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

Appendix H

Summary of Surface Water and Sediment Analytical Data
and
Constituents Detected in Surface Water and Sediment
Environmental Indicator Determination
For
Pratt & Whitney Willgoos Facility

SURFACE WATER AND SEDIMENT SAMPLING IN SUPPORT OF VCAP RISK ASSESSMENT

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

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

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DRAWING

Drawing H1 Sediment and Surface Water Sampling Locations

ATTACHMENT

Attachment H1 Letter from Lancaster Laboratories

1. SUMMARY

Surface water and sediment sampling 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. The surface water samples collected were analyzed for metals (antimony, arsenic, barium, beryllium, cadmium, chromium [total and hexavalent], cobalt, copper, lead, mercury, nickel, selenium, silver, thallium, tin, vanadium, and zinc), and volatile organic compounds (VOCs). The sediment samples collected were analyzed for metals (antimony, arsenic, barium, beryllium, cadmium, chromium [total and hexavalent], cobalt, copper, lead, mercury, nickel, selenium, silver, thallium, tin, vanadium, and zinc), total petroleum hydrocarbons (TPH), VOCs, semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs) and total organic carbon (TOC).

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

Surface water and sediment samples were collected by LEA personnel on April 27, 1999. Two surface water samples and one sediment sample were collected from the facility.

Prior to sampling, polyethylene sheeting was laid on the ground in the vicinity of the sample collection location. All sediment sampling equipment was placed on the polyethylene sheeting. Sediment sampling location was chosen so as to minimize physical agitation of sediments. The location selected was on the backside of a concrete spillway wall, where the velocity was relatively slower and sediment deposition was the thickest. Utilizing a dedicated spatula, sediment was transferred directly into prelabeled sampling containers. The rim of each sample container was wiped with a clean paper towel to remove excess solids and permit adequate sealing of the sample container.

The surface water samples were collected directly into the sampling jars by carefully orienting the jars in an upright position to prevent loss of the preservative. Surface water samples to be analyzed for dissolved metals were collected by pumping in the field at low speeds using a

peristaltic pump and filtering through dedicated polyethylene tubing and 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 the parameters listed above with the exception of chromium. Due to the narrow holding time samples were also sent to a local laboratory (Averill Environmental Laboratory) for analysis for hexavalent and total chromium using the same procedures as for the samples sent to Lancaster.

In addition, two equipment blanks, one trip blank, and one duplicate/replicate sample each were collected for surface water and sediment. Also two performance evaluation samples were submitted for analysis for quality assurance/quality control (QA/QC) purposes.

4. RESULTS

4.1 Surface Water Sampling

The analytical results for surface water sampling are summarized in the following paragraphs and are presented in tabular form in Tables H1 through H4. Table H1 presents a summary of sampling and analytical information; Table H2 presents a list of detected constituents; and Table H3 summarizes all analytical results obtained for the surface water sampling. Table H4 presents a list of exceedances over applicable VCAP screening levels. A list of qualifiers is attached at the end of the Table section in this report. All sampling locations are shown on Drawing H1.

Low concentrations of metals were detected in the surface water samples collected. The highest metal concentrations detected included barium at 0.0142 mg/l; copper at 0.0343 mg/l; chromium at 0.014 mg/l; nickel at 0.0139 mg/l; and zinc at 0.0175 mg/l. Hexavalent chromium remained undetected in all samples analyzed. No VOCs were detected in any of the surface water samples analyzed.

Comparison of the surface water data obtained against applicable VCAP screening levels identified two exceedances. Specifically, the surface water data were compared to the numeric criteria published in Table 3-6 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 3-6 is titled, *Generic P&W Surface Water Screening Levels (SLs), P&W VCAP, Connecticut Facilities.*. The comparison indicated two exceedances over surface water screening levels: copper at 0.0343 mg/l and total chromium at 0.014 mg/l, both at sample location WG-RSK-SD-01. It should be noted that the screening levels listed in the conceptual site model (CSM) were developed based

on readily available published criteria. Modified generic Pratt & Whitney screening levels were subsequently developed by Gradient Corporation for the compounds listed above. More specifically, the maximum contaminant level (MCL) was used as the generic P&W surface water screening level for chromium (0.1 mg/l) and for copper (action level 1.3 mg/l). Comparison with these criteria did not indicate any exceedances in surface water. A letter from Lancaster Laboratories regarding the detection limits achieved is provided in Attachment H1. According to the letter, instrument sensitivity and purging characteristics limit the detection limits achieved for some of the compounds listed in Table H4.

A comparison of results for the replicate samples generally indicated reasonable agreement. The relative percent differences observed ranged up to 93% with the greatest difference noted for zinc (0.0175mg/l and 0.0064 mg/l). Such high relative percent differences, however, are to be expected at the low concentration levels reported. It should be noted that copper (0.0343 mg/l), nickel (0.0139 mg/l) and chromium (0.014 mg/l) were detected in only one of the replicate samples collected from location WG-RSK-SD-01.

Zinc was detected at trace levels (0.0052 mg/l) in the equipment blank collected for surface water sampling. There were no detectable concentrations of VOCs reported in the trip blank sample collected.

4.2 Sediment Sampling

Two sediment samples (duplicates) were collected from location WG-RSK-SD-01. No sediment was found at location WG-RSK-SD-02 due to high water flow within the concrete channel. The analytical results for sediment sampling are summarized in the following paragraphs and are presented in tabular form in Tables H5 through H7. Table H5 presents a summary of sampling and analytical information; Table H6 presents a list of detected constituents; and Table H7 summarizes all analytical results obtained. All sampling locations are shown on Drawing H1.

The sediment samples contained low concentrations of metals. The highest metal concentrations in the sediment samples were: arsenic at 2.8 mg/kg; barium at 80.1 mg/kg; beryllium at 0.54 mg/kg; cobalt at 12.2 mg/kg; total chromium at 24.6 mg/kg; copper at 33.7 mg/kg; lead at 28.2 mg/kg; mercury at 0.38 mg/kg; nickel at 30.0 mg/kg; selenium at 1.3 mg/kg; thallium at 0.63 mg/kg; tin at 7.8 mg/kg, vanadium at 30.5 mg/kg; and zinc at 114 mg/kg. Hexavalent chromium remained undetected in the samples analyzed.

The highest TPH concentration detected was 166 mg/kg. Only two volatile organic compounds were detected: acetone and toluene. The highest concentrations detected were acetone at 140 μg/kg and toluene at 29 μg/kg.

Some SVOCs were detected. Some typical compounds detected and their highest concentrations included anthracene at 190 J μg/kg; benzo[a]pyrene at 720 μg/kg; benzo[b]fluoranthene at 840 μg/kg; benzo[k]fluoranthene at 310 J μg/kg; dibenzo[a,h]anthracene at 130 J μg/kg; fluoranthene at 1500 μg/kg; fluorene at 440 J μg/kg; and pyrene at 1200 μg/kg. One PCB (PCB 1254) was detected, with a highest concentration of 29 J μg/kg. The highest total organic carbon concentration was 6,000 mg/kg. The qualifier "J" indicates an estimated concentration.

Comparison of the sediment data against applicable VCAP screening levels did not indicate any exceedances. Specifically, the sediment data were compared to the numeric criteria published in Table 3-10 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 3-10 is titled, *Generic P&W Soil Screening Levels (SSLs) Based on Dermal Contact, P&W VCAP, Connecticut Facilities.* The screening levels were based on the exposure scenarios for trespassers and off-site recreators.. The comparison did not indicate any exceedances.

The results for the replicate samples collected generally indicated acceptable agreement. The relative percent differences observed ranged up to 125% with the greatest difference noted for mercury (0.087 mg/kg and 0.38 mg/kg). Such high relative percent differences, are to be expected at the low concentration levels reported. Tin, acenaphthene, and dibenzofuran were detected in only one of the replicate samples collected from location WG-RSK-SD-01. Chromium (0.011 mg/l) and zinc (0.0055 mg/l) were detected at trace levels in the equipment blank collected. A total organic carbon concentration of 0.39 J mg/l was also detected in the equipment blank collected. There were no detectable concentrations reported in the trip blank sample collected.

4.3 Performance Evaluation Samples

Two performance evaluation samples were collected. The first one (1838378) was submitted for analysis for metals, VOCs, SVOCs, TOC, and TPH on April 27, 1999. All metals and VOCs were reported within vendor-specified acceptance limits. The SVOCs were also within acceptance limits, with the exception of the following: benzyl alcohol (12 J μg/l; false positive); fluorene (2 J μg/l; false positive); and 2,3,4,6-tetracholorophenol (3 J μg/l; false positive). In response to these results Lancaster conducted an investigation and indicated that benzyl alcohol and 2,3,4,6-tetrachlorophenol most likely came from the sample extraction. The result reported for fluorene was biased high due to the curve fit chosen. The curve fit chosen was however in accordance to the method.. TPH (94 mg/l) was also reported outside the vendor-specified acceptance limits (36.8-76.8 mg/l). The investigation conducted by Lancaster did not indicate

any problems in the case of TPH. The total organic carbon concentration was within acceptance limits.

The second performance evaluation sample (1838379) was submitted for analysis for PCBs also on April 27, 1999. A separate sample number was used to prevent accidental mixing of the jars within the same sample. PCB-1260 (4.2 μg/l) was reported below vendor-specified acceptance limits (4.88 to 9.32 μg/l). The investigation conducted by Lancaster did not indicate any problems in the case of PCBs. All PCB-1260 results in the associated field samples were non-detect. Discrepancy in the PEs may also be attributed to analytical variability, analyst error, or error in the preparation of the performance evaluation sample.

TABLES

Table H1
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water 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
EQUIPMENT	1838375	4/27/99			BKE		x	x			x	X	X
EQUIPMENT	1838377	4/27/99			BKE		x					X	
TRIP BLANK	1838376	4/27/99			BKT		x						
WG-RSK-SD-01	1838372	4/27/99			SW		x					X	
WG-RSK-SD-01	1838373	4/27/99			SW		x					X	
WG-RSK-SD-02	1838374	4/27/99			SW		x					X	
performance	1838378	4/27/99			PEW		X	X				X	X
performance	1838379	4/27/99			PEW						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 H2
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water Sampling

	Location ID	EQUIPMENT	EQUIPMENT	EQUIPMENT	WG-RSK-SD-01	WG-RSK-SD-01	WG-RSK-SD-01	WG-RSK-SD-02
	Sample ID	1838375	1838375	1838377	1838372	1838373	1838373	1838374
	Sample Date	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999
	Sample Time	15:00	15:00	15:15	11:20	11:20	11:20	12:15
	Laboratory	AEL	LANC	LANC	LANC	AEL	LANC	AEL
	Lab. Number	AEL99004033	3140964	3140965	3140961	AEL99004031	3140962	AEL99004032
Constituent	Units							
Date PCBs Analyzed	-							
Date Metals Analyzed	-	04/30/1999	05/04/1999	05/04/1999	05/04/1999	04/30/1999	05/04/1999	04/30/1999
Date Organics Analyzed	-							
Date Physical Analyzed	-		05/05/1999					
Date Semi-volatile Organics Analyzed	-							
Antimony	mg/L							
Arsenic	mg/L							
Barium	mg/L				0.0142 BR		0.0140 BR	
Beryllium	mg/L							
Cadmium	mg/L							
Chromium	mg/L	0.011				0.014		0.010
Cobalt	mg/L							
Copper	mg/L				0.0343 NJ			
Lead	mg/L							
Mercury	mg/L							
Nickel	mg/L				0.0139 B			
Selenium	mg/L							
Silver	mg/L							
Thallium	mg/L							
Vanadium	mg/L							
Zinc	mg/L		0.0055 B	0.0052 B	0.0175 B		0.0064 B	
PCB 1260	µg/l							
Total Organic Carbon	mg/l		0.39 J					
TPH	mg/l							
Acenaphthylene	µg/l							
Acenapthalene	µg/l							
Anthracene	µg/l							
Benzyl Alcohol	µg/l							
Chrysene	µg/l							

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

Table H2
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water Sampling

	Location ID	EQUIPMENT	EQUIPMENT	EQUIPMENT	WG-RSK-SD-01	WG-RSK-SD-01	WG-RSK-SD-01	WG-RSK-SD-02
	Sample ID	1838375	1838375	1838377	1838372	1838373	1838373	1838374
	Sample Date	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999
	Sample Time	15:00	15:00	15:15	11:20	11:20	11:20	12:15
	Laboratory	AEL	LANC	LANC	LANC	AEL	LANC	AEL
	Lab. Number	AEL99004033	3140964	3140965	3140961	AEL99004031	3140962	AEL99004032
Constituent	Units							
p-Chloro-m-cresol	µg/l							
o-Cresol	µg/l							
Dibenzofuran	µg/l							
Dichloroethyl Ether	µg/l							
Fluoranthene	µg/l							
Fluorene	µg/l							
Naphthalene	µg/l							
2,3,4,6-Tetrachlorophenol	µg/l							
2,4,6-Trichlorophenol	µg/l							
2,4-Dichlorophenol	µg/l							
o-Chlorophenol	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							
Pyrene	µg/l							
2,4-Dinitrotoluene	µg/l							
Benzene	µg/l							
1,2,4-Trichlorobenzene	µg/l							
o-Dichlorobenzene	µg/l							
m-Dichlorobenzene	µg/l							
Chlorobenzene	µg/l							
Ethyl Benzene	µg/l							
Carbon Tetrachloride	µg/l							
1,1,1-Trichloroethane	µg/l							
1,2-Dichloroethane	µg/l							
1,1-Dichloroethylene	µg/l							
Tetrachloroethylene	µg/l							

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

Table H2
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water Sampling

	Location ID	EQUIPMENT	EQUIPMENT	EQUIPMENT	WG-RSK-SD-01	WG-RSK-SD-01	WG-RSK-SD-01	WG-RSK-SD-02
	Sample ID	1838375	1838375	1838377	1838372	1838373	1838373	1838374
	Sample Date	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999
	Sample Time	15:00	15:00	15:15	11:20	11:20	11:20	12:15
	Laboratory	AEL	LANC	LANC	LANC	AEL	LANC	AEL
	Lab. Number	AEL99004033	3140964	3140965	3140961	AEL99004031	3140962	AEL99004032
Constituent	Units							
Trichloroethylene	µg/l							
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							

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

Table H2
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water Sampling

	Location ID	WG-RSK-SD-02	performance	performance				
	Sample ID	1838374	1838378	1838379				
	Sample Date	04/27/1999	04/27/1999	04/27/1999				
	Sample Time	12:15	16:00	16:00				
	Laboratory	LANC	LANC	LANC				
	Lab. Number	3140963	3140966	3140967				
Constituent	Units							
Date PCBs Analyzed	-			05/07/1999				
Date Metals Analyzed	-	05/04/1999	05/04/1999					
Date Organics Analyzed	-		05/10/1999					
Date Physical Analyzed	-		05/05/1999					
Date Semi-volatile Organics Analyzed	-		05/04/1999					
Antimony	mg/L		0.108 N					
Arsenic	mg/L		0.0625					
Barium	mg/L	0.0142 BR	0.294 N					
Beryllium	mg/L		0.0851 N					
Cadmium	mg/L		0.0894					
Chromium	mg/L							
Cobalt	mg/L		0.104					
Copper	mg/L	0.0069 B	0.438 N					
Lead	mg/L		0.464					
Mercury	mg/L		0.0049					
Nickel	mg/L		0.409 N					
Selenium	mg/L		0.0968					
Silver	mg/L		0.102					
Thallium	mg/L		0.0776 N					
Vanadium	mg/L		0.12 N					
Zinc	mg/L	0.0154 B	0.236 N					
PCB 1260	µg/l			4.2				
Total Organic Carbon	mg/l		34.3					
TPH	mg/l		94					
Acenaphthylene	µg/l		13					
Acenapthalene	µg/l		64					
Anthracene	µg/l		100					
Benzyl Alcohol	µg/l		12 J					
Chrysene	µg/l		18					

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

Table H2
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water Sampling

	Location ID	WG-RSK-SD-02	performance	performance				
	Sample ID	1838374	1838378	1838379				
	Sample Date	04/27/1999	04/27/1999	04/27/1999				
	Sample Time	12:15	16:00	16:00				
	Laboratory	LANC	LANC	LANC				
	Lab. Number	3140963	3140966	3140967				
Constituent	Units							
p-Chloro-m-cresol	µg/l		90					
o-Cresol	µg/l		62					
Dibenzofuran	µg/l		74					
Dichloroethyl Ether	µg/l		120					
Fluoranthene	µg/l		30					
Fluorene	µg/l		2 J					
Naphthalene	µg/l		55					
2,3,4,6-Tetrachlorophenol	µg/l		3 J					
2,4,6-Trichlorophenol	µg/l		80					
2,4-Dichlorophenol	µg/l		69					
o-Chlorophenol	µg/l		92					
p-Nitrophenol	µg/l		57					
Pentachlorophenol	µg/l		120					
Butyl Benzyl Phthalate	µg/l		110					
bis(2-Ethylhexyl)phthalate	µg/l		31					
Di-n-butyl Phthalate	µg/l		100					
Pyrene	µg/l		58					
2,4-Dinitrotoluene	µg/l		120					
Benzene	µg/l		99					
1,2,4-Trichlorobenzene	µg/l		57					
o-Dichlorobenzene	µg/l		120					
m-Dichlorobenzene	µg/l		17					
Chlorobenzene	µg/l		130					
Ethyl Benzene	µg/l		130					
Carbon Tetrachloride	µg/l		19					
1,1,1-Trichloroethane	µg/l		43					
1,2-Dichloroethane	µg/l		30					
1,1-Dichloroethylene	µg/l		160					
Tetrachloroethylene	µg/l		87					

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

Table H2
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water Sampling

	Location ID	WG-RSK-SD-02	performance	performance				
	Sample ID	1838374	1838378	1838379				
	Sample Date	04/27/1999	04/27/1999	04/27/1999				
	Sample Time	12:15	16:00	16:00				
	Laboratory	LANC	LANC	LANC				
	Lab. Number	3140963	3140966	3140967				
Constituent	Units							
Trichloroethylene	µg/l		120					
Bromodichloromethane	µg/l		20					
Dibromochloromethane	µg/l		110					
Methylene Chloride	µg/l		25					
Bromoform	µg/l		120					
Chloroform	µg/l		74					
Methyl Isobutyl Ketone	µg/l		84					
Propylene Dichloride	µg/l		10					
Styrene	µg/l		70					
Toluene	µg/l		41					

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

Table H3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water Sampling

	Location ID	EQUIPMENT	EQUIPMENT	EQUIPMENT	EQUIPMENT	TRIP BLANK	WG-RSK-SD-01	WG-RSK-SD-01
	Sample ID	1838375	1838375	1838377	1838377	1838376	1838372	1838372
	Sample Date	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999
	Sample Time	15:00	15:00	15:15	15:15	08:30	11:20	11:20
	Laboratory	AEL	LANC	AEL	LANC	LANC	AEL	LANC
	Lab. Number	AEL99004033	3140964	AEL99004034	3140965	3140958	AEL99004030	3140961
Constituent	Units							
Date PCBs Analyzed	-		05/07/1999					
Date Metals Analyzed	-	04/27/1999	05/04/1999	04/27/1999	05/04/1999		04/27/1999	05/04/1999
Date Organics Analyzed	-		05/10/1999		05/10/1999	05/10/1999		05/10/1999
Date Physical Analyzed	-		05/05/1999					
Date Semi-volatile Organics Analyzed	-		05/04/1999					
Diallate	µg/l		<1 U					
Antimony	mg/L		<0.0053 UR		<0.0053 U			<0.0053 UR
Arsenic	mg/L		<0.00100 U		<0.00100 U			<0.00100 U
Barium	mg/L		<0.0015 UR		<0.0015 U			0.0142 BR
Beryllium	mg/L		<0.0017 U		<0.0017 U			<0.0017 U
Cadmium	mg/L		<0.00063 U		<0.00063 U			<0.00063 U
Chromium	mg/L	0.011		<0.01			<0.01	
Chromium, hexavalent	mg/L	<0.01		<0.01			<0.01	
Cobalt	mg/L		<0.0055 U		<0.0055 U			<0.0055 U
Copper	mg/L		<0.0058 U		<0.0058 U			0.0343 NJ
Lead	mg/L		<0.0019 U		<0.0019 U			<0.0019 U
Mercury	mg/L		<0.000042 U		<0.000042 U			<0.000042 U
Nickel	mg/L		<0.0054 U		<0.0054 U			0.0139 B
Selenium	mg/L		<0.0016 U		<0.0016 U			<0.0016 U
Silver	mg/L		<0.0057 U		<0.0057 U			<0.0057 U
Thallium	mg/L		<0.0012 U		<0.0012 U			<0.0012 U
Tin	mg/L		<0.0320 U		<0.0320 U			<0.0320 U
Vanadium	mg/L		<0.0028 U		<0.0028 U			<0.0028 U
Zinc	mg/L		0.0055 B		0.0052 B			0.0175 B
PCB 1016	µg/l		<0.095 U					
PCB 1221	µg/l		<0.095 U					
PCB 1232	µg/l		<0.095 U					
PCB 1242	µg/l		<0.095 U					
PCB 1248	µg/l		<0.095 U					

Notes: 1. Printed on 08/30/01

Table H3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water Sampling

	Location ID	EQUIPMENT	EQUIPMENT	EQUIPMENT	EQUIPMENT	TRIP BLANK	WG-RSK-SD-01	WG-RSK-SD-01
	Sample ID	1838375	1838375	1838377	1838377	1838376	1838372	1838372
	Sample Date	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999
	Sample Time	15:00	15:00	15:15	15:15	08:30	11:20	11:20
	Laboratory	AEL	LANC	AEL	LANC	LANC	AEL	LANC
	Lab. Number	AEL99004033	3140964	AEL99004034	3140965	3140958	AEL99004030	3140961
Constituent	Units							
PCB 1254	µg/l		<0.095 U					
PCB 1260	µg/l		<0.095 U					
2-Acetylaminofluorene	µg/l		<2 U					
Hexachlorobenzene	µg/l		<2 U					
4,4'-Dichlorobenzilic Acid Ethyl Ester	µg/l		<3 U					
Hexachlorocyclopentadiene	µg/l		<5 U					
Dimethoate	µg/l		<3 U					
Isodrin	µg/l		<5 U					
1,2-Dibromo-3-chloropropane	µg/l		<3 U		<3 U	<3 U		<3 U
Tetraethyl Dithiopyrophosphate	µg/l		<1 U					
Thioanzin	µg/l		<2 U					
Total Organic Carbon	mg/l		0.39 J					
TPH	mg/l		<0.16 U					
Acenaphthylene	µg/l		<1 U					
Acenapthalene	µg/l		<1 U					
Phenacetin	µg/l		<1 U					
Acetophenone	µg/l		<1 U					
Aniline	µg/l		<1 U					
o-Nitroaniline	µg/l		<2 U					
m-Nitroaniline	µg/l		<2 U					
p-Chloroaniline	µg/l		<1 U					
p-Nitroaniline	µg/l		<2 U					
p-Dimethylamino azobenzene	µg/l		<2 U					
Anthracene	µg/l		<1 U					
Benzo[a]anthracene	µg/l		<1 U					
7,12-Dimethylbenz[a]anthracene	µg/l		<2 U					
Benzo[b]fluoranthene	µg/l		<1 U					
1,2,4,5-Tetrachlorobenzene	µg/l		<1 U					
Isosafrole	µg/l		<1 U					

Notes: 1. Printed on 08/30/01

Table H3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water Sampling

	Location ID	EQUIPMENT	EQUIPMENT	EQUIPMENT	EQUIPMENT	TRIP BLANK	WG-RSK-SD-01	WG-RSK-SD-01
	Sample ID	1838375	1838375	1838377	1838377	1838376	1838372	1838372
	Sample Date	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999
	Sample Time	15:00	15:00	15:15	15:15	08:30	11:20	11:20
	Laboratory	AEL	LANC	AEL	LANC	LANC	AEL	LANC
	Lab. Number	AEL99004033	3140964	AEL99004034	3140965	3140958	AEL99004030	3140961
Constituent	Units							
1,3,5-Trinitrobenzene	µg/l		<5 UR					
m-Dinitrobenzene	µg/l		<1 U					
Safrole	µg/l		<1 U					
Nitrobenzene	µg/l		<1 U					
3,3'-Dichlorobenzidine	µg/l		<2 U					
o-Tolidine	µg/l		<5 U					
Benzo[a]pyrene	µg/l		<1 U					
Benzo[ghi]perylene	µg/l		<1 U					
Benzo[k]fluoranthene	µg/l		<1 U					
Benzyl Alcohol	µg/l		<5 U					
p-Aminobiphenyl	µg/l		<2 U					
Hexachlorobutadiene	µg/l		<2 U					
n-Nitrosodi-n-butylamine	µg/l		<1 U					
trans-1,4-Dichloro-2-butylene	µg/l		<15 U		<15 U	<15 U		<15 U
3-Methylchloanthrene	µg/l		<2 U					
Chrysene	µg/l		<1 U					
Dinitro-o-cresol	µg/l		<5 U					
p-Chloro-m-cresol	µg/l		<1 U					
o-Cresol	µg/l		<1 U					
p-Cresol	µg/l		<3 U					
Dibenz(a,h)anthracene	µg/l		<1 U					
Dibenzofuran	µg/l		<1 U					
n-Nitrosodiethylamine	µg/l		<1 U					
n-Nitrosodimethylamine	µg/l		<2 U					
n-Nitrosodiphenylamine	µg/l		<1 U					
n-Nitrosodipropylamine	µg/l		<1 U					
Hexachloroethane	µg/l		<1 U					
4-Bromophenyl Phenyl Ether	µg/l		<2 U					
4-Chlorophenyl phenyl ether	µg/l		<1 U					

Notes: 1. Printed on 08/30/01

Table H3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water Sampling

	Location ID	EQUIPMENT	EQUIPMENT	EQUIPMENT	EQUIPMENT	TRIP BLANK	WG-RSK-SD-01	WG-RSK-SD-01
	Sample ID	1838375	1838375	1838377	1838377	1838376	1838372	1838372
	Sample Date	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999
	Sample Time	15:00	15:00	15:15	15:15	08:30	11:20	11:20
	Laboratory	AEL	LANC	AEL	LANC	LANC	AEL	LANC
	Lab. Number	AEL99004033	3140964	AEL99004034	3140965	3140958	AEL99004030	3140961
Constituent	Units							
Dichlorodiisopropyl ether	µg/l		<1 U					
Dichloroethyl Ether	µg/l		<1 U					
n-Methyl-n-nitrosoethylamine	µg/l		<2 U					
Fluoranthene	µg/l		<1 U					
Fluorene	µg/l		<1 U					
Indeno(1,2,3-cd)pyrene	µg/l		<1 U					
Isophorone	µg/l		<1 U					
bis(2-Chloroethoxy)methane	µg/l		<1 U					
Ethylmethanesulfonate	µg/l		<1 U					
Methylmethanesulfonate	µg/l		<1 U					
Methapyrilene	µg/l		<2 U					
n-Nitrosomorpholine	µg/l		<1 U					
Naphthalene	µg/l		<1 U					
2-Chloronaphthalene	µg/l		<1 U					
2-Methylnaphthalene	µg/l		<1 U					
1,4-Naphthoquinone	µg/l		<10 UR					
alpha-Naphthylamine	µg/l		<2 U					
beta-Naphthylamine	µg/l		<2 U					
Phenanthrene	µg/l		<1 U					
Phenol	µg/l		<1 U					
2,3,4,6-Tetrachlorophenol	µg/l		<2 U					
2,4,5-Trichlorophenol	µg/l		<2 U					
2,4,6-Trichlorophenol	µg/l		<2 U					
2,4-Dichlorophenol	µg/l		<1 U					
2,4-Dinitrophenol	µg/l		<14 U					
2,6-Dichlorophenol	µg/l		<1 U					
o-Chlorophenol	µg/l		<1 U					
o-Nitrophenol	µg/l		<1 U					
p-Nitrophenol	µg/l		<10 U					

Notes: 1. Printed on 08/30/01

Table H3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water Sampling

	Location ID	EQUIPMENT	EQUIPMENT	EQUIPMENT	EQUIPMENT	TRIP BLANK	WG-RSK-SD-01	WG-RSK-SD-01
	Sample ID	1838375	1838375	1838377	1838377	1838376	1838372	1838372
	Sample Date	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999
	Sample Time	15:00	15:00	15:15	15:15	08:30	11:20	11:20
	Laboratory	AEL	LANC	AEL	LANC	LANC	AEL	LANC
	Lab. Number	AEL99004033	3140964	AEL99004034	3140965	3140958	AEL99004030	3140961
Constituent	Units							
Pentachlorophenol	µg/l		<3 U					
p-Phenylenediamine	µg/l		<57 UR					
Butyl Benzyl Phthalate	µg/l		<2 U					
bis(2-Ethylhexyl)phthalate	µg/l		<2 U					
Di-n-butyl Phthalate	µg/l		<2 U					
Di-n-octyl Phthalate	µg/l		<2 U					
Diethyl Phthalate	µg/l		<2 U					
Dimethyl Phthalate	µg/l		<2 U					
2-Picoline	µg/l		<2 U					
n-Nitrosopiperidine	µg/l		<1 U					
Pronamide	µg/l		<2 U					
Hexachloropropylene	µg/l		<2 U					
Pyrene	µg/l		<1 U					
Pyridine	µg/l		<2 U					
n-Nitrosopyrrolidine	µg/l		<2 U					
4-Nitroquinoline, 1-oxide	µg/l		<19 UJ					
2,4-Dinitrotoluene	µg/l		<1 U					
2,6-Dinitrotoluene	µg/l		<2 U					
5-Nitro-o-Toluidine	µg/l		<2 U					
o-Toluidine	µg/l		<1 U					
O,O,O-Triethyl phosphorothioa	µg/l		<2 U					
2,4-Xylenol	µg/l		<1 U					
Vinyl Acetate	µg/l		<2 U		<2 U	<2 U		<2 U
Acetone	µg/l		<6 U		<6 U	<6 U		<6 U
Acetonitrile	µg/l		<25 UR		<25 UR	<25 UR		<25 UR
Acrolein	µg/l		<40 UR		<40 UR	<40 UR		<40 UR
Acrylonitrile	µg/l		<10 U		<10 U	<10 U		<10 U
Benzene	µg/l		<1 U		<1 U	<1 U		<1 U
1,2,4-Trichlorobenzene	µg/l		<1 U					

Notes: 1. Printed on 08/30/01

Table H3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water Sampling

	Location ID	EQUIPMENT	EQUIPMENT	EQUIPMENT	EQUIPMENT	TRIP BLANK	WG-RSK-SD-01	WG-RSK-SD-01
	Sample ID	1838375	1838375	1838377	1838377	1838376	1838372	1838372
	Sample Date	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999
	Sample Time	15:00	15:00	15:15	15:15	08:30	11:20	11:20
	Laboratory	AEL	LANC	AEL	LANC	LANC	AEL	LANC
	Lab. Number	AEL99004033	3140964	AEL99004034	3140965	3140958	AEL99004030	3140961
Constituent	Units							
o-Dichlorobenzene	µg/l		<1 U					
m-Dichlorobenzene	µg/l		<1 U					
p-Dichlorobenzene	µg/l		<1 U					
Chlorobenzene	µg/l		<1 U		<1 U	<1 U		<1 U
Ethyl Benzene	µg/l		<2 U		<2 U	<2 U		<2 U
Pentachlorobenzene	µg/l		<1 U					
Pentachloronitrobenzene	µg/l		<2 U					
beta-Chloroprene	µg/l		<2 U		<2 U	<2 U		<2 U
2-Butanone	µg/l		<3 U		<3 U	<3 U		<3 U
Carbon Disulfide	µg/l		<3 U		<3 U	<3 U		<3 U
Carbon Tetrachloride	µg/l		<1 U		<1 U	<1 U		<1 U
Dioxane	µg/l		<70 UR		<70 UR	<70 UR		<70 UR
1,1,1,2-Tetrachloroethane	µg/l		<1 U		<1 U	<1 U		<1 U
1,1,1-Trichloroethane	µg/l		<1 U		<1 U	<1 U		<1 U
1,1,2,2-Tetrachloroethane	µg/l		<2 U		<2 U	<2 U		<2 U
1,1,2-Trichloroethane	µg/l		<2 U		<2 U	<2 U		<2 U
1,1-Dichloroethane	µg/l		<2 U		<2 U	<2 U		<2 U
Ethylene Dibromide	µg/l		<1 U		<1 U	<1 U		<1 U
1,2-Dichloroethane	µg/l		<2 U		<2 U	<2 U		<2 U
Chloroethane	µg/l		<3 U		<3 U	<3 U		<3 U
Methyl-tert-butyl Ether	µg/l		<2 U		<2 U	<2 U		<2 U
1,1-Dichloroethylene	µg/l		<1 U		<1 U	<1 U		<1 U
Vinyl Chloride	µg/l		<2 U		<2 U	<2 U		<2 U
cis-1,2-Dichloroethylene	µg/l		<2 U		<2 U	<2 U		<2 U
Tetrachloroethylene	µg/l		<1 U		<1 U	<1 U		<1 U
trans-1,2-Dichloroethylene	µg/l		<2 U		<2 U	<2 U		<2 U
Trichloroethylene	µg/l		<1 U		<1 U	<1 U		<1 U
Ethylmethacrylate	µg/l		<1 U		<1 U	<1 U		<1 U
2-Hexanone	µg/l		<7 U		<7 U	<7 U		<7 U

Notes: 1. Printed on 08/30/01

Table H3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water Sampling

	Location ID	EQUIPMENT	EQUIPMENT	EQUIPMENT	EQUIPMENT	TRIP BLANK	WG-RSK-SD-01	WG-RSK-SD-01
	Sample ID	1838375	1838375	1838377	1838377	1838376	1838372	1838372
	Sample Date	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999
	Sample Time	15:00	15:00	15:15	15:15	08:30	11:20	11:20
	Laboratory	AEL	LANC	AEL	LANC	LANC	AEL	LANC
	Lab. Number	AEL99004033	3140964	AEL99004034	3140965	3140958	AEL99004030	3140961
Constituent	Units							
Bromomethane	µg/l		<3 U		<3 U	<3 U		<3 U
Bromodichloromethane	µg/l		<1 U		<1 U	<1 U		<1 U
Chloromethane	µg/l		<3 U		<3 U	<3 U		<3 U
Dibromomethane	µg/l		<1 U		<1 U	<1 U		<1 U
Dibromochloromethane	µg/l		<2 U		<2 U	<2 U		<2 U
Methylene Chloride	µg/l		<2 U		<2 U	<2 U		<2 U
Dichlorodifluoromethane	µg/l		<2 U		<2 U	<2 U		<2 U
Iodomethane	µg/l		<1 U		<1 U	<1 U		<1 U
Bromoform	µg/l		<1 U		<1 U	<1 U		<1 U
Chloroform	µg/l		<1 U		<1 U	<1 U		<1 U
Fluorotrichloromethane	µg/l		<2 U		<2 U	<2 U		<2 U
Methyl Methacrylate	µg/l		<1 U		<1 U	<1 U		<1 U
Methyl Isobutyl Ketone	µg/l		<5 U		<5 U	<5 U		<5 U
1,2,3-Trichloropropane	µg/l		<1 U		<1 U	<1 U		<1 U
Propylene Dichloride	µg/l		<1 U		<1 U	<1 U		<1 U
Isobutyl Alcohol	µg/l		<100 UR		<100 UR	<100 UR		<100 UR
Propionitrile	µg/l		<30 UR		<30 UR	<30 U		<30 U
3-Chloropropylene	µg/l		<1 U		<1 U	<1 U		<1 U
cis-1,3-Dichloropropylene	µg/l		<1 U		<1 U	<1 U		<1 U
trans-1,3-Dichloropropylene	µg/l		<1 U		<1 U	<1 U		<1 U
Methacrylonitrile	µg/l		<10 U		<10 U	<10 U		<10 U
Styrene	µg/l		<1 U		<1 U	<1 U		<1 U
Toluene	µg/l		<2 U		<2 U	<2 U		<2 U
Xylenes	µg/l		<1 U		<1 U	<1 U		<1 U

Notes: 1. Printed on 08/30/01

Table H3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water Sampling

	Location ID	WG-RSK-SD-01	WG-RSK-SD-01	WG-RSK-SD-02	WG-RSK-SD-02	performance	performance	
	Sample ID	1838373	1838373	1838374	1838374	1838378	1838379	
	Sample Date	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	
	Sample Time	11:20	11:20	12:15	12:15	16:00	16:00	
	Laboratory	AEL	LANC	AEL	LANC	LANC	LANC	
	Lab. Number	AEL99004031	3140962	AEL99004032	3140963	3140966	3140967	
Constituent	Units							
Date PCBs Analyzed	-						05/07/1999	
Date Metals Analyzed	-	04/27/1999	05/04/1999	04/27/1999	05/04/1999	05/04/1999		
Date Organics Analyzed	-		05/10/1999		05/10/1999	05/10/1999		
Date Physical Analyzed	-					05/05/1999		
Date Semi-volatile Organics Analyzed	-					05/04/1999		
Diallate	µg/l					<1 U		
Antimony	mg/L		<0.0053 UR		<0.0053 UR	0.108 N		
Arsenic	mg/L		<0.00100 U		<0.00100 U	0.0625		
Barium	mg/L		0.0140 BR		0.0142 BR	0.294 N		
Beryllium	mg/L		<0.0017 U		<0.0017 U	0.0851 N		
Cadmium	mg/L		<0.00063 U		<0.00063 U	0.0894		
Chromium	mg/L	0.014		0.010				
Chromium, hexavalent	mg/L	<0.01		<0.01				
Cobalt	mg/L		<0.0055 U		<0.0055 U	0.104		
Copper	mg/L		<0.0058 U		0.0069 B	0.438 N		
Lead	mg/L		<0.0019 U		<0.0019 U	0.464		
Mercury	mg/L		<0.000042 U		<0.000042 U	0.0049		
Nickel	mg/L		<0.0054 U		<0.0054 U	0.409 N		
Selenium	mg/L		<0.0016 U		<0.0016 U	0.0968		
Silver	mg/L		<0.0057 U		<0.0057 U	0.102		
Thallium	mg/L		<0.0012 U		<0.0012 U	0.0776 N		
Tin	mg/L		<0.0320 U		<0.0320 U	<0.0320 U		
Vanadium	mg/L		<0.0028 U		<0.0028 U	0.12 N		
Zinc	mg/L		0.0064 B		0.0154 B	0.236 N		
PCB 1016	µg/l						<0.096 U	
PCB 1221	µg/l						<0.096 U	
PCB 1232	µg/l						<0.096 U	
PCB 1242	µg/l						<0.096 U	
PCB 1248	µg/l						<0.096 U	

Notes: 1. Printed on 08/30/01

Table H3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water Sampling

	Location ID	WG-RSK-SD-01	WG-RSK-SD-01	WG-RSK-SD-02	WG-RSK-SD-02	performance	performance
	Sample ID	1838373	1838373	1838374	1838374	1838378	1838379
	Sample Date	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999
	Sample Time	11:20	11:20	12:15	12:15	16:00	16:00
	Laboratory	AEL	LANC	AEL	LANC	LANC	LANC
	Lab. Number	AEL99004031	3140962	AEL99004032	3140963	3140966	3140967
Constituent	Units						
PCB 1254	µg/l						<0.096 U
PCB 1260	µg/l						4.2
2-Acetylaminofluorene	µg/l					<2 U	
Hexachlorobenzene	µg/l					<2 U	
4,4'-Dichlorobenzilic Acid Ethyl Ester	µg/l					<3 U	
Hexachlorocyclopentadiene	µg/l					<5 U	
Dimethoate	µg/l					<3 U	
Isodrin	µg/l					<5 U	
1,2-Dibromo-3-chloropropane	µg/l		<3 U		<3 U	<3 U	
Tetraethyl Dithiopyrophosphate	µg/l					<1 U	
Thioanzin	µg/l					<2 U	
Total Organic Carbon	mg/l					34.3	
TPH	mg/l					94	
Acenaphthylene	µg/l					13	
Acenapthalene	µg/l					64	
Phenacetin	µg/l					<1 U	
Acetophenone	µg/l					<1 U	
Aniline	µg/l					<1 U	
o-Nitroaniline	µg/l					<2 U	
m-Nitroaniline	µg/l					<2 U	
p-Chloroaniline	µg/l					<1 U	
p-Nitroaniline	µg/l					<2 U	
p-Dimethylamino azobenzene	µg/l					<2 U	
Anthracene	µg/l					100	
Benzo[a]anthracene	µg/l					<1 U	
7,12-Dimethylbenz[a]anthracene	µg/l					<2 U	
Benzo[b]fluoranthene	µg/l					<1 U	
1,2,4,5-Tetrachlorobenzene	µg/l					<1 U	
Isosafrole	µg/l					<1 U	

Notes: 1. Printed on 08/30/01

Table H3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water Sampling

	Location ID	WG-RSK-SD-01	WG-RSK-SD-01	WG-RSK-SD-02	WG-RSK-SD-02	performance	performance	
	Sample ID	1838373	1838373	1838374	1838374	1838378	1838379	
	Sample Date	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	
	Sample Time	11:20	11:20	12:15	12:15	16:00	16:00	
	Laboratory	AEL	LANC	AEL	LANC	LANC	LANC	
	Lab. Number	AEL99004031	3140962	AEL99004032	3140963	3140966	3140967	
Constituent	Units							
1,3,5-Trinitrobenzene	µg/l					<5 U		
m-Dinitrobenzene	µg/l					<1 U		
Safrole	µg/l					<1 U		
Nitrobenzene	µg/l					<1 U		
3,3'-Dichlorobenzidine	µg/l					<2 U		
o-Tolidine	µg/l					<5 U		
Benzo[a]pyrene	µg/l					<1 U		
Benzo[ghi]perylene	µg/l					<1 U		
Benzo[k]fluoranthene	µg/l					<1 U		
Benzyl Alcohol	µg/l					12 J		
p-Aminobiphenyl	µg/l					<2 U		
Hexachlorobutadiene	µg/l					<2 U		
n-Nitrosodi-n-butylamine	µg/l					<1 U		
trans-1,4-Dichloro-2-butylene	µg/l		<15 U		<15 U	<15 U		
3-Methylchloanthrene	µg/l					<2 U		
Chrysene	µg/l					18		
Dinitro-o-cresol	µg/l					<5 U		
p-Chloro-m-cresol	µg/l					90		
o-Cresol	µg/l					62		
p-Cresol	µg/l					<3 U		
Dibenz(a,h)anthracene	µg/l					<1 U		
Dibenzofuran	µg/l					74		
n-Nitrosodiethylamine	µg/l					<1 U		
n-Nitrosodimethylamine	µg/l					<2 U		
n-Nitrosodiphenylamine	µg/l					<1 U		
n-Nitrosodipropylamine	µg/l					<1 U		
Hexachloroethane	µg/l					<1 U		
4-Bromophenyl Phenyl Ether	µg/l					<2 U		
4-Chlorophenyl phenyl ether	µg/l					<1 U		

Notes: 1. Printed on 08/30/01

Table H3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water Sampling

	Location ID	WG-RSK-SD-01	WG-RSK-SD-01	WG-RSK-SD-02	WG-RSK-SD-02	performance	performance	
	Sample ID	1838373	1838373	1838374	1838374	1838378	1838379	
	Sample Date	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	
	Sample Time	11:20	11:20	12:15	12:15	16:00	16:00	
	Laboratory	AEL	LANC	AEL	LANC	LANC	LANC	
	Lab. Number	AEL99004031	3140962	AEL99004032	3140963	3140966	3140967	
Constituent	Units							
Dichlorodiisopropyl ether	µg/l					<1 U		
Dichloroethyl Ether	µg/l					120		
n-Methyl-n-nitrosoethylamine	µg/l					<2 U		
Fluoranthene	µg/l					30		
Fluorene	µg/l					2 J		
Indeno(1,2,3-cd)pyrene	µg/l					<1 U		
Isophorone	µg/l					<1 U		
bis(2-Chloroethoxy)methane	µg/l					<1 U		
Ethylmethanesulfonate	µg/l					<1 U		
Methylmethanesulfonate	µg/l					<1 U		
Methapyrilene	µg/l					<2 U		
n-Nitrosomorpholine	µg/l					<1 U		
Naphthalene	µg/l					55		
2-Chloronaphthalene	µg/l					<1 U		
2-Methylnaphthalene	µg/l					<1 U		
1,4-Naphthoquinone	µg/l					<10 U		
alpha-Naphthylamine	µg/l					<2 U		
beta-Naphthylamine	µg/l					<2 U		
Phenanthrene	µg/l					<1 U		
Phenol	µg/l					<1 U		
2,3,4,6-Tetrachlorophenol	µg/l					3 J		
2,4,5-Trichlorophenol	µg/l					<2 U		
2,4,6-Trichlorophenol	µg/l					80		
2,4-Dichlorophenol	µg/l					69		
2,4-Dinitrophenol	µg/l					<15 U		
2,6-Dichlorophenol	µg/l					<1 U		
o-Chlorophenol	µg/l					92		
o-Nitrophenol	µg/l					<1 U		
p-Nitrophenol	µg/l					57		

Notes: 1. Printed on 08/30/01

Table H3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water Sampling

	Location ID	WG-RSK-SD-01	WG-RSK-SD-01	WG-RSK-SD-02	WG-RSK-SD-02	performance	performance	
	Sample ID	1838373	1838373	1838374	1838374	1838378	1838379	
	Sample Date	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	
	Sample Time	11:20	11:20	12:15	12:15	16:00	16:00	
	Laboratory	AEL	LANC	AEL	LANC	LANC	LANC	
	Lab. Number	AEL99004031	3140962	AEL99004032	3140963	3140966	3140967	
Constituent	Units							
Pentachlorophenol	µg/l					120		
p-Phenylenediamine	µg/l					<60 U		
Butyl Benzyl Phthalate	µg/l					110		
bis(2-Ethylhexyl)phthalate	µg/l					31		
Di-n-butyl Phthalate	µg/l					100		
Di-n-octyl Phthalate	µg/l					<2 U		
Diethyl Phthalate	µg/l					<2 U		
Dimethyl Phthalate	µg/l					<2 U		
2-Picoline	µg/l					<2 U		
n-Nitrosopiperidine	µg/l					<1 U		
Pronamide	µg/l					<2 U		
Hexachloropropylene	µg/l					<2 U		
Pyrene	µg/l					58		
Pyridine	µg/l					<2 U		
n-Nitrosopyrrolidine	µg/l					<2 U		
4-Nitroquinoline, 1-oxide	µg/l					<20 U		
2,4-Dinitrotoluene	µg/l					120		
2,6-Dinitrotoluene	µg/l					<2 U		
5-Nitro-o-Toluidine	µg/l					<2 U		
o-Toluidine	µg/l					<1 U		
O,O,O-Triethyl phosphorothioa	µg/l					<2 U		
2,4-Xylenol	µg/l					<1 U		
Vinyl Acetate	µg/l		<2 U		<2 U	<2 U		
Acetone	µg/l		<6 U		<6 U	<6 U		
Acetonitrile	µg/l		<25 UR		<25 UR	<25 U		
Acrolein	µg/l		<40 UR		<40 UR	<40 U		
Acrylonitrile	µg/l		<10 U		<10 U	<10 U		
Benzene	µg/l		<1 U		<1 U	99		
1,2,4-Trichlorobenzene	µg/l					57		

Notes: 1. Printed on 08/30/01

Table H3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water Sampling

	Location ID	WG-RSK-SD-01	WG-RSK-SD-01	WG-RSK-SD-02	WG-RSK-SD-02	performance	performance	
	Sample ID	1838373	1838373	1838374	1838374	1838378	1838379	
	Sample Date	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	
	Sample Time	11:20	11:20	12:15	12:15	16:00	16:00	
	Laboratory	AEL	LANC	AEL	LANC	LANC	LANC	
	Lab. Number	AEL99004031	3140962	AEL99004032	3140963	3140966	3140967	
Constituent	Units							
o-Dichlorobenzene	µg/l					120		
m-Dichlorobenzene	µg/l					17		
p-Dichlorobenzene	µg/l					<1 U		
Chlorobenzene	µg/l		<1 U		<1 U	130		
Ethyl Benzene	µg/l		<2 U		<2 U	130		
Pentachlorobenzene	µg/l					<1 U		
Pentachloronitrobenzene	µg/l					<2 U		
beta-Chloroprene	µg/l		<2 U		<2 U	<2 U		
2-Butanone	µg/l		<3 U		<3 U	<3 U		
Carbon Disulfide	µg/l		<3 U		<3 U	<3 U		
Carbon Tetrachloride	µg/l		<1 U		<1 U	19		
Dioxane	µg/l		<70 UR		<70 UR	<70 U		
1,1,1,2-Tetrachloroethane	µg/l		<1 U		<1 U	<1 U		
1,1,1-Trichloroethane	µg/l		<1 U		<1 U	43		
1,1,2,2-Tetrachloroethane	µg/l		<2 U		<2 U	<2 U		
1,1,2-Trichloroethane	µg/l		<2 U		<2 U	<2 U		
1,1-Dichloroethane	µg/l		<2 U		<2 U	<2 U		
Ethylene Dibromide	µg/l		<1 U		<1 U	<1 U		
1,2-Dichloroethane	µg/l		<2 U		<2 U	30		
Chloroethane	µg/l		<3 U		<3 U	<3 U		
Methyl-tert-butyl Ether	µg/l		<2 U		<2 U	<2 U		
1,1-Dichloroethylene	µg/l		<1 U		<1 U	160		
Vinyl Chloride	µg/l		<2 U		<2 U	<2 U		
cis-1,2-Dichloroethylene	µg/l		<2 U		<2 U	<2 U		
Tetrachloroethylene	µg/l		<1 U		<1 U	87		
trans-1,2-Dichloroethylene	µg/l		<2 U		<2 U	<2 U		
Trichloroethylene	µg/l		<1 U		<1 U	120		
Ethylmethacrylate	µg/l		<1 U		<1 U	<1 U		
2-Hexanone	µg/l		<7 U		<7 U	<7 U		

Notes: 1. Printed on 08/30/01

Table H3
SUMMARY OF ANALYTICAL RESULTS
Pratt & Whitney, Pent Road, East Hartford, CT(Willgoos) - Surface Water Sampling

	Location ID	WG-RSK-SD-01	WG-RSK-SD-01	WG-RSK-SD-02	WG-RSK-SD-02	performance	performance	
	Sample ID	1838373	1838373	1838374	1838374	1838378	1838379	
	Sample Date	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	
	Sample Time	11:20	11:20	12:15	12:15	16:00	16:00	
	Laboratory	AEL	LANC	AEL	LANC	LANC	LANC	
	Lab. Number	AEL99004031	3140962	AEL99004032	3140963	3140966	3140967	
Constituent	Units							
Bromomethane	µg/l		<3 U		<3 U	<3 U		
Bromodichloromethane	µg/l		<1 U		<1 U	20		
Chloromethane	µg/l		<3 U		<3 U	<3 U		
Dibromomethane	µg/l		<1 U		<1 U	<1 U		
Dibromochloromethane	µg/l		<2 U		<2 U	110		
Methylene Chloride	µg/l		<2 U		<2 U	25		
Dichlorodifluoromethane	µg/l		<2 U		<2 U	<2 U		
Iodomethane	µg/l		<1 U		<1 U	<1 U		
Bromoform	µg/l		<1 U		<1 U	120		
Chloroform	µg/l		<1 U		<1 U	74		
Fluorotrichloromethane	µg/l		<2 U		<2 U	<2 U		
Methyl Methacrylate	µg/l		<1 U		<1 U	<1 U		
Methyl Isobutyl Ketone	µg/l		<5 U		<5 U	84		
1,2,3-Trichloropropane	µg/l		<1 U		<1 U	<1 U		
Propylene Dichloride	µg/l		<1 U		<1 U	10		
Isobutyl Alcohol	µg/l		<100 UR		<100 UR	<100 U		
Propionitrile	µg/l		<30 U		<30 UR	<30 U		
3-Chloropropylene	µg/l		<1 U		<1 U	<1 U		
cis-1,3-Dichloropropylene	µg/l		<1 U		<1 U	<1 U		
trans-1,3-Dichloropropylene	µg/l		<1 U		<1 U	<1 U		
Methacrylonitrile	µg/l		<10 U		<10 U	<10 U		
Styrene	µg/l		<1 U		<1 U	70		
Toluene	µg/l		<2 U		<2 U	41		
Xylenes	µg/l		<1 U		<1 U	<1 U		

Notes: 1. Printed on 08/30/01

Table H4
EXCEEDANCES OF P&W VCAP RISK-BASED SURFACE WATER SCREENING LEVELS
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Surface Water Sampling

	Location ID	WG-RSK-SD-01	WG-RSK-SD-01	WG-RSK-SD-01	WG-RSK-SD-02			
	Sample ID	1838372	1838373	1838373	1838374			
	Sample Date	04/27/1999	04/27/1999	04/27/1999	04/27/1999			
	Sample Time	11:20	11:20	11:20	12:15			
	Laboratory	LANC	AEL	LANC	LANC			
	Lab. Number	3140961	AEL99004031	3140962	3140963			
Constituent	Units							
Date Metals Analyzed	-	05/04/1999	04/30/1999					
Date Organics Analyzed	-	05/10/1999		05/10/1999	05/10/1999			
Chromium	mg/L		0.014					
Copper	mg/L	0.0343 NJ						
Acrylonitrile	µg/l	<10 U		<10 U	<10 U			
1,1,2,2-Tetrachloroethane	µg/l	<2 U		<2 U	<2 U			
Ethylene Dibromide	µg/l	<1 U		<1 U	<1 U			
1,2-Dichloroethane	µg/l	<2 U		<2 U	<2 U			
Isobutyl Alcohol	µg/l	<100 UR		<100 UR	<100 UR			
Propionitrile	µg/l	<30 U		<30 U	<30 UR			
Methacrylonitrile	µg/l	<10 U		<10 U	<10 U			

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

Table H5
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Sediment 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
EQUIPMENT	1838375	4/27/99			BKE		x	x			x	X	X
EQUIPMENT	1838377	4/27/99			BKE		x					X	
TRIP BLANK	1838376	4/27/99			BKT		x						
WG-RSK-SD-01	1838364	4/27/99			SD		X	X			X	X	X
WG-RSK-SD-01	1838365	4/27/99			SD		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 08/29/01

Table H6
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Sediment Sampling

	Location ID	EQUIPMENT	EQUIPMENT	EQUIPMENT	WG-RSK-SD-01	WG-RSK-SD-01	WG-RSK-SD-01	WG-RSK-SD-01
	Sample ID	1838375	1838375	1838377	1838364	1838364	1838365	1838365
	Sample Date	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999
	Sample Time	15:00	15:00	15:15	11:00	11:00	11:00	11:00
	Laboratory	AEL	LANC	LANC	AEL	LANC	AEL	LANC
	Lab. Number	AEL99004033	3140964	3140965	AEL99004035	3140959	AEL99004036	3140960
Constituent	Units							
Date PCBs Analyzed	-					05/04/1999		05/04/1999
Date Metals Analyzed	-	04/30/1999	05/04/1999	05/04/1999	04/30/1999	05/06/1999	04/30/1999	05/06/1999
Date Organics Analyzed	-					04/30/1999		04/30/1999
Date Physical Analyzed	-		05/05/1999			05/05/1999		05/05/1999
Date Semi-volatile Organics Analyzed	-					05/08/1999		05/08/1999
Arsenic	-					2.8 BJ mg/kg		2.7 BJ mg/kg
Barium	-					79.3 mg/kg		80.1 mg/kg
Beryllium	-					0.53 B mg/kg		0.54 B mg/kg
Chromium	-	0.011 mg/L			24.6 mg/kg		22 mg/kg	
Cobalt	-					11.9 mg/kg		12.2 mg/kg
Copper	-					33.4 mg/kg		33.7 mg/kg
Lead	-					28.2 S mg/kg		25.0 S mg/kg
Mercury	-					0.087 B mg/kg		0.38 mg/kg
Nickel	-					30.0 mg/kg		28.8 mg/kg
Selenium	-					1.0 B mg/kg		1.3 B mg/kg
Thallium	-					0.63 B mg/kg		0.48 B mg/kg
Tin	-							7.8 B mg/kg
Vanadium	-					30.5 mg/kg		29.9 mg/kg
Zinc	-		0.0055 mg/L	0.0052 mg/L		109 NJ mg/kg		114 NJ mg/kg
PCB 1254	-					23 J ug/kg		29 J ug/kg
Total Organic Carbon	-		0.39 J mg/l			5200 mg/kg		6000 mg/kg
TPH	-					166 J mg/kg		63 J mg/kg
Acenaphthylene	-					86 J ug/kg		90 J ug/kg
Acenapthalene	-							110 J ug/kg
Anthracene	-					140 J ug/kg		190 J ug/kg
Benzo[a]anthracene	-					540 J ug/kg		650 J ug/kg
Benzo[b]fluoranthene	-					720 ug/kg		840 ug/kg
Benzo[a]pyrene	-					600 J ug/kg		720 ug/kg
Benzo[ghi]perylene	-					420 J ug/kg		510 J ug/kg

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

Table H6
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION (DETECTS)
Pratt & Whitney, Pent Road, East Hartford, CT (Willgoos) - Sediment Sampling

	Location ID	EQUIPMENT	EQUIPMENT	EQUIPMENT	WG-RSK-SD-01	WG-RSK-SD-01	WG-RSK-SD-01	WG-RSK-SD-01
	Sample ID	1838375	1838375	1838377	1838364	1838364	1838365	1838365
	Sample Date	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999	04/27/1999
	Sample Time	15:00	15:00	15:15	11:00	11:00	11:00	11:00
	Laboratory	AEL	LANC	LANC	AEL	LANC	AEL	LANC
	Lab. Number	AEL99004033	3140964	3140965	AEL99004035	3140959	AEL99004036	3140960
Constituent	Units							
Benzo[k]fluoranthene	-					250 J ug/kg		310 J ug/kg
Chrysene	-					580 J ug/kg		740 ug/kg
p-Cresol	-					400 J ug/kg		240 J ug/kg
Dibenz(a,h)anthracene	-					100 J ug/kg		130 J ug/kg
Dibenzofuran	-							69 J ug/kg
Fluoranthene	-					1000 ug/kg		1500 ug/kg
Fluorene	-					440 J ug/kg		440 J ug/kg
Indeno(1,2,3-cd)pyrene	-					420 J ug/kg		550 J ug/kg
Phenanthrene	-					400 J ug/kg		1100 ug/kg
bis(2-Ethylhexyl)phthalate	-					270 J ug/kg		300 J ug/kg
Pyrene	-					950 ug/kg		1200 ug/kg
Acetone	-					140 J ug/kg		120 J ug/kg
Toluene	-					29 ug/kg		20 ug/kg

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