	2.3				
1,2-Dichloroethane	µg/l				0.3 L			
Chloroethane	µg/l							
Methyl-tert-butyl Ether	µg/l	59 L	2.2	5.5	25 L			

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





**Table E7**  
**SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)**  
**Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Special Groundwater Sampling**

Location ID	NW-MW-79				
Sample ID	1998816				
Sample Date	07/19/2001				
Sample Time	13:05				
Sample Depth	2.0' - 7.0'				
Laboratory	PREM				
Lab. Number	534056988				
Constituent	Units				
Depth of Well	FT	6.82			
Depth to Water	FT	5.95			
Specific Conductivity (field)	µmhos	232			
Water Elevation	FT				
pH (field)	SU	6.37			
Date Metals Analyzed	-				
Date Organics Analyzed	-	07/24/2001			
Date Physical Analyzed	-				
Date Semi-volatile Organics Analyzed	-				
Zinc	mg/l				
Zinc (Unfiltered)	mg/L				
Total Petroleum Hydrocarbons EPA 413	mg/l				
TPH	mg/l				
n-Propylbenzene	µg/l	5.8			
Cymene	µg/l	12			
Naphthalene	µg/l	54			
2-Methylnaphthalene	µg/l				
Benzene	µg/l				
1,2,4-Trimethylbenzene	µg/l	130			
o-Dichlorobenzene	µg/l				
1,3,5-Trimethylbenzene	µg/l	39			
p-Dichlorobenzene	µg/l				
Ethyl Benzene	µg/l				
1,1,1-Trichloroethane	µg/l				
1,1-Dichloroethane	µg/l				
1,2-Dichloroethane	µg/l				
Chloroethane	µg/l	31			
Methyl-tert-butyl Ether	µg/l				

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



