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REMEDIAL INVESTIGATION

Beede Waste Oil/Cash Energy Superfund Site
Plaistow, New Hampshire
Volume II - Tables

Prepared for
New Hampshire Department of Environmental Services

Prepared by
Sanborn, Head & Associates, Inc.

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Paul M. Sanborn ■ Charles L. Head ■ R. Scott Shillaber
Charles A. Crocetti ■ Mathew A. DiPilato ■ Daniel B. Carr ■ Duncan W. Wood

Sanborn, Head & Associates, Inc.
6 Garvins Falls Road ■ Concord, New Hampshire 03301
Fax (603) 229-1919 ■ **Phone (603) 229-1900**

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TABLE 1
Summary of Soil Sampling and Analysis Program
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Location	Depth Interval Sampled (ft)	Sample(s) Analyzed		Sample Date	SDG No.	Analyses Performed	Similar Location for Other Phases
		Number	Depth (ft)				
Phase 1 Soil							
S-1	0 - 1	N/A	0 - 1	11/3/97	BW220, BW310, BW406, BW407	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 22 Metals, TOC	
S-2	0 - 1	N/A	0 - 1	10/27/97	BW302	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-3	0 - 1	N/A	0 - 1	10/27/97	BW302	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-4	0 - 1	N/A	0 - 1	10/27/97	BW302	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-5	0 - 1	N/A	0 - 1	10/27/97	BW302	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-1
S-6	0 - 1	N/A	0 - 1	10/27/97	BW302	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-7	0 - 1	N/A	0 - 1	10/27/97	BW302	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-8	0 - 1	N/A	0 - 1	11/3/97	BW220, BW310, BW406, BW407	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, VPH, EPH, PCBs/Pesticides, 22 Metals, TOC	
S-9	0 - 1	N/A	0 - 1	10/27/97	BW302	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-10	0 - 1	N/A	0 - 1	10/27/97	BW302	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-11	0 - 1	N/A	0 - 1	10/27/97	BW302	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-12	0 - 1	N/A	0 - 1	10/27/97	BW302	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-13	0 - 1	N/A	0 - 1	10/27/97	BW302	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-14	0 - 1	N/A	0 - 1	10/27/97	BW302, BW407	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: TOC	
S-15	0 - 1	N/A	0 - 1	10/27/97	BW302	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-16	0 - 1	N/A	0 - 1	10/27/97	BW302	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-17	0 - 1	N/A	0 - 1	10/27/97	BW302	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-18	0 - 1	N/A	0 - 1	10/27/97	BW302	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-19	0 - 1	N/A	0 - 1	10/27/97	BW302	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-20	0 - 1	N/A	0 - 1	10/27/97	BW303	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-21	0 - 1	N/A	0 - 1	10/27/97	BW303	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-22	0 - 1	N/A	0 - 1	10/27/97	BW303	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-23	0 - 1	N/A	0 - 1	11/3/97	BW220, BW310, BW406, BW407	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, VPH, EPH, PCBs/Pesticides, 22 Metals, TOC	SP-26

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Location	Depth Interval Sampled (ft)	Sample(s) Analyzed		Sample Date	SDG No.	Analyses Performed	Similar Location for Other Phases
		Number	Depth (ft)				
S-24	0 - 1	N/A	0 - 1	10/28/97	BW304	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-25	0 - 1	N/A	0 - 1	10/27/97	BW303	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-26	0 - 1	N/A	0 - 1	10/27/97	BW303	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-27	0 - ¼	N/A	0 - ¼	10/28/97	BW304	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-204
S-28	0 - 1	N/A	0 - 1	10/28/97	BW304	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-29	0 - 1	N/A	0 - 1	10/28/97	BW304	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-30	0 - 1	N/A	0 - 1	10/28/97	BW304	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-31	0 - 1	N/A	0 - 1	10/28/97	BW304	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-220 and SP-2
S-32	0 - ¾	N/A	0 - ¾	10/28/97	BW304	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-33	0 - ¾	N/A	0 - ¾	10/28/97	BW304	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-34	0 - 1	N/A	0 - 1	10/28/97	BW304	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-35	0 - 1	N/A	0 - 1	10/28/97	BW304	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-36	0 - ¾	N/A	0 - ¾	11/3/97	BW220, BW310, BW406	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, VPH, EPH, PCBs/Pesticides, 22 Metals	
S-37	0 - 1	N/A	0 - 1	10/28/97	BW303	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-38	0 - 1	N/A	0 - 1	10/28/97	BW304	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-39	0 - 1	N/A	0 - 1	10/28/97	BW304	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-40	0 - 1	N/A	0 - 1	11/3/97	BW220, BW310, BW406	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 22 Metals	S-212 and SP-3
S-41	0 - 1	N/A	0 - 1	11/3/97	BW220, BW310, BW406, BW407	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, VPH, EPH, PCBs/Pesticides, 22 Metals, TOC	
S-42	0 - 1	N/A	0 - 1	10/29/97	BW304	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-4
S-43	0 - 1	N/A	0 - 1	10/29/97	BW304	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-213, SP-25, and SP-143
S-44	0 - 1	N/A	0 - 1	10/29/97	BW304	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-45	0 - 1	N/A	0 - 1	10/29/97	BW304	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-46	0 - 1	N/A	0 - 1	10/29/97	BW304	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-47	0 - 1	N/A	0 - 1	10/29/97	BW305	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-48	0 - 1	N/A	0 - 1	10/28/97	BW303	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-49	0 - 1	N/A	0 - 1	11/3/97	BW220, BW310, BW406	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 22 Metals	SP-124

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Location	Depth Interval Sampled (ft)	Sample(s) Analyzed		Sample Date	SDG No.	Analyses Performed	Similar Location for Other Phases
		Number	Depth (ft)				
S-50	0 - 1	N/A	0 - 1	10/29/97	BW305	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-123
S-51	0 - 1	N/A	0 - 1	10/29/97	BW305	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-214 and SP-125
S-52	0 - 1	N/A	0 - 1	10/29/97	BW305	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-126
S-53	0 - 1	N/A	0 - 1	10/29/97	BW305	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-127
S-54	0 - 1	N/A	0 - 1	10/29/97	BW221, BW305	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: Ethylene Glycol	
S-55	0 - 1	N/A	0 - 1	10/29/97	BW221, BW305	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: Ethylene Glycol	
S-56	0 - 1	N/A	0 - 1	10/29/97	BW221, BW305	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: Ethylene Glycol	
S-57	0 - 1	N/A	0 - 1	10/29/97	BW221, BW305	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: Ethylene Glycol	
S-58	0 - ½	N/A	0 - ½	10/29/97	BW305	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-59	0 - 1	N/A	0 - 1	10/29/97	BW305	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-60	0 - ¾	N/A	0 - ¾	10/29/97	BW305	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-226, SP-114, and SP-202
S-61	0 - ¾	N/A	0 - ¾	10/29/97	BW305	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-113
S-62	0 - ¾	N/A	0 - ¾	10/29/97	BW305	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-23
S-63	0 - 1	N/A	0 - 1	10/29/97	BW305	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-64	0 - 1	N/A	0 - 1	10/29/97	BW305	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-217 and SP-24
S-65	0.5 - 1.5	N/A	0.5 - 1.5	10/29/97	BW305	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-66	0 - 1	N/A	0 - 1	10/28/97	BW303	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-67	0 - 1	N/A	0 - 1	10/28/97	BW303	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-68	0 - ½	N/A	0 - ½	10/28/97	BW303	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-69	0 - 1	N/A	0 - 1	11/3/97	BW220, BW310, BW406, BW407	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, VPH, EPH, PCBs/Pesticides, 22 Metals, TOC	
S-70	0 - 1	N/A	0 - 1	10/28/97	BW303	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-71	0 - 1	N/A	0 - 1	10/28/97	BW303	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-72	0 - 1	N/A	0 - 1	10/28/97	BW303	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-73	0 - 1	N/A	0 - 1	11/3/97	BW220, BW310, BW406, BW407	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, VPH, EPH, PCBs/Pesticides, 22 Metals, TOC	

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Location	Depth Interval Sampled (ft)	Sample(s) Analyzed		Sample Date	SDG No.	Analyses Performed	Similar Location for Other Phases
		Number	Depth (ft)				
S-74	0 - 1	N/A	0 - 1	10/28/97	BW303	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-75	0 - 1	N/A	0 - 1	10/30/97	BW306	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-6
S-76	0 - 1	N/A	0 - 1	10/30/97	BW306	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-77	0 - 1	N/A	0 - 1	11/3/97	BW220, BW310, BW406	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 22 Metals	SP-7
S-78	0 - 1	N/A	0 - 1	10/30/97	BW306	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-79	0 - 1	N/A	0 - 1	10/30/97	BW306	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-80	0 - 1	N/A	0 - 1	10/30/97	BW306	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-225, SP-102, and SP-200
S-81	0 - ¾	N/A	0 - ¾	10/30/97	BW306	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-82	0 - 1	N/A	0 - 1	10/30/97	BW306	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-104
S-83	0 - 1	N/A	0 - 1	10/30/97	BW306	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-84	0 - 1	N/A	0 - 1	10/30/97	BW306	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-85	0 - 1	N/A	0 - 1	11/3/97	BW220, BW310, BW406	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 22 Metals	SP-14 and SP-145
S-86	0 - 1	N/A	0 - 1	11/3/97	BW220, BW310, BW406	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 22 Metals	SP-12
S-87	0 - 1	N/A	0 - 1	11/3/97	BW220, BW310, BW406	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 22 Metals	SP-21
S-88	0 - 1	N/A	0 - 1	11/3/97	BW220, BW310, BW406	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 22 Metals	
S-89	0 - 1	N/A	0 - 1	10/30/97	BW306	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-90	0 - 1	N/A	0 - 1	10/30/97	BW306	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-91	0 - 1	N/A	0 - 1	10/30/97	BW306	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-92	0 - 1	N/A	0 - 1	10/30/97	BW306	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-93	0 - 1	N/A	0 - 1	10/30/97	BW306	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-94	0 - 1	N/A	0 - 1	10/30/97	BW306	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-95	0 - ¾	N/A	0 - ¾	10/30/97	BW306	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-96	0 - 1	N/A	0 - 1	10/30/97	BW306	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-15
S-97	0 - 1	N/A	0 - 1	10/30/97	BW307	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-98	0 - 1	N/A	0 - 1	10/30/97	BW307	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-99	0 - 1	N/A	0 - 1	10/30/97	BW307	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	

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Location	Depth Interval Sampled (ft)	Sample(s) Analyzed		Sample Date	SDG No.	Analyses Performed	Similar Location for Other Phases
		Number	Depth (ft)				
S-100	0 - 1	N/A	0 - 1	10/30/97	BW307	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-101	0 - 1	N/A	0 - 1	10/30/97	BW307	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-102	0 - 1	N/A	0 - 1	10/30/97	BW307	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-10
S-103	0 - 1	N/A	0 - 1	10/30/97	BW307	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-218
S-104	0 - 1	N/A	0 - 1	10/30/97	BW307	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-105	0 - 1	N/A	0 - 1	10/30/97	BW307	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-11 and SP-144
S-106	0 - 1	N/A	0 - 1	10/30/97	BW307	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-107	0 - 1	N/A	0 - 1	10/30/97	BW307	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-108	0 - 1	N/A	0 - 1	10/30/97	BW307	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-109	0 - 1	N/A	0 - 1	10/30/97	BW307	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-13, S-219, and SP-135
S-110	0 - 1	N/A	0 - 1	10/30/97	BW307	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-111	0 - 1	N/A	0 - 1	10/30/97	BW307	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-112	0 - 1	N/A	0 - 1	10/30/97	BW307	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-113	0 - 1	N/A	0 - 1	10/30/97	BW307	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-114	0 - 1	N/A	0 - 1	10/31/97	BW308	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-22
S-115	0 - 1	N/A	0 - 1	10/31/97	BW308	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-116	0 - 1	N/A	0 - 1	10/31/97	BW308	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-221, SP-20, and SP-146
S-117	0 -1	N/A	0 -1	10/31/97	BW308	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-118	0 - 1	N/A	0 - 1	10/31/97	BW308	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-16
S-119	0 - 1	N/A	0 - 1	10/31/97	BW308	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-18
S-120	0 - 1	N/A	0 - 1	10/31/97	BW308	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-17
S-121	0 - 1	N/A	0 - 1	10/31/97	BW308	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-19
S-122	0 -1	N/A	0 -1	10/31/97	BW308	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-123	0 - 1	N/A	0 - 1	10/31/97	BW308	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-124	0 - 1	N/A	0 - 1	10/31/97	BW308	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-125	0 - 1	N/A	0 - 1	10/31/97	BW308, BW407	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: TOC	
S-126	0 - 1	N/A	0 - 1	10/31/97	BW308	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-127	0 - 1	N/A	0 - 1	10/31/97	BW308	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-128	0 - 1	N/A	0 - 1	10/31/97	BW308	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-9

TABLE 1
Summary of Soil Sampling and Analysis Program
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Location	Depth Interval Sampled (ft)	Sample(s) Analyzed		Sample Date	SDG No.	Analyses Performed	Similar Location for Other Phases
		Number	Depth (ft)				
S-129	0 - 1	N/A	0 - 1	10/31/97	BW308	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-130	0 - 1	N/A	0 - 1	10/31/97	BW308	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-211
S-131	0 - 1	N/A	0 - 1	10/30/97	BW309	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-132	0 - 1	N/A	0 - 1	10/30/97	BW309	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-133	0 - 1	N/A	0 - 1	10/30/97	BW309	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-134	0 - 1	N/A	0 - 1	10/31/97	BW309	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-135	0 - 1	N/A	0 - 1	10/31/97	BW309	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-8
S-136	0 - 1	N/A	0 - 1	10/31/97	BW309	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-137	0 - 1	N/A	0 - 1	10/31/97	BW309	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-138	0 - 1	N/A	0 - 1	10/31/97	BW309	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-139	0 - 1	N/A	0 - 1	10/31/97	BW309	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-140	0 - 1	N/A	0 - 1	10/31/97	BW309	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
S-141	0 - 1	N/A	0 - 1	11/3/97	BW220, BW406, BW407	Full: VOCs, SVOCs, VPH, EPH, PCBs/Pesticides, 22 Metals, TOC	
S-142	0 - 1	N/A	0 - 1	11/3/97	BW220, BW406, BW407	Full: VOCs, SVOCs, VPH, EPH, PCBs/Pesticides, 22 Metals, TOC	
S-143	0 - 1	N/A	0 - 1	12/17/97	BW222, BW408, BW409	Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 22 Metals, TOC	
Phase 2 Soil							
SP-1	0 - 5	S-3	2 - 3	12/5/97	BW311, BW408	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: TOC	S-5
SP-2	0 - 5	S-3	2 - 3	12/5/97	BW311, BW408	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: TOC	S-31 and S-220
SP-3	0 - 5	S-3	2 - 3	12/5/97	BW311	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-40 and S-212
SP-4	0 - 5	S-3	2 - 3	12/5/97	BW311	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-42
SP-4	0 - 5	S-5	4 - 5	12/5/97	BW311	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-42
SP-5	0 - 23	S-3	2 - 3	12/9/97	BW311	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-5	0 - 23	S-9	11 - 13	12/9/97	BW311	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-6	0 - 5	S-3	2 - 3	12/8/97	BW311	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-75
SP-7	0 - 5	S-3	2 - 3	12/8/97	BW311, BW408	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: TOC	S-77

TABLE 1
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Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Location	Depth Interval Sampled (ft)	Sample(s) Analyzed		Sample Date	SDG No.	Analyses Performed	Similar Location for Other Phases
		Number	Depth (ft)				
SP-8	0 - 5	S-3	2 - 3	12/17/97	BW313	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-135
SP-8	0 - 5	S-5	4 - 5	12/17/97	BW313	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-135
SP-9	0 - 5	S-3	2 - 3	12/17/97	BW222, BW313, BW409	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 22 Metals	S-128
SP-10	0 - 5	S-3	2 - 3	12/8/97	BW311	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-102
SP-11	0 - 5	S-3	2 - 3	12/8/97	BW311	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-105 and SP-144
SP-12	0 - 5	S-3	2 - 3	12/8/97	BW311	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-86
SP-13	0 - 5	S-3	2 - 3	12/8/97	BW311	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-109, S-219, and SP-135
SP-13	0 - 5	S-5	4 - 5	12/8/97	BW311	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-109, S-219, and SP-135
SP-14	0 - 5	S-3	2 - 3	12/8/97	BW311	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-85 and SP-145
SP-15	0 - 5	S-3	2 - 3	12/17/97	BW222, BW313, BW409	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 22 Metals	S-96
SP-15	0 - 5	S-5	4 - 5	12/17/97	BW313	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-96
SP-16	0 - 5	S-3	2 - 3	12/11/97	BW312	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-118
SP-17	0 - 5	S-3	2 - 3	12/10/97	BW312	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-120
SP-18	0 - 5	S-3	2 - 3	12/17/97	BW222, BW313, BW409	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 22 Metals	S-119
SP-18	0 - 5	S-5	4 - 5	12/17/97	BW313	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-119
SP-19	0 - 5	S-3	2 - 3	12/10/97	BW312	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-121
SP-19	0 - 5	S-5	4 - 5	12/10/97	BW312	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-121
SP-20	0 - 5	S-3	2 - 3	12/8/97	BW311	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-116, S-221, and SP-146
SP-21	0 - 5	S-3	2 - 3	12/10/97	BW312	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-87
SP-21	0 - 5	S-5	4 - 5	12/10/97	BW312	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-87
SP-22	0 - 4.7	S-3	2 - 3	12/11/97	BW312	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-114
SP-22	0 - 4.7	S-5	4 - 4.7	12/11/97	BW312	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-114
SP-23	0 - 11	S-4	3 - 4	1/19/98	BW315	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-62
SP-24	0 - 11	S-5	4 - 5	12/9/97	BW311	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-217 and S-64
SP-25	0 - 5	S-3	2 - 3	12/11/97	BW312	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-43, S-213, and SP-143
SP-26	0 - 5	S-3	2 - 3	12/16/97	BW312, BW408	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: TOC	S-23

TABLE 1
Summary of Soil Sampling and Analysis Program
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Location	Depth Interval Sampled (ft)	Sample(s) Analyzed		Sample Date	SDG No.	Analyses Performed	Similar Location for Other Phases
		Number	Depth (ft)				
Phase 3 Soil							
SP-101	0 - 30	S-4	6 - 8	1/9/98	BW408	Full: TOC	
SP-101	0 - 30	S-5	8 - 10	1/9/98	BW314	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-102	0 - 30	S-4	6 - 8	1/9/98	BW314	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-80, S-225, and SP-200
SP-103	0 - 30	S-8	14 - 16	1/9/98	BW314	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-104	0 - 30	S-7	12 - 14	1/12/98	BW315	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-82
SP-105	0 - 28	S-12	22 - 24	12/15/97	BW312	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-106	0 - 30	S-6	10 - 12	1/12/98	BW315	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-107	0 - 28	S-4	6 - 8	12/16/97	BW312	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-108	0 - 30	S-8	14 - 16	12/18/97	BW313	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-109	0 - 30	S-5	8 - 10	12/17/97	BW313	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	SP-201
SP-109	0 - 30	S-12	22 - 24	12/18/97	BW222, BW313, BW409	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 22 Metals	SP-201
SP-110	0 - 30	S-4	6 - 8	12/16/97	BW312	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-216
SP-111	0 - 30	S-8	14 - 16	1/8/98	BW314	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-112	0 - 30	S-9	16 - 18	1/12/98	BW315	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-113	0 - 30	S-8	14 - 16	1/8/98	BW314	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-61
SP-114	0 - 30	S-4	6 - 8	1/8/98	BW314	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-60, S-226, and SP-202
SP-115	0 - 30	S-12	22 - 24	1/7/98	BW314	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-116	0 - 32	S-13	24 - 26	12/15/97	BW312	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-117	0 - 30	S-8	14 - 16	12/19/97	BW222, BW313, BW409	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 22 Metals	
SP-118	0 - 30	S-5	8 - 10	1/7/98	BW314	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-119	0 - 30	S-12	22 - 24	12/11/97	BW312	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-120	0 - 30	S-11	20 - 22	12/12/97	BW312	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-121	0 - 30	S-7	12 - 14	12/12/97	BW312	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-122	0 - 30	S-6	10 - 12	12/19/97	BW222, BW313, BW409	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 22 Metals	
SP-123	0 - 30	S-5	8 - 10	1/6/98	BW314	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-50
SP-124	0 - 30	S-4	6 - 8	1/6/98	BW314	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-49

TABLE 1
Summary of Soil Sampling and Analysis Program
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Beede Waste Oil/Cash Energy Site
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Location	Depth Interval Sampled (ft)	Sample(s) Analyzed		Sample Date	SDG No.	Analyses Performed	Similar Location for Other Phases
		Number	Depth (ft)				
SP-125	0 - 16	S-5	8 - 10	12/17/97	BW222, BW313, BW409	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 22 Metals	S-51 and S-214
SP-126	0 - 16	S-4	6 - 8	12/19/97	BW313	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-52
SP-127	0 - 16	S-3	4 - 6	12/16/97	BW313	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-53
SP-128	0 - 16	S-5	8 - 10	1/5/98	BW314	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-129	0 - 16	S-4	6 - 8	1/5/98	BW314	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-130	0 - 16	S-3	4 - 6	1/5/98	BW314	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-131	0 - 30	S-3	4 - 6	1/5/98	BW314	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-132	0 - 30	S-7	12 - 14	1/7/98	BW314	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-133	0 - 30	S-11	20 - 22	1/6/98	BW314	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-134	0 - 30	S-4	6 - 8	12/18/97	BW222, BW313, BW409	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 22 Metals	
SP-134	0 - 30	S-7	12 - 14	12/18/97	BW313	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-135	0 - 30	S-4	6 - 8	1/13/98	BW315	Screening: PCBs	S-109, S-219, and SP-13
SP-135	0 - 30	S-5	8 - 10	1/13/98	BW315	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-109, S-219, and SP-13
SP-136	0 - 22	S-7	12 - 14	1/13/98	BW315	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-137	0 - 30	S-7	12 - 14	1/13/98	BW408	Full: TOC	
SP-137	0 - 30	S-11	20 - 22	1/13/98	BW315	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-138	0 - 30	S-7	12 - 14	1/14/98	BW315	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-139	0 - 28	S-7	12 - 14	1/14/98	BW315	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-140	0 - 30	S-6	10 - 12	1/14/98	BW408	Full: TOC	
SP-140	0 - 30	S-11	20 - 22	1/14/98	BW315	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-141	0 - 30	S-6	10 - 12	1/15/98	BW315	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-142	0 - 20	S-8	14 - 16	1/15/98	BW315	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	
SP-143	6 - 8	S-1	6 - 8	1/15/98	BW315, BW408	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: TOC	S-43, S-213, and SP-25
SP-144	6 - 8	S-1	6 - 8	1/15/98	BW315	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-105 and SP-11
SP-145	6 - 8	S-1	6 - 8	1/15/98	BW315	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals	S-85 and SP-14
SP-146	6 - 8	S-1	6 - 8	1/15/98	BW315, BW408	Screening: VOCs, PAHs, TPH, PCBs, 4 Metals Full: TOC	S-116, S-221, and SP-20

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Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Location	Depth Interval Sampled (ft)	Sample(s) Analyzed		Sample Date	SDG No.	Analyses Performed	Similar Location for Other Phases
		Number	Depth (ft)				
Phase 4/5 Soil							
S-200	0 - 1	N/A	0 - 1	5/20/98	BW416	PCB Aroclors	
S-201	0 - 1	N/A	0 - 1	5/20/98	BW416	PCB Aroclors	
S-202	0 - 1	N/A	0 - 1	5/20/98	BW416	PCB Aroclors	
S-203	0 - 1	N/A	0 - 1	5/20/98	BW416	PCB Aroclors	
S-204	0 - $^{1}/_{3}$	N/A	0 - $^{1}/_{3}$	5/20/98	BW228, BW416	Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 14 Metals	S-27
S-205	0 - ¾	N/A	0 - ¾	5/20/98	BW228, BW416	Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 14 Metals	
S-206	0 - 1	N/A	0 - 1	5/20/98	BW228, BW416	Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 14 Metals	
S-207	0 - 1	N/A	0 - 1	5/20/98	BW228, BW416	Full: VOCs, SVOCs, VPH, EPH, PCBs/Pesticides, 14 Metals	
S-208	0 - 1	N/A	0 - 1	5/20/98	BW228, BW416	Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 14 Metals	
S-209	0 - 1	N/A	0 - 1	5/20/98	BW228, BW416	Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 14 Metals	
S-210	0 - 1	N/A	0 - 1	5/20/98	BW228, BW416	Full: VOCs, SVOCs, VPH, EPH, PCBs/Pesticides, 14 Metals	
S-211	0 - 1	N/A	0 - 1	5/20/98	BW228, BW416, BW507	Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 14 Metals, PCB Congeners/Homologs, Dioxins	S-130
S-212	0 - 1	N/A	0 - 1	5/20/98	BW507	PCB Congeners/Homologs	S-40 and SP-3
S-213	0 - 1	N/A	0 - 1	5/20/98	BW228, BW416, BW507	Full: VOCs, SVOCs, VPH, EPH, PCBs/Pesticides, 14 Metals, PCB Congeners/Homologs, Dioxins	S-43, SP-25, and SP-143
S-214	0 - 1	N/A	0 - 1	5/20/98	BW228, BW416	Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 14 Metals	S-51 and SP-125
S-215	0 - ½	N/A	0 - ½	5/20/98	BW228, BW416, BW507	Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 14 Metals, PCB Congeners/Homologs	
S-216	0 - 1	N/A	0 - 1	5/20/98	BW229, BW417	Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 14 Metals	SP-110
S-217	0 - 1	N/A	0 - 1	5/20/98	BW229, BW417	Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 14 Metals	S-64 and SP-24
S-218	0 - 1	N/A	0 - 1	5/20/98	BW229, BW417	Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 14 Metals	S-103
S-219	0 - 1	N/A	0 - 1	5/20/98	BW507	PCB Congeners/Homologs, Dioxins	S-109, SP-13, and SP-135
S-220	0 - 1	N/A	0 - 1	5/21/98	BW229, BW417	Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 14 Metals	S-31 and SP-2
S-221	0 - 1	N/A	0 - 1	5/21/98	BW507	PCB Congeners/Homologs	S-116, SP-20, and SP-146
S-222	0 - 1	N/A	0 - 1	5/21/98	BW229, BW417	Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 14 Metals	
S-223	0 - ¾	N/A	0 - ¾	5/21/98	BW229, BW417	Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 14 Metals	
S-224	0.7 - 1.7	N/A	0.7 - 1.7	5/21/98	BW229, BW417	Full: VOCs, SVOCs, VPH, EPH, PCBs/Pesticides, 14 Metals	
S-225	0 - 1	N/A	0 - 1	5/21/98	BW229, BW417, BW507	Full: VOCs, SVOCs, VPH, EPH, PCBs/Pesticides, 14 Metals, PCB Congeners/Homologs	S-80, SP-102, and SP-200

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Location	Depth Interval Sampled (ft)	Sample(s) Analyzed		Sample Date	SDG No.	Analyses Performed	Similar Location for Other Phases
		Number	Depth (ft)				
S-226	0 - 1	N/A	0 - 1	5/21/98	BW229, BW417, BW507	Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 14 Metals, PCB Congeners/Homologs, Dioxins	S-60, SP-114, and SP-202
SP-200	6 - 8	S-1	6 - 8	5/21/98	BW229, BW417	Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 14 Metals	S-80, S-225, and SP-102
SP-201	22 - 24	S-1	22 - 24	5/21/98	BW507	PCB Congeners/Homologs	SP-109
SP-202	6 - 8	S-1	6 - 8	5/21/98	BW229, BW417	Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 14 Metals	S-60, S-226, and SP-114
SP-203	0 - 28	S-7	12 - 14	5/21/98	BW229, BW417	Full: VOCs, SVOCs, SIM, VPH, EPH, PCBs/Pesticides, 14 Metals	
Phase 6 Soil							
Pile 1	3 - 3.5	P1-1	3 - 3.5	4/2/98	BW224, BW317, BW412, BW506	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals, PCB Congeners/Homologs	
Pile 1	2 - 2.5	P1-2	2 - 2.5	4/2/98	BW224, BW317, BW412	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 2	1.5 - 2.5	P2-1	1.5 - 2.5	4/2/98	BW224, BW317, BW412, BW506	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals, PCB Congeners/Homologs	
Pile 2	3 - 4	P2-2	3 - 4	4/2/98	BW224, BW317, BW412	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals	
Pile 3	4	P3-1	4	4/8/98	BW225, BW318, BW413	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 3	4	P3-2	4	4/8/98	BW225, BW318, BW413, BW506	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals, PCB Congeners/Homologs	
Pile 4	1.5 - 2	P4-1	1.5 - 2	4/3/98	BW224, BW317, BW412, BW506	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals, PCB Congeners/Homologs	
Pile 4	3 - 3.5	P4-2	3 - 3.5	4/3/98	BW224, BW317, BW412	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 5A	3.5 - 4.5	P5A-1	3.5 - 4.5	4/3/98	BW224, BW317, BW412, BW506	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals, PCB Congeners/Homologs	
Pile 5A	3 - 4	P5A-2	3 - 4	4/3/98	BW224, BW317, BW412	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 5A	4	P5A-3	4	4/8/98	BW225, BW318, BW413	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	

TABLE 1
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Plaistow, New Hampshire

Location	Depth Interval Sampled (ft)	Sample(s) Analyzed		Sample Date	SDG No.	Analyses Performed	Similar Location for Other Phases
		Number	Depth (ft)				
Pile 5A	6	P5A-4	6	4/8/98	BW225, BW318, BW413	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 5A	8	P5A-5	8	4/8/98	BW225, BW318, BW413	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 5B	1 - 2	P5B-1	1 - 2	4/7/98	BW224, BW317, BW412, BW506	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals, PCB Congeners/Homologs	
Pile 5B	2.5 - 3.5	P5B-2	2.5 - 3.5	4/7/98	BW224, BW317, BW412	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 6	3.5 - 4.5	P6-1	3.5 - 4.5	4/3/98	BW224, BW317, BW412, BW506	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals, PCB Congeners/Homologs	
Pile 6	1 - 2	P6-2	1 - 2	4/3/98	BW224, BW317, BW412	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 7	3.5 - 4	P7-1	3.5 - 4	4/6/98	BW224, BW317, BW412, BW506	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals, PCB Congeners/Homologs	
Pile 7	2 - 2.5	P7-2	2 - 2.5	4/6/98	BW224, BW317, BW412	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 8	3	P8-1	3	4/9/98	BW225, BW318, BW413	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals	
Pile 8	8	P8-2	8	4/9/98	BW225, BW318, BW413	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 8	5	P8-3	5	4/9/98	BW225, BW318, BW413, BW506	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals, PCB Congeners/Homologs	
Pile 8	5	P8-4	5	4/9/98	BW225, BW318, BW413	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 8	6	P8-5	6	4/10/98	BW226, BW319, BW414	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 8	10	P8-6	10	4/10/98	BW226, BW319, BW414	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 8	10	P8-7	10	4/10/98	BW226, BW319, BW414	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals	

TABLE 1
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Location	Depth Interval Sampled (ft)	Sample(s) Analyzed		Sample Date	SDG No.	Analyses Performed	Similar Location for Other Phases
		Number	Depth (ft)				
Pile 8	12	P8-8	12	4/10/98	BW226, BW319, BW414	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 8	3	P8-9	3	4/10/98	BW226, BW319, BW414	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 8	14	P8-10	14	4/10/98	BW226, BW319, BW414	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 9	3	P9-1	3	4/10/98	BW226, BW319, BW414	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 9	5	P9-2	5	4/10/98	BW226, BW319, BW414	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 9	7	P9-3	7	4/10/98	BW226, BW319, BW414	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 9	4	P9-4	4	4/10/98	BW226, BW319, BW414	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 9	5	P9-5	5	4/13/98	BW226, BW319, BW414	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 9	7	P9-6	7	4/13/98	BW226, BW319, BW414, BW506	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals, PCB Congeners/Homologs	
Pile 9	4	P9-7	4	4/13/98	BW226, BW319, BW414	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 9	2	P9-8	2	4/13/98	BW226, BW319, BW414	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 9	6	P9-9	6	4/13/98	BW226, BW319, BW414	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals	
Pile 9	10	P9-10	10	4/24/98	BW227, BW320, BW415	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 9	2	P9-11	2	4/15/98	BW226, BW319, BW414	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 9	2	P9-12	2	4/15/98	BW226, BW319, BW414	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 9	7	P9-13	7	4/24/98	BW227, BW320, BW415	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals	

TABLE 1
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Location	Depth Interval Sampled (ft)	Sample(s) Analyzed		Sample Date	SDG No.	Analyses Performed	Similar Location for Other Phases
		Number	Depth (ft)				
Pile 9	8	P9-14	8	4/24/98	BW227, BW320, BW415	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals	
Pile 9	3	P9-15	3	4/24/98	BW227, BW320, BW415	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals	
Pile 10	2	P10-1	2	4/8/98	BW225, BW318, BW413	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 10	4	P10-2	4	4/8/98	BW225, BW318, BW413	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 10	8	P10-3	8	4/8/98	BW225, BW318, BW413	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 10	10	P10-4	10	4/8/98	BW225, BW318, BW413	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 10	8	P10-5	8	4/8/98	BW225, BW318, BW413, BW506	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals, PCB Congeners/Homologs	
Pile 10A	3.5 - 4	P10A-1	3.5 - 4	4/6/98	BW224, BW317, BW412	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 10A	1.5 - 2	P10A-2	1.5 - 2	4/6/98	BW224, BW317, BW412, BW506	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals, PCB Congeners/Homologs	
Pile 11	7	P11-1	7	4/23/98	BW227, BW320, BW415	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals	
Pile 11	4	P11-2	4	4/23/98	BW227, BW320, BW415	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals	
Pile 12	10	P12-1	10	4/9/98	BW225, BW318, BW413	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals	
Pile 12	4	P12-2	4	4/9/98	BW225, BW318, BW413, BW506	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals, PCB Congeners/Homologs	
Pile 12	8	P12-3	8	4/9/98	BW225, BW318, BW413	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals	
Pile 13	2 - 2.5	P13-1	2 - 2.5	4/7/98	BW224, BW317, BW412	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals	
TP-101	0 - 7	N/A	N/A	9/22/97	N/A	N/A	

TABLE 1
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Location	Depth Interval Sampled (ft)	Sample(s) Analyzed		Sample Date	SDG No.	Analyses Performed	Similar Location for Other Phases
		Number	Depth (ft)				
TP-102	0 - 7	N/A	N/A	9/22/97	N/A	N/A	
TP-103	0 - 8	N/A	N/A	9/22/97	N/A	N/A	
TP-104	0 - 4.5	N/A	N/A	9/22/97	N/A	N/A	
TP-105	0 - 7.5	N/A	N/A	9/22/97	N/A	N/A	
TP-106	0 - 5	N/A	N/A	9/22/97	N/A	N/A	
TP-107	0 - 5	N/A	N/A	9/22/97	N/A	N/A	
TP-108	0 - 6	N/A	N/A	4/20/98	N/A	N/A	
TP-109	0 - 10	N/A	N/A	4/20/98	N/A	N/A	
TP-110	0 - 11	N/A	N/A	4/20/98	N/A	N/A	
TP-111	0 - 10	N/A	N/A	4/20/98	N/A	N/A	
TP-112	0 - 7	N/A	N/A	4/20/98	N/A	N/A	
TP-113	0 - 16	N/A	N/A	4/20/98	N/A	N/A	
TP-114	0 - 18	N/A	N/A	4/20/98	N/A	N/A	
TP-115	0 - 14	N/A	N/A	4/20/98	N/A	N/A	
TP-116	0 - 14	N/A	N/A	4/20/98	N/A	N/A	
TP-117	0 - 11	N/A	N/A	4/20/98	N/A	N/A	
TP-118	0 - 13	N/A	N/A	4/20/98	N/A	N/A	
TP-119	0 - 14	N/A	N/A	4/20/98	N/A	N/A	
TP-120	0 - 15	N/A	N/A	4/20/98	N/A	N/A	
TP-121	0 - 8	N/A	N/A	4/20/98	N/A	N/A	
TP-122	0 - 12	N/A	N/A	4/20/98	N/A	N/A	
TP-123	0 - 6	N/A	N/A	4/20/98	N/A	N/A	
TP-124	0 - 9	N/A	N/A	4/20/98	N/A	N/A	
TP-125	0 - 7	N/A	N/A	4/20/98	N/A	N/A	
TP-126	0 - 12	N/A	N/A	4/21/98	N/A	N/A	
TP-127	0 - 14	N/A	N/A	4/21/98	N/A	N/A	
TP-128	0 - 15	N/A	N/A	4/21/98	N/A	N/A	
TP-129	0 - 17	N/A	N/A	4/21/98	N/A	N/A	
TP-130	0 - 15	N/A	N/A	4/21/98	N/A	N/A	
TP-131	0 - 16	N/A	N/A	4/21/98	N/A	N/A	

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Location	Depth Interval Sampled (ft)	Sample(s) Analyzed		Sample Date	SDG No.	Analyses Performed	Similar Location for Other Phases
		Number	Depth (ft)				
TP-132	0 - 12	N/A	N/A	4/21/98	N/A	N/A	
TP-133	0 - 16	N/A	N/A	4/21/98	N/A	N/A	
TP-134	0 - 8	N/A	N/A	4/21/98	N/A	N/A	
TP-135	0 - 14	N/A	N/A	4/21/98	N/A	N/A	
TP-136	0 - 15	N/A	2 - 3	4/22/98	BW227, BW320, BW415	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals	
TP-137	0 - 13	N/A	12 - 13	4/22/98	BW227, BW320, BW415	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals	
TP-138	0 - 16	N/A	12 - 13	4/22/98	BW227, BW320, BW415, BW506	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals, PCB Congeners/Homologs	
TP-139	0 - 16	N/A	0 - 1	4/22/98	BW227, BW320, BW415	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals	
TP-140	0 - 19	N/A	5 - 6	4/22/98	BW227, BW320, BW415, BW506	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals, PCB Congeners/Homologs	
TP-141	0 - 17	N/A	½ - 1	4/22/98	BW227, BW320, BW415	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals	
TP-142	0 - 18	N/A	3 - 4	4/22/98	BW227, BW320, BW415	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals	
TP-143	0 - 18	N/A	4 - 6	4/22/98	BW227, BW320, BW415, BW506	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals, PCB Congeners/Homologs	
TP-144	0 - 18	N/A	0 - 1	4/22/98	BW227, BW320, BW415	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals	
TP-145	0 - 18	N/A	6.5	4/23/98	BW227, BW320, BW415, BW506	Screening: PCBs Full: VOCs, SVOCs, SIM, VPH, EPH, Pesticides, 22 Metals, PCB Congeners/Homologs	
TP-145	0 - 18	N/A	4	4/23/98	N/A	Screening: Ethylene Glycol	
TP-145	0 - 18	N/A	10 - 14	4/23/98	N/A	Screening: 22 Metals	
TP-146	0 - 12	N/A	N/A	4/23/98	N/A	N/A	
TP-147	0 - 12	N/A	4 - 6	4/23/98	BW227, BW320, BW415	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals	

TABLE 1
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Location	Depth Interval Sampled (ft)	Sample(s) Analyzed		Sample Date	SDG No.	Analyses Performed	Similar Location for Other Phases
		Number	Depth (ft)				
TP-127/139 Composite	TP-127: 0 - 14 TP-139: 0 - 16	N/A	TP-127: 8 - 10 TP-139: 10	4/21/98	BW227, BW320, BW415	Screening: PCBs Full: VOCs, SVOCs, VPH, EPH, Pesticides, 22 Metals Screening: Total Cyanide, Physiologically Available Cyanide	
TP-148	0 - 15	N/A	N/A	4/24/98	N/A	N/A	
TP-149	0 - 18	N/A	N/A	4/24/98	N/A	N/A	
TP-150	0 - 16	N/A	N/A	4/24/98	N/A	N/A	
TP-151	0 - 16	N/A	N/A	4/24/98	N/A	N/A	
TP-152	0 - 15	N/A	N/A	4/24/98	N/A	N/A	

Notes:

1. "N/A" indicates not applicable.
2. SDG series are as follows:
   BW200 series – NHDES Laboratory – Full Level VOCs, Full Level Ethylene Glycol, and Screening Level Ethylene Glycol
   BW300 series – Eastern Analytical, Inc. – Screening Level: VOCs, PAHs, TPH, PCBs, Metals
   BW400 series – Woods Hole Group Analytical Laboratories – Full Level: SVOCs, SIM, VPH, EPH, PCBs/Pesticides, Metals, TOC; Screening Level: Total and Physiologically Available Cyanide
   BW500 series – Alta Analytical Laboratories – Full Level: PCB Congeners/Homologs, Dioxins
3. See Table 3 for additional TOC analyses performed on soil samples from borings completed as part of monitoring well installations.
4. Test pits TP-101 through TP-135, TP-146, and TP-148 through TP-152 had no samples submitted for laboratory analysis (other than TP-127/139 composite sample discussed below).
5. A composited sample of soils and unidentified blue substances collected from TP-127 (approximately 8 to 10 feet) and TP-139 (approximately 10 feet) was analyzed for screening level PCBs and full level VOCs, SVOCs, VPH, EPH, pesticides, and 22 metals, as well as screening level analyses for total and physiologically available cyanide.
6. Three purple-stained soil samples were collected from TP-145. A sample from approximately 4 feet was submitted to NHDES Laboratory for screening level analysis for ethylene glycol. A sample from approximately 6.5 feet was submitted for screening level PCBs and full level VOCs, SVOCs, SIM, VPH, EPH, pesticides, 22 metals, and PCB congeners/homologs. A sample from 10 to 14 feet was submitted to Woods Hole Group Analytical Laboratories for screening level analysis of 22 metals.
7. "Similar Location" denotes samples are within approximately 5 feet.
8. Depths indicated are approximate.
9. See text for further explanation/discussion regarding analytical program.
10. See appendices for field logs/forms, validated analytical data reports, and reference limit criteria.

TABLE 2
Summary of Monitoring Well Installation Program
Remedial Investigation
Beede Waste Oil/Cash Energy Site
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Well Designation	Engineering Firm	Screened Zone Depth (ft)	Total Boring Depth (ft)	Estimated Depth to Bedrock (ft)	Completion Date	Borehole Permeability Test Depth (ft)	Grain Size		Slug Test
							Sample	Depth (ft)	
SH-1I	SHA	40 - 50	50.3		7/14/1997	46 - 48			
SH-1D	SHA	88-98	99		6/2/1995	24.5-27 51-53	S-11	51-53	Yes
SH-2S	SHA	14.8-29.8	30		6/5/1995				Yes
SH-2I	SHA	35 - 45	47		7/7/1997		S-1	33 - 35	Yes
SH-2D	SHA	56.5-66.5	67.6	66.5	6/5/1995	28.8-31	S-7 S-13	29-31 59-59.7	Yes
SH-3S	SHA	17-32	32		6/3/1995				Yes
SH-3I	SHA	42 - 52	52		7/10/1997				
SH-3D	SHA	62-72	74		6/9/1995	22.8-26 53.3-56.2 58.7-61.5	S-9 S-13	39-41 59-60.5	
SH-4S	SHA	11.5-26.5	26.5		6/3/1995				Yes
SH-4I	SHA	42 - 52	52		7/9/1997				
SH-4D	SHA	60.8-70.8	73.3		6/7/1995	38.7-41.1	S-6 S-9	24-26 39-41	Yes
SH-5S	SHA	14.7-29.7	29.7		5/30/1995				
SH-6S	SHA	6-16	16		6/2/1995				
SH-7S	SHA	18-28	31		6/2/1995		S-12	29-31	
SH-8S	SHA	15-30	30		6/3/1995				
SH-9S	SHA	13.4-28.4	28.4		6/3/1995		S-8	24-26	
SH-10S	SHA	13-28	28		6/1/1995				
SH-10I	SHA	43 - 53	53		8/14/1997				
SH-10D	SHA	88 - 98	104	99.5	8/13/1997	49 - 50.8	S-2 S-4 S-14	34.5 - 36.5 44 - 46 94 - 94.7	
SH-11S	SHA	7.9-22.9	22.9		6/5/1995				
SH-12S	SHA	5.3-20.3	21		6/5/1995		S-3	9-11	
SH-13D	SHA	93 - 103	121	104	6/30/1997	51.9 - 54 54 - 56	S-12	54 - 56	Yes
SH-14S	SHA	10 - 20	20		8/6/1997				
SH-14I	SHA	41 - 51	52		7/8/1997	46 - 47.8			Yes
SH-14D	SHA	92 - 102	108.5	103.5	7/7/1997		S-10 S-20	44 - 46 94 - 95.8	Yes
SH-15S	SHA	3 - 13	13		8/6/1997				
SH-15I	SHA	38.5 - 48.5	49		7/11/1997				Yes
SH-15D	SHA	87 - 97	104.1	99	7/10/1997	19 - 21	S-1 S-10	4 - 6 49 - 49.9	Yes
SH-16S	SHA	17 - 27	27		8/6/1997				Yes
SH-16I	SHA	39 - 49	49		7/16/1997				Yes
SH-16D	SHA	72 - 82	90	86	7/15/1997	63.2 - 65	S-10 S-17	44 - 46 79 - 80.4	
SH-17I	SHA	40 - 50	51		8/21/1997		S-2	44 - 46	
SH-17D	SHA	111 - 121	124	121.7	8/19/1997	49 - 51	S-5 S-25	19 - 21 119 - 119.3	Yes
SH-18D	SHA	86 - 96	104	99.3	8/27/1997	49 - 51	S-8	34 - 36	Yes
SH-19S	SHA	3 - 13	13		8/5/1997				
SH-19I	SHA	40 - 50	50		7/23/1997				
SH-19D	SHA	91 - 101	109.5	105	7/22/1997				Yes
SH-20S	SHA	2 - 12	12		8/5/1997				
SH-20I	SHA	35 - 45	45		7/18/1997				
SH-20D	SHA	74 - 84	93	86	7/17/1997	69.3 - 71	S-8 S-16	34 - 36 74 - 74.9	Yes
SH-21S	SHA	11.5 - 21.5	21.5		8/4/1997				
SH-21I	SHA	40 - 50	58.5		8/1/1997				
SH-21D	SHA	67 - 77	84.5	79.2	7/31/1997	54 - 56			
SH-22S	SHA	3 - 13	13		8/5/1997				
SH-22D	SHA	39 - 49	59	50	7/22/1997				
SH-22R	SHA	58.2 - 159	159	49.5	3/27/1998				Yes

TABLE 2
Summary of Monitoring Well Installation Program
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Well Designation	Engineering Firm	Screened Zone Depth (ft)	Total Boring Depth (ft)	Estimated Depth to Bedrock (ft)	Completion Date	Borehole Permeability Test Depth (ft)	Grain Size		Slug Test
							Sample	Depth (ft)	
SH-23S	SHA	3 - 13	13		7/24/1997				
SH-23I	SHA	25 - 35	35		7/23/1997				
SH-23D	SHA	49 - 59	69.1	61.5	7/23/1997	34 - 36 44 - 46	S-11	49 - 51	Yes
SH-24S	SHA	10 - 20	20		8/13/1997				Yes
SH-24I	SHA	34 - 44	44		8/1/1997				Yes
SH-24D	SHA	93.5 - 103.5	114	105.8	7/29/1997	54 - 56	S-9	39 - 41	
SH-25S	SHA	14 - 24	24		7/31/1997				
SH-25I	SHA	50 - 60	60		7/30/1997				
SH-25D	SHA	88.5 - 98.5	109	102.5	7/29/1997		S-19	89 - 89.9	
SH-26S	SHA	9 - 19	21		8/28/1997				
SH-27S	SHA	3 - 13	13		8/4/1997				Yes
SH-28S	SHA	2 - 12	12		7/24/1997				
SH-29S	SHA	2 - 12	12		8/4/1997				
SH-30S	SHA	10 - 20	20		8/8/1997				
SH-31S	SHA	12 - 22	22		8/8/1997				Yes
SH-32S	SHA	16 - 26	27		9/23/1997				
SH-32I	SHA	43 - 53	55		7/10/1998				
SH-33S	SHA	18 - 28	28		9/23/1997				
SH-34S	SHA	17 - 27	27		9/23/1997				
No Well Designated SH-35									
SH-36S	SHA	14 - 24	27		8/7/1997				Yes
SH-37S	SHA	15 - 25	25		8/28/1997				
SH-38S	SHA	17 - 27	27		8/28/1997				
No Well Designated SH-39									
SH-40S	SHA	12 - 22	22		8/7/1997				
SH-41S	SHA	4 - 14	14		8/27/1997				
SH-42S	SHA	8.5 - 18.5	18.5		8/7/1997				
SH-43S	SHA	8 - 18	18		8/8/1997				
SH-44S	SHA	10 - 20	20		8/6/1997				
SH-45S	SHA	7 - 17	17		8/6/1997				
SH-46S	SHA	11 - 21	22		8/7/1997				
SH-47S	SHA	10 - 20	20		8/6/1997				
SH-48S	SHA	7 - 17	17		8/7/1997				
SH-49S	SHA	6 - 16	16		8/7/1997				
SH-50S	SHA	6 - 16	17		8/7/1997				
SH-51S	SHA	11 - 21	21		8/7/1997				
SH-52S	SHA	3 - 13	14		8/6/1997				
SH-53S	SHA	10 - 20	21.8		3/24/1998				
SH-54S	SHA	10 - 20	22		6/12/1998				
SH-55S	SHA	11 - 21	27		6/12/1998				
SH-56S	SHA	10 - 20	21.3		6/12/1998				
SH-57S	SHA	11 - 21	27		7/14/1998				
SH-58S	SHA	15 - 25	30		7/10/1998				
WP-3	SHA	11.65-12.65	12.65		9/25/1997				
WP-4	SHA	16.2-17.2	17.2		9/24/1997				
WP-5	SHA	15.92-16.92	16.92		9/24/1997				
WP-6	SHA	15.88-16.88	16.88		9/24/1997				
WP-10	SHA	10.85-11.85	11.85		9/25/1997				
WP-12	SHA	16.03-17.03	17.03		9/25/1997				
WP-14	SHA	15.87-16.87	16.87		9/25/1997				
WP-15	SHA	16.13-17.13	17.13		9/25/1997				
WP-17	SHA	16.48-17.48	0		9/15/1997				
WP-17A	SHA	16.24-17.24	17.24		9/25/1997				
WP-18	SHA	11.06-12.06	12.06		9/15/1997				
SHMW-1	SHA	41 - 51	51.5		6/29/1998				
SHMW-2	SHA	12 - 22	22.5		6/29/1998				
SHMW-3	SHA	12 - 22	22.5		6/29/1998				
SHMW-4	SHA	12 - 22	22.5		6/29/1998				

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Well Designation	Engineering Firm	Screened Zone Depth (ft)	Total Boring Depth (ft)	Estimated Depth to Bedrock (ft)	Completion Date	Borehole Permeability Test Depth (ft)	Grain Size		Slug Test
							Sample	Depth (ft)	
SHMW-5	SHA	12 - 22	22.5		6/29/1998				
SHMW-6	SHA	12 - 22	22.5		6/29/1998				
SHMW-7	SHA	12 - 22	22.5		6/29/1998				
SHMW-8	SHA	20 - 30	30.5		6/29/1998				
SHMW-9	SHA	20 - 30	30.5		6/30/1998				
SHMW-10	SHA	24 - 34	34.5		6/30/1998				
SHMW-11	SHA	24 - 34	34.5		6/30/1998				
SHMW-12	SHA	34 - 44	44.5		6/30/1998				
SHMW-13	SHA	24 - 34	34.5		6/30/1998				
SHMW-14	SHA	10 - 20	20.5		6/30/1998				
SHMW-15	SHA	24 - 34	34.5		7/1/1998				
SHMW-16	SHA	10 - 20	20.5		7/1/1998				
SHMW-17	SHA	36 - 46	46.5		7/1/1998				
SHMW-18	SHA	36 - 46	46.5		7/1/1998				
SHMW-19	SHA	12 - 22	22.5		7/1/1998				
SHMW-20	SHA	17 - 27	27.5		7/1/1998				
AE-1	Aries	12-22	22		1/16/1991				
AE-2	Aries	9.5-19.5	19.5		1/16/1991				
AE-3	Aries	2-15	15		1/16/1991				
AE-4	Aries	14.5-24.5	24.5		1/17/1991				
AE-5	Aries	18.5-28.5	28.5		1/17/1991				
AE-6	Aries	Destroyed/Damaged Beyond Use							
AE-7	Aries	Destroyed/Damaged Beyond Use							
AE-8	Aries	17-27	27		1/18/1991				
AE-9	Aries	17-27	27		1/18/1991				
AE-10	Aries	10-20	20		1/18/1991				Yes
AE-11S	Aries	17-27	27		1/18/1991				
AE-11D	Aries	55-65	67		9/25/1991				Yes
AE-12	Aries	15-25	25		1/21/1991				Yes
AE-13	Aries	Destroyed/Damaged Beyond Use							
AE-14	Aries	17-27	27		1/21/1991				Yes
AE-15	Aries	Destroyed/Damaged Beyond Use							
AE-16	Aries	See Note 11.							
AE-17S	Aries	10-20	20		9/26/1991				
AE-17D	Aries	39-49	49		9/26/1991				Yes
AE-18S	Aries	16.3-26.3	26.3		9/27/1991				*
AE-18D	Aries	46-56	56		9/27/1991				*
AE-19	Aries	Destroyed/Damaged Beyond Use							
AE-20	Aries	10-20	21.5		9/30/1991				
AE-21	Aries	14.5-24.5	24.5		9/30/1991				
AE-22	Aries	14.5-24.5	24.5		9/30/1991				
MW-1	GTI	Destroyed/Damaged Beyond Use							
MW-2	GTI	Decommissioned by SHA on 3/23/98							
MW-3	GTI	Decommissioned by SHA on 3/24/98							
MW-4	GTI	9-49	49		2/23/1984				
MW-5	GTI	Destroyed/Damaged Beyond Use							
RFW-1	Weston	17.5-32.5	41		11/16/1998				
RFW-2	Weston	3-17	21		11/20/1998				

Notes:

1. Well designation modifiers S, I, D, and R identify the aquifer zone screened:
   Shallow [S] Zone: At or near water table
   Intermediate [I] Zone: Typically approximately midway between S and D, just above or near top of identified till
   Deep [D] Zone: Typically just above overburden/bedrock contact
   Rock [R] Zone: Open in rock

2. "Screened Zone" refers to the vertical location below ground surface of the well screen, or in the case of SH-22R, the interval of open borehole in bedrock.

3. "Total Boring Depth" refers to the depth of drilling.

4. "Estimated Depth to Bedrock" refers to the depth of top of bedrock based on observation of soil cuttings and drilling behavior. Bedrock was not cored as part of RI activities.

5. Monitoring wells (SH-series wells) are constructed of 2.0-inch I.D. Schedule 40 PVC with the exception of SH-22R, which is constructed with 6.0 inch I.D. steel casing sealed approximately 8.7 feet into bedrock. Shallow wells were installed using hollow stem auger drilling methods; intermediate and deep wells were installed using the drive and wash/cased hole drilling method. Mykrowells (SHMW-series wells) were constructed of 0.62-inch I.D. steel pipe and were installed using vibratory hammer direct-push methods. Well points (WP-series wells) were constructed using the Waterloo Drive Point Piezometer by Solinst Canada Ltd. and were installed by hand using a manual and/or pneumatic hammer.

6. For wells installed under the direction of SHA, soil samples were typically collected at 5-foot intervals during drilling of the deep [D] monitoring wells. Soil samples were collected during drilling of the shallow [S] and intermediate [I] monitoring wells to confirm the screened interval and when samples were not obtained in the adjacent deep boring. Soil samples were not collected during drilling of the Mykrowells or installation of well points.

7. Monitoring wells (AE-series wells) were installed under the direction of Aries Engineering, Inc. (Aries) as part of earlier (pre-RI) investigations. These monitoring wells are constructed of 2.0-inch I.D. Schedule 40 PVC.

8. Monitoring wells (MW-series wells) were installed under the direction of Groundwater Technologies, Inc. (GTI) as part of earlier (pre-RI) investigations. Monitoring wells MW-1 and MW-2 were constructed of 1½-inch PVC. Monitoring wells MW-3, MW-4, and MW-5 were constructed of 2-inch PVC. Monitoring wells MW-2 and MW-3 were decommissioned by SHA on the dates indicated.

9. Monitoring wells (RFW-series wells) were installed under the direction of Roy F. Weston, Inc. (Weston) as part of U.S. Environmental Protection Agency (USEPA) removal actions. These monitoring wells are constructed of 2.0-inch I.D. Schedule 40 PVC.

10. "Borehole Permeability Test" refers to borehole permeability (wick) test conducted during drilling.
"Grain Size" refers to soil sample collected for sieve/hydrometer analyses.
"Slug Test" refers to variable-head permeability tests completed in finished monitoring wells.

11. Monitoring well AE-16 when installed on January 21, 1991 had a boring depth of 25 feet bgs and a screened zone depth of 15 to 25 feet bgs. Due to its location on a steep/unstable slope, its surface completion was modified by SHA and the upper portion of the riser was removed to facilitate access to the well.

12. "*" indicates the descriptions provided for soils encountered in AE-18S/D commonly are not consistent with those encountered in other nearby explorations at similar depths. Further, the degree to which the hydraulic conductivity estimates (from falling or rising head slug tests) from monitoring wells AE-18S and AE-18D are representative of subsurface conditions is considered questionable. The hydraulic conductivity values estimated for monitoring wells AE-18S and AE-18D are the two lowest (AE-18S - 0.074 ft/day; AE-18D - 0.025 ft/day) for the gravelly sand, which is what the soils are described as on the logs. Due to the apparent inconsistency between hydraulic conductivity estimates from AE-18S and AE-18D and other explorations, and the uncertainty in the soil type screened by these monitoring wells, the data from AE-18S and AE-18D were not included in the definition of the range or calculation of the average hydraulic conductivities.

13. Refer to Table 6 for further information on depth intervals/soils on which hydraulic conductivity/permeability tests/estimates were completed.

TABLE 3
Summary of Total Organic Carbon Data
Soil and Stream Sediment Samples
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Location	Sample/ Depth (feet)	Approximate Depth of Sample Below Observed Water Table (feet)	Sample Date	SDG	Soil Type	Soil/Sediment Description	TOC (mg/kg)
SH-10D	S-13 / 89-91	67	8/11/97	BW401	Till	Hard, dark greenish-gray (10Y 4/1), Clayey SILT. Change at 90' to fine SAND and SILT, trace Gravel.	100 U
SH-13D	S-8 / 34-36	18	6/23/97	BW101	Sand	Medium dense, light olive brown (2.5Y 5/3), fine to coarse SAND, trace Silt.	4,800
SH-13D	S-21 / 99-99.8	83	6/25/97	BW101	Till	Very dense, light olive gray (5Y 6/2), SILT, some fine to medium Sand, trace Gravel, trace fragments of weathered rock.	2,200
SH-14I	S-1 / 29-31	11	7/7/97	BW101	Gravelly Sand	Medium dense, brown (10YR 4/3), fine to coarse SAND and Gravel, trace Silt.	100 U
SH-14I	S-4 / 46-48	28	7/7/97	BW101	Gravelly Sand	Medium dense, olive yellow (2.5Y 6/6), fine to coarse SAND, trace Gravel, trace Silt.	100 U
SH-15D	S-4 / 19-21	12	7/8/97	BW101	Sand	Medium dense, pale olive (5Y 6/4) fine to medium SAND, trace Gravel, trace Silt.	240
SH-15D	S-9 / 44-46	37	7/8/97	BW101	Gray Sand	Medium dense, greenish-gray (10Y 6/1), fine to medium SAND, little Gravel, trace Silt.	100 U
SH-16D	S-6 / 24-26	0	7/11/97	BW101	Fine Sand	Medium dense, light yellowish-brown (10YR 6/4), fine SAND, trace Silt.	100 U
SH-16D	S-16 / 74-76	47	7/14/97	BW101	Till	Hard, dark greenish-gray (5G 4/1) SILT & CLAY, little Sand, little Gravel.	100 U
SH-17D	S-10 / 44-46	18	8/15/97	BW401	Gray Sand	Medium dense, greenish-gray (10Y 6/1), fine SAND, trace Silt.	100 U
SH-18D	S-7 / 29-31	4	8/22/97	BW401	Fine Sand	Medium dense, light yellowish-brown (10YR 6/4), fine SAND, and Silt, trace Gravel.	100 U
SH-18D	S-12 / 54-56	29	8/25/97	BW401	Fine Sand	Medium dense, light yellowish-brown (10YR 6/4), fine to coarse SAND, some Gravel, trace Silt. Localized rusty staining.	100 U

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Location	Sample/ Depth (feet)	Approximate Depth of Sample Below Observed Water Table (feet)	Sample Date	SDG	Soil Type	Soil/Sediment Description	TOC (mg/kg)
SH-23D	S-7 / 29-31	19	7/22/97	BW401	Gravelly Sand	Medium dense, olive (5Y 5/4), fine to coarse SAND, little Gravel, trace Silt.	100 U
SH-23D Dup.	S-7 / 29-31	19	7/22/97	BW401	Gravelly Sand	Field Duplicate of SH-23D.	290 JEB
SH-23D	S-12 / 54-56	44	7/22/97	BW401	Till	Very dense, greenish-gray (10Y 6/1), fine SAND, some Silt, trace Gravel.	230 JEB
SH-24D	S-21 / 94-96	77	7/28/98	BW401	Till	Hard, dark greenish-gray (5GY 4/1), SILT & CLAY, some fine Sand, trace Gravel. Portion of sample stratified with very thin layers of fine Sand, Silt, and Clay.	2,800 JEB
SH-26S	S-1 / 15-17	0	8/27/97	BW401	Gravelly Sand	Medium dense, brownish-yellow (10YR 6/8), fine to coarse SAND, some Gravel, trace Silt. Localized rusty staining.	910 EB
SP-1	S-3 / 2-3	N/A	12/5/97	BW408	Gravelly Sand	Brown (10YR 4/3), fine to medium SAND, little Gravel, trace Silt.	4,200
SP-2	S-3 / 2-3	N/A	12/5/97	BW408	Sand	Yellowish-brown (10YR 5/6), fine to medium SAND, trace Silt, trace Gravel.	14,000
SP-2 Dup.	S-3 / 2-3	N/A	12/5/97	BW408	Sand	Field Duplicate of SP-2.	15,000
SP-7	S-3 / 2-3	N/A	12/8/97	BW408	Sand	Olive yellow (2.5Y 6/6), fine to medium SAND, trace Silt.	600
SP-26	S-3 / 2-3	N/A	12/16/97	BW408	Fine Sand	Olive-yellow (2.5Y 6/6), fine SAND, some Silt. Layers of rust color staining.	100 U
SP-101	S-4 / 6-8	N/A	1/9/98	BW408	Gravelly Sand	Yellowish-brown (10YR 5/6), fine to coarse SAND, little Gravel, trace Silt.	230
SP-137	S-7 / 12-14	N/A	1/13/98	BW408	Gravelly Sand / Fine Sand	Light yellowish-brown (10YR 6/4), fine to coarse SAND, trace Gravel, trace Silt; change at 12.6 feet to olive-yellow (2.5Y 6/6), fine SAND, some Silt. Stratified rust discolorations.	100 U

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Location	Sample/ Depth (feet)	Approximate Depth of Sample Below Observed Water Table (feet)	Sample Date	SDG	Soil Type	Soil/Sediment Description	TOC (mg/kg)
SP-140	S-6 / 10-12	N/A	1/14/98	BW408	Sand	Light olive-brown (2.5Y 5/3), fine to medium SAND, trace Gravel, trace Silt. Stratified.	100 U
SP-143	S-1 / 6-8	N/A	1/15/98	BW408	Gravelly Sand	Yellowish-brown (10YR 5/6), fine to coarse SAND and Gravel, trace Silt.	210
SP-146	S-1 / 6-8	N/A	1/15/98	BW408	Gravelly Sand	Yellowish-brown (10YR 5/6), fine to coarse SAND, some Gravel, trace Silt.	1,200
S-1	- / 0-1	N/A	11/3/97	BW407	Surface Soil	Brown (10YR 4/3), fine to medium SAND, little Silt, trace fine Gravel, trace Organic Matter.	100 U
S-8	- / 0-1	N/A	11/3/97	BW407	Surface Soil	Yellowish-brown (10YR 5/6), fine to medium SAND, trace Silt, trace fine to coarse Gravel, trace Organic Matter.	3,300
S-14	- / 0-1	N/A	10/27/97	BW407	Surface Soil	Yellowish-brown (10YR 5/6), fine to coarse SAND, trace Silt, trace fine to coarse Gravel, trace Organic Matter.	5,500
S-23	- / 0-1	N/A	11/3/97	BW407	Surface Soil	Yellowish-brown (10YR 5/6), fine to medium SAND, little Silt, little fine to coarse Gravel, trace Cobbles.	8,700
S-41	- / 0-1	N/A	11/3/97	BW407	Surface Soil	Brown (10YR 4/3) with yellowish-brown (10YR 5/6), fine SAND, little Silt, trace fine Gravel.	8,100
S-69	- / 0-1	N/A	11/3/97	BW407	Surface Soil	Brown (10YR 4/3), fine to medium SAND, little Silt, little Organic Matter.	29,000 J
S-69 Dup.	- / 0-1	N/A	11/3/97	BW407	Surface Soil	Field Duplicate of S-69.	56,000 J
S-73	- / 0-1	N/A	11/3/97	BW407	Surface Soil	Brown (10YR 4/3), fine to medium SAND, little Silt, little Organic Matter, trace fine Gravel.	42,000
S-125	- / 0-1	N/A	10/31/97	BW407	Surface Soil	Yellowish-brown (10YR 5/6), fine to coarse SAND, trace Silt, trace fine to coarse Gravel, trace Organic Matter.	3,800
S-141	- / 0-1	N/A	11/3/97	BW407	Surface Soil	Brown (10YR 4/3), fine SAND, little Silt, trace fine Gravel, trace Organic Matter.	71,000

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Location	Sample/ Depth (feet)	Approximate Depth of Sample Below Observed Water Table (feet)	Sample Date	SDG	Soil Type	Soil/Sediment Description	TOC (mg/kg)
S-142	- / 0-1	N/A	11/3/97	BW407	Surface Soil	Brown (10YR 4/3), fine SAND, little Silt, trace coarse Gravel, trace Organic Matter.	32,000
S-143	- / 0-1	N/A	12/17/97	BW408	Surface Soil	Brown (10YR 4/3), fine to medium SAND, little Silt, little Organic Matter.	24,000
SS-1	- / 0-0.5	N/A	10/6/97	BW403	Stream Sediment	Brown (10YR 4/3), SILT, trace fine Sand.	60,000
SS-2	- / 0-0.5	N/A	10/7/97	BW403	Stream Sediment	Brown (10YR 4/3), SILT, some Organic Matter, little fine Gravel.	>99,000
SS-3A	- / 0-0.5	N/A	5/28/98	BW418	Stream Sediment	Black (10YR 2/1), Fine SAND and SILT, trace Organic Matter.	82,000
SS-3A Dup.	- / 0-0.5	N/A	5/28/98	BW418	Stream Sediment	Field Duplicate of SS-3A.	79,000
SSB-3B	- / 0-0.3	N/A	10/6/99	BW420	Stream Sediment	Dark brown (10YR3/3), SILT and ORGANIC MATTER, some fine to coarse Sand. Wet.	32,000
SS-4	- / 0-0.5	N/A	10/8/97	BW403	Stream Sediment	Dark brown (10YR 3/3), SILT and Organic Matter, trace fine Sand.	78,000
SSB-8A	- / 0-0.3	N/A	10/5/99	BW420	Stream Sediment	Dark brown (10YR3/3), ORGANIC MATTER, some Silt, trace fine Sand. Wet.	49,000
SS-10	- / 0-0.5	N/A	10/7/97	BW403	Stream Sediment	Dark brown (10YR 3/3), SILT, little fine to medium Sand.	55,000
SSB-10A	- / 0-0.3	N/A	10/5/99	BW420	Stream Sediment	Very dark brown (10YR2/2), ORGANIC MATTER and SILT. Wet.	76,000
SSB-10B	- / 0-0.3	N/A	10/5/99	BW420	Stream Sediment	Very dark brown (10YR2/2), ORGANIC MATTER and SILT. Wet.	55,000
SSB-10C	- / 0-0.3	N/A	10/6/99	BW420	Stream Sediment	Very dark brown (10YR2/2), ORGANIC MATTER and SILT, trace fine Sand. Wet.	90,000

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Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Location	Sample/ Depth (feet)	Approximate Depth of Sample Below Observed Water Table (feet)	Sample Date	SDG	Soil Type	Soil/Sediment Description	TOC (mg/kg)
SS-11	- / 0-0.5	N/A	10/6/97	BW403	Stream Sediment	Dark brown (10YR 3/3), SILT, trace fine Sand, trace Organic Matter.	39,000
SS-12	- / 0-0.5	N/A	10/6/97	BW403	Stream Sediment	Dark brown (10YR 3/3), SILT and fine Sand, trace medium Sand, Organic Matter present.	44,000
SSB-12A	- / 0-0.3	N/A	10/6/99	BW420	Stream Sediment	Dark brown (10YR3/3), ORGANIC MATTER and SILT, trace fine Sand. Wet.	37,000
SS-13	- / 0-0.5	N/A	10/3/97	BW403	Stream Sediment	Brown (10YR 4/3), Silty sediment, trace fine Sand.	76,000
SS-14	- / 0-0.5	N/A	10/3/97	BW403	Stream Sediment	Brown (10YR 4/3), Silty sediment, trace fine Sand.	100,000
SSB-14A	- / 0-0.3	N/A	10/5/99	BW420	Stream Sediment	Dark brown (10YR3/3), ORGANIC MATTER, some Silt, little fine to medium Sand. Wet.	20,000
SS-16	- / 0-0.5	N/A	10/3/97	BW403	Stream Sediment	Dark brown (10YR 3/3), Silty sediment, high liquid content, high organic content.	87,000
SS-16 Dup.	- / 0-0.5	N/A	10/3/97	BW403	Stream Sediment	Field Duplicate of SS-16.	57,000
SSB-16A	- / 0-0.3	N/A	10/5/99	BW420	Stream Sediment	Dark brown (10YR3/3), ORGANIC MATTER and SILT, trace fine Sand. Wet.	22,000
SS-17	- / 0-0.5	N/A	10/2/97	BW403	Stream Sediment	Dark brown (10YR 3/3), Semi-solid, silty sediment, trace fine Sand.	86,000
SSB-19	- / 0-0.3	N/A	10/6/99	BW420	Stream Sediment	Dark brown (10YR3/3), ORGANIC MATTER, some Silt, little fine Sand. Wet.	18,000
OS-5	- / 0-0.5	N/A	10/9/97	BW404	Overbank Sediment	Dark brown (10YR 3/3), SILT and fine to medium Sand, little Organic Matter.	>180,000
OS-5A	- / 0-1	N/A	5/28/98	BW418	Overbank Sediment	Very dark gray (5YR 3/1), Fine to medium SAND, some Silt, trace Organic Matter.	49,000

TABLE 3
Summary of Total Organic Carbon Data
Soil and Stream Sediment Samples
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Location	Sample/ Depth (feet)	Approximate Depth of Sample Below Observed Water Table (feet)	Sample Date	SDG	Soil Type	Soil/Sediment Description	TOC (mg/kg)
OS-5B	- / 0-1	N/A	5/28/98	BW418	Overbank Sediment	Black (10YR 2/1); Fine SAND and SILT, little Organic Matter.	>110,000
OS-5C	- / 0-1	N/A	5/28/98	BW418	Overbank Sediment	Brown (10YR 4/3), Fine to medium SAND, some Silt, trace Gravel, trace Organic Matter.	66,000
OS-6	- / 0-0.5	N/A	10/9/97	BW404	Overbank Sediment	Brown (10YR 4/3), SILT and Organic Matter, little fine Sand.	130,000
OS-6A	- / 0-0.5	N/A	10/9/97	BW404	Overbank Sediment	Brown (10YR 4/3), SILT and Organic Matter, little fine Sand.	100,000
OS-7	- / 0-0.5	N/A	10/9/97	BW404	Overbank Sediment	Dark brown (10YR 3/3), SILT and Organic Material, trace fine Sand.	75,000
OS-8	- / 0-0.5	N/A	10/9/97	BW404	Overbank Sediment	Dark brown (10YR 3/3), SILT and Organic Material, trace fine Sand.	>110,000
OS-8 Dup.	- / 0-0.5	N/A	10/9/97	BW404	Overbank Sediment	Field Duplicate of OS-8.	>110,000
OS-9	- / 0-0.5	N/A	10/8/97	BW404	Overbank Sediment	Dark brown (10YR 3/3), SILT, little fine Sand, little Organic Matter.	50,000
OS-10	- / 0-0.5	N/A	10/8/97	BW404	Overbank Sediment	Dark brown (10YR 3/3), SILT, little fine Sand, little Organic Matter.	>110,000
OSPG-10A	- / 0-0.3	N/A	10/4/99	BW420	Overbank Sediment	Very dark brown (10YR2/2), ORGANIC MATTER and SILT, little fine Sand. Wet.	92,000
OSPG-10A Dup	- / 0-0.3	N/A	10/4/99	BW420	Overbank Sediment	Very dark brown (10YR2/2), ORGANIC MATTER and SILT, little fine Sand. Wet.	97,000
OSPG-10B	- / 0-0.3	N/A	10/4/99	BW420	Overbank Sediment	Very dark brown (10YR2/2), ORGANIC MATTER and SILT, trace fine to medium Sand. Wet.	67,000
OSPG-10C	- / 0-0.3	N/A	10/4/99	BW420	Overbank Sediment	Very dark brown (10YR2/2), ORGANIC MATTER and SILT, trace fine Sand. Wet.	38,000

TABLE 3
Summary of Total Organic Carbon Data
Soil and Stream Sediment Samples
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Location	Sample/ Depth (feet)	Approximate Depth of Sample Below Observed Water Table (feet)	Sample Date	SDG	Soil Type	Soil/Sediment Description	TOC (mg/kg)
OS-12	- / 0-0.5	N/A	10/8/97	BW404	Overbank Sediment	Dark brown (10YR 3/3), SILT, trace fine Sand, trace Organic Matter.	68,000
OS-13	- / 0-0.5	N/A	10/8/97	BW404	Overbank Sediment	Brown (10YR 4/3), SILT, trace fine Sand, trace root material (Organic Matter).	>180,000
OS-14	- / 0-0.5	N/A	10/8/97	BW404	Overbank Sediment	Dark brown (10YR 3/3), SILT, trace fine Sand, trace Organic Matter.	>110,000
SSBPG-Sea	- / 0-0.3	N/A	10/6/99	BW420	Stream Sediment	Black (10YR2/1), ORGANIC MATTER and SILT, trace fine Sand. Wet.	80,000
SSBPG-McQ	- / 0-0.3	N/A	10/7/99	BW420	Stream Sediment	Dark brown (10YR3/3), ORGANIC MATTER, some Silt, little fine to medium Sand. Wet.	57,000

Notes:

1. Samples were collected by SHA on the dates indicated.

2. Samples in SDG BW101 were analyzed by NEI/GTEL using analytical method CA DOA 18.0. Samples in all other SDGs were analyzed by Woods Hole Analytical Laboratories using Modified United States Environmental Protection Agency (USEPA) Method 9060.

3. "-" indicates only one sample was taken at the location.
"NA" indicates not applicable; the sample is from above the water table, or a sediment sample.

4. ">" indicates the TOC sample was run with minimum possible sample size and still exceeded calibration range. Use value as low-biased estimate.
"U" indicates not detected above the method detection limit.
"J" indicates an estimated value.
"EB" indicates the compound was detected in the associated aqueous equipment blank.

5. Refer to appendices for Field Sampling Summaries, Boring Logs, and validated analytical data reports.

TABLE 4
Summary of Groundwater Elevations and Product Thickness Measurements
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Monitoring Well Location	Reference Elevation (ft)	Ground Surface Elevation (ft)	Specific Gravity of Product	September 8-15, 1997			October 22-23, 1997		
				Depth to Water (ft)	Product Thickness (ft)	Equivalent Potentiometric Elevation (ft)	Depth to Water (ft)	Product Thickness (ft)	Equivalent Potentiometric Elevation (ft)
AE-1	128.42	126.07		19.33		109.09	19.63		108.79
AE-2	127.47	125.45		18.53		108.94	18.79	Sheen	108.68
AE-3	122.47	119.39	0.83	13.36	0.01	109.12	13.63	0.05	108.88
AE-4	133.62	131.21	0.83	23.84	Sheen	109.78	24.23	0.01	109.40
AE-5	130.93	131.17	0.90	23.03	0.45	108.31	23.52	0.74	108.08
AE-8	133.93	131.66	0.91	*			29.84	4.57	108.25
AE-9	132.49	130.22	0.82	25.82	1.54	107.93	25.92	1.40	107.72
AE-10	132.33	129.31		19.58		112.75	20.46		111.87
AE-11D	132.47	130.72		24.02		108.45	24.32		108.15
AE-11S	133.46	130.77	0.86	**			26.57	2.08	108.68
AE-12	132.69	129.91		21.32		111.37	22.06		110.63
AE-14	131.69	129.12		24.63		107.06	24.78		106.91
AE-16	121.98	121.82	0.86	NM			NM		
AE-17D	121.27	118.64		16.20		105.07	16.03		105.24
AE-17S	121.19	118.31		15.99		105.20	15.92		105.27
AE-18D	121.61	119.75		16.48		105.13	16.38		105.23
AE-18S	123.21	119.77		18.08		105.13	17.94		105.27
AE-19	120.82	118.40		15.42		105.40	15.41		105.41
AE-20	130.68	127.59		17.53		113.15	18.52		112.16
AE-21	131.61	131.95		21.28		110.33	21.80		109.81
AE-22	131.84	131.84		21.87		109.97	22.30		109.54
BR-1	111.83	109.80	0.92	NI			NI		
BR-2	112.49	110.18	0.92	NI			NI		
BR-3	112.79	110.29	0.92	NI			NI		
BR-4	114.05	111.12	0.92	NI			NI		
BR-5	114.17	111.20	0.92	NI			NI		
BR-6	114.30	111.63	0.92	NI			NM		
BR-7	120.04	117.05	0.86	NI			NI		
BR-8	130.35	130.96	0.87	NI			NM		
BR-9	130.09	130.76	0.87	NI			NM		
BR-10	130.26	130.53	0.87	NI			NM		
BR-11	132.05	129.83	0.92	NI			NM		
BR-12	133.17	130.03	0.92	NI			NM		
BR-13	122.00	118.80	0.86	NI			NM		
BR-14	121.89	119.14	0.86	NI			NM		
BR-15	125.35	122.55	0.87	NI			NI		
BR-16	133.85	131.25	0.87	NI			NI		
BR-17	133.05	130.44	0.87	NI			NI		
BR-18	121.46	118.55	0.83	NI			NI		
BR-19	133.76	130.85	0.83	NI			NI		
BR-20	133.45	130.30	0.83	NI			NI		
BR-21	133.85	131.16	0.92	NI			NI		
BR-22	130.82	127.82	0.87	NI			NI		
BR-23	131.82	128.95	0.86	NI			NI		
BR-24	122.40	119.47	0.86	NI			NI		
BR-25	130.68	127.72	0.83	NI			NI		
BR-26	131.15	128.14	0.87	NI			NI		
BR-27	134.27	131.26	0.86	NI			NI		
BR-28	118.32	115.50	0.86	NI			NI		
BRE-1	130.54	130.76	0.87	NI			NM		
BRE-2	132.30	130.02	0.92	NI			NM		
BRE-3	121.44	118.97	0.86	NI			NM		
BR-TRENCH 1 (Sump)	110.67		0.86	NI			NI		
BR-TRENCH 2	111.52		0.86	NI			NI		
BR-TRENCH 3	111.64		0.86	NI			NI		
BR-TRENCH 4	111.61		0.86	NI			NI		
BR-TRENCH 5	111.64		0.86	NI			NI		
BR-TRENCH 6	111.59		0.86	NI			NI		
BR-TRENCH 7	111.62		0.86	NI			NI		
BR-TRENCH 8	111.62		0.86	NI			NI		
BR-TRENCH 9	111.49		0.86	NI			NI		
BR-TRENCH 10	111.57		0.86	NI			NI		
BR-TRENCH 11	111.59		0.86	NI			NI		
BR-TRENCH 12	111.52		0.86	NI			NI		
BR-TRENCH 13	111.53		0.86	NI			NI		
FDMW-1	130.54	127.81		NM			NM		
FDMW-2	135.59	133.73		NM			NM		
FDMW-3	135.85	133.45		NM			NM		
FDMW-4	133.09	133.30		NM			NM		
FDMW-5	132.25	129.76		NM			NM		
Lot 51-1-1-COB	108.22	106.54		4.89		103.33	5.06		103.16
Lot 51-1-1-OB	116.71	115.42		11.84		104.87	11.80		104.91
MW-4	125.36	123.18		14.45		110.91	15.18		110.18
On-Site Dug Well	112.90	108.31		8.01		104.89	7.89		105.01
RFW-1	133.22	130.73		25.85	Sheen	107.37	25.07		108.15
RFW-2	113.52	111.43		5.86		107.66	6.03		107.49
SH-1D	127.13	124.78		18.24		108.89	18.53		108.60
SH-1I	128.68	125.95		19.88		108.80	20.14		108.54
SH-2D	122.74	120.14		18.13		104.61	18.04		104.70
SH-2I	123.07	120.15		18.48		104.59	18.39		104.68
SH-2S	122.83	120.13		18.25		104.58	18.15		104.68
SH-3D	132.00	129.70		25.82		106.18	26.02		105.98
SH-3I	132.27	129.52		26.04		106.23	26.24		106.03

TABLE 4
Summary of Groundwater Elevations and Product Thickness Measurements
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Monitoring Well Location	Reference Elevation (ft)	Ground Surface Elevation (ft)	Specific Gravity of Product	September 8-15, 1997			October 22-23, 1997		
				Depth to Water (ft)	Product Thickness (ft)	Equivalent Potentiometric Elevation (ft)	Depth to Water (ft)	Product Thickness (ft)	Equivalent Potentiometric Elevation (ft)
SH-3S	131.61	129.52		25.11		106.50	25.15		106.46
SH-4D	131.10	128.42		22.37		108.73	22.84		108.26
SH-4I	131.38	128.48		22.47		108.91	22.93		108.45
SH-4S	130.83	128.33		19.38		111.45	20.21		110.62
SH-5S	130.43	130.72	0.89	***			28.77	8.03	108.81
SH-6S	120.62	118.15	0.87	15.15	1.75	106.99	15.42	1.94	106.89
SH-7S	133.81	131.12	0.89	24.56	1.25	110.36	25.53	1.67	109.77
SH-8S	131.20	131.59		21.35		109.85	21.82		109.38
SH-9S	132.62	129.81		25.42		107.20	25.70		106.92
SH-10D	129.09	126.35		22.02		107.07	22.17		106.92
SH-10I	129.56	126.89		22.37		107.19	22.53		107.03
SH-10S	128.40	127.00	0.78	23.83	2.68	106.66	23.08	1.81	106.73
SH-11S	121.20	118.93		15.80		105.40	15.71		105.49
SH-12S	120.54	118.16		11.19		109.35	11.49		109.05
SH-13D	120.98	118.23		15.94		105.04	15.92		105.06
SH-14D	122.26	119.30		17.80		104.46	17.71		104.55
SH-14I	122.21	119.05		17.73		104.48	17.63		104.58
SH-14S	121.79	119.09		17.50		104.29	17.25		104.54
SH-15D	112.19	109.08		7.11		105.08	7.06		105.13
SH-15I	111.93	109.01		7.11		104.82	6.98		104.95
SH-15S	111.43	108.82		6.57		104.86	6.46		104.97
SH-16D	133.28	130.42		27.14		106.14	27.22		106.06
SH-16I	133.16	130.24		25.54		107.62	25.85		107.31
SH-16S	133.04	130.32		24.97		108.07	25.39		107.65
SH-17D	133.26	130.51		25.71		107.55	25.80		107.46
SH-17I	133.25	130.24		25.15		108.10	25.38		107.87
SH-18D	133.35	130.62		24.66		108.69	24.95		108.40
SH-19D	115.09	112.18		7.36		107.73	7.50		107.59
SH-19I	115.21	112.07		8.74		106.47	8.75		106.46
SH-19S	115.17	112.28		8.86		106.31	8.85		106.32
SH-20D	110.98	108.42		5.33		105.65	5.26		105.72
SH-20I	111.10	108.24		5.51		105.59	5.45		105.65
SH-20S	112.33	108.55		6.83		105.50	6.73		105.60
SH-21D	122.28	123.00		16.61		105.67	16.70		105.58
SH-21I	122.62	123.07		16.89		105.73	16.98		105.64
SH-21S	122.69	123.08		16.96		105.73	17.06		105.63
SH-22D	110.20	107.63		8.05		102.15	8.06		102.14
SH-22R	109.50	107.66		NI			NI		
SH-22S	109.89	107.07		8.01		101.88	7.99		101.90
SH-23D	114.30	111.56		10.36		103.94	10.43		103.87
SH-23I	114.27	111.90		10.76		103.51	10.78		103.49
SH-23S	114.13	111.30		10.64		103.49	10.70		103.43
SH-24D	122.20	122.40		18.10		104.10	17.16		105.04
SH-24I	121.65	121.96		15.16		106.49	15.47		106.18
SH-24S	122.10	122.45		15.38		106.72	15.78		106.32
SH-25D	128.01	128.21		24.48		103.53	23.38		104.63
SH-25I	127.76	128.02		19.48		108.28	19.95		107.81
SH-25S	128.02	128.23		17.47		110.55	18.26		109.76
SH-26S	122.02	118.99		16.76		105.26	16.66		105.36
SH-27S	115.04	111.89		10.07		104.97	10.12		104.92
SH-28S	106.37	106.63		3.61		102.76	3.57		102.80
SH-29S	106.01	106.38		2.32		103.69	2.29		103.72
SH-30S	129.82	127.25		16.80		113.02	17.78		112.04
SH-31S	131.28	128.79		18.51		112.77	19.43		111.85
SH-32I	132.29	132.55		NI			NI		
SH-32S	132.25	132.67		NI			22.43		109.82
SH-33S	132.48	132.97		NI			22.74		109.74
SH-34S	131.88	132.30		NI			22.05		109.83
SH-36S	132.53	129.89		23.38		109.15	24.97		107.56
SH-37S	133.21	130.18	0.86	24.76	0.01	108.46	25.11		108.10
SH-38S	131.26	128.51		23.08	Sheen	108.18	23.25		108.01
SH-40S	124.58	124.97		17.39		107.19	17.59		106.99
SH-41S	116.28	113.43		10.43		105.85	10.49		105.79
SH-42S	118.54	118.76		12.48		106.06	12.51		106.03
SH-43S	120.83	118.38		15.04	Sheen	105.79	15.01		105.82
SH-44S	121.87	119.22		16.55		105.32	16.47		105.40
SH-45S	118.51	116.08		13.18		105.33	13.06		105.45
SH-46S	122.63	119.69		17.86		104.77	17.75		104.88
SH-47S	122.09	119.33		17.12		104.97	16.95		105.14
SH-48S	119.44	116.45		14.44		105.00	14.32		105.12
SH-49S	118.55	115.80		13.62		104.93	13.52		105.03
SH-50S	118.05	115.10		13.34		104.71	13.22		104.83
SH-51S	122.18	119.22		17.70		104.48	17.59		104.59
SH-52S	114.88	112.07		10.35		104.53	10.25		104.63
SH-53S	131.91	129.10		NI			NI		
SH-54S	132.61	129.66		NI			NI		
SH-55S	132.70	129.97		NI			NI		
SH-56S	131.88	129.07		NI			NI		
SH-57S	134.09	131.05		NI			NI		
SH-58S	131.69	131.91		NI			NI		
SHMW-1	131.13	129.09		NI			NI		
SHMW-2	131.99	129.84		NI			NI		
SHMW-3	131.98	129.93		NI			NI		

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Remedial Investigation
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Plaistow, New Hampshire

Monitoring Well Location	Reference Elevation (ft)	Ground Surface Elevation (ft)	Specific Gravity of Product	September 8-15, 1997			October 22-23, 1997		
				Depth to Water (ft)	Product Thickness (ft)	Equivalent Potentiometric Elevation (ft)	Depth to Water (ft)	Product Thickness (ft)	Equivalent Potentiometric Elevation (ft)
SHMW-4	131.60	129.55		NI			NI		
SHMW-5	131.52	129.43		NI			NI		
SHMW-6	132.03	130.02		NI			NI		
SHMW-7	132.33	130.27		NI			NI		
SHMW-8	131.69	130.13		NI			NI		
SHMW-9	132.78	130.24		NI			NI		
SHMW-10	133.11	131.50		NI			NI		
SHMW-11	133.48	131.74		NI			NI		
SHMW-12	133.12	131.44		NI			NI		
SHMW-13	133.38	131.68		NI			NI		
SHMW-14	131.74	130.06		NI			NI		
SHMW-15	133.23	131.65		NI			NI		
SHMW-16	132.40	130.69		NI			NI		
SHMW-17	134.67	132.10		NI			NI		
SHMW-18	135.58	132.94		NI			NI		
SHMW-19	131.94	130.51		NI			NI		
SHMW-20	133.99	132.50		NI			NI		
WP-3	110.84	110.49		NI			1.97		108.87
WP-4	109.44	108.64		NI			1.67		107.77
WP-5	108.79	107.71		NI			1.86		106.93
WP-6	108.17	107.05		NI			1.65		106.52
WP-10	106.84	105.69		NI			1.21		105.63
WP-12	105.35	104.38		NI			0.41		104.94
WP-14	106.09	104.96		NI			1.54		104.55
WP-15	105.27	104.40		NI			0.98		104.29
WP-17	104.95	104.43		NI			1.45		103.50
WP-17A	103.27	102.51		NI			0.33		102.94
WP-18	103.31	102.37		NI			1.31		102.00
WS-1	132.60	131.10		26.55		106.05	26.54		106.06

TABLE 4
Summary of Groundwater Elevations and Product Thickness Measurements
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Monitoring Well Location	Reference Elevation (ft)	Ground Surface Elevation (ft)	Specific Gravity of Product	March 25-26, 1998			September 2-3, 1998		
				Depth to Water (ft)	Product Thickness (ft)	Equivalent Potentiometric Elevation (ft)	Depth to Water (ft)	Product Thickness (ft)	Equivalent Potentiometric Elevation (ft)
AE-1	128.42	126.07		17.46		110.96	18.82		109.60
AE-2	127.47	125.45		16.70		110.77	18.02		109.45
AE-3	122.47	119.39	0.83	10.79	0.01	111.69	12.58	0.12	109.99
AE-4	133.62	131.21	0.83	21.72	0.01	111.91	23.01	Sheen	110.61
AE-5	130.93	131.17	0.90	20.73	Sheen	110.20	22.06	0.01	108.88
AE-8	133.93	131.66	0.91	23.83	0.41	110.47	27.08	2.07	108.73
AE-9	132.49	130.22	0.82	23.36	0.71	109.71	24.77	0.93	108.48
AE-10	132.33	129.31		17.40		114.93	18.20		114.13
AE-11D	132.47	130.72		22.14		110.33	23.32		109.15
AE-11S	133.46	130.77	0.86	23.67	1.42	111.01	25.30	1.99	109.87
AE-12	132.69	129.91		19.16		113.53	19.93		112.76
AE-14	131.69	129.12		22.91		108.78	23.97		107.72
AE-16	121.98	121.82	0.86	17.05	4.70	108.97	18.07	4.61	107.87
AE-17D	121.27	118.64		14.64		106.63	15.53		105.74
AE-17S	121.19	118.31		14.40		106.79	15.38		105.81
AE-18D	121.61	119.75		15.16		106.45	15.92		105.69
AE-18S	123.21	119.77		16.77		106.44	17.54		105.67
AE-19	120.82	118.40		13.58		107.24	NM		
AE-20	130.68	127.59		15.26		115.42	15.98		114.70
AE-21	131.61	131.95		19.12		112.49	20.42		111.19
AE-22	131.84	131.84		19.76		112.08	21.09		110.75
BR-1	111.83	109.80	0.92	4.54	0.27	107.54	5.52	0.30	106.59
BR-2	112.49	110.18	0.92	4.67	0.92	108.67	5.56	0.86	107.72
BR-3	112.79	110.29	0.92	4.69	0.01	108.11	5.46	0.01	107.34
BR-4	114.05	111.12	0.92	8.24	3.24	108.79	8.56	2.48	107.77
BR-5	114.17	111.20	0.92	8.84	3.77	108.80	8.88	2.74	107.81
BR-6	114.30	111.63	0.92	5.73	0.74	109.25	6.59	0.36	108.04
BR-7	120.04	117.05	0.86	****			NM		
BR-8	130.35	130.96	0.87	21.05	2.33	111.33	22.97	3.23	110.19
BR-9	130.09	130.76	0.87	18.82	0.01	111.28	23.43	3.97	110.11
BR-10	130.26	130.53	0.87	19.02	Sheen	111.24	23.30	3.52	110.02
BR-11	132.05	129.83	0.92	25.19	3.26	109.86	25.56	2.42	108.72
BR-12	133.17	130.03	0.92	26.93	4.08	109.99	28.84	4.52	108.49
BR-13	122.00	118.80	0.86	13.90	0.70	108.70	15.61	1.48	107.66
BR-14	121.89	119.14	0.86	14.51	1.42	108.60	15.89	1.86	107.60
BR-15	125.35	122.55	0.87	?			NM		
BR-16	133.85	131.25	0.87	21.94	0.01	111.92	NM		
BR-17	133.05	130.44	0.87	22.13	Sheen	110.92	NM		
BR-18	121.46	118.55	0.83	?			NM		
BR-19	133.76	130.85	0.83	?			NM		
BR-20	133.45	130.30	0.83	?			NM		
BR-21	133.85	131.16	0.92	23.43	0.01	110.43	NM		
BR-22	130.82	127.82	0.87	*****			NM		
BR-23	131.82	128.95	0.86	?			NM		
BR-24	122.40	119.47	0.86	14.31	Sheen	108.09	NM		
BR-25	130.68	127.72	0.83	22.78	1.55	109.19	NM		
BR-26	131.15	128.14	0.87	?			NM		
BR-27	134.27	131.26	0.86	23.70	0.01	110.58	NM		
BR-28	118.32	115.50	0.86	11.96	2.08	108.15	NM		
BRE-1	130.54	130.76	0.87	19.33	0.10	111.30	23.41	3.45	110.13
BRE-2	132.30	130.02	0.92	26.04	4.27	110.19	26.19	3.05	108.92
BRE-3	121.44	118.97	0.86	12.98	0.23	108.66	14.29	0.58	107.65
BR-TRENCH 1 (Sump)	110.67		0.86	1.86	0.02	108.83	2.90	0.01	107.78
BR-TRENCH 2	111.52		0.86	NM			NM		
BR-TRENCH 3	111.64		0.86	3.02	0.01	108.63	4.00	0.01	107.65
BR-TRENCH 4	111.61		0.86	NM			NM		
BR-TRENCH 5	111.64		0.86	3.02	0.00	108.62	4.00	0.01	107.65
BR-TRENCH 6	111.59		0.86	NM			NM		
BR-TRENCH 7	111.62		0.86	3.00	0.01	108.63	3.97	Sheen	107.65
BR-TRENCH 8	111.62		0.86	NM			NM		
BR-TRENCH 9	111.49		0.86	2.88	0.01	108.62	3.85	Sheen	107.64
BR-TRENCH 10	111.57		0.86	NM			NM		
BR-TRENCH 11	111.59		0.86	2.98	0.00	108.61	3.94	0.01	107.66
BR-TRENCH 12	111.52		0.86	NM			NM		
BR-TRENCH 13	111.53		0.86	2.92	0.00	108.61	3.88	Sheen	107.65
FDMW-1	130.54	127.81		18.68		111.86	20.11		110.43
FDMW-2	135.59	133.73		23.67		111.92	25.11		110.48
FDMW-3	135.85	133.45		23.70		112.15	25.14		110.71
FDMW-4	133.09	133.30		21.35		111.74	22.79		110.30
FDMW-5	132.25	129.76		20.82		111.43	22.25		110.00
Lot 51-1-1-COB	108.22	106.54		4.14		104.08	4.45		103.77
Lot 51-1-1-OB	116.71	115.42		10.66		106.05	11.26		105.45
MW-4	125.36	123.18		12.19		113.17	13.10		112.26
On-Site Dug Well	112.90	108.31		6.80		106.10	7.49		105.41
RFW-1	133.22	130.73		23.08		110.14	24.35		108.87
RFW-2	113.52	111.43		4.34		109.18	5.51		108.01
SH-1D	127.13	124.78		16.35		110.78	17.67		109.46
SH-1I	128.68	125.95		18.04		110.64	19.36		109.32
SH-2D	122.74	120.14		16.86		105.88	17.59		105.15
SH-2I	123.07	120.15		17.21		105.86	17.94		105.13
SH-2S	122.83	120.13		17.00		105.83	17.76		105.07
SH-3D	132.00	129.70		23.89		108.11	25.01		106.99
SH-3I	132.27	129.52		24.09		108.18	25.16		107.11

TABLE 4
Summary of Groundwater Elevations and Product Thickness Measurements
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Monitoring Well Location	Reference Elevation (ft)	Ground Surface Elevation (ft)	Specific Gravity of Product	March 25-26, 1998			September 2-3, 1998		
				Depth to Water (ft)	Product Thickness (ft)	Equivalent Potentiometric Elevation (ft)	Depth to Water (ft)	Product Thickness (ft)	Equivalent Potentiometric Elevation (ft)
SH-3S	131.61	129.52		22.74		108.87	23.94		107.67
SH-4D	131.10	128.42		20.28		110.82	21.35		109.75
SH-4I	131.38	128.48		20.33		111.05	21.32		110.06
SH-4S	130.83	128.33		17.33		113.50	17.96		112.87
SH-5S	130.43	130.72	0.89	20.40	1.57	111.43	23.66	3.92	110.26
SH-6S	120.62	118.15	0.87	14.89	3.40	108.69	15.02	2.38	107.67
SH-7S	133.81	131.12	0.89	21.74	0.57	112.58	23.05	0.73	111.41
SH-8S	131.20	131.59		19.28		111.92	20.46		110.74
SH-9S	132.62	129.81		23.29		109.33	24.58		108.04
SH-10D	129.09	126.35		20.33		108.76	21.59		107.50
SH-10I	129.56	126.89		20.80		108.76	21.83		107.73
SH-10S	128.40	127.00	0.78	21.41	1.67	108.29	22.53	1.83	107.30
SH-11S	121.20	118.93		14.00		107.20	15.12		106.08
SH-12S	120.54	118.16		9.27		111.27	10.63		109.91
SH-13D	120.98	118.23		14.45		106.53	15.77		105.21
SH-14D	122.26	119.30		16.62		105.64	17.26		105.00
SH-14I	122.21	119.05		16.55		105.66	17.22		104.99
SH-14S	121.79	119.09		16.17		105.62	16.89		104.90
SH-15D	112.19	109.08		5.85		106.34	6.69		105.50
SH-15I	111.93	109.01		5.88		106.05	6.58		105.35
SH-15S	111.43	108.82		5.38		106.05	6.08		105.35
SH-16D	133.28	130.42		24.93		108.35	26.15		107.13
SH-16I	133.16	130.24		23.55		109.61	24.64		108.52
SH-16S	133.04	130.32		22.78		110.26	23.90		109.14
SH-17D	133.26	130.51		23.59		109.67	25.47		107.79
SH-17I	133.25	130.24		23.44		109.81	24.47		108.78
SH-18D	133.35	130.62		22.75		110.60	24.04		109.31
SH-19D	115.09	112.18		5.08		110.01	6.96		108.13
SH-19I	115.21	112.07		7.35		107.86	8.31		106.90
SH-19S	115.17	112.28		7.70		107.47	8.42		106.75
SH-20D	110.98	108.42		3.85		107.13	5.07		105.91
SH-20I	111.10	108.24		3.97		107.13	4.98		106.12
SH-20S	112.33	108.55		5.45		106.88	6.31		106.02
SH-21D	122.28	123.00		15.11		107.17	16.19		106.09
SH-21I	122.62	123.07		15.35		107.27	16.47		106.15
SH-21S	122.69	123.08		15.44		107.25	16.55		106.14
SH-22D	110.20	107.63		6.56		103.64	7.48		102.72
SH-22R	109.50	107.66		NI			7.16		102.34
SH-22S	109.89	107.07		6.54		103.35	7.25		102.64
SH-23D	114.30	111.56		8.62		105.68	9.77		104.53
SH-23I	114.27	111.90		8.84		105.43	10.13		104.14
SH-23S	114.13	111.30		8.71		105.42	10.02		104.11
SH-24D	122.20	122.40		14.94		107.26	16.45		105.75
SH-24I	121.65	121.96		12.96		108.69	14.12		107.53
SH-24S	122.10	122.45		13.14		108.96	14.33		107.77
SH-25D	128.01	128.21		20.14		107.87	21.67		106.34
SH-25I	127.76	128.02		17.30		110.46	18.29		109.47
SH-25S	128.02	128.23		15.69		112.33	16.30		111.72
SH-26S	122.02	118.99		15.49		106.53	16.22		105.80
SH-27S	115.04	111.89		8.43		106.61	9.45		105.59
SH-28S	106.37	106.63		2.36		104.01	2.96		103.41
SH-29S	106.01	106.38		0.86		105.15	1.85		104.16
SH-30S	129.82	127.25		14.53		115.29	15.22		114.60
SH-31S	131.28	128.79		16.27		115.01	17.02		114.26
SH-32I	132.29	132.55		NI			21.18		111.11
SH-32S	132.25	132.67		19.73		112.52	20.94		111.31
SH-33S	132.48	132.97		20.10		112.38	21.27		111.21
SH-34S	131.88	132.30		19.32		112.56	20.47		111.41
SH-36S	132.53	129.89		21.06		111.47	22.04		110.49
SH-37S	133.21	130.18	0.86	22.68		110.53	23.78	Sheen	109.43
SH-38S	131.26	128.51		20.86		110.40	22.14	Sheen	109.12
SH-40S	124.58	124.97		15.51		109.07	16.69		107.89
SH-41S	116.28	113.43		8.64		107.64	9.77		106.51
SH-42S	118.54	118.76		10.90		107.64	11.91		106.63
SH-43S	120.83	118.38		13.63		107.20	14.46		106.37
SH-44S	121.87	119.22		15.17		106.70	15.98		105.89
SH-45S	118.51	116.08		11.56		106.95	12.51		106.00
SH-46S	122.63	119.69		16.38		106.25	17.28		105.35
SH-47S	122.09	119.33		15.69		106.40	16.52		105.57
SH-48S	119.44	116.45		13.18		106.26	13.89		105.55
SH-49S	118.55	115.80		12.44		106.11	13.20		105.35
SH-50S	118.05	115.10		12.05		106.00	12.81		105.24
SH-51S	122.18	119.22		16.43		105.75	17.22		104.96
SH-52S	114.88	112.07		9.22		105.66	9.83		105.05
SH-53S	131.91	129.10		17.11		114.80	17.93		113.98
SH-54S	132.61	129.66		NI			18.31		114.30
SH-55S	132.70	129.97		NI			18.98		113.72
SH-56S	131.88	129.07		NI			17.98		113.90
SH-57S	134.09	131.05		NI			20.57		113.52
SH-58S	131.69	131.91		NI			20.22		111.47
SHMW-1	131.13	129.09		NI			18.37		112.76
SHMW-2	131.99	129.84		NI			17.52		114.47
SHMW-3	131.98	129.93		NI			19.71		112.27

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Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Monitoring Well Location	Reference Elevation (ft)	Ground Surface Elevation (ft)	Specific Gravity of Product	March 25-26, 1998			September 2-3, 1998		
				Depth to Water (ft)	Product Thickness (ft)	Equivalent Potentiometric Elevation (ft)	Depth to Water (ft)	Product Thickness (ft)	Equivalent Potentiometric Elevation (ft)
SHMW-4	131.60	129.55		NI			17.77		113.83
SHMW-5	131.52	129.43		NI			17.52		114.00
SHMW-6	132.03	130.02		NI			18.42		113.61
SHMW-7	132.33	130.27		NI			18.53		113.80
SHMW-8	131.69	130.13		NI			18.03		113.66
SHMW-9	132.78	130.24		NI			18.91		113.87
SHMW-10	133.11	131.50		NI			14.63		118.48
SHMW-11	133.48	131.74		NI			Dry/bent		
SHMW-12	133.12	131.44		NI			20.27		112.85
SHMW-13	133.38	131.68		NI			19.99		113.39
SHMW-14	131.74	130.06		NI			18.18		113.56
SHMW-15	133.23	131.65		NI			20.34		112.89
SHMW-16	132.40	130.69		NI			20.70		111.70
SHMW-17	134.67	132.10		NI			12.64		122.03
SHMW-18	135.58	132.94		NI			23.87		111.71
SHMW-19	131.94	130.51		NI			>17.50		<114.44
SHMW-20	133.99	132.50		NI			23.04		110.95
WP-3	110.84	110.49		0.02		110.82	0.56		110.28
WP-4	109.44	108.64		-0.22		109.66	2.09		107.35
WP-5	108.79	107.71		0.14		108.65	1.12		107.67
WP-6	108.17	107.05		0.13		108.04	0.78		107.39
WP-10	106.84	105.69		0.26		106.58	0.70		106.14
WP-12	105.35	104.38		<-0.39		>105.74	0.02		105.33
WP-14	106.09	104.96		0.51		105.58	1.01		105.08
WP-15	105.27	104.40		0.09		105.18	0.48		104.79
WP-17	104.95	104.43		0.59		104.36	0.61		104.34
WP-17A	103.27	102.51		-0.50		103.77	-0.54		103.81
WP-18	103.31	102.37		0.28		103.03	0.41		102.90
WS-1	132.60	131.10		23.67		108.93	26.50		106.10

TABLE 4
Summary of Groundwater Elevations and Product Thickness Measurements
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Notes:

1. Measurements and elevations are reported in feet.

2. Groundwater level and product thickness measurements were obtained by Sanborn, Head & Associates, Inc. (SHA) personnel on the dates indicated using an ORS Co. oil/water interface probe, Heron Instrument, Inc. (March 1998 only) oil/water interface probe, or Slope Indicator Co. water level meter.

3. Due to the inherent limitation of the small diameter construction of the well points, a water level meter would often not reliably indicate the presence and/or depth of groundwater. In those instances a thin wooden dowel was used. See text for further discussion.

4. Reference point elevations were surveyed by Meridian Land Services, Inc. (Meridian) of Amherst, New Hampshire, during the remedial investigation. Elevations are in feet relative to the United States Geologic Survey (USGS) datum, which is equivalent to mean sea level (MSL).

5. The top of the PVC well casing was used as the reference point for measurements at wells except AE-17D, BR-1, WS-1, Lot 51-1-1-COB, and Lot 51-1-1-OB where the top of the steel casing was used as a reference point.
   The reference points for the individual manholes along the product recovery trench was the rim of each manhole frame.
   The reference point for the on-site dug well was the top of the concrete.
   The reference point for the well points was the top of pipe.

6. "COB" indicates a drilled or driven overburden water supply well (currently inactive) at the condominium on Lot 51-1-1.
   "OB" indicates a drilled or driven overburden water supply well (currently inactive) at the residence on Lot 51-1-1.
   "NM" indicates a product thickness and/or groundwater level measurement was not obtained.
   "NI" indicates the corresponding monitoring well, well point, Mykrowell, or product recovery trench was not installed at the time product thickness and/or water level measurements were obtained.
   "Sheen" indicates a product thickness of less than 0.01 feet indicated by an intermittent sounding of the oil/water interface probe or an appearance of product on the probe.
   "*" indicates there was product measured to the bottom of well AE-8, approximately 4.65 feet thick.
   "**" indicates there was product measured to the bottom of well AE-11S, approximately 2.43 feet thick.
   "***" indicates there was product measured to the bottom of well SH-5S, approximately 8.39 feet thick.
   "****" indicates there was product measured to the bottom of well BR-7, approximately 3.99 feet thick. The depth to the bottom of the well was calculated from data on the monitoring well log in (BRE, 1998a) and Meridian survey data.
   "*****" indicates there was product measured to the bottom of well BR-22, approximately 7.77 feet thick. The depth to the bottom of the well was calculated from data on the monitoring well log in (BRE, 1998a) and Meridian survey data.
   "-" indicates that groundwater in well points was above the top of pipe reference point, but still within the polyethylene Teflon® lined tubing which extends above the top of the pipe.
   "<" indicates the height of groundwater head above the top of the pipe reference point (<-0.39) in well point WP-12 was greater than the length of the polyethylene Teflon® lined sample tubing (0.39 feet) as indicated by groundwater flowing out of the top of the tubing.
   "?" indicates the oil/water interface probe did not sound to indicate the presence of groundwater or free product, but the probe was observed to have minor oil on it.

7. Equivalent potentiometric elevations were calculated by multiplying the measured product thickness by a product specific gravity and adding this to the observed elevation of groundwater. The following specific gravities were used for the corresponding monitoring wells based on specific gravity data determined from product samples collected at the site:

   0.78 – SH-10S
   0.82 – AE-9
   0.83 – AE-3, AE-4[†], RFW-1[†], BR-18, BR-19, BR-20, BR-25
   0.86 – AE-11S, AE-16, SH-37S[††], BR-7, BR-13, BR-14, BR-23, BR-24, BR-27, BR-28, BRE-3, Trench[‡]
   0.87 – SH-6S, BR-8, BR-9, BR-10, BR-15, BR-16, BR-17, BR-22, BR-26, BRE-1
   0.89 – SH-5S, SH-7S
   0.90 – AE-5[‡‡]
   0.91 – AE-8
   0.92 – BR-1, BR-2, BR-3, BR-4, BR-5, BR-6, BR-11, BR-12, BR-21, BRE-2

   [†] The estimated specific gravity is based on that determined for AE-3 which exhibits a similar chemical fingerprint and visual characteristics.
   [††] The estimated specific gravity is based on that determined for the nearby monitoring well AE-11S.
   [‡] The estimated specific gravity is based on that determined for the nearby extraction well BRE-3.
   [‡‡]The estimated specific gravity is based on that determined for nearby wells.

8. Values for specific gravity in product from monitoring wells AE-8, AE-9, AE-11S, AE-16, SH-5S, SH-6S, SH-7S, SH-10S, BR-25, and BR-28 are based on samples collected by SHA during the current Remedial Investigation on March 27 and 30, 1998. Samples were analyzed using United States Environmental Protection Agency (USEPA)Method 2710F by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts.

9. Values for specific gravity for monitoring wells BR-1 through BR-24, BR-26, BR-27, and extraction wells BRE-1 through BRE-3 are based on values contained in Table 4-1 of a report by Brown & Root Environmental of Wilmington, Massachusetts, dated April 1998 and entitled, "LNAPL Recovery Treatability Study and Field Investigation Report, Engineering Evaluation/Cost Analysis, Beede Waste Oil Site, Plaistow, New Hampshire," (BRE, 1998a)

10. The specific gravity value for product from monitoring well AE-3 is from SHA 1995b.

11. Prior to the March 1998 comprehensive water level round, monitoring well AE-16 was inaccessible, the protective casing and a portion of PVC riser protruded from the side of an earthen embankment. In conjunction with the March 1998 water level round, those portions of the well protruding beyond the embankment were removed by SHA. The reference point and ground surface elevations were resurveyed by Meridian on July 21 and 22, 1998. The reference point and ground surface elevations shown in this table for AE-16 are from the July 1998 Meridian resurvey.

12. Due to difficulties in measuring product in small diameter monitoring wells (e.g., BR-7, and BR-15 through BR-28) only a visual indication of the presence of free product could be made during the March 1998 comprehensive water level round. These monitoring wells were not included in the September 1998 comprehensive water level round.

TABLE 5
Summary of Surface Water Elevations
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Location	Reference Elevation	Local Benchmark	Stream Bed Elevation	9/11/1997		10/23/1997		3/25/1998		9/3/1998	
				Depth to Water	Surface Water Elevation	Depth to Water	Surface Water Elevation	Depth to Water	Surface Water Elevation	Depth to Water	Surface Water Elevation
SG-3	118.99	Note 7	107.10	11.06	107.93	11.11	107.88	9.38	109.61	11.45	107.54
SG-4	109.52	111.67	107.29	1.94	107.58	1.94	107.58	0.10	109.42	2.16	107.36
SG-5	109.66	109.70	106.48	3.06	106.60	2.98	106.68	1.82	107.84	3.06	106.60
SG-6	108.01	108.50	105.30	2.35	105.66	1.89	106.12	0.76	107.25	1.82	106.19
SG-10	108.03	108.67	105.52	2.40	105.63	2.22	105.81	1.31	106.72	1.49	106.54
SG-11	108.16	107.90	104.75	0.43	Note 4	2.38	105.78	1.71	106.45	1.90	106.26
SG-12	106.39	107.90	102.63	2.79	103.60	2.75	103.64	1.99	104.40	2.15	104.24
SG-13	107.29	106.97	103.96	3.11	104.18	2.73	104.56	2.69	104.60	2.99	104.30
SG-14	105.14	107.50	101.60	1.40	103.74	1.53	103.61	0.90	104.24	0.97	104.17
SG-15	104.55	105.89	102.54	0.98	103.57	0.94	103.61	0.45	104.10	0.32	104.23
SG-16	104.65	103.73	102.50	1.06	103.59	0.96	103.69	0.52	104.13	0.41	104.24
SG-17	104.74	105.75	102.82	1.16	103.58	1.08	103.66	0.64	104.10	0.49	104.25
SG-17A	103.00	104.61	101.45	0.60	102.40	1.24	101.76	0.21	102.79	0.03 *	103.24
SG-18	106.25	Note 7	100.24	4.75	101.50	4.77	101.48	3.96	102.29	2.97	103.28

Notes:
1. Elevations and depths are reported in feet.
2. Surface water measurements were obtained by Sanborn, Head & Associates, Inc. (SHA) personnel on the dates indicated using a Slope Indicator Co. water level meter, tape, or ruler.
3. Reference point elevations and local benchmarks were surveyed by Meridian Land Services, Inc. (Meridian) of Amherst, New Hampshire between October 29, and November 13, 1997. Elevations are in feet relative to the USGS datum which is equivalent to mean sea level. SHA personnel measured stream bed elevations on October 23, 1997 by measuring the distance from reference points to top of stream bed at each location.
4. The wooden stake installed at SG-11 for the September 11, 1997 measurement was disturbed/removed prior to the Meridian survey. A 1-inch diameter steel pipe was installed on October 23, 1997 to replace the wooden stake and was incorporated in the Meridian survey.
5. For SG-3 through SG-18, the reference points are the tops of wooden grade stakes except for SG-3, SG-12, and SG-18 which are the tops of bridges, SG-13 which is the top of an existing metal graduated staff gauge (3.33 feet tall), and SG-11 which is the top of a 1-inch steel pipe.
6. Local Benchmarks were set by Meridian and are P.K. nails set in nearby trees, except for SG-15 which is a ½-inch pin with cap set at the water's edge.
7. Local benchmarks were not established for SG-3 and SG-18.
8. "*" indicates surface water elevation for SG-17A on September 3, 1998 is based on the depth below the top of the pipe coupling for WP-17A. The stake for SG-17A had been disturbed/removed. Reference elevation of the WP-17A pipe coupling is 103.27 feet.

TABLE 6
Summary of Estimates of Hydraulic Conductivities by Soil Type
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Location	Testing Period	Depth Interval Tested (ft)	Sample Number (Sample Depth)	Soil Type	Method of Estimation	Hydraulic Conductivity (ft/day)	Geometric Mean K Unit (ft/d)
SH-2I	A	33-35'	S-1 (33-35')	Gravelly Sand	Hazen	42	
SH-17D	A	19-21'	S-5 (19-21')	Gravelly Sand	Hazen	36	
SH-14D	A	44-46'	S-10 (44-46')	Gravelly Sand	Hazen	28	
SH-15D	A	4-6'	S-1 (4-6')	Gravelly Sand	Hazen	14	
SH-20D	A	34-36'	S-8 (34-36')	Gravelly Sand	Hazen	0.91	
SH-2I	A	33-35'	S-1 (33-35')	Gravelly Sand	Kozeny-Carmen	10	
SH-17D	A	19-21'	S-5 (19-21')	Gravelly Sand	Kozeny-Carmen	8.9	
SH-14D	A	44-46'	S-10 (44-46')	Gravelly Sand	Kozeny-Carmen	6.9	6.3
SH-15D	A	4-6'	S-1 (4-6')	Gravelly Sand	Kozeny-Carmen	3.4	
SH-20D	A	34-36'	S-8 (34-36')	Gravelly Sand	Kozeny-Carmen	0.23	
SH-14I	A	38-51'	S-2 (39-41') / S-3 (44-46') / S-4 (46-48') / S-5 (48-50') /S-6 (50-52')	Gravelly Sand	Slug (Rising)	37	
SH-2I	A	32-47'	S-1 (33-35') / S-2 (40-42') / S-3 (43-45') / S-4 (45-47')	Gravelly Sand	Slug (Rising)	2.2	
SH-14I	A	46-47.8	S-4 (46-48')	Gravelly Sand	Borehole	1.1	
SH-12S	B	9-11'	S-3 (9-11')	Sand	Hazen	65	
SH-2D	B	29-31'	S-7 (29-31')	Sand	Hazen	62	
SH-7S	B	29-31'	S-12 (29-31')	Sand	Hazen	8.0	
SH-12S	B	9-11'	S-3 (9-11')	Sand	Kozeny-Carmen	63	
SH-2D	B	29-31'	S-7 (29-31')	Sand	Kozeny-Carmen	60	
SH-7S	B	29-31'	S-12 (29-31')	Sand	Kozeny-Carmen	7.7	
AE-10	A	16-20'	S-4 (14.5-16')	Sand	Slug (Rising)	9.0	9.9
AE-12	A	18-25'	S-5 (19.5-21.5')	Sand	Slug (Rising)	5.4	
SH-36S	A	21-24'	S-1 (25-27')	Sand	Slug (Rising)	4.3	
SH-31S	A	16-22'	S-1 (15-17')	Sand	Slug (Rising)	0.12	
SH-15D	A	19-21'	S-4 (19-21')	Sand	Borehole	73	
SH-2D	B	28.8-31'	S-7 (29-31')	Sand	Borehole	8.0	
SH-1D	B	24.5-27'	S-6 (25-27')	Sand	Borehole	0.65	
SH-9S	B	24-26'	S-8 (24-26')	Fine Sand	Hazen	26	
SH-4D	B	39-41'	S-9 (39-41')	Fine Sand	Hazen	24	
SH-16D	A	44-46'	S-10 (44-46')	Fine Sand	Hazen	6.6	
SH-3D	B	39-41'	S-9 (39-41')	Fine Sand	Hazen	6.5	
SH-10D	A	44-46'	S-4 (44-46')	Fine Sand	Hazen	4.0	
SH-10D	A	34.5-36.5'	S-2 (34.5-36.5)	Fine Sand	Hazen	0.96	
SH-4D	B	24-26'	S-6 (24-26')	Fine Sand	Hazen	0.38	
SH-24D	A	39-41'	S-9 (39-41')	Fine Sand	Hazen	0.35	
SH-18D	A	34-36'	S-8 (34-36')	Fine Sand	Hazen	0.25	
SH-9S	B	24-26'	S-8 (24-26')	Fine Sand	Kozeny-Carmen	18	
SH-4D	B	39-41'	S-9 (39-41')	Fine Sand	Kozeny-Carmen	8.8	
SH-3D	B	39-41'	S-9 (39-41')	Fine Sand	Kozeny-Carmen	7.8	
SH-16D	A	44-46'	S-10 (44-46')	Fine Sand	Kozeny-Carmen	2.5	
SH-10D	A	44-46'	S-4 (44-46')	Fine Sand	Kozeny-Carmen	1.5	
SH-4D	B	24-26'	S-6 (24-26')	Fine Sand	Kozeny-Carmen	0.46	
SH-10D	A	34.5-36.5'	S-2 (34.5-36.5)	Fine Sand	Kozeny-Carmen	0.36	
SH-24D	A	39-41'	S-9 (39-41')	Fine Sand	Kozeny-Carmen	0.24	2.4
SH-18D	A	34-36'	S-8 (34-36')	Fine Sand	Kozeny-Carmen	0.096	
SH-27S	A	6-13'	S-1 (10-12')	Fine Sand	Slug (Rising)	27	
SH-24S	A	15-20'	S-1 (15-17')	Fine Sand	Slug (Rising)	7.6	
SH-16I	A	36-49'	S-1 (38-40') / S-2 (43-45') / S-3 (47-49')	Fine Sand	Slug (Rising)	7.0	
SH-16S	A	22-27'	S-1 (25-27')	Fine Sand	Slug (Rising)	6.7	
SH-24I	A	31-44'	S-1 (33-35') / S-2 (38-40') / S-3 (42-44')	Fine Sand	Slug (Rising)	5.8	
AE-14	A	22-27'	S-6 (24.5-26')	Fine Sand	Slug (Rising)	1.9	
SH-2S	B	18.1-29.8'	S-5 (19-21') / S-6 (24-26') / S-7 (29-31')	Fine Sand & Sand	Slug (Rising)	1.3	
SH-1D	A	85.6-98'	S-19 (90-91.5')	Fine Sand	Slug (Rising)	1.3	
SH-4S	B	18.9-26.3'	S-5 (19-21') / S-6 (24-26')	Fine Sand	Slug (Falling)	1.1	
SH-3S	B	24.5-32	S-6 (24-26') / S-7 (29-31')	Fine Sand	Slug (Falling)	0.75	
SH-18D	A	49-51'	S-11 (49-51')	Fine Sand	Borehole	30	
SH-23D	A	34-36'	S-8 (34-36')	Fine Sand	Borehole	9.7	
SH-1I	A	46-48'	S-2 (46-48')	Fine Sand	Borehole	3.4	
SH-3D	B	22.8-26'	S-6 (24-26')	Fine Sand	Borehole	2.1	
SH-4D	B	38.7-41.1'	S-9 (39-41')	Fine Sand	Borehole	1.1	
SH-21D	A	54-56'	S-12 (54-54.9')	Fine Sand	Borehole	0.67	

TABLE 6
Summary of Estimates of Hydraulic Conductivities by Soil Type
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Location	Testing Period	Depth Interval Tested (ft)	Sample Number (Sample Depth)	Soil Type	Method of Estimation	Hydraulic Conductivity (ft/day)	Geometric Mean K Unit (ft/d)
SH-13D	A	54-56	S-12 (54-56')	Gray Sand	Hazen	38	5.6
SH-13D	A	54-56	S-12 (54-56')	Gray Sand	Kozeny-Carmen	12	
SH-15I	A	35.5-49'	S-1 (38-40') / S-2 (43-45') / S-3 (47-49')	Gray Sand	Slug (Rising)	14	
SH-10D	A	49-50.8'	S-5 (49-51')	Gray Sand	Borehole	14	
SH-13D	A	54-56	S-12 (54-56')	Gray Sand	Borehole	2.6	
SH-13D	A	51.9-54	S-12 (54-56')	Gray Sand	Borehole	0.13	
SH-1D	B	51-53'	S-11 (51-53')	Gray Fine Sand	Hazen	7.2	2.5
SH-17I	A	44-46'	S-2 (44-46')	Gray Fine Sand	Hazen	4.9	
SH-3D	B	59-60.5'	S-13 (59-60.5')	Gray Fine Sand	Hazen	0.42	
SH-1D	B	51-53'	S-11 (51-53')	Gray Fine Sand	Kozeny-Carmen	12	
SH-17I	A	44-46'	S-2 (44-46')	Gray Fine Sand	Kozeny-Carmen	2.4	
SH-3D	B	59-60.5'	S-13 (59-60.5')	Gray Fine Sand	Kozeny-Carmen	0.39	
SH-1D	B	51-53'	S-11 (51-53')	Gray Fine Sand	Borehole	7.7	
SH-3D	B	58.7-61.5'	S-13 (59-60.5') / S-14 (60.5-61.3')	Gray Fine Sand	Borehole	1.2	
SH-2D	B	59-59.7'	S-13 (59-59.7')	Sandy Till	Hazen	0.79	0.62
SH-17D	A	119-119.3'	S-25 (119-119.3')	Sandy Till	Hazen	0.28	
SH-15D	A	49-49.9'	S-10 (49-49.9')	Sandy Till	Hazen	0.25	
SH-2D	B	59-59.7'	S-13 (59-59.7')	Sandy Till	Kozeny-Carmen	1.5	
SH-17D	A	119-119.3'	S-25 (119-119.3')	Sandy Till	Kozeny-Carmen	0.17	
SH-15D	A	49-49.9'	S-10 (49-49.9')	Sandy Till	Kozeny-Carmen	0.15	
AE-11D	A	53-65'	S-7 (55-57') / S-8 (60-62')	Sandy Till *	Slug (Rising)	2.7	
SH-19D	A	88-103'	S-20 (89-91') / S-21 (94-96') / S-22 (99-99.4')	Sandy Till	Slug (Rising)	1.3	
SH-18D	A	85-99'	S-19 (89-89.9') / S-20 (96-96.3')	Sandy Till	Slug (Rising)	0.38	
SH-4D	B	58.2-70.8'	S-13 (59-61') / S-14 (64-66') / S-15 (69-70/8')	Sandy Till	Slug (Rising)	0.14	
AE-17D	A	37-49'	S-9 (40-42') / S-10 (45-47')	Sandy Till	Slug (Rising)	0.13	
SH-17D	A	108-121.7'	S-23 (109-109.3') / S-24 (114-114.3') / S-25 (119-119.3')	Sandy Till	Slug (Rising)	0.016	
SH-2D	B	54-66.5'	S-12 (54-56') / S-13 (59-59.7') / S-14 (64-65')	Sandy Till	Slug (Falling)	0.038	
SH-3D	B	53.3-56.2'	S-12 (54-56')	Sandy Till	Borehole	27	
SH-24D	A	54-56'	S-12 (54-54.8')	Sandy Till	Borehole	14	
SH-23D	A	44-46'	S-10 (44-46')	Sandy Till	Borehole	6.8	
SH-17D	A	49-51'	S-11 (49-51')	Sandy Till	Borehole	3.6	
SH-14D	A	94-95.8'	S-20 (94-95.8')	Clayey Till	Hazen	0.080	0.0093
SH-23D	A	49-51'	S-11 (49-51')	Clayey Till	Hazen	0.034	
SH-20D	A	74-74.9'	S-16 (74-74.9')	Clayey Till	Hazen	0.0036	
SH-10D	A	94-94.7	S-14 (94-94.7')	Clayey Till	Hazen	0.0032	
SH-14D	A	94-95.8'	S-20 (94-95.8')	Clayey Till	Kozeny-Carmen	0.048	
SH-23D	A	49-51'	S-11 (49-51')	Clayey Till	Kozeny-Carmen	0.020	
SH-20D	A	74-74.9'	S-16 (74-74.9')	Clayey Till	Kozeny-Carmen	0.0070	
SH-10D	A	94-94.7	S-14 (94-94.7')	Clayey Till	Kozeny-Carmen	0.0062	
SH-25D	A	89-89.9'	S-19 (89-89.9')	Clayey Till	Kozeny-Carmen	0.0027	
SH-16D	A	79-80.4'	S-17 (79-80.4')	Clayey Till	Kozeny-Carmen	6.9E-04	
SH-20D	A	71-86'	S-16 (74-74.9') / S-17 (79-79.4') / S-18 (85-85.8')	Clayey Till	Slug (Rising)	0.12	
SH-15D	A	84-99'	S-18 (89-89.8') / S-19 (94-95.2')	Clayey Till	Slug (Rising)	0.11	
SH-23D	A	46-61'	S-11 (49-51') / S-12 (54-56') / S-13 (59-61')	Clayey Till	Slug (Rising)	0.0072	
SH-13D	A	90-105'	S-20 (94-95') / S-21 (99-99.8') / S-22 (104-104.1')	Clayey Till	Slug (Rising)	0.0038	
SH-14D	A	89-104'	S-19 (89-89.9) / S-20 (94-95.8') / S-21 (99-99.8')	Clayey Till	Slug (Rising)	5.3E-04	
SH-13D	A	90-105'	S-20 (94-95') / S-21 (99-99.8') / S-22 (104-104.1')	Clayey Till	Slug (Rising)	2.2E-04	
SH-16D	A	63.2-65'	S-14 (63-63.8')	Clayey Till	Borehole	0.063	
SH-20D	A	69.3-71'	S-15 (69-69.9')	Clayey Till	Borehole	0.046	
SH-22R	A	58.2-159'		Bedrock	Slug (Rising)	0.15	0.023
SH-22R	A	58.2-159'		Bedrock	Slug (Rising)	0.11	
SH-22R	A	58.2-159'		Bedrock	Slug (Rising)	0.052	
WS-1	A	120-232'		Bedrock	Slug (Rising)	0.013	
WS-1	A	120-232'		Bedrock	Slug (Rising)	0.0074	
WS-1	A	120-232'		Bedrock	Slug (Rising)	0.0056	
WS-1	A	120-232'		Bedrock	Slug (Rising)	0.0036	
SH-22R	A	58.2-159'		Bedrock	Slug (Falling)	0.089	
WS-1	A	120-232'		Bedrock	Slug (Falling)	0.011	

TABLE 6
Summary of Estimates of Hydraulic Conductivities by Soil Type
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Notes:

1. Estimated hydraulic conductivities are presented in feet per day (ft/day).

2. "Hazen" indicates hydraulic conductivity is estimated from grain size distribution using Hazen's equation:

$$K = C\,(D_{10})^2$$

where: K is hydraulic conductivity (in centimeters per second [cm/s])
D_{10} is the grain size in cm for which 10% of a given soil is finer; and
C is a coefficient - based on Fetter (1988)

For Site soils, C values used:

50	sandy till, clayey till
60	gray fine sand
80	fine sand
100	sand, gray sand
120	gravelly sand

3. "Kozeny-Carmen" indicates hydraulic conductivity is estimated from grain size distribution using the method developed by Kozeny-Carmen (Bear, 1972):

$$K = (pg/u)[n^3/(1-n)^2](d_m^2/180)$$

where: K is hydraulic conductivity (in centimeters per second [cm/s])
p is fluid density (in grams per cubic centimeter [g/cm^3])
g is acceleration due to gravity (in centimeters per square second [cm/s^2])
u is fluid viscosity (in grams per centimeter seconds [g/s·cm])
n is porosity (unitless)
d_m is some representative grain size, interpreted as D_{10} for these analyses (in centimeters [cm])

4. "Borehole" indicates that the hydraulic conductivity is estimated from field falling head test performed as a wick test in a cased-hole boring using the equations of Hvorslev (1951).

5. "Slug" indicates that the hydraulic conductivity is estimated from a field falling and/or rising head test performed in completed monitoring wells by lowering and raising a slug in and out of the groundwater within the well. The data are evaluated using the equations of Hvorslev (1951).

6. Sample number and interval refer to samples collected from approximate depth interval within tested boring or in associated deep borings (D) located within approximately 10 to 15 feet horizontal distance.

7. "A" indicates data generated during the 1997/1998 Remedial Investigation. "B" indicates data generated during SHA's 1995 Site and Waste Characterization activities (SHA 1995b).

8. "*" indicates the stratigraphic description of the screened interval of AE-11D was compared with soil descriptions as encountered during the 1997/1998 Remedial Investigation and was re-classified as a sandy till. For additional soil descriptions, refer to boring logs.

9. "**" indicates the descriptions provided for soils encountered in AE-18S/D commonly are not consistent with those encountered in other nearby explorations at similar depths. Further, the degree to which the hydraulic conductivity estimates (from falling or rising head slug tests) from monitoring wells AE-18S and AE-18D are representative of subsurface conditions is considered questionable. The hydraulic conductivity values estimated for monitoring wells AE-18S and AE-18D are the two lowest (AE-18S - 0.074 ft/day; AE-18D - 0.025 ft/day) for the gravelly sand, which is what the soils are described as on the logs. Due to the apparent inconsistency between hydraulic conductivity estimates from AE-18S and AE-18D and other explorations, and the uncertainty in the soil type screened by these monitoring wells, the data from AE-18S and AE-18D were not included in the definition of the range or calculation of the average hydraulic conductivities.

TABLE 7A
Summary of Background Soil Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg								
	Risk Threshold Screening Levels						S-141	S-142	S-143
	OR1	OR2	OR3	S-1	S-2	S-3	0 - 1'	0 - 1'	0 - 1'
Methylene Chloride (Dichloromethane)				0.1	0.1	0.1			0.004
Trichlorofluoromethane				1,000	2,500	5,000	0.005	0.008 J	0.004

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) on 11/3/97 (S-141 and S-142) and 12/17/98 (S-143), and belong to sample delivery groups (SDGs) BW220 (S-141 and S-142) and BW222 (S-143).

2. Samples were analyzed by New Hampshire Department of Environmental Services Laboratory of Concord, New Hampshire, by United States Environmental Protection Agency (USEPA) Method 8260.

3. All concentrations are shown in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. A blank indicates the parameter was not detected.

6. "OR1" refers to "Table 1. Screening benchmark concentrations for the toxicity of chemicals to earthworms" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.

"OR2" refers to "Table 2. Screening benchmark concentrations for the toxicity of chemicals to soil microorganisms and microbial processes" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.

"OR3" refers to "Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.

"S-1" refers to the S-1 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision).

"S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision).

"S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision).

7. "J" indicates an estimated value.

8. Refer to appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 7B
Summary of Background Soil Data - Semi-Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg								
	Risk Threshold Screening Levels						S-141	S-142	S-143
	OR1	OR2	OR3	S-1	S-2	S-3	0 - 1'	0 - 1'	0 - 1'
PAHs									
Acenaphthene			20	270	270	270	R	R	†
Benzo[b]fluoranthene				7	20	400	R	R	†
Fluoranthene				810	2,500	5,000	0.043 J		0.068 J
Phenanthrene ‡				480	2,400	5,000			0.047 J
Pyrene ‡				480	2,400	5,000			0.056 J
Other SVOCs									
Benzoic Acid				350	350	350	0.11 J	0.068 J	0.24 J

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) on 11/3/97 (S-141 and S-142) and 12/17/98 (S-143), and belong to sample delivery groups (SDGs) BW406 (S-141 and S-142) and BW409 (S-143).
2. Samples were analyzed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, by United States Environmental Protection Agency (USEPA) Method 8270. Sample S-143 was also analyzed with selective ion monitoring (SIM) for polynuclear aromatic hydrocarbons (PAHs). During validation either the 8270 or SIM value was selected for use by the end user. Results indicated by "†" were analyzed by SIM.
3. All concentrations are shown in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).
4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.
5. A blank indicates the parameter was not detected.
6. "OR1" refers to "Table 1. Screening benchmark concentrations for the toxicity of chemicals to earthworms" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.

   "OR2" refers to "Table 2. Screening benchmark concentrations for the toxicity of chemicals to soil microorganisms and microbial processes" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.

   "OR3" refers to "Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.

   "S-1" refers to the S-1 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).

   "S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).

   "S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
7. "‡" indicates the values indicated for S-1, S-2, and S-3 are a combined total for benzo(g,h,i)perylene, phenanthrene, and pyrene.
8. "J" indicates an estimated value.

   "R" indicates data (non-detects) rejected during validation.
9. Refer to appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 7C
Summary of Background Soil Data - Petroleum Hydrocarbons
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg								
	Risk Threshold Screening Levels						S-141	S-142	S-143
	OR1	OR2	OR3	S-1	S-2	S-3	0 - 1'	0 - 1'	0 - 1'
VPH									
C9-C12 Aliphatics %				10,000	10,000	10,000	28 J	8.9 J	13 J
C9-C10 Aromatics %				10,000	10,000	10,000	1.4 J		
EPH									
C19-C36 Aliphatics %				10,000	10,000	10,000	5.7 J	6.7 J	
C10-C22 Aromatics %				10,000	10,000	10,000			10

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) on 11/3/97 (S-141 and S-142) and 12/17/98 (S-143), and belong to sample delivery groups (SDGs) BW406 (S-141 and S-142) and BW409 (S-143).

2. Samples were analyzed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, using Massachusetts Department of Environmental Protection (MADEP) volatile petroleum hydrocarbon (VPH) and extractable petroleum hydrocarbon (EPH) Methods (modified).

3. All concentrations are shown in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. A blank indicates the parameter was not detected.

6. "OR1" refers to "Table 1. Screening benchmark concentrations for the toxicity of chemicals to earthworms" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
"OR2" refers to "Table 2. Screening benchmark concentrations for the toxicity of chemicals to soil microorganisms and microbial processes" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
"OR3" refers to "Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
"S-1" refers to the S-1 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
"S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
"S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).

7. "%" indicates S-1, S-2, and S-3 values are for total petroleum hydrocarbons.

8. "J" indicates an estimated value.

9. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 7D
Summary of Background Soil Data - PCBs/Pesticides
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg								
	Risk Threshold Screening Levels						S-141	S-142	S-143
	OR1	OR2	OR3	S-1	S-2	S-3	0 - 1'	0 - 1'	0 - 1'
PCBs			40	1	1	2			
Pesticides									
BHC (hexachlorocyclohexane) (delta)							R	R	
DDE (4,4'-)				0.7	2	56			R
DDT (4,4'-)				0.9	3	11	R	R	R
Dieldrin				0.06	0.2	3			0.0051 J
Heptachlor				0.2	0.7	9			R
Heptachlor Epoxide				0.1	0.3	0.5	R	R	R
Methoxychlor				38	170	170	R	R	

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) on 11/3/97 (S-141 and S-142) and 12/17/98 (S-143), and belong to sample delivery groups (SDGs) BW406 (S-141 and S-142) and BW409 (S-143).

2. Samples were analyzed by Woods Hold Group Environmental Laboratories of Raynham, Massachusetts, by United States Environmental Protection Agency (USEPA) Method 8080A.

3. All concentrations are shown in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed. No PCB aroclors were detected.

5. A blank indicates the parameter was not detected.

6. "OR1" refers to "Table 1. Screening benchmark concentrations for the toxicity of chemicals to earthworms" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
"OR2" refers to "Table 2. Screening benchmark concentrations for the toxicity of chemicals to soil microorganisms and microbial processes" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
"OR3" refers to "Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
"S-1" refers to the S-1 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
"S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
"S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).

7. "J" indicates an estimated value.
"R" indicates data (non-detects) rejected during validation.

8. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 7E
Summary of Background Soil Data - Metals
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg										
	Risk Threshold Screening Levels						Background		S-141	S-142	S-143
	OR1	OR2	OR3	S-1	S-2	S-3	NHDES	MADEP	0 - 1'	0 - 1'	0 - 1'
Antimony ¶			5	8	26	26		1.4	0.25 J	0.24 J	0.31 J
Arsenic ¶	60	100	10	12	12	12	12	17	9.0 J	3.9 J	5.2
Barium		3,000	500	750	2,500	3,400		45	17.8	22	16.7 J
Beryllium * ¶			10	0.1	0.1	1	1.0	0.4	0.42	0.42	0.41 J
Cadmium ¶	20	20	4	32	230	230	1.9	2	0.025 J	0.043 J	0.14 J
Calcium									212	248	155 J
Chromium (Total) † ¶	0.4	10	1	130	460	540	33	29	11.8	12.8	11.4
Copper ¶	50	100	100					38	3.5	2.8	4.0 J
Iron		200						17,000	8,140	8,420	9,100
Lead ‡ ¶	500	900	50	400	400	400	54	99	7.5 J	8.1 J	16.6 J
Magnesium								4,900	844	951	786 J
Manganese		100	500					300	167	182	116 J
Mercury ¶	0.1	30	0.3	1	7	7	0.33	0.3			0.056
Nickel ¶	200	90	30	580	2,500	3,900	24	17	6.8	6.0	5.6
Potassium									221	200	192 J
Selenium ¶	70	100	1	260	2,500	4,200	2.2	0.5	0.81 J	0.74 J	0.57
Sodium									29.7 J	26.5 J	34.3
Tin		2,000	50						R	R	
Vanadium		20	2					29	13.8	15.2	15.2
Zinc ¶	200	100	50	1,000	2,500	5,000	98	116	22.4	21.9	18.1 J

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) on 11/3/97 (S-141 and S-142) and 12/17/98 (S-143), and belong to sample delivery groups (SDGs) BW406 (S-141 and S-142) and BW409 (S-143).
2. Samples were analyzed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, using United States Environmental Protection Agency (USEPA) Methods 6010A, 7000 Series, and 7471.
3. All concentrations are shown in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).
4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.
5. A blank indicates the parameter was not detected.
6. "OR1" refers to "Table 1. Screening benchmark concentrations for the toxicity of chemicals to earthworms" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.

"OR2" refers to "Table 2. Screening benchmark concentrations for the toxicity of chemicals to soil microorganisms and microbial processes" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.

"OR3" refers to "Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.

"S-1" refers to the S-1 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).

"S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).

"S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).

"NHDES" refers to background concentrations of metals in soil values as listed in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).

"MADEP" refers to background concentrations of metals in soil values as listed in "Guidance for Disposal Site Risk Characterization; In support of the Massachusetts Contingency Plan; Interim Final Policy # WSC/ORS-95-141," Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup, and Office of Research and Standards (July 1995).

7. "*" indicates NHDES background value from SHA 1998d.

"†" indicates OR1, OR2, OR3, S-1, S-2, and S-3 values are for chromium (VI). Chromium (III) values for S-1, S-2, and S-3 are 1,000 mg/kg, 2,500 mg/kg, and 5,000 mg/kg, respectively. Analytical results are for total chromium.

"‡" indicates the S-1, S-2, and S-3 values for lead are based on the USEPA's 1994 "Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities."

"¶" indicates priority pollutant metal.

8. "J" indicates an estimated value.

"R" indicates data (non-detects) rejected during validation.

9. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 8A
Summary of Shallow Soil Data
Phases 1 and 2 Screening Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg									Concentrations in mg/kg																	
	Risk Threshold Screening Levels						Reference Background Values (Metals Only)			Phase 1 Screening Level Analytical Results (Sampling Depth in feet)																	
	Oak Ridge			NHDES						S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-10 Dup.	S-11	S-12	S-13	S-14	S-15	S-16	S-17
	1	2	3	S-1	S-2	S-3	Site	NHDES	MADEP	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'
VOCs																											
Ethylbenzene				140	140	140																					
Toluene			200	100	100	100																					
Xylene (m,p-) †				500	1,000	1,100																					
Xylene (o-) †				500	1,000	1,100																					
Total AVOCs (BTEX)																											
Dichloroethene (cis-1,2-)				2	2	2																					
Tetrachloroethene				2	2	2																					
Trichloroethane (1,1,1-)				42	42	42																					
Trichloroethene				0.8	0.8	0.8																					
Total CVOCs																											
Total VOCs																											
PAHs																											
Benzo[a]pyrene				0.7	0.7	4																					
Benzo[b]fluoranthene				7	20	400																					
Benzo[k]fluoranthene				7	20	400																					
Chrysene				70	200	4,000																					
Fluoranthene				810	2,500	5,000																					
Methylnaphthalene (2-)				150	150	150																					
Phenanthrene ‡				480	2,400	5,000																					
Pyrene ‡				480	2,400	5,000																					
Total PAHs																											
Petroleum Hydrocarbons																											
VPH C6-C9 ¶				10,000	10,000	10,000																					
VPH C10-C12 ¶				10,000	10,000	10,000				3	1						2										
TPH ¶				10,000	10,000	10,000																					
Polychlorinated Biphenyls																											
Total PCBs *			40	1	1	2																					
Metals																											
Arsenic £	60	100	10	12	12	12	9.0	12	17	8	10	6	7	8	11	4	5	8	5	4	7	7	12	9	8	10	6
Cadmium £	20	20	4	32	230	230	0.14	1.9	2		0.4 HJ	0.3 HJ	0.3 HJ	0.5 HJ	0.3 HJ		0.3 HJ	0.3 HJ	0.4 HJ	0.4 HJ	0.3 HJ			0.2 HJ	0.4 HJ	0.3 HJ	0.4 HJ
Chromium (Total) # £	0.4	10	1	130	460	540	12.8	33	29	18	13	15	18	20	28	17	13	15	13	9.9	13	17	18	16	14	21	15
Lead @ £	500	900	50	400	400	400	16.6	54	99	22	10	7	11	12	20	18	10	13	7	6	6	15	21	14	7	17	7

TABLE 8A
Summary of Shallow Soil Data
Phases 1 and 2 Screening Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg									Concentrations in mg/kg																
	Risk Threshold Screening Levels						Reference Background Values (Metals Only)			Phase 1 Screening Level Analytical Results (Sampling Depth in feet)																
	Oak Ridge			NHDES						S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	S-31	S-32	S-33	S-33 Dup.
	1	2	3	S-1	S-2	S-3	Site	NHDES	MADEP	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - ¼'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - ¾'	0 - ¾'	0 - ¾'
VOCs																										
Ethylbenzene				140	140	140																				
Toluene			200	100	100	100																				
Xylene (m,p-) †				500	1,000	1,100																				
Xylene (o-) †				500	1,000	1,100																				
Total AVOCs (BTEX)																										
Dichloroethene (cis-1,2-)				2	2	2																				
Tetrachloroethene				2	2	2																				
Trichloroethane (1,1,1-)				42	42	42																				
Trichloroethene				0.8	0.8	0.8																				
Total CVOCs																										
Total VOCs																										
PAHs																										
Benzo[a]pyrene				0.7	0.7	4																				
Benzo[b]fluoranthene				7	20	400																				
Benzo[k]fluoranthene				7	20	400																				
Chrysene				70	200	4,000															0.2					
Fluoranthene				810	2,500	5,000															0.4					
Methylnaphthalene (2-)				150	150	150																				
Phenanthrene ‡				480	2,400	5,000															0.3					
Pyrene ‡				480	2,400	5,000															0.3					
Total PAHs																					1.2					
Petroleum Hydrocarbons																										
VPH C6-C9 ¶				10,000	10,000	10,000																		1	0.5	
VPH C10-C12 ¶				10,000	10,000	10,000									2									2		
TPH ¶				10,000	10,000	10,000													900		100	200	3,900	800	1,200	900
Polychlorinated Biphenyls																										
Total PCBs *			40	1	1	2								0.5	0.7				2		0.7	1	4	1	1	1
Metals																										
Arsenic £	60	100	10	12	12	12	9.0	12	17	5	8	7	7	7	9	10	7	8	8	4	3	9	10	8	7	8
Cadmium £	20	20	4	32	230	230	0.14	1.9	2	0.3 HJ			0.5 HJ		0.7 HJ		0.4 HJ	0.3 HJ	1.6 HJ	3.9 HJ	0.7 HJ	0.5 HJ	1.7 HJ	0.9 HJ	0.8 HJ	0.8 HJ
Chromium (Total) # £	0.4	10	1	130	460	540	12.8	33	29	15	18	17	17	11	25	18	19	17	43	85	27	18	46	21	23	20
Lead @ £	500	900	50	400	400	400	16.6	54	99	6	17	14	8	22	61	22	8	8	190	49	86	88	780	250	210	190

TABLE 8A
Summary of Shallow Soil Data
Phases 1 and 2 Screening Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg									Concentrations in mg/kg															
	Risk Threshold Screening Levels						Reference Background			Phase 1 Screening Level Analytical Results (Sampling Depth in feet)															
	Oak Ridge			NHDES			Values (Metals Only)			S-34	S-35	S-36	S-37	S-38	S-39	S-40	S-41	S-42	S-43	S-43 Rerun	S-44	S-45	S-46	S-47	S-48
	1	2	3	S-1	S-2	S-3	Site	NHDES	MADEP	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'
VOCs																									
Ethylbenzene				140	140	140														NA					
Toluene			200	100	100	100														NA					
Xylene (m,p-) †				500	1,000	1,100														NA					
Xylene (o-) †				500	1,000	1,100														NA					
Total AVOCs (BTEX)																				NA					
Dichloroethene (cis-1,2-)				2	2	2														NA					
Tetrachloroethene				2	2	2														NA					14
Trichloroethane (1,1,1-)				42	42	42														NA					
Trichloroethene				0.8	0.8	0.8														NA					28
Total CVOCs																				NA					42
Total VOCs																				NA					42
PAHs																									
Benzo[a]pyrene				0.7	0.7	4														NA					
Benzo[b]fluoranthene				7	20	400														NA					
Benzo[k]fluoranthene				7	20	400														NA					
Chrysene				70	200	4,000														NA					
Fluoranthene				810	2,500	5,000														NA					
Methylnaphthalene (2-)				150	150	150														NA					
Phenanthrene ‡				480	2,400	5,000														NA					
Pyrene ‡				480	2,400	5,000														NA					
Total PAHs																				NA					
Petroleum Hydrocarbons																									
VPH C6-C9 ¶				10,000	10,000	10,000														NA					9
VPH C10-C12 ¶				10,000	10,000	10,000										3		10		NA		70			
TPH ¶				10,000	10,000	10,000				1,800					1,200	5,100		12,000	600	NA	100	1,400			1,000
Polychlorinated Biphenyls																									
Total PCBs *			40	1	1	2				3					1	19		3	260	210		0.9		1	3
Metals																									
Arsenic £	60	100	10	12	12	12	9.0	12	17	10	7	7	6	7	9	7	9	7	7	NA	6	8	9	7	11
Cadmium £	20	20	4	32	230	230	0.14	1.9	2	0.6 HJ		0.4 HJ			0.3 HJ	1.6 HJ		0.3 HJ	0.4 HJ	NA	0.4 HJ	0.6 HJ	0.6 HJ	0.2 HJ	0.6 HJ
Chromium (Total) # £	0.4	10	1	130	460	540	12.8	33	29	30	12	18	13	15	15	36	13	12	14	NA	12	18	24	14	15
Lead @ £	500	900	50	400	400	400	16.6	54	99	480	10	19	14	27	130	530	19	24	96	NA	22	220	27	24	48

TABLE 8A
Summary of Shallow Soil Data
Phases 1 and 2 Screening Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg									Concentrations in mg/kg														
	Risk Threshold Screening Levels						Reference Background			Phase 1 Screening Level Analytical Results (Sampling Depth in feet)														
	Oak Ridge			NHDES			Values (Metals Only)			S-49	S-50	S-51	S-52	S-53	S-54	S-55	S-55 Dup.	S-56	S-57	S-58	S-59	S-60	S-61	S-62
	1	2	3	S-1	S-2	S-3	Site	NHDES	MADEP	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - ½'	0 - 1'	0 - ¾'	0 - ¾'	0 - ¾'
VOCs																								
Ethylbenzene				140	140	140																		
Toluene			200	100	100	100															0.2			
Xylene (m,p-) †				500	1,000	1,100															0.3			
Xylene (o-) †				500	1,000	1,100					4										0.2			
Total AVOCs (BTEX)											4										0.7			
Dichloroethene (cis-1,2-)				2	2	2																		
Tetrachloroethene				2	2	2																		
Trichloroethane (1,1,1-)				42	42	42																		
Trichloroethene				0.8	0.8	0.8																		
Total CVOCs																								
Total VOCs											4										0.7			
PAHs																								
Benzo[a]pyrene				0.7	0.7	4																		
Benzo[b]fluoranthene				7	20	400																		
Benzo[k]fluoranthene				7	20	400																		
Chrysene				70	200	4,000																		
Fluoranthene				810	2,500	5,000																		
Methylnaphthalene (2-)				150	150	150					10													
Phenanthrene ‡				480	2,400	5,000					10													
Pyrene ‡				480	2,400	5,000																		
Total PAHs											20													
Petroleum Hydrocarbons																								
VPH C6-C9 ¶				10,000	10,000	10,000				4	100										1			
VPH C10-C12 ¶				10,000	10,000	10,000				100	1,000	100	4	40							4	1	1	
TPH ¶				10,000	10,000	10,000				58,000	28,000	22,000	400	5,000	100	500	500	400	2,200	1,400	1,800	5,300	5,900	5,500
Polychlorinated Biphenyls																								
Total PCBs *			40	1	1	2					1	1			2	8	6	3	3	5	7	4	5	2
Metals																								
Arsenic £	60	100	10	12	12	12	9.0	12	17	6	15	14	3	6	11	13	12	9	11	9	9	8	8	5
Cadmium £	20	20	4	32	230	230	0.14	1.9	2	0.6 HJ	0.5 HJ	0.6 HJ	0.4 HJ	0.5 HJ	1.7 HJ	4.1 HJ	3.1 HJ	0.2 HJ	0.6 HJ	1.3 HJ	1.4 HJ	0.6 HJ	0.5 HJ	0.7 HJ
Chromium (Total) # £	0.4	10	1	130	460	540	12.8	33	29	13	25	20	15	18	32	36	31	19	26	27	31	16	19	15
Lead @ £	500	900	50	400	400	400	16.6	54	99	160	82	410	10	130	170	300	240	160	630	270	310	750	360	110

TABLE 8A
Summary of Shallow Soil Data
Phases 1 and 2 Screening Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg									Concentrations in mg/kg																
	Risk Threshold Screening Levels						Reference Background Values (Metals Only)			Phase 1 Screening Level Analytical Results (Sampling Depth in feet)																
	Oak Ridge			NHDES						S-63	S-64	S-65	S-66	S-67	S-67 Dup.	S-68	S-69	S-69 Dup.	S-70	S-71	S-72	S-73	S-74	S-75	S-76	S-77
	1	2	3	S-1	S-2	S-3	Site	NHDES	MADEP	0 - 1'	0 - 1'	½ - 1½'	0 - 1'	0 - 1'	0 - 1'	0 - ½'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'
VOCs																										
Ethylbenzene				140	140	140																				
Toluene			200	100	100	100																				
Xylene (m,p-) †				500	1,000	1,100																				
Xylene (o-) †				500	1,000	1,100																				
Total AVOCs (BTEX)																										
Dichloroethene (cis-1,2-)				2	2	2																				
Tetrachloroethene				2	2	2																				
Trichloroethane (1,1,1-)				42	42	42																				
Trichloroethene				0.8	0.8	0.8																				
Total CVOCs																										
Total VOCs																										
PAHs																										
Benzo[a]pyrene				0.7	0.7	4										0.4										
Benzo[b]fluoranthene				7	20	400										0.4										
Benzo[k]fluoranthene				7	20	400										0.3										
Chrysene				70	200	4,000										0.3										
Fluoranthene				810	2,500	5,000										0.4										
Methylnaphthalene (2-)				150	150	150																				
Phenanthrene ‡				480	2,400	5,000																				
Pyrene ‡				480	2,400	5,000										0.6										2
Total PAHs																2.4										2
Petroleum Hydrocarbons																										
VPH C6-C9 ¶				10,000	10,000	10,000												2								
VPH C10-C12 ¶				10,000	10,000	10,000					2						6	20	6			4		500	10	10
TPH ¶				10,000	10,000	10,000				900	1,100	300				800								23,000	1,300	5,500
Polychlorinated Biphenyls																										
Total PCBs *			40	1	1	2				2	5	0.6				2										4
Metals																										
Arsenic £	60	100	10	12	12	12	9.0	12	17	6	9	9	9	7	6	7	7	7	13	7	7	6	6	6	4	4
Cadmium £	20	20	4	32	230	230	0.14	1.9	2	0.3 HJ	0.7 HJ	0.6 HJ				3 HJ								0.5 HJ	0.4 HJ	1.6 HJ
Chromium (Total) # £	0.4	10	1	130	460	540	12.8	33	29	11	28	32	11	15	17	27	16	15	15	15	16	13	18	12	13	25
Lead @ £	500	900	50	400	400	400	16.6	54	99	45	120	37	14	15	16	180	22	21	20	17	32	16	22	110	63	120

TABLE 8A
Summary of Shallow Soil Data
Phases 1 and 2 Screening Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg									Concentrations in mg/kg															
	Risk Threshold Screening Levels						Reference Background Values (Metals Only)			Phase 1 Screening Level Analytical Results (Sampling Depth in feet)															
	Oak Ridge			NHDES						S-78	S-79	S-80	S-81	S-82	S-83	S-83 Dup.	S-84	S-85	S-86	S-87	S-88	S-89	S-90	S-91	S-92
	1	2	3	S-1	S-2	S-3	Site	NHDES	MADEP	0 - 1'	0 - 1'	0 - 1'	0 - ¾'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'
VOCs																									
Ethylbenzene				140	140	140														0.6					
Toluene			200	100	100	100														0.3					
Xylene (m,p-) †				500	1,000	1,100														0.6					
Xylene (o-) †				500	1,000	1,100														4.7					
Total AVOCs (BTEX)																				6.2					
Dichloroethene (cis-1,2-)				2	2	2																			
Tetrachloroethene				2	2	2													1.6	4.1					
Trichloroethane (1,1,1-)				42	42	42														1.1					
Trichloroethene				0.8	0.8	0.8														0.2					
Total CVOCs																			1.6	5.4					
Total VOCs																			1.6	11.6					
PAHs																									
Benzo[a]pyrene				0.7	0.7	4																			
Benzo[b]fluoranthene				7	20	400											0.3								
Benzo[k]fluoranthene				7	20	400											0.2								
Chrysene				70	200	4,000											0.3								
Fluoranthene				810	2,500	5,000											0.5								0.5
Methylnaphthalene (2-)				150	150	150					2														
Phenanthrene ‡				480	2,400	5,000				0.9	4						0.4								1
Pyrene ‡				480	2,400	5,000											0.7								0.9
Total PAHs										0.9	6						2.4								2.4
Petroleum Hydrocarbons																									
VPH C6-C9 ¶				10,000	10,000	10,000												3	20	40	3				
VPH C10-C12 ¶				10,000	10,000	10,000				11	200		7		2	1	0.8	100	300	200	50			2	5
TPH ¶				10,000	10,000	10,000				2,200	16,000	700	3,300	500	900	600	600	35,000	15,000	50,000	4,500	200	900	1,800	3,900
Polychlorinated Biphenyls																									
Total PCBs *			40	1	1	2				0.9	2	9	6	3	4	5	2	4	110	10	1	12	0.8	9	4
Metals																									
Arsenic £	60	100	10	12	12	12	9.0	12	17	6	7	8	8	8	8	5	10	7	8	6	6	8	14	10	16
Cadmium £	20	20	4	32	230	230	0.14	1.9	2	0.5 HJ	2.3 HJ	0.3 HJ	0.1 HJ	0.9 HJ	0.6 HJ	0.6 HJ	0.4 HJ	0.3 HJ	0.8 HJ	1.3 HJ	0.9 HJ	0.3 HJ		0.5 HJ	0.3 HJ
Chromium (Total) # £	0.4	10	1	130	460	540	12.8	33	29	49	14	16	20	18	19	20	23	14	23	20	26	17	22	20	21
Lead @ £	500	900	50	400	400	400	16.6	54	99	50	76	140	290	740	140	230	87	700	460	690	150	67	900	350	300

TABLE 8A
Summary of Shallow Soil Data
Phases 1 and 2 Screening Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg									Concentrations in mg/kg														
	Risk Threshold Screening Levels						Reference Background			Phase 1 Screening Level Analytical Results (Sampling Depth in feet)														
	Oak Ridge			NHDES			Values (Metals Only)			S-93	S-94	S-95	S-96	S-97	S-98	S-99	S-100	S-101	S-102	S-103	S-104	S-105	S-105 Dup.	S-106
	1	2	3	S-1	S-2	S-3	Site	NHDES	MADEP	0 - 1'	0 - 1'	0 - ¾'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'
VOCs																								
Ethylbenzene				140	140	140																		
Toluene			200	100	100	100																		
Xylene (m,p-) †				500	1,000	1,100																		
Xylene (o-) †				500	1,000	1,100				0.1														
Total AVOCs (BTEX)										0.1														
Dichloroethene (cis-1,2-)				2	2	2																		
Tetrachloroethene				2	2	2				0.2														
Trichloroethane (1,1,1-)				42	42	42																		
Trichloroethene				0.8	0.8	0.8																		
Total CVOCs										0.2														
Total VOCs										0.3														
PAHs																								
Benzo[a]pyrene				0.7	0.7	4																		
Benzo[b]fluoranthene				7	20	400				1.5														
Benzo[k]fluoranthene				7	20	400																		
Chrysene				70	200	4,000				1										0.4				
Fluoranthene				810	2,500	5,000				1.2		0.5								1.3				
Methylnaphthalene (2-)				150	150	150																		
Phenanthrene ‡				480	2,400	5,000				0.8		0.5								0.5				
Pyrene ‡				480	2,400	5,000				2.4		1	3					2		1.2				
Total PAHs										6.9		2	3					2		3.4				
Petroleum Hydrocarbons																								
VPH C6-C9 ¶				10,000	10,000	10,000				2														
VPH C10-C12 ¶				10,000	10,000	10,000				50	10	8	4		10	10	200			0.9	7	8	3	3
TPH ¶				10,000	10,000	10,000				12,000	1,700	3,600	22,000	1,300	4,900	5,100	12,000	4,200	1,900	1,400	8,800	5,400	5,000	6,000
Polychlorinated Biphenyls																								
Total PCBs *			40	1	1	2				3	10	8	43	0.7	4	1	11	3	18	4		13	14	4
Metals																								
Arsenic £	60	100	10	12	12	12	9.0	12	17	7	7	8	9	6	8	9	28	7	9	13	8	8	10	9
Cadmium £	20	20	4	32	230	230	0.14	1.9	2	0.5 HJ	0.4 HJ	0.4 HJ	0.4 HJ		0.5 HJ	0.2 HJ	0.7 HJ		0.5 HJ	0.6 HJ		0.3 HJ	0.3 HJ	0.9 HJ
Chromium (Total) # £	0.4	10	1	130	460	540	12.8	33	29	17	22	22	19	20	18	18	19	12	21	24	18	34	16	24
Lead @ £	500	900	50	400	400	400	16.6	54	99	180	210	400	390	72	240	96	130	170	51	320	220	820	720	270

TABLE 8A
Summary of Shallow Soil Data
Phases 1 and 2 Screening Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg									Concentrations in mg/kg														
	Risk Threshold Screening Levels						Reference Background			Phase 1 Screening Level Analytical Results (Sampling Depth in feet)														
	Oak Ridge			NHDES			Values (Metals Only)			S-107	S-108	S-109	S-110	S-111	S-112	S-113	S-114	S-115	S-116	S-116 Dup.	S-117	S-118	S-119	S-120
	1	2	3	S-1	S-2	S-3	Site	NHDES	MADEP	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'
VOCs																								
Ethylbenzene				140	140	140				2								1.8						
Toluene			200	100	100	100												2.2						
Xylene (m,p-) †				500	1,000	1,100				4								5.1						
Xylene (o-) †				500	1,000	1,100				4								4.6			0.3			
Total AVOCs (BTEX)										10								13.7			0.3			
Dichloroethene (cis-1,2-)				2	2	2												1.4						
Tetrachloroethene				2	2	2						0.4	0.6				12	1.2			1.9		1.7	0.71
Trichloroethane (1,1,1-)				42	42	42												3.7						
Trichloroethene				0.8	0.8	0.8											1.2							
Total CVOCs												0.4	0.6				13.2	6.3			1.9		1.7	0.71
Total VOCs										10		0.4	0.6				13.2	20			2.2		1.7	0.71
PAHs																								
Benzo[a]pyrene				0.7	0.7	4																		
Benzo[b]fluoranthene				7	20	400									0.9									
Benzo[k]fluoranthene				7	20	400									1									
Chrysene				70	200	4,000																		
Fluoranthene				810	2,500	5,000																		
Methylnaphthalene (2-)				150	150	150				14								4						
Phenanthrene ‡				480	2,400	5,000				6														
Pyrene ‡				480	2,400	5,000									1			4						
Total PAHs										20					2.9			8						
Petroleum Hydrocarbons																								
VPH C6-C9 ¶				10,000	10,000	10,000				200		5					7	60			10	3	9	5
VPH C10-C12 ¶				10,000	10,000	10,000				2,000		100	10	40	70	8	40	400		2	200	50	70	30
TPH ¶				10,000	10,000	10,000				14,000	300	8,100	21,000	4,400	9,700	200	9,400	17,000	2,800	2,600	8,000	14,000	28,000	21,000
Polychlorinated Biphenyls																								
Total PCBs *			40	1	1	2					1	250	6	8	20	1	4	12	90	72	5	6	32	6
Metals																								
Arsenic £	60	100	10	12	12	12	9.0	12	17	8	8	12	7	9	6	7	6	5	7	8	5	8	13	8
Cadmium £	20	20	4	32	230	230	0.14	1.9	2			1.2 HJ	0.6 HJ	0.4 HJ	0.2 HJ	0.4 HJ	0.3 HJ	0.6 HJ	0.3 HJ	0.3 HJ	0.6 HJ	0.9 HJ	2.4 HJ	1.7 HJ
Chromium (Total) # £	0.4	10	1	130	460	540	12.8	33	29	18	21	15	16	12	13	17	16	15	16	18	17	21	45	16
Lead @ £	500	900	50	400	400	400	16.6	54	99	120	98	140	190	64	200	310	1000	190	280	250	180	1400	13000	1100

TABLE 8A
Summary of Shallow Soil Data
Phases 1 and 2 Screening Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg									Concentrations in mg/kg														
	Risk Threshold Screening Levels						Reference Background			Phase 1 Screening Level Analytical Results (Sampling Depth in feet)														
	Oak Ridge			NHDES			Values (Metals Only)			S-121	S-122	S-123	S-124	S-125	S-126	S-127	S-128	S-129	S-130	S-131	S-132	S-133	S-134	S-134 Dup.
	1	2	3	S-1	S-2	S-3	Site	NHDES	MADEP	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'
VOCs																								
Ethylbenzene				140	140	140					0.5													
Toluene			200	100	100	100																		
Xylene (m,p-) †				500	1,000	1,100					0.4													
Xylene (o-) †				500	1,000	1,100				4	0.6													
Total AVOCs (BTEX)										4	1.5													
Dichloroethene (cis-1,2-)				2	2	2																		
Tetrachloroethene				2	2	2																		
Trichloroethane (1,1,1-)				42	42	42																		
Trichloroethene				0.8	0.8	0.8																		
Total CVOCs																								
Total VOCs										4	1.5													
PAHs																								
Benzo[a]pyrene				0.7	0.7	4																		
Benzo[b]fluoranthene				7	20	400																		
Benzo[k]fluoranthene				7	20	400																		
Chrysene				70	200	4,000					1													
Fluoranthene				810	2,500	5,000					2.2													
Methylnaphthalene (2-)				150	150	150					1.3													
Phenanthrene ‡				480	2,400	5,000					1.1													
Pyrene ‡				480	2,400	5,000				3	5.6					0.6								
Total PAHs										3	11.2					0.6								
Petroleum Hydrocarbons																								
VPH C6-C9 ¶				10,000	10,000	10,000				200	30	2												1
VPH C10-C12 ¶				10,000	10,000	10,000				700	100	30	8	1	8	8	8	3	6	5	1	2	3	5
TPH ¶				10,000	10,000	10,000				17,000	8,300	12,000	3,500	100	3,000	2,100	4,200		2,700	8,200	200	6,200	9,100	10,000
Polychlorinated Biphenyls																								
Total PCBs *			40	1	1	2				10	2	2	15	1	3	13	20	0.6	29	0.6		18	4	3
Metals																								
Arsenic £	60	100	10	12	12	12	9.0	12	17	18	9	8	7	8	6	7	8	8	7	5	8	8	6	6
Cadmium £	20	20	4	32	230	230	0.14	1.9	2	6.7 HJ		0.4 HJ	0.4 HJ	0.3 HJ	0.5 HJ	0.5 HJ	0.8 HJ	0.4 HJ	1.1 HJ	0.5 HJ	0.3 HJ	0.9 HJ	0.6 HJ	0.7 HJ
Chromium (Total) # £	0.4	10	1	130	460	540	12.8	33	29	120	22	32	60	59	82	29	26	14	29	30	13	25	16	18
Lead @ £	500	900	50	400	400	400	16.6	54	99	13000	600	890	310	25	120	82	130	17	71	79	17	260	62	81

TABLE 8A
Summary of Shallow Soil Data
Phases 1 and 2 Screening Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg									Concentrations in mg/kg															
	Risk Threshold Screening Levels						Reference Background Values (Metals Only)			Phase 1 Screening Level Analytical Results (Sampling Depth in feet)						Phase 2 Screening Level Analytical Results (Sampling Depth in feet)									
	Oak Ridge			NHDES						S-135	S-136	S-137	S-138	S-139	S-140	SP-1/S-3	SP-2/S-3	SP-2/S-3 Dup.	SP-3/S-3	SP-4/S-3	SP-4/S-5	SP-5/S-3	SP-6/S-3	SP-7/S-3	SP-8/S-3
	1	2	3	S-1	S-2	S-3	Site	NHDES	MADEP	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	2 - 3'	2 - 3'	2 - 3'	2 - 3'	2 - 3'	4 - 5'	2 - 3'	2 - 3'	2 - 3'	2 - 3'
VOCs																									
Ethylbenzene				140	140	140																			
Toluene			200	100	100	100																			
Xylene (m,p-) †				500	1,000	1,100																			
Xylene (o-) †				500	1,000	1,100																			
Total AVOCs (BTEX)																									
Dichloroethene (cis-1,2-)				2	2	2																			
Tetrachloroethene				2	2	2																			
Trichloroethane (1,1,1-)				42	42	42																			
Trichloroethene				0.8	0.8	0.8																			
Total CVOCs																									
Total VOCs																									
PAHs																									
Benzo[a]pyrene				0.7	0.7	4																			
Benzo[b]fluoranthene				7	20	400									0.2										
Benzo[k]fluoranthene				7	20	400																			
Chrysene				70	200	4,000									0.2										
Fluoranthene				810	2,500	5,000									0.4										
Methylnaphthalene (2-)				150	150	150				2			0.4												
Phenanthrene ‡				480	2,400	5,000				2															
Pyrene ‡				480	2,400	5,000				3			0.5		0.3										
Total PAHs										7			0.9		1.1										
Petroleum Hydrocarbons																									
VPH C6-C9 ¶				10,000	10,000	10,000				4				2						10	3				0.8
VPH C10-C12 ¶				10,000	10,000	10,000				4	4	1	1	10	0.8					50	100			2	2
TPH ¶				10,000	10,000	10,000				17,000	2,300	3,100	1,900	5,400			700	600	500	11,000	4,700		900		800
Polychlorinated Biphenyls																									
Total PCBs *			40	1	1	2				2	9	3	7		0.5		1	2	1	4	0.8				0.7
Metals																									
Arsenic £	60	100	10	12	12	12	9.0	12	17	6	10	10	11	5	6	8	4	5	5	5	7	7	4	3	7
Cadmium £	20	20	4	32	230	230	0.14	1.9	2	0.8 HJ	6.6 HJ	0.3 HJ	0.9 HJ	0.2 HJ	0.4 HJ	0.6 HJ	0.6 HJ	0.7 HJ	0.5 HJ	0.2 HJ	0.7 HJ	0.3 HJ	0.5 HJ	0.4 HJ	2 HJ
Chromium (Total) # £	0.4	10	1	130	460	540	12.8	33	29	23	21	14	33	13	15	33	12	14	15	9.9	21	14	15	12	23
Lead @ £	500	900	50	400	400	400	16.6	54	99	190	200	41	260	42	39	9	51	29	28	8	9	5	7	6	77

TABLE 8A
Summary of Shallow Soil Data
Phases 1 and 2 Screening Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg									Concentrations in mg/kg													
	Risk Threshold Screening Levels						Reference Background Values (Metals Only)			Phase 2 Screening Level Analytical Results (Sampling Depth in feet)													
	Oak Ridge			NHDES						SP-8/S-5	SP-9/S-3	SP-10/S-3	SP-11/S-3	SP-12/S-3	SP-13/S-3	SP-13/S-5	SP-13/S-5 Rerun	SP-14/S-3	SP-15/S-3	SP-15/S-5	SP-16/S-3	SP-17/S-3	SP-18/S-3
	1	2	3	S-1	S-2	S-3	Site	NHDES	MADEP	4 - 5'	2 - 3'	2 - 3'	2 - 3'	2 - 3'	2 - 3'	4 - 5'	4 - 5'	2 - 3'	2 - 3'	4 - 5'	2 - 3'	2 - 3'	2 - 3'
VOCs																							
Ethylbenzene				140	140	140											NA						
Toluene			200	100	100	100											NA						
Xylene (m,p-) †				500	1,000	1,100											NA						
Xylene (o-) †				500	1,000	1,100											NA						
Total AVOCs (BTEX)																							
Dichloroethene (cis-1,2-)				2	2	2											NA						
Tetrachloroethene				2	2	2											NA						
Trichloroethane (1,1,1-)				42	42	42											NA						
Trichloroethene				0.8	0.8	0.8											NA						
Total CVOCs																							
Total VOCs																							
PAHs																							
Benzo[a]pyrene				0.7	0.7	4											NA						
Benzo[b]fluoranthene				7	20	400											NA						
Benzo[k]fluoranthene				7	20	400											NA						
Chrysene				70	200	4,000											NA						
Fluoranthene				810	2,500	5,000											NA						
Methylnaphthalene (2-)				150	150	150											NA						
Phenanthrene ‡				480	2,400	5,000											NA			0.2			
Pyrene ‡				480	2,400	5,000											NA						
Total PAHs																				0.2			
Petroleum Hydrocarbons																							
VPH C6-C9 ¶				10,000	10,000	10,000							1				NA						
VPH C10-C12 ¶				10,000	10,000	10,000				1		1	3		7	4	NA						
TPH ¶				10,000	10,000	10,000					1,000	200	300	700	2,500	400	NA	4,400	300	700		900	100
Polychlorinated Biphenyls																							
Total PCBs *			40	1	1	2					3	2	10	0.5	770	1,000	700	4	0.9	1		0.8	
Metals																							
Arsenic £	60	100	10	12	12	12	9.0	12	17	5	5	7	9	9	9	3	NA	13	13	4	6	9	12
Cadmium £	20	20	4	32	230	230	0.14	1.9	2	0.8 HJ	0.9 HJ	0.4 HJ	0.3 HJ	0.4 HJ	1.1 HJ	0.3 HJ	NA	0.6 HJ	0.7 HJ	0.5 HJ	0.4 HJ	0.7 HJ	1.1 HJ
Chromium (Total) # £	0.4	10	1	130	460	540	12.8	33	29	17	15	22	9.1	8.3	10	8	NA	22	13	12	8.2	17	24
Lead @ £	500	900	50	400	400	400	16.6	54	99	9	54	8	6	27	19	4	NA	140	19	7	6	38	13

TABLE 8A
Summary of Shallow Soil Data
Phases 1 and 2 Screening Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg									Concentrations in mg/kg												
	Risk Threshold Screening Levels						Reference Background			Phase 2 Screening Level Analytical Results (Sampling Depth in feet)												
	Oak Ridge			NHDES			Values (Metals Only)			SP-18/S-5	SP-19/S-3	SP-19/S-3 Dup.	SP-19/S-5	SP-20/S-3	SP-21/S-3	SP-21/S-5	SP-22/S-3	SP-22/S-5	SP-23/S-4	SP-24/S-5	SP-25/S-3	SP-26/S-3
	1	2	3	S-1	S-2	S-3	Site	NHDES	MADEP	4 - 5'	2 - 3'	2 - 3'	4 - 5'	2 - 3'	2 - 3'	4 - 5'	2 - 3'	4 - 4.7'	3 - 4'	4 - 5'	2 - 3'	2 - 3'
VOCs																						
Ethylbenzene				140	140	140																
Toluene			200	100	100	100																
Xylene (m,p-) †				500	1,000	1,100																
Xylene (o-) †				500	1,000	1,100						1										
Total AVOCs (BTEX)												1										
Dichloroethene (cis-1,2-)				2	2	2																
Tetrachloroethene				2	2	2						0.3					3.6					
Trichloroethane (1,1,1-)				42	42	42																
Trichloroethene				0.8	0.8	0.8											0.2			0.1		
Total CVOCs												0.3					3.8			0.1		
Total VOCs												1.3					3.8			0.1		
PAHs																						
Benzo[a]pyrene				0.7	0.7	4																
Benzo[b]fluoranthene				7	20	400																
Benzo[k]fluoranthene				7	20	400																
Chrysene				70	200	4,000																
Fluoranthene				810	2,500	5,000																
Methylnaphthalene (2-)				150	150	150																
Phenanthrene ‡				480	2,400	5,000																
Pyrene ‡				480	2,400	5,000																
Total PAHs																						
Petroleum Hydrocarbons																						
VPH C6-C9 ¶				10,000	10,000	10,000						20					4			2		
VPH C10-C12 ¶				10,000	10,000	10,000					7	100	7				20			50		
TPH ¶				10,000	10,000	10,000					4,300	13,000	2,000	300		200	7,100	1,100		5,100	200	
Polychlorinated Biphenyls																						
Total PCBs *			40	1	1	2					4	3	0.9	32			2			2	28	
Metals																						
Arsenic £	60	100	10	12	12	12	9.0	12	17	2	7	9	8	4	3	5		4	4	8	4	7
Cadmium £	20	20	4	32	230	230	0.14	1.9	2	0.6 HJ	1.1 HJ	1 HJ	0.5 HJ	0.2 HJ	0.4 HJ	0.7 HJ	0.3 HJ	0.6 HJ	0.6 HJ	1.3 HJ	0.6 HJ	0.9 HJ
Chromium (Total) # £	0.4	10	1	130	460	540	12.8	33	29	9.9	53	43	9.5	11	5.8	14	9	15	8.6	11	13	30
Lead @ £	500	900	50	400	400	400	16.6	54	99	5	28	61	25	97	25	15	190	41	6	21	29	8

TABLE 8A
Summary of Shallow Soil Data
Screening Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. between October 27, 1997 and January 19, 1998. See Table 1 for specific dates and identity of sample delivery groups (SDGs).
2. Samples were analyzed by Eastern Analytical, Inc. of Concord, New Hampshire. Analyses are screening level and all concentrations are considered to be estimated.
3. Concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).
4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.
5. Total concentrations listed (e.g., Total PAHs) are the sum of the detected concentrations of the relevant analytes.
6. A blank indicates the parameter was not detected.
7. "Dup." indicates sample is a field duplicate.
8. "Rerun" indicates the sample was re-analyzed for parameter indicated for confirmation of results.
9. "Oak Ridge 1" refers to "Table 1. Screening benchmark concentrations for the toxicity of chemicals to earthworms" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.

   "Oak Ridge 2" refers to "Table 2. Screening benchmark concentrations for the toxicity of chemicals to soil microorganisms and microbial processes" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.

   "Oak Ridge 3" refers to "Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.

   "NHDES S-1" refers to the S-1 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision).

   "NHDES S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision).

   "NHDES S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision).

   "Site" reference background values are the maximum concentrations detected at background locations at the Site.

   "NHDES" reference background values refers to background concentrations of metals in soil values as listed in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).

   "MADEP" refers to background concentrations of metals in soil values as listed in "Guidance for Disposal Site Risk Characterization; In Support of the Massachusetts Contingency Plan; Interim Final Policy # WSC/ORS-95-141," Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup, and Office of Research and Standards (July 1995).
10. "*" indicates S-1 and S-2 values for total PCBs are based on USEPA's August 1990 "Guidance on Remedial Actions for Superfund Sites with PCB Contamination" for residential areas.
11. "£" indicates priority pollutant metal.
12. "†" indicates that the S-1, S-2, and S-3 standards are for xylene (mixed isomers).
13. "‡" indicates the values presented for S-1, S-2, and S-3 are a combined total for benzo[g,h,i]perylene, phenanthrene, and pyrene.
14. "¶" indicates the values presented for S-1, S-2, and S-3 are for total petroleum hydrocarbons.
15. "#" indicates Oak Ridge 1, 2, and 3; S-1; S-2; and S-3 values are for chromium (VI). Chromium (III) values for S-1, S-2, and S-3 are 1,000 mg/kg, 2,500 mg/kg, and 5,000 mg/kg, respectively. Analytical results are for total chromium.
16. "@" indicates the S-1, S-2, and S-3 values for lead are based on the USEPA's 1994 "Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities."
17. "HJ" indicates cadmium values are biased high based on review of data by Data Validator/Project QA Officer.
    "NA" indicates the sample was not analyzed for this parameter.
18. "VOCs" are volatile organic compounds.
    "AVOCs" are non-chlorinated aromatic volatile organic compounds.
    "BTEX" indicates the sum of benzene, ethylbenzene, toluene, m,p-xylene, and o-xylene.
    "CVOCs" are chlorinated volatile organic compounds.
    "PAHs" are polynuclear aromatic hydrocarbons.
    "VPH" is volatile petroleum hydrocarbons.
    "TPH" is total petroleum hydrocarbons.
19. See appendices for field logs/forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 8B
Summary of Shallow Soil Data (Screening Level Analyses)
Contaminant Distribution with Depth
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Phase 1 Sampling Location	Sample Name	Sample Depth (ft)	Soil Sampling Phase	Collection Date	Concentrations in mg/kg																	
					VOCs							PAHs			VPH		TPH	PCBs	Metals			
					Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	Tetrachloroethene	1,1,1-Trichloroethane	Trichloroethene	2-Methylnaphthalene	Phenanthrene	Pyrene	C6-C9	C10-C12	Total Petroleum Hydrocarbons (C6-40)	Total PCBs (Aroclors 1242-1260)	Arsenic	Cadmium	Chromium	Lead
S-5	S-5	0 - 1	1	10/27/1997															8	0.5 HJ	20	12
S-5	SP-1/S-3	2 - 3	2	12/5/1997															8	0.6 HJ	33	9
S-23	S-23	0 - 1	1	11/3/1997												2		0.7	9	0.7 HJ	25	61
S-23	SP-26/S-3	2 - 3	2	12/16/1997															7	0.9 HJ	30	8
S-31	S-31	0 - 1	1	10/28/1997													3,900	4	10	1.7 HJ	46	780
S-31	SP-2/S-3	2 - 3	2	12/5/1997													700	1	4	0.6 HJ	12	51
S-31	SP-2/S-3 Dup.	2 - 3	2	12/5/1997													600	2	5	0.7 HJ	14	29
S-40	S-40	0 - 1	1	11/3/1997												3	5,100	19	7	1.6 HJ	36	530
S-40	SP-3/S-3	2 - 3	2	12/5/1997													500	1	5	0.5 HJ	15	28
S-42	S-42	0 - 1	1	10/28/1997												10	12,000	3	7	0.3 HJ	12	24
S-42	SP-4/S-3	2 - 3	2	12/5/1997											10	50	11,000	4	5	0.2 HJ	9.9	8
S-42	SP-4/S-5	4 - 5	2	12/5/1997											3	100	4,700	0.8	7	0.7 HJ	21	9
S-43	S-43	0 - 1	1	10/28/1997													600	260	7	0.4 HJ	14	96
S-43	S-43 Rerun	0 - 1	1	10/28/1997														210				
S-43	SP-25/S-3	2 - 3	2	12/11/1997													200	28	4	0.6 HJ	13	29
S-43	SP-143/S-1	6 - 8	3	1/15/1998												1			6	0.6 HJ	12	9
S-43	SP-143/S-1 Dup.	6 - 8	3	1/15/1998												1			6	0.8 HJ	19	9
S-48	S-48	0 - 1	1	10/28/1997					14		28				9		1,000	3	11	0.6 HJ	15	48
S-48	SP-5/S-3	2 - 3	2	12/9/1997															7	0.3 HJ	14	5
S-49	S-49	0 - 1	1	11/3/1997											4	100	58,000		6	0.6 HJ	13	160
S-49	SP-124/S-4	6 - 8	3	1/6/1998											1	3			6	0.6 HJ	9.1	6
S-62	S-62	0 - 0.75	1	10/29/1997													5,500	2	5	0.7 HJ	15	110
S-62	SP-23/S-4	3 - 4	2	1/19/1998															4	0.6 HJ	8.6	6
S-64	S-64	0 - 1	1	10/29/1997												2	1,100	5	9	0.7 HJ	28	120
S-64	SP-24/S-5	4 - 5	2	12/9/1997							0.1				2	50	5,100	2	8	1.3 HJ	11	21
S-75	S-75	0 - 1	1	10/30/1997												500	23,000		6	0.5 HJ	12	110
S-75	SP-6/S-3	2 - 3	2	12/8/1997													900		4	0.5 HJ	15	7
S-77	S-77	0 - 1	1	11/3/1997										2		10	5,500	4	4	1.6 HJ	25	120
S-77	SP-7/S-3	2 - 3	2	12/8/1997												2			3	0.4 HJ	12	6
S-85	S-85	0 - 1	1	11/3/1997											3	100	35,000	4	7	0.3 HJ	14	700
S-85	SP-14/S-3	2 - 3	2	12/8/1997													4,400	4	13	0.6 HJ	22	140
S-85	SP-145/S-1	6 - 8	3	1/15/1998															7	0.6 HJ	12	6
S-86	S-86	0 - 1	1	11/3/1997					1.6						20	300	15,000	110	8	0.8 HJ	23	460
S-86	SP-12/S-3	2 - 3	2	12/8/1997													700	0.5	9	0.4 HJ	8.3	27
S-87	S-87	0 - 1	1	11/3/1997	0.6	0.3	0.6	4.7	4.1	1.1	0.2				40	200	50,000	10	6	1.3 HJ	20	690
S-87	SP-21/S-3	2 - 3	2	12/10/1997															3	0.4 HJ	5.8	25
S-87	SP-21/S-5	4 - 5	2	12/10/1997													200		5	0.7 HJ	14	15

TABLE 8B
Summary of Shallow Soil Data (Screening Level Analyses)
Contaminant Distribution with Depth
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Phase 1 Sampling Location	Sample Name	Sample Depth (ft)	Soil Sampling Phase	Collection Date	Concentrations in mg/kg																	
					VOCs							PAHs			VPH		TPH	PCBs	Metals			
					Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	Tetrachloroethene	1,1,1-Trichloroethane	Trichloroethene	2-Methylnaphthalene	Phenanthrene	Pyrene	C6-C9	C10-C12	Total Petroleum Hydrocarbons (C6-40)	Total PCBs (Aroclors 1242-1260)	Arsenic	Cadmium	Chromium	Lead
S-96	S-96	0 - 1	1	10/30/1997										3		4	22,000	43	9	0.4 HJ	19	390
S-96	SP-15/S-3	2 - 3	2	12/17/1997													300	0.9	13	0.7 HJ	13	19
S-96	SP-15/S-5	4 - 5	2	12/17/1997									0.2				700	1	4	0.5 HJ	12	7
S-102	S-102	0 - 1	1	10/30/1997													1,900	18	9	0.5 HJ	21	51
S-102	SP-10/S-3	2 - 3	2	12/8/1997												1	200	2	7	0.4 HJ	22	8
S-105	S-105	0 - 1	1	10/30/1997												8	5,400	13	8	0.3 HJ	34	820
S-105	S-105 Dup.	0 - 1	1	10/30/1997												3	5,000	14	10	0.3 HJ	16	720
S-105	SP-11/S-3	2 - 3	2	12/8/1997											1	3	300	10	9	0.3 HJ	9.1	6
S-105	SP-144/S-1	6 - 8	3	1/15/1998															5	0.6 HJ	8.8	6
S-109	S-109	0 - 1	1	10/30/1997					0.4						5	100	8,100	250	12	1.2 HJ	15	140
S-109	SP-13/S-3	2 - 3	2	12/8/1997												7	2,500	770	9	1.1 HJ	10	19
S-109	SP-13/S-5	4 - 5	2	12/8/1997												4	400	1,000	3	0.3 HJ	8	4
S-109	SP-135/S-4	6 - 8	3	1/13/1998																		
S-109	SP-135/S-5	8 - 10	3	1/13/1998															4	0.5 HJ	9.6	6
S-114	S-114	0 - 1	1	10/31/1997					12		1.2				7	40	9,400	4	6	0.3 HJ	16	1,000
S-114	SP-22/S-3	2 - 3	2	12/11/1997					3.6		0.2				4	20	7,100	2		0.3 HJ	9	190
S-114	SP-22/S-5	4 - 5	2	12/11/1997													1,100		4	0.6 HJ	15	41
S-116	S-116	0 - 1	1	10/31/1997													2,800	90	7	0.3 HJ	16	280
S-116	S-116 Dup.	0 - 1	1	10/31/1997												2	2,600	72	8	0.3 HJ	18	250
S-116	SP-20/S-3	2 - 3	2	12/8/1997													300	32	4	0.2 HJ	11	97
S-116	SP-146/S-1	6 - 8	3	1/15/1998															8	1.1 HJ	40	13
S-118	S-118	0 - 1	1	10/31/1997											3	50	14,000	6	8	0.9 HJ	21	1,400
S-118	SP-16/S-3	2 - 3	2	12/11/1997															6	0.4 HJ	8.2	6
S-119	S-119	0 - 1	1	10/31/1997					1.7						9	70	28,000	32	13	2.4 HJ	45	13,000
S-119	S-119 Rerun	0 - 1	1	10/31/1997																		10,000
S-119	SP-18/S-3	2 - 3	2	12/17/1997													100		12	1.1 HJ	24	13
S-119	SP-18/S-5	4 - 5	2	12/17/1997															2	0.6 HJ	9.9	5
S-120	S-120	0 - 1	1	10/31/1997					0.71						5	30	21,000	6	8	1.7 HJ	16	1,100
S-120	SP-17/S-3	2 - 3	2	12/10/1997													900	0.8	9	0.7 HJ	17	38
S-121	S-121	0 - 1	1	10/31/1997				4						3	200	700	17,000	10	18	6.7 HJ	120	13,000
S-121	SP-19/S-3	2 - 3	2	12/10/1997												7	4,300	4	7	1.1 HJ	53	28
S-121	SP-19/S-3 Dup.	2 - 3	2	12/10/1997				1	0.3						20	100	13,000	3	9	1 HJ	43	61
S-121	SP-19/S-5	4 - 5	2	12/10/1997												7	2,000	0.9	8	0.5 HJ	9.5	25
S-128	S-128	0 - 1	1	10/31/1997												8	4,200	20	8	0.8 HJ	26	130
S-128	SP-9/S-3	2 - 3	2	12/17/1997													1,000	3	5	0.9 HJ	15	54
S-135	S-135	0 - 1	1	10/31/1997								2	2	3	4	4	17,000	2	6	0.8 HJ	23	190
S-135	SP-8/S-3	2 - 3	2	12/17/1997											0.8	2	800	0.7	7	2 HJ	23	77
S-135	SP-8/S-5	4 - 5	2	12/17/1997												1			5	0.8 HJ	17	9

TABLE 8B
Summary of Shallow Soil Data (Screening Level Analyses)
Contaminant Distribution with Depth
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. on the dates indicated. See Table 1 for identity of sample delivery groups (SDGs).

2. Only screening level data are presented because no full level data are available for multi-depth samples at the same location. All screening level data concentrations are considered estimated.

3. Only those parameters detected in one or more Phase 1, 2, or 3 samples presented herein are listed.

4. Concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

5. "S-43 Rerun" indicates that sample S-43 was re-analyzed for PCBs for confirmation of the results.

6. "S-119 Rerun" indicates that sample S-119 was re-analyzed for lead for confirmation of the results.

7. A blank indicates the parameter was not detected.

8. "Dup." indicates sample is a field duplicate.

9. "VOCs" are volatile organic compounds.
   "PAHs" are polynuclear aromatic hydrocarbons.
   "VPH" is volatile petroleum hydrocarbons.
   "TPH" is total petroleum hydrocarbons.
   "PCBs" are polychlorinated biphenyls.

10. "HJ" indicates cadmium values are biased high based on review of data by Data Validator/Project QA Officer.

11. See appendices for field logs/forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 9A
Summary of Shallow Soil Data - Full Level Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg						Concentrations in mg/kg																					
	Oak Ridge			NHDES			S-1	S-8	S-23	S-36	S-40	S-41	S-49	S-69	S-69 Dup.	S-73	S-77	S-85	S-86	S-87	S-88	SP-9/S-3	SP-15/S-3	SP-18/S-3	S-204	S-205	S-206	S-207
	1	2	3	S-1	S-2	S-3	0 - 1'	0 - 1'	0 - 1'	0 - ¾'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	2 - 3'	2 - 3'	2 - 3'	0 - 1/3'	0 - ¾'	0 - 1'	0 - 1'
Naphthalene				5	5	5																			0.0024 J			
Toluene			200	100	100	100																						
Xylene (m,p-) †				500	1,000	1,100														1.4								
Xylene (o-) †				500	1,000	1,100														3.2								
Butylbenzene (n-) &				59	59	59								R	R		R											
Butylbenzene (sec-) &				59	59	59								R	R		R											
Butylbenzene (tert-) &				59	59	59								R	R		R											
Isopropyltoluene (p- / 4-) &				59	59	59								R	R		R											
Propylbenzene (n-) &				59	59	59								R	R		R											
Trimethylbenzene (1,2,4-) &				59	59	59								R	R		R			4.8								
Trimethylbenzene (1,3,5-) &				59	59	59								R	R		R			5.3								
Total Alkylbenzenes &				59	59	59														10.1								
Total AVOCs																				14.7					0.0024			
Chlorotoluene (2- / o-)				30	30	30								R	R		R											
Chlorotoluene (4- / p-)				21	21	21								R	R		R											
Dichlorobenzene (1,2- / o-)				66	66	66								R	R		R											
Dichlorobenzene (1,3- / m-)				45	45	45								R	R		R											
Dichlorobenzene (1,4- / p-)	20			6	9	9								R	R		R											
Dichloroethane (1,1-)				3	3	3																						
Dichloroethene (cis-1,2-)				2	2	2																						
Hexachlorobutadiene				0.2	0.8	3								R	R		R											
Methylene Chloride (Dichloromethane)				0.1	0.1	0.1																0.0030	0.0030	0.0030				
Tetrachloroethene				2	2	2											0.0020 J		1.2	2.3								
Trichlorobenzene (1,2,3-)	20																											
Trichlorobenzene (1,2,4-)	20			15	15	15									R													
Trichloroethene				0.8	0.8	0.8																						
Trichloropropane (1,2,3-)				1.4	1.4	1.4								R	R		R											
Total CVOCs																	0.0020		1.2	2.3		0.0030	0.0030	0.0030				
Bromobenzene														R	R		R											
Bromoform				0.1	0.1	0.1																						
Bromomethane				0.3	0.3	0.3	0.0070 J																					
Dibromo-3-Chloropropane (1,2-) *				0.01	0.01	0.01								R	R		R											
Methyl Tert-Butyl Ether (MTBE)				0.13	0.13	0.13																						
Trichlorofluoromethane				1,000	2,500	5,000	0.010				0.012 J	0.0080		0.014 J	0.0050 J	0.010 J	0.010 J					0.0020			0.016 J	0.0030	0.0015 J	
Total VOCs							0.017				0.012	0.0080		0.014	0.0050	0.010	0.012		1.2	17		0.0050	0.0030	0.0030	0.0184	0.0030	0.0015	

TABLE 9A
Summary of Shallow Soil Data - Full Level Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg						Concentrations in mg/kg																				
	Oak Ridge			NHDES			S-208	S-209	S-210	S-211	S-213	S-213 Dup.	S-214	S-215	S-216	S-216 Dup.	S-217	S-218	S-220	S-222	S-223	S-224	S-225	S-226	TP-139	TP-141	TP-144
	1	2	3	S-1	S-2	S-3	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - ½'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - ¾'	0.7 - 1.7'	0 - 1'	0 - 1'	0 - 1'	½ - 1'	0 - 1'
Naphthalene				5	5	5								0.0030 J					0.0030 J								
Toluene			200	100	100	100													0.0022 J						0.0010 J		
Xylene (m,p-) †				500	1,000	1,100																					
Xylene (o-) †				500	1,000	1,100							0.010														
Butylbenzene (n-) &				59	59	59																					
Butylbenzene (sec-) &				59	59	59																					
Butylbenzene (tert-) &				59	59	59																					
Isopropyltoluene (p- / 4-) &				59	59	59							0.0084 J														
Propylbenzene (n-) &				59	59	59																					
Trimethylbenzene (1,2,4-) &				59	59	59																					
Trimethylbenzene (1,3,5-) &				59	59	59							0.026														
Total Alkylbenzenes &				59	59	59							0.0344														
Total AVOCs													0.0444	0.0030					0.0052						0.0010		
Chlorotoluene (2- / o-)				30	30	30																					
Chlorotoluene (4- / p-)				21	21	21																					
Dichlorobenzene (1,2- / o-)				66	66	66															0.011 J						
Dichlorobenzene (1,3- / m-)				45	45	45																					
Dichlorobenzene (1,4- / p-)	20			6	9	9															0.0088 J						
Dichloroethane (1,1-)				3	3	3																			0.0010 J		
Dichloroethene (cis-1,2-)				2	2	2																			0.0040 J		0.0010 J
Hexachlorobutadiene				0.2	0.8	3																					
Methylene Chloride (Dichloromethane)				0.1	0.1	0.1																			0.0030 J		
Tetrachloroethene				2	2	2														0.026 J	0.076 J						
Trichlorobenzene (1,2,3-)	20																				0.066 J						
Trichlorobenzene (1,2,4-)	20			15	15	15														0.018 J	0.25 J						
Trichloroethene				0.8	0.8	0.8															0.010 J						
Trichloropropane (1,2,3-)				1.4	1.4	1.4																					
Total CVOCs																				0.044	0.4218				0.0080		0.0010
Bromobenzene																											
Bromoform				0.1	0.1	0.1																					
Bromomethane				0.3	0.3	0.3																					
Dibromo-3-Chloropropane (1,2-) *				0.01	0.01	0.01																					
Methyl Tert-Butyl Ether (MTBE)				0.13	0.13	0.13																			0.0020 J		
Trichlorofluoromethane				1,000	2,500	5,000	0.0050 J			0.0020 J			0.012	0.010 J	0.0020 J	0.0031 J	0.0055 J	0.0045 J	0.0063 J		0.0061 J			0.0015 J	0.0030 J		
Total VOCs							0.0050			0.0020			0.0564	0.013	0.0020	0.0031	0.0055	0.0045	0.0115	0.044	0.4279			0.0015	0.014		0.0010

TABLE 9A
Summary of Shallow Soil Data - Full Level Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) between November 3, 1997 and May 21, 1998; see Table 1 for specific dates and identity of sample delivery groups (SDGs).

2. Analyses were performed by New Hampshire Department of Environmental Services (NHDES) Laboratory, Concord, New Hampshire, by United States Environmental Protection Agency (USEPA) Method 8260.

3. Analysis for ethylene glycol by direct injection GC-FID was performed by NHDES Laboratory on samples S-54, S-55, S-56, and S-57. No ethylene glycol was detected.

4. All concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

5. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

6. Total concentrations listed (e.g., Total AVOCs) are the sum of the detected concentrations of the relevant analytes.

7. A blank indicates the parameter was not detected.

8. "Dup." indicates the sample is a field duplicate.

9. "Oak Ridge 1" refers to "Table 1. Screening benchmark concentrations for the toxicity of chemicals to earthworms" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
   "Oak Ridge 2" refers to "Table 2. Screening benchmark concentrations for the toxicity of chemicals to soil microorganisms and microbial processes" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
   "Oak Ridge 3" refers to "Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
   "S-1" refers to the S-1 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision).
   "S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision).
   "S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision).

10. "*" indicates values for S-1, S-2, and S-3 are for dibromochloropropane (isomer unspecified).
    "†" indicates values for S-1, S-2, and S-3 are for xylene (mixed isomers).
    "&" indicates that NHDES includes 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, n-propylbenzene, n-butylbenzene, 4-isopropyltoluene, tert-butylbenzene, and sec-butylbenzene as alkylbenzenes. NHDES evaluated the risk posed by alkylbenzenes as a group because of the similar structures of these compounds and the lack of toxicological data for all compounds in this class of chemicals. The total concentration of these compounds is compared to the S-1, S-2, and S-3 standards.

11. "J" indicates an estimated value.
    "R" indicates data (non-detects) rejected during validation.

12. "VOCs" are volatile organic compounds.
    "AVOCs" are non-chlorinated aromatic volatile organic compounds.
    "CVOCs" are chlorinated volatile organic compounds.

13. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 9B
Summary of Shallow Soil Data - Full Level Semi-Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg						Concentrations in mg/kg																		
	Risk Threshold Screening Levels						S-1	S-8	S-23	S-36	S-40	S-41	S-49	S-69	S-69 Dup.	S-73	S-77	S-85	S-86	S-87	S-88	S-204	S-205	S-206	S-207
	OR 1	OR 2	OR 3	S-1	S-2	S-3	0 - 1'	0 - 1'	0 - 1'	0 - ¾'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1/3'	0 - ¾'	0 - 1'	0 - 1'
PAHs																									
Acenaphthene			20	270	270	270	†	R	R	R	†	R	0.27 J†	R	R	R	†	†	†	†	†				
Acenaphthylene				300	300	300			0.058 J		0.18 J†	0.042 J	†				0.061 J†	†	†	†	†		0.024 J†		
Anthracene				1,000	1,700	1,700			0.052 J		†		0.19 J†				†	†	†	0.26 J†	†		0.045 J†		
Benzo[a]anthracene				0.7	2	40	†		0.13 J		0.59 †	0.042 J	1.6 †				0.50 †	0.63 †	0.22 J†	0.87 †	0.57 †	0.24 J†	0.17 J†	0.022 J†	
Benzo[a]pyrene				0.7	0.7	4			0.17 J		0.43 †	0.071 J	0.30 J†				0.35 †	0.27 J†	0.21 J†	0.43 †	0.31 J†	0.30 J†	0.16 J†	0.023 J†	
Benzo[b]fluoranthene				7	20	400	†	R	0.13 J	R	0.39 †	0.052 J	0.60 †	R	R	R	0.44 †	0.35 J†	0.41 †	0.47 †	0.51 †	0.22 J†	0.14 J†	0.032 J†	
Benzo[g,h,i]perylene ‡				480	2,400	5,000			0.10 J		0.25 J†		0.48 †				0.12 †	0.35 J†	0.54 †	0.39 †	0.64 †	0.33 J†	0.16 J†	0.074 J†	
Benzo[k]fluoranthene				7	20	400			0.20 J		0.35 †	0.12 J	0.46 †				0.31 †	0.26 J†	0.24 J†	0.46 †	0.43 †	0.22 J†	0.13 J†	0.021 J†	
Chrysene				70	200	4,000			0.14 J		0.90 †	0.074 J	1.0 †				0.26 †	0.46 †	0.57 †	0.54 †	0.49 †	0.28 J†	0.18 J†	0.054 J†	
Dibenzo(a,h)anthracene				0.7	0.7	4					†		†				†	†	†	†	†		0.023 J†		
Fluoranthene				810	2,500	5,000			0.30 J		0.20 J†	0.16 J	0.61 †				0.24 †	0.22 J†	0.22 J†	0.56 †	0.64 †	0.41 J†	0.32 J†	0.038 J†	
Fluorene	30			510	510	510					†		0.55 †				†	†	†	0.37 †	†				
Indeno[1,2,3-cd]pyrene				0.7	2	40			0.087 J		0.21 J†		0.24 J†				0.10 †	0.24 J†	0.28 J†	0.22 J†	0.30 J†	0.21 J†	0.13 J†	0.026 J†	
Methylnaphthalene (1-)							†	NA	NA	NA	0.38 †	NA	3.2 †	NA	NA	NA	0.069 †	†	0.19 †	1.8 †	†	R	R	R	NA
Methylnaphthalene (2-)				150	150	150					0.79 †		3.3 †				0.095 †	†	0.29 J†	2.5 †	†				
Naphthalene				5	5	5					0.25 J†		0.59 †				0.091 †	†	†	0.55 †	†				
Phenanthrene ‡				480	2,400	5,000			0.14 J		0.23 J†	0.094 J	1.3 †				0.085 †	†	†	0.98 †	0.44 †	0.22 J†	0.14 J†	0.020 J†	
Pyrene ‡				480	2,400	5,000			0.23 J		1.9 †	0.12 J	1.7 †				0.82 †	0.66 †	0.95 †	1.2 †	1.1 †	0.45 J†	0.30 J†	0.054 J†	
Total PAHs									1.737		7.05	0.775	16.39				3.541	3.44	4.12	11.6	5.43	2.88	1.922	0.364	
Other SVOCs																									
Benzoic Acid				350	350	350						0.26 J			0.15 J										0.051 J
Benzyl Alcohol																									0.049 J
bis(2-Ethylhexyl)phthalate (Di(ethylhexyl)phthalate)				39	110	2,200			0.20 JEB		34 EB		69 EB				110 EB	12 EB	75 EB	130 EB	28 EB	0.68 J	0.53 J	19 J	
Butylbenzylphthalate													5.4 J												
Di-n-butylphthalate			200	1,000	2,500	5,000																			
Di-n-octylphthalate											13 J		120						2.0 J	4.5 J					
Dinitro-2-methylphenol (4,6-)																						R	R	R	R
Methylphenol (4-)				5	5	5																			
Pentachlorophenol	6	400	3	3.3	3.3	3.3																			
Phenol	30	100	70	56	56	56																			
Trichlorobenzene (1,2,4-)	20			15	15	15																			

TABLE 9B
Summary of Shallow Soil Data - Full Level Semi-Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg						Concentrations in mg/kg																
	Risk Threshold Screening Levels						S-208	S-209	S-210	S-211	S-213	S-213 Dup.	S-214	S-215	S-216	S-216 Dup.	S-217	S-218	S-220	S-222	S-223	S-224	S-225
	OR 1	OR 2	OR 3	S-1	S-2	S-3	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - ½'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - ¾'	0.7 - 1.7'	0 - 1'
PAHs																							
Acenaphthene			20	270	270	270								0.46 J†	†	†	†	0.27 J	†	†	†		
Acenaphthylene				300	300	300									†	†	†	0.026 J†	0.022 J†	0.030 J†	†		
Anthracene				1,000	1,700	1,700								1.3 J†	†	†	†	0.63 J	0.18 J	†	†		
Benzo[a]anthracene				0.7	2	40	0.022 J†					0.034 J		2.8 J†	†	†	0.22 J	0.46 J	0.24 J	0.059 †	4.2 J		
Benzo[a]pyrene				0.7	0.7	4	0.026 J†				0.037 J			2.0 J†	†	†	0.38 J	0.29 J	0.32 J	0.42 †	0.71 J†		0.064 J
Benzo[b]fluoranthene				7	20	400	0.044 J†				0.034 J	0.039 J		1.6 J†	0.027 J†	0.038 J†	0.31 J	0.39 J	0.34 J	0.12 †	0.77 J†		
Benzo[g,h,i]perylene ‡				480	2,400	5,000	0.11 J†	0.10 J†		0.035 J†	0.063 J	0.069 J		1.4 J†	0.051 J†	0.066 †	0.29 J	0.20 J†	0.44 J	0.34 †	1.6 †		
Benzo[k]fluoranthene				7	20	400	0.023 J†							1.7 J†	†	†	0.21 J	0.33 J	0.21 J	0.19 †	0.48 J†		
Chrysene				70	200	4,000	0.11 J†			0.032 J†	0.13 J	0.16 J	0.12 J†	2.7 J†	0.048 J†	0.066 †	0.40 J	0.81 J	0.48 J	1.1 J	7.2 J		0.071 J
Dibenzo(a,h)anthracene				0.7	0.7	4								0.28 J†	†	†	†	0.030 J†	†	0.027 J†	†		
Fluoranthene				810	2,500	5,000						0.036 J		6.1 J†	†	†	0.43 J	2.5 J	0.46 J	†	4.6 J		
Fluorene	30			510	510	510								0.59 J†	†	†	†	0.047 J†	†	†	†		
Indeno[1,2,3-cd]pyrene				0.7	2	40	0.029 J†	0.028 J†						1.2 J†	†	0.022 J†	0.079 J†	0.13 J†	0.042 J†	0.089 †	0.44 J†		
Methylnaphthalene (1-)							R	R	NA	R	NA	NA	R	0.29 J†	†	†	†	†	0.033 J†	†	†	NA	NA
Methylnaphthalene (2-)				150	150	150	0.027 J†							0.40 J†	†	†	†	†	0.23 J	0.032 J†	1.1 J		
Naphthalene				5	5	5								0.50 J†					0.022 J†				
Phenanthrene ‡				480	2,400	5,000								6.0 J†			0.26 J	0.43 J	0.48 J		1.5 J		0.032 J
Pyrene ‡				480	2,400	5,000	0.10 J†		0.069 J	0.031 J†	0.17 J		0.74 J†	5.6 J†	0.035 J†	0.055 †	0.48 J	1.6 J	0.44 J	1.1 J	10 J		0.073 J
Total PAHs							0.491	0.128	0.069	0.098	0.434	0.338	0.86	34.92	0.161	0.247	3.059	8.143	3.939	3.507	32.6		0.24
Other SVOCs																							
Benzoic Acid				350	350	350																	
Benzyl Alcohol																							
bis(2-Ethylhexyl)phthalate (Di(ethylhexyl)phthalate)				39	110	2,200	14 J		1.6 J	5.0 J	1.4 J	1.6 J	34 J	8.2 J	50	68	6.6 J	9.8 J	19 J	20 J	64	0.22 J	3.7 J
Butylbenzylphthalate																	0.57 J			0.78 J			
Di-n-butylphthalate			200	1,000	2,500	5,000					0.075 J										2.4 J		
Di-n-octylphthalate							1.2 J					0.10 J	0.50 J					1.4 J	0.22 J				
Dinitro-2-methylphenol (4,6-)							R	R	R	R	R	R	R	R									
Methylphenol (4-)				5	5	5															1.3 J		
Pentachlorophenol	6	400	3	3.3	3.3	3.3															17 JM		
Phenol	30	100	70	56	56	56															1.3 JM		
Trichlorobenzene (1,2,4-)	20			15	15	15															3.4 JM		

TABLE 9B
Summary of Shallow Soil Data - Full Level Semi-Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg						Concentrations in mg/kg						
	Risk Threshold Screening Levels						S-226	SP-9/S-3	SP-15/S-3	SP-18/S-3	TP-139	TP-141	TP-144
	OR 1	OR 2	OR 3	S-1	S-2	S-3	0 - 1'	2 - 3'	2 - 3'	2 - 3'	0 - 1'	½ - 1'	0 - 1'
PAHs													
Acenaphthene			20	270	270	270	†	†	†	†			
Acenaphthylene				300	300	300	†	†	†	†			
Anthracene				1,000	1,700	1,700	†	†	0.042 J	†			
Benzo[a]anthracene				0.7	2	40	†	†	0.035 J	†			
Benzo[a]pyrene				0.7	0.7	4	0.029 J†	†	†	†			
Benzo[b]fluoranthene				7	20	400	0.040 J†	†	†	†	0.043 J		
Benzo[g,h,i]perylene ‡				480	2,400	5,000	0.091 J†	†	†	†			
Benzo[k]fluoranthene				7	20	400	0.026 J†	†	†	†	0.039 J		
Chrysene				70	200	4,000	0.22 J	†	0.041 J	†	0.040 J		
Dibenzo(a,h)anthracene				0.7	0.7	4	†	†	†	†			
Fluoranthene				810	2,500	5,000	†	†	0.17 J	†	0.042 J		
Fluorene	30			510	510	510	†	†	0.036 J	†			
Indeno[1,2,3-cd]pyrene				0.7	2	40	0.037 J†	†	†	†			
Methylnaphthalene (1-)							†	†	†	†	NA	NA	NA
Methylnaphthalene (2-)				150	150	150	†	†	†	†			
Naphthalene				5	5	5		†	†	†			
Phenanthrene ‡				480	2,400	5,000		†	0.12 †	†			
Pyrene ‡				480	2,400	5,000	0.10 J†	†	0.11 J	†	0.060 J		
Total PAHs							0.543		0.554		0.224		
Other SVOCs													
Benzoic Acid				350	350	350							
Benzyl Alcohol													
bis(2-Ethylhexyl)phthalate (Di(ethylhexyl)phthalate)				39	110	2,200	22 J	11	0.36	0.072 J	1.4		0.040 J
Butylbenzylphthalate													
Di-n-butylphthalate			200	1,000	2,500	5,000							
Di-n-octylphthalate													
Dinitro-2-methylphenol (4,6-)													
Methylphenol (4-)				5	5	5							
Pentachlorophenol	6	400	3	3.3	3.3	3.3							
Phenol	30	100	70	56	56	56							
Trichlorobenzene (1,2,4-)	20			15	15	15							

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) between November 3, 1997 and May 21, 1998; see Table 1 for specific dates and identity of sample delivery groups (SDGs).

2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, by United States Environmental Protection Agency (USEPA) Method 8270. On many samples selective ion monitoring (SIM) for polynuclear aromatic hydrocarbons (PAHs) was also performed. During validation either the 8270 or SIM value was selected for use by the end user. Results indicated by "†" were analyzed by SIM.

3. All concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. Total PAHs listed are the sum of the detected concentrations of the individual PAHs.

6. A blank indicates the parameter was not detected.

7. "Dup." indicates the sample is a field duplicate.

8. "OR 1" refers to "Table 1. Screening benchmark concentrations for the toxicity of chemicals to earthworms" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
"OR 2" refers to "Table 2. Screening benchmark concentrations for the toxicity of chemicals to soil microorganisms and microbial processes" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
"OR 3" refers to "Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
"S-1" refers to the S-1 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
"S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
"S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).

9. "‡" indicates the values for S-1, S-2, and S-3 are a combined total for benzo(g,h,i)perylene, phenanthrene, and pyrene.

10. "J" indicates an estimated value.
"EB" indicates parameter was detected in the associated aqueous equipment blank.
"R" indicates data (non-detects) rejected during validation.
"M" indicates a matrix spiking compound and suspected contamination; final assessment is left to the end user.
"NA" indicates data for 1-methylnaphthalene are not available because 1-methylnaphthalene was only identified in SIM analysis, and SIM analysis was not completed on the sample.

11. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 9C
Summary of Shallow Soil Data - Full Level Petroleum Hydrocarbons
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg																								
	RTSLs			S-1	S-8	S-23	S-36	S-40	S-41	S-49	S-69	S-69 Dup.	S-73	S-77	S-85	S-86	S-87	S-88	S-204	S-205	S-206	S-207	S-208	S-209	S-210
	S-1	S-2	S-3	0 - 1'	0 - 1'	0 - 1'	0 - ¾'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1/3'	0 - ¾'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'
VPH																									
C_5-C_8 Aliphatics *	10,000	10,000	10,000														25	3.9							
C_9-C_{12} Aliphatics *	10,000	10,000	10,000					11 J	16 J	36 J		5.4 J		20 J	76 J	44 J	32 J	68 J	5.4 J		6.0 J	5.8 J		7.9 J	9.6 J
C_9-C_{10} Aromatics *	10,000	10,000	10,000							63 J				2.5 J	10 J	4.7 J	69 J	11 J							
Total VPH *	10,000	10,000	10,000					11	16	99		5.4		22.5	86	48.7	126	82.9	5.4		6.0	5.8		7.9	9.6
EPH																									
C_9-C_{18} Aliphatics *	10,000	10,000	10,000					460		2,330				420	1,690	1,200	2,200	590			18	3.9	38	8.3	20
C_{19}-C_{36} Aliphatics *	10,000	10,000	10,000	10		77	42 J	10,250 J	25 J	29,940 J	7.0 J	6.0 J	12 J	4,680 J	17,250 J	9,260 J	35,440 J	13,430 J	280	69	430	18	1,200	260	98
C_{10}-C_{22} Aromatics *	10,000	10,000	10,000			12		1,990	19	2,710			12	250	2,020	840	4,900	2,160	410 J	44 J	96 J	25 J	200 J	84 J	16 J
Total EPH *	10,000	10,000	10,000	10		89	42	12,700	44	34,980	7.0	6.0	24	5,350	20,960	11,300	42,540	16,180	690	113	544	46.9	1,438	352.3	134

Parameter	Concentrations in mg/kg																							
	RTSLs			S-211	S-213	S-213 Dup.	S-214	S-215	S-216	S-216 Dup.	S-217	S-218	S-220	S-222	S-223	S-224	S-225	S-226	SP-9/S-3	SP-15/S-3	SP-18/S-3	TP-139	TP-141	TP-144
	S-1	S-2	S-3	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - ½'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - ¾'	0.7 - 1.7'	0 - 1'	0 - 1'	2 - 3'	2 - 3'	2 - 3'	0 - 1'	½ - 1'	0 - 1'
VPH																								
C_5-C_8 Aliphatics *	10,000	10,000	10,000					17 J																
C_9-C_{12} Aliphatics *	10,000	10,000	10,000				91 J	4.5 J						23 J	22 J				5.2 J				7.6 J	
C_9-C_{10} Aromatics *	10,000	10,000	10,000				19 J																	
Total VPH *	10,000	10,000	10,000				110	21.5						23	22				5.2				7.6	
EPH																								
C_9-C_{18} Aliphatics *	10,000	10,000	10,000	8.6	16	16	4,580		11 J	12	5.2 J	76	19 J	510 J	1,530		10 J	30 J	36		4.3	3.6 J	3.4	
C_{19}-C_{36} Aliphatics *	10,000	10,000	10,000	500	400	430	3,100	510	790 J	1,160 J	590 J	1,530 J	430 J	11,570 J	48,860 J	61 J	620 J	570 J	740	94	240	14 JEB	120 JEB	260 JEB
C_{10}-C_{22} Aromatics *	10,000	10,000	10,000	78 J	91 J	130 J	2,030 J	340 J	160 J	160 J	140 J	350 J	99 J	1,820 J	8,150 J		21 J	93 J	100		16	11 J		24
Total EPH *	10,000	10,000	10,000	586.6	507	576	9,710	850	961	1,332	735.2	1,956	548	13,900	58,540	61	651	693	876	94	260.3	28.6	123.4	284

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) between November 3, 1997 and May 21, 1998; see Table 1 for specific dates and identity of sample delivery groups (SDGs).
2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, using Massachusetts Department of Environmental Protection (MADEP) Methods (modified) for volatile petroleum hydrocarbons (VPH) and extractable petroleum hydrocarbons (EPH).
3. All concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).
4. Sample depths indicated are presented in feet.
5. Only those parameters detected or rejected in one or more of the samples presented herein are listed.
6. Total concentrations listed (e.g., Total VPH) are the sum of the detected concentrations of the relative analytes.
7. A blank indicates the parameter was not detected.
8. "Dup." indicates the sample is a field duplicate.
9. "S-1" refers to the S-1 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
   "S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
   "S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
10. "*" indicates values for S-1, S-2, and S-3 are for total petroleum hydrocarbons.
11. "J" indicates an estimated value.
    "EB" indicates the parameter was detected in the associated aqueous equipment blank.
    "RTSLs" are Risk Threshold Screening Levels.
12. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 9D
Summary of Shallow Soil Data - Full Level PCBs and Pesticides
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg																											
	RTSLs				S-1	S-8	S-23	S-36	S-40	S-41	S-49	S-69	S-69 Dup.	S-73	S-77	S-85	S-86	S-87	S-88	S-200	S-201	S-202	S-203	S-204	S-205	S-206	S-207	S-208
	OR 3	S-1	S-2	S-3	0 - 1'	0 - 1'	0 - 1'	0 - ¾'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - $^{1}/_{3}$'	0 - ¾'	0 - 1'	0 - 1'	0 - 1'
PCBs																												
Aroclor 1242							0.11 J		71		0.55				5.5	2.2 J	270 J	15 J	2.2 J	0.84 ‡	1.1 ‡	0.24 ‡	0.15 ‡	0.63	0.30	2.0		9.7
Aroclor 1260							0.071									0.41 J		1.6 J										
Total PCBs *	40	1	1	2			0.181		71		0.55				5.5	2.61	270	16.6	2.2	0.84	1.1	0.24	0.15	0.63	0.30	2.0		9.7
Pesticides																												
BHC (alpha-)		0.06	0.06	0.06																NA	NA	NA	NA					
BHC (beta-)		0.06	0.06	0.06								0.0024 J	0.0054 J							NA	NA	NA	NA					
BHC (delta-)					R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	NA	NA	NA	NA					
BHC (gamma-) (Lindane)		0.09	0.09	0.09																NA	NA	NA	NA					
Chlordane (alpha-) †		0.8	2	2											0.021 J			0.030 J		NA	NA	NA	NA					
Chlordane (gamma-) †		0.8	2	2							0.063 J									NA	NA	NA	NA					
DDD (4,4'-)		0.7	2	64																NA	NA	NA	NA					
DDE (4,4'-)		0.7	2	56																NA	NA	NA	NA					
DDT (4,4'-)		0.9	3	11	R	R	R	R	R	0.0075 J	R	R	R	R	R	R	R	R	R	NA	NA	NA	NA					
Endosulfan I **		45	45	45			0.0031 J				0.021 J									NA	NA	NA	NA					
Endosulfan II **		45	45	45																NA	NA	NA	NA					
Endosulfan Sulfate									0.060 J		0.36 J		0.0071 J					0.083 J		NA	NA	NA	NA					
Endrin Aldehyde							0.0038 J				0.093 J							0.066 J		NA	NA	NA	NA					
Endrin Ketone											0.060 J							0.064		NA	NA	NA	NA					
Heptachlor		0.2	0.7	9																NA	NA	NA	NA					
Heptachlor Epoxide		0.1	0.3	0.5	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	NA	NA	NA	NA					
Methoxychlor		38	170	170	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	NA	NA	NA	NA					
Total Pesticides							0.0069		0.060	0.0075	0.597	0.0024	0.0125		0.021			0.243										

Parameter	Concentrations in mg/kg																										
	RTSLs				S-209	S-210	S-211	S-213	S-213 Dup.	S-214	S-215	S-216	S-216 Dup.	S-217	S-218	S-220	S-222	S-223	S-224	S-225	S-226	SP-9/S-3	SP-15/S-3	SP-18/S-3	TP-139	TP-141	TP-144
	OR 3	S-1	S-2	S-3	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - ½'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - ¾'	0.7 - 1.7'	0 - 1'	0 - 1'	2 - 3'	2 - 3'	2 - 3'	0 - 1'	½ - 1'	0 - 1'
PCBs																											
Aroclor 1242					3.1	0.13	8.7	75	66	0.52	5.0	8.9	8.4	2.3	3.6	1.3	9.9	8.2	0.37	0.75	1.6	1.9	0.71	0.042	NA	NA	NA
Aroclor 1260												0.25	0.23	0.21	0.23	0.19	1.4	21	0.040	0.081	0.27				NA	NA	NA
Total PCBs *	40	1	1	2	3.1	0.13	8.7	75	66	0.52	5.0	9.15	8.63	2.51	3.83	1.49	11.3	29.2	0.41	0.831	1.87	1.9	0.71	0.042	1.1	0.8	
Pesticides																											
BHC (alpha-)		0.06	0.06	0.06						0.0052 J		R	R	R	R	R	R	R	R	R	R				R	R	R
BHC (beta-)		0.06	0.06	0.06							0.016 J	R	R	0.0067 J	R	0.0043 J	R	R	R	R	R						
BHC (delta-)												R	R	R	R	R	R	R	R	R	R						
BHC (gamma-) (Lindane)		0.09	0.09	0.09							0.0020 J	R	R	R	R	R	R	R	R	R	R				R	R	R
Chlordane (alpha-) †		0.8	2	2								R	R	R	R	R	R	R	R	R	R						
Chlordane (gamma-) †		0.8	2	2								R	R	R	R	R	R	R	R	R	R						
DDD (4,4'-)		0.7	2	64								R	R	R	R	R	0.0054 J	R	R	R	R						
DDE (4,4'-)		0.7	2	56								R	R	R	R	R	R	R	R	R	R	R	R	R			
DDT (4,4'-)		0.9	3	11						0.010 J		R	R	R	R	R	R	R	R	R	R	R	R	R			
Endosulfan I **		45	45	45			0.0054 J			0.010 J		R	R	R	R	R	R	R	R	R	R				R	R	R
Endosulfan II **		45	45	45				0.0088 J		0.0055 J		R	R	R	R	R	0.011 J	R	R	R	R						
Endosulfan Sulfate												R	0.0042 J	R	R	R	R	R	R	R	R						
Endrin Aldehyde												R	R	R	R	R	R	R	R	R	R						
Endrin Ketone								0.0036 J			0.013 J	R	R	0.0067 J	0.011 J	0.0036 J	0.024 J	R	R	R	0.0052 J						
Heptachlor		0.2	0.7	9								R	R	R	R	R	R	R	R	R	R	R	R	R			
Heptachlor Epoxide		0.1	0.3	0.5								R	R	R	R	R	R	R	R	R	R	R	R	R			
Methoxychlor		38	170	170								R	R	R	R	R	R	R	R	R	R						
Total Pesticides							0.0054	0.0124		0.0307	0.031		0.0042	0.0134	0.011	0.0079	0.0404				0.0052						

TABLE 9D
Summary of Shallow Soil Data - Full Level PCB Aroclors and Pesticides
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) between November 3, 1997 and May 21, 1998; see Table 1 for specific dates and identity of sample delivery groups (SDGs).

2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, using United States Environmental Protection Agency (USEPA) Method 8080A, with the exception of total PCBs for samples TP-139, TP-141, and TP-144 which were analyzed by Eastern Analytical, Inc. of Concord, New Hampshire, by USEPA Method 8080 (modified – screening level).

3. All concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

4. Sample depths indicated are presented in feet.

5. Only those parameters detected or rejected in one or more of the samples presented herein are listed, except for samples S-216, S-216 Dup., S-217, S-218, S-220, S-222, S-223, S-224, S-225, and S-226 which had the results (non-detects) for all the remaining pesticides rejected during validation.

6. Total concentrations listed (e.g., Total Pesticides) are the sum of the detected concentrations of the relevant analytes.

7. A blank indicates the parameter was not detected.

8. "Dup." indicates the sample is a field duplicate.

9. "S-1" refers to the S-1 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
   "S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
   "S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
   "OR 3" refers to "Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants: 1994 Revision" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy.
   No reference limits were available from "Table 1. Screening benchmark concentrations for the toxicity of chemicals to earthworms" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process", or "Table 2. Screening benchmark concentrations for the toxicity of chemicals to soil microorganisms and microbial processes" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (Rev. 11/97).

10. "*" indicates S-1 and S-2 values for total PCBs are based on USEPA's August 1990 "Guidance on Remedial Actions for Superfund Sites with PCB Contamination" for residential areas.
    "**" indicates S-1, S-2, and S-3 values are for Endosulfan (unspecified).
    "†" indicates S-1, S-2, and S-3 values are for total chlordane, including alpha-chlordane and gamma-chlordane.

11. "J" indicates an estimated value.
    "R" indicates data (non-detects) rejected during validation.
    "NA" indicates the sample was not analyzed for this parameter.
    "‡" indicates PCBs were present, but chromatogram did not match that of an Aroclor mixture. Concentration presented is estimated. See validated analytical data report for BW416 for further information.
    "RTSLs" indicates Risk Threshold Screening Levels.

12. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 9E
Summary of Shallow Soil Data
Full Level Analyses - PCBs (Homologs/Congeners)
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg								
	S-211	S-212	S-213	S-213 Dup.	S-215	S-219	S-221	S-225	S-226
Congeners									
PCB-1		0.0030		2.9E-04		8.4E-04	0.0027	7.4E-04	
PCB-3		9.1E-04	3.1E-04	3.3E-04		5.0E-04	0.0012	4.3E-04	
PCB-8	0.0042	0.66	0.017	0.017	0.0069	0.70	1.2	0.0042	0.0039
PCB-15	0.16	0.51	1.9	1.6	0.053	19 J	4.9	0.011	0.045
PCB-18	0.10	2.3	0.73	0.69	0.11	35 J	12 J	0.017	0.18
PCB-28	1.6 J	5.0 J	14 J	14 J	0.19 J	77 J	46 J	0.083	0.33 J
PCB-37	0.45 J	0.73 J	4.3 J	3.5 J	0.085	20 J	9.7 J	0.035	0.082
PCB-44	0.60	0.92	3.7	4.4	0.36	39 J	12 J	0.12	0.32
PCB-49	0.38	0.54	2.7	2.9	0.20	23 J	6.6	0.090	0.18
PCB-52	0.60	0.89	4.2	4.3	0.35	40 J	11 J	0.062	0.28
PCB-66	0.88	0.96	5.6	5.5	0.33	40 J	14 J	0.11	0.24
PCB-70	0.95	1.1	5.8	6.1	0.27	42 J	16 J	0.12	0.26
PCB-74	0.44	0.58	2.9	3.2	0.11	22 J	7.6 J	0.064	0.12
PCB-77	0.11	0.099	0.66	0.72	0.062	3.0	1.8	0.020	0.043
PCB-81	0.0092	0.0095	0.060	0.076	0.0017	0.078	0.098	0.0016	0.0014
PCB-87/115	0.18	0.17	1.2	1.3	0.12	5.2	2.9	0.032	0.11
PCB-90/101	0.32	0.32	2.1	2.1	0.23	9.6	4.5	0.059	0.19
PCB-99	0.17	0.17	1.2	1.1	0.12	4.6	2.4	0.033	0.11
PCB-105	0.16	0.15	0.99	1.1	0.092	4.4	2.3	0.031	0.066
PCB-110	0.43	0.36	2.7	2.8	0.28	11	5.9	0.074	0.23
PCB-114	0.016	0.018	0.11	0.12	0.0085	0.44	0.22	0.0034	0.0068
PCB-118	0.28	0.26	1.8	2.0	0.16	7.2 J	3.5	0.054	0.12
PCB-119	0.010	0.0080	0.066	0.070	0.0067	0.23	0.12	0.0019	0.0055
PCB-123	0.027	0.019	0.20	0.14	0.022	0.74	0.43	0.0058	0.018
PCB-126	0.0016	9.2E-04	0.0098	0.012	9.4E-04	0.028	0.020	3.8E-04	0.0013
PCB-128/167	0.020	0.015	0.14	0.16	0.019	0.42	0.24	0.0051	0.016
PCB-138/158	0.089	0.070	0.74	0.82	0.094	2.2	1.1	0.026	0.082
PCB-149	0.064	0.046	0.46	0.50	0.065	1.4	0.67	0.019	0.061
PCB-151	0.014	0.024	0.11	0.10	0.019	0.26	0.13	0.0064	0.019
PCB-153/168	0.056	0.060	0.37	0.41	0.060	1.1	0.64	0.016	0.059
PCB-156	0.0098	0.0081	0.079	0.090	0.0088	0.22	0.12	0.0025	0.0066
PCB-157	0.0022	0.0018	0.017	0.020	0.0020	0.054	0.027	5.4E-04	0.0016
PCB-170	0.012	0.0090	0.078	0.088	0.022	0.22	0.12	0.0074	0.020
PCB-177	0.0053	0.0036	0.028	0.032	0.0094	0.10	0.054	0.0031	0.0091
PCB-180	0.020	0.014	0.10	0.12	0.038	0.37	0.20	0.014	0.039
PCB-183	0.0046	0.0029	0.023	0.026	0.0078	0.085	0.044	0.0027	0.0084
PCB-187	0.010	0.0068	0.043	0.050	0.018	0.16	0.095	0.0062	0.019
PCB-189	3.9E-04		0.0026	0.0030	6.3E-04	0.0083		2.6E-04	6.5E-04
PCB-194	0.0025	0.0019	0.010	0.011	0.0062	0.042	0.027	0.0027	0.0069
PCB-195	0.0012	9.3E-04	0.0052	0.0055	0.0030	0.021	0.011	0.0013	0.0032
PCB-201	0.0047	0.0036	0.023	0.028	0.011	0.094	0.053	0.0047	0.013
PCB-202	8.3E-04	6.3E-04	0.0040	0.0045	0.0017	0.016	0.0095	6.6E-04	0.0018
PCB-206	0.0016	0.0013	0.0086	0.0097	0.0039	0.043	0.019	0.0011	0.0034
PCB-207			8.5E-04	9.3E-04	3.9E-04	0.0039	0.0020		4.1E-04
PCB-209	4.3E-04	3.1E-04	0.0017	0.0020	0.0014	0.0091	0.0041		3.7E-04
Homologs									
Total monoCB	2.5E-04	0.0040	3.1E-04	6.2E-04		0.0013	0.0041	0.0012	
Total diCB	0.18	1.8	2.1	1.8	0.071	27 J	9.0	0.020	0.073
Total triCB	3.2	13	35	28	0.74	250 J	120 J	0.21	1.0
Total tetraCB	6.8	11	51	49	2.9	330 J	130 J	1.0	2.7
Total pentaCB	2.4	2.3	16	16	1.6	67 J	30	0.44	1.3
Total hexaCB	0.34	0.29	2.5	2.7	0.31	7.8	4.0	0.099	0.32
Total heptaCB	0.072	0.049	0.38	0.43	0.13	1.3	0.71	0.044	0.13
Total octaCB	0.013	0.010	0.062	0.074	0.033	0.26	0.14	0.013	0.037
Total nonaCB	0.0022	0.0017	0.012	0.014	0.0054	0.061	0.027	0.0014	0.0046
Total PCBs	13.00788	28.45501	107.05601	98.02062	5.7908	683.4314	293.8852	1.8286	5.56497

TABLE 9E
Summary of Shallow Soil Data
Full Level Analyses - PCBs (Congeners/Homologs)
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. personnel on May 20 and 21, 1998. Sampling depths were generally 0 to 1 foot below ground surface; see Table 1 for specific dates and identity of sample delivery groups (SDGs).

2. Analyses were performed by Alta Analytical Laboratory Inc. of El Dorado Hills, California, by USEPA Method 1668 (Modified).

3. All concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

4. Only those parameters detected in one or more of the samples presented herein are listed.

5. Total PCBs were calculated by summing the detected concentrations of homologs and congener 209.

6. A blank indicates the parameter was not detected.

7. "Dup." indicates the sample is a field duplicate.

8. Soil Risk Threshold Screening Levels for total PCBs include New Hampshire Department of Environmental Services (NHDES) S-1/S-2/S-3 standards of 1/1/2 mg/kg (NHDES Contaminated Sites Risk Characterization and Management Policy, January, 1998), and Oak Ridge value of 40 mg/kg ("Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy, November, 1997).

9. "J" indicates an estimated value.

10. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 9F
Summary of Shallow Soil Data
Full Level Analyses - Dioxins/Furans
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/kg				
	S-211	S-213	S-213 Dup.	S-219	S-226
Dioxins					
2,3,7,8-TCDD	3.9E-04 J		1.7E-04 J	2.7E-04 J	3.8E-04 J
Total TCDD	0.0079	0.0033	0.0042	0.0052	0.015
1,2,3,7,8-PeCDD	0.0022 J	4.3E-04 J	4.8E-04 J	0.0011 J	0.0036
Total PeCDD	0.015	0.0043	0.0052	0.0077	0.029
1,2,3,4,7,8-HxCDD	0.0044	6.0E-04 J	6.9E-04 J	0.0015 J	0.0051
1,2,3,6,7,8-HxCDD	0.012	0.0017 J	0.0019 J	0.0050	0.012
1,2,3,7,8,9-HxCDD	0.010	0.0012 J	0.0013 J	0.0032	0.0085
Total HxCDD	0.082	0.013	0.015	0.030	0.093
1,2,3,4,6,7,8-HpCDD	0.25	0.022	0.024	0.094	0.15
Total Hp-CDD	0.44	0.041	0.046	0.16	0.29
OCDD	2.0	0.17	0.18	0.85	0.99
Furans					
2,3,7,8-TCDF	0.0036	0.012	0.013	0.059	0.0057
Total TCDF	0.10	0.27 J+	0.31 J+	1.7	0.45 J+
1,2,3,7,8,-PeCDF	0.0014 J	0.0039	0.0044	0.022	0.0033
2,3,4,7,8,-PeCDF	0.0064	0.022	0.025	0.14	0.049
Total PeCDF	0.042	0.11 J+	0.13 J+	0.62 J+	0.81 J+
1,2,3,4,7,8-HxCDF	0.0047	0.0078	0.0093	0.032	0.015
1,2,3,6,7,8-HxCDF	0.0019 J	0.0029	0.0040	0.011	0.019 J+
2,3,4,6,7,8-HxCDF	0.0020 J	0.0029	0.0035	0.014	0.021
1,2,3,7,8,9-HxCDF	7.8E-04 J	0.0020 J	0.0025	0.011	0.0030
Total HxCDF	0.030	0.035 J+	0.042	0.15	0.34 J+
1,2,3,4,6,7,8-HpCDF	0.019	0.0097	0.011	0.042	0.063
1,2,3,4,7,8,9-HpCDF	0.0013 J	0.0019 J	0.0021 J	0.0078	0.0041
Total HpCDF	0.038	0.018	0.020	0.12	0.11
OCDF	0.027	0.013	0.015	0.10	0.067
TEQ	0.013	0.015	0.017	0.088	0.039

Notes:
1. Samples were collected by Sanborn, Head & Associates, Inc. personnel on May 20 and 21, 1998. Sampling depths were generally 0 to 1 foot below ground surface; see Table 1 for specific dates and identity of sample delivery groups (SDGs).
2. Analyses were performed by Alta Analytical Laboratory Inc. of El Dorado Hills, California, by USEPA Method 8290.
3. All concentrations are presented in micrograms per kilogram (µg/kg) which are equivalent to parts per billion (ppb).
4. A blank indicates parameter was not detected.
5. "Dup." indicates the sample is a field duplicate.
6. "TEQ" indicates 2,3,7,8-TCDD Toxicity Equivalent using toxicity equivalency factors (TEFs) for compounds from "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Update", (EPA/625/3-89/016, March 1989).
7. There are no currently available Risk Threshold Screening Levels for dioxins/furans in soil from New Hampshire Department of Environmental Services (NHDES) (NHDES Contaminated Sites Risk Characterization and Management Policy, January, 1998) or Oak Ridge National Laboratory ("Table 1. Screening benchmark concentrations for the toxicity of chemicals to earthworms" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process"; "Table 2. Screening benchmark concentrations for the toxicity of chemicals to soil microorganisms and microbial processes" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process"; and "Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy, November, 1997).
8. "J" indicates an estimated value.
"J+" indicates the maximum possible concentration; value may be high-biased.
9. See appendices for field forms and validated analytical data reports.

TABLE 9G
Summary of Shallow Soil Data - Metals
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg																								
	Risk Threshold Screening Levels						Background			S-1	S-8	S-23	S-36	S-40	S-41	S-49	S-69	S-69 Dup.	S-73	S-77	S-85	S-86	S-87	S-88
	OR1	OR2	OR3	S-1	S-2	S-3	Site	NHDES	MADEP	0 - 1'	0 - 1'	0 - 1'	0 - ¾'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'
Antimony ¶			5	8	26	26	0.31		1.4	0.24 J	0.15 J	0.24 J	0.15 J	0.42 J	0.23 J	0.27 J	0.25 J	0.28 J	0.22 J	0.34 J	0.19 J	0.56 J	0.97 J	0.37 J
Arsenic ¶	60	100	10	12	12	12	9.0	12	17	7.6 J	4.8 J	7.5 J	5.8 J	7.7 J	8.3 J	5.7 J	6.8 J	6.4 J	4.3 J	7.5 J	5.6 J	6.3 J	6.5 J	4.2 J
Barium		3,000	500	750	2,500	3,400	22.0		45	25.4	24.3	44.3	18.9	109	23.6	18.3	27.3	26.8	15.0	31.9	37.4	71.8	54.0	25.2
Beryllium ¶ *			10	0.1	0.1	1	0.42	1.0	0.4	0.50	0.29	0.38	0.32	0.33	0.41	0.28	0.48	0.46	0.38	0.29	0.31	0.38	0.33	0.29
Cadmium ¶	20	20	4	32	230	230	0.14	1.9	2	0.083 J	0.014 J	0.17 J	0.024 J	0.67	0.0073 J	0.34	0.049 J	0.024 J	0.050 J	0.39 J	0.040 J	0.48	0.18 J	0.22 J
Calcium							248			847	697	1,260	460	502	223	482	164	170	157	989	303	308	675	733
Chromium (Total) † ¶	0.4	10	1	130	460	540	12.8	33	29	15.1	12.7	19.7	16.6	28.4	10.0	12.8	12.4	12.9	10.6	22.6	12.0	20.3	19.2	17.9
Copper ¶	50	100	100				4.0		38	5.1	6.8	13.9	6.2	41.2	3.4	18.1	3.8	3.6	3.2	9.8	6.5	22.7	25.3	11.3
Iron		200					9,100		17,000	12,000	8,570	11,300	10,300	12,200	8,470	8,510	9,320	9,600	7,160	14,100	6,480	15,400	8,340	7,380
Lead ‡ ¶	500	900	50	400	400	400	16.6	54	99	13.4 J	6.8 J	43.2 J	15.3 J	453 J	17.1 J	120 J	15.1 J	15.2 J	13.2 J	122 J	594 J	550 J	353 J	135 J
Magnesium							951		4,900	1,290	2,200	2,990	2,340	1,830	567	1,830	701	884	736	3,290	1,210	1,230	1,900	1,970
Manganese		100	500				182		300	124	109	164	115	84.8	213	71.1	225	198	121	173	60.4	102	80.3	80.2
Mercury ¶	0.1	30	0.3	1	7	7	0.056	0.33	0.3	0.069		0.13		0.15								0.24		
Molybdenum *		200	2					3.5						16.8 J	0.42 J	2.0 J				1.8 J		1.9 J	3.8 J	1.7 J
Nickel ¶	200	90	30	580	2,500	3,900	6.8	24	17	7.1	9.6	12.6	8.5	13.4	5.4	8.9	4.6	5.9	5.1	19.7	7.4	15.2	11.2	9.4
Potassium							221			358	1,020	1,700	953	902	169	725	181	202	202	1,500	353	448	768	665
Selenium ¶	70	100	1	260	2,500	4,200	0.81	2.2	0.5	0.58 J	0.22 J	0.28 J	0.37 J	0.35 J	0.77 J	0.21 J	0.74 J	0.85 J	0.58 J	0.23 J	0.37 J	0.47 J	0.28 J	0.17 J
Sodium							34.3			29.4 J	39.6	68.7	51.7	52.4	30.8 J	41.9	18.5 J	21.5 J	24.7 J	73.6	21.8 J	34.7	64.1	33.2
Thallium (thallium chloride) ¶			1	10	21	32			0.6															
Tin		2,000	50							R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Vanadium		20	2				15.2		29	18.2	11.7	17.3	14.4	17.5	14.5	12.2	16.0	16.7	13.8	17.1	11.2	17.1	15.4	11.5
Zinc ¶	200	100	50	1,000	2,500	5,000	22.4	98	116	28.0	18.2	44.8	20.9	135	18.3	99.0	22.1	23.6	20.8	211	30.1	77.2	104	54.6

Parameter	Concentrations in mg/kg																							
	Risk Threshold Screening Levels						Background			S-204	S-205	S-206	S-207	S-208	S-209	S-210	S-211	S-213	S-213 Dup.	S-214	S-215	S-216	S-216 Dup.
	OR1	OR2	OR3	S-1	S-2	S-3	Site	NHDES	MADEP	0 - 1/3'	0 - ¾'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - ½'	0 - 1'	0 - 1'
Antimony ¶			5	8	26	26	0.31		1.4	0.37 J							0.47 J				0.69 J	0.47 J	0.69 J
Arsenic ¶	60	100	10	12	12	12	9.0	12	17	9.3 J	5.4 J	4.7 J	5.0 J	3.8 J	4.7 J	2.4 J	5.8 J	4.0 J	4.2 J	5.7 J	6.2 J	4.1 J	3.9 J
Barium		3,000	500	750	2,500	3,400	22.0		45	39.1	29.8	22.4	24.3	50.2	72.1	17.3	16.2	24.0	24.9	54.4	61.9	28.3	34.3
Beryllium ¶ *			10	0.1	0.1	1	0.42	1.0	0.4	0.48	0.30	0.28 J	0.36	0.32	0.32	0.21 J	0.28 J	0.26 J	0.35	0.27 J	0.47	0.30 J	0.32 J
Cadmium ¶	20	20	4	32	230	230	0.14	1.9	2	0.53 J	0.62 J	0.36 J	0.40 J	0.87 J	1.1 J		0.46 J	0.53 J	0.68 J	0.55 J	1.0 J	0.65 J	0.81 J
Calcium							248			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium (Total) † ¶	0.4	10	1	130	460	540	12.8	33	29	18.0	13.9	12.5	16.5	14.8	18.3	8.7	11.3	10.0	13.5	12.4	18.3	13.2	13.1
Copper ¶	50	100	100				4.0		38	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron		200					9,100		17,000	11,900 J	9,630 J	6,850 J	9,560 J	8,420 J	12,500 J	6,370 J	6,820 J	6,180 J	7,670 J	7,940 J	15,600 J	6,540 J	7,990 J
Lead ‡ ¶	500	900	50	400	400	400	16.6	54	99	91.9 J	43.7 J	73.3 J	6.5 J	231 J	400 J	18.0 J	36.8 J	84.3 J	69.9 J	124 J	252 J	123 J	133 J
Magnesium							951		4,900	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		100	500				182		300	198	162	72.5	104	79.9	114	70.2	90.1	95.0	94.3	73.3	218	63.2	79.4
Mercury ¶	0.1	30	0.3	1	7	7	0.056	0.33	0.3	0.062	0.11	0.071	0.0096 J	0.17	0.44		0.035 J	0.072	0.080	0.16	0.47	0.064	0.071
Molybdenum *		200	2					3.5		1.2 J	0.77 J	0.92 J	0.35 J	2.3 J	4.3 J			1.4 J	1.7 J		0.91 J	1.6	1.8
Nickel ¶	200	90	30	580	2,500	3,900	6.8	24	17	18.4	10.6	8.3	9.3	9.4	11.9	6.3	7.2	8.3	9.3	7.9	18.3	8.0	9.3
Potassium							221			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium ¶	70	100	1	260	2,500	4,200	0.81	2.2	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium							34.3			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium (thallium chloride) ¶			1	10	21	32			0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tin		2,000	50							0.97 J	1.4 J	1.8 J			24.0 J						1.5 J		
Vanadium		20	2				15.2		29	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc ¶	200	100	50	1,000	2,500	5,000	22.4	98	116	93.3 J	40.5 J	34.7 J	18.8 J	66.8 J	99.3 J	17.8 J	29.8 J	39.0 J	41.3 J	30.5 J	125 J	47.9	53.7

TABLE 9G
Summary of Shallow Soil Data - Metals
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg																						
	Risk Threshold Screening Levels						Background			S-217	S-218	S-220	S-222	S-223	S-224	S-225	S-226	SP-9/S-3	SP-15/S-3	SP-18/S-3	TP-139	TP-141	TP-144
	OR1	OR2	OR3	S-1	S-2	S-3	Site	NHDES	MADEP	0 - 1'	0 - 1'	0 - 1'	0 - 1'	0 - ¾'	0.7 - 1.7'	0 - 1'	0 - 1'	2 - 3'	2 - 3'	2 - 3'	0 - 1'	½ - 1'	0 - 1'
Antimony ¶			5	8	26	26	0.31		1.4		0.17 J	0.66 J	0.14 J	6.2 J	0.063 J	0.13 J	0.91 J	0.20 J	0.13 J	0.20 J			
Arsenic ¶	60	100	10	12	12	12	9.0	12	17	6.2 J	8.7 J	6.1 J	4.8 J	21.7 J	4.9 J	6.5 J	4.7 J	4.2	9.9	8.8	4.5 J	7.2 J	7.2 J
Barium		3,000	500	750	2,500	3,400	22.0		45	37.6	31.9	103	98.1	3,180	19.2	25.6	51.1	56.5 J	21.1 J	36.8 J	28.5 J	22.8 J	31.7 J
Beryllium ¶ *			10	0.1	0.1	1	0.42	1.0	0.4	0.31 J	0.38 J	0.34 J	0.32 J	0.37 J	0.32 J	0.28 J	0.28 J	0.37 J	0.24 J	0.32 J	0.49	0.35	0.37
Cadmium ¶	20	20	4	32	230	230	0.14	1.9	2	0.46 J	0.43 J	0.55 J	0.48 J	22.6		0.38 J		0.20 J	0.055 J	0.093 J	0.27	0.42	0.20
Calcium							248			NA	NA	NA	NA	NA	NA	NA	NA	332 J	522 J	570 J	2,440 J	358 J	428 J
Chromium (Total) † ¶	0.4	10	1	130	460	540	12.8	33	29	18.0	15.5	24.4	15.4	528	11.6	12.5	15.0	11.8	14.5	21.2	13.2	11.2	17.6
Copper ¶	50	100	100				4.0		38	NA	NA	NA	NA	NA	NA	NA	NA	4.9 J	6.5 J	6.2 J	5.3 J	4.9 J	4.7 J
Iron		200					9,100		17,000	9,510 J	10,200 J	11,800 J	8,500 J	40,100 J	6,960 J	7,910 J	7,620 J	7,810	6,910	10,700	9,410	7,000	8,250
Lead ‡ ¶	500	900	50	400	400	400	16.6	54	99	103 J	334 J	361 J	806 J	19,900 J	26.7 J	218 J	214 J	35.1 J	9.3 J	6.3 J	26.6	33.3	108
Magnesium							951		4,900	NA	NA	NA	NA	NA	NA	NA	NA	1,640 J	1,730 J	3,340 J	1,310 J	1,350 J	1,880 J
Manganese		100	500				182		300	117	80.3	92.5	60.3	220	77.6	92.7	66.7	111 J	86.1 J	174 J	255 J	81.7 J	94.3 J
Mercury ¶	0.1	30	0.3	1	7	7	0.056	0.33	0.3	0.12	0.060	0.21	0.045	2.0	0.015 J	0.033 J	0.068				0.067	0.047 J	0.029 J
Molybdenum *		200	2					3.5		1.5 J	0.99 J	8.2	1.9	21.0	0.70	0.71	1.1	0.83 J		0.43 J			
Nickel ¶	200	90	30	580	2,500	3,900	6.8	24	17	10.8	10.9	12.7	8.8	920	8.2	9.1	9.8	8.8	9.0	14.2	10.0	8.9	9.1
Potassium							221			NA	NA	NA	NA	NA	NA	NA	NA	753 J	980 J	1,690 J	352 J	533 J	1,070 J
Selenium ¶	70	100	1	260	2,500	4,200	0.81	2.2	0.5	NA	NA	NA	NA	NA	NA	NA	NA	0.27	0.082 J	0.14			
Sodium							34.3			NA	NA	NA	NA	NA	NA	NA	NA	72.3	38.5	51.5	26.9 J	23.9 J	21.2 J
Thallium (thallium chloride) ¶			1	10	21	32			0.6	NA	NA	NA	NA	NA	NA	NA	NA				0.039 J		0.027 J
Tin		2,000	50											7.3 J									
Vanadium		20	2				15.2		29	NA	NA	NA	NA	NA	NA	NA	NA	11.8	9.8	16.2	16.6 J	10.0 J	13.4 J
Zinc ¶	200	100	50	1,000	2,500	5,000	22.4	98	116	57.1	36.7	58.7	80.9	1,580	19.8	36.4	53.8	47.5 J	16.5 J	38.4 J	23.1	24.1	24.9

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) personnel between November 3, 1997 and May 21, 1998; see Table 1 for specific dates.

2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, by United States Environmental Protection Agency (USEPA) Methods 6010, 7000 Series, and 7471.

3. All concentrations are shown in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. A blank indicates the parameter was not detected.

6. "Dup." indicates the sample is a field duplicate.

7. "OR1" refers to "Table 1. Screening benchmark concentrations for the toxicity of chemicals to earthworms" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
"OR2" refers to "Table 2. Screening benchmark concentrations for the toxicity of chemicals to soil microorganisms and microbial processes" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
"OR3" refers to "Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
"S-1" refers to the S-1 soil standard established under the New Hampshire Department of Environmental Services (NHDES) Contaminated Sites Risk Characterization and Management Policy (January 1998).
"S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
"S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
"Site" background values are the maximum concentrations detected at background locations at the Site.
"NHDES" refers to background concentrations of metals in soil values as listed in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
"MADEP" refers to background concentrations of metals in soil values as listed in "Guidance for Disposal Site Risk Characterization; In support of the Massachusetts Contingency Plan; Interim Final Policy # WSC/ORS-95-141," Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup, and Office of Research and Standards (July 1995).

8. "†" indicates OR1, OR2, OR3, S-1, S-2, and S-3 values are for chromium (VI). Chromium (III) values for S-1, S-2, and S-3 are 1,000 mg/kg, 2,500 mg/kg, and 5,000 mg/kg, respectively. Analytical results are for total chromium.
"‡" indicates the S-1, S-2, and S-3 values for lead are based on the USEPA's 1994 "Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities."
"¶" indicates priority pollutant metal.
"*" indicates NHDES background value from SHA 1998d.

9. "J" indicates an estimated value.
"R" indicates data (non-detects) rejected during validation.
"NA" indicates sample not analyzed for parameter.

10. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 10
Summary of Deep Soil Data
Phase 3 Screening Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg									Concentrations in mg/kg													
	Risk Threshold Screening Levels						Reference Background			Phase 3 Screening Level Analytical Results (Sampling Depth in feet)													
	Oak Ridge			NHDES			Values (Metals Only)			SP-5/S-9	SP-101/S-5	SP-102/S-4	SP-103/S-8	SP-104/S-7	SP-105/S-12	SP-106/S-6	SP-107/S-4	SP-108/S-8	SP-109/S-5	SP-109/S-12	SP-110/S-4	SP-111/S-8	SP-112/S-9
	1	2	3	S-1	S-2	S-3	Site	NHDES	MADEP	11 - 13'	8 - 10'	6 - 8'	14 - 16'	12 - 14'	22 - 24'	10 - 12'	6 - 8'	14 - 16'	8 - 10'	22 - 24'	6 - 8'	14 - 16'	16 - 18'
VOCs																							
Benzene				0.3	0.3	0.3							4		5				0.5	6		0.4	
Ethylbenzene				140	140	140							10		7		5	1.3	0.9	24	0.6	1.4	
Toluene			200	100	100	100							15		11		7	0.5	2.4	60	0.4	0.7	
Xylene (m,p-) †				500	1,000	1,100							27		18		13	2.2	2.7	79	0.8	2.1	
Xylene (o-) †				500	1,000	1,100						0.6	15		10		10	2.7	1.1	39	1	2.2	
Total AVOCs (BTEX)												0.6	71		51		35	6.7	7.6	208	2.8	6.8	
BT/BTEX												ND / 0.6	0.27		0.31		0.20	0.075	0.38	0.32	0.14	0.16	
Dichloroethene (cis-1,2-)				2	2	2													1.8	11			
Tetrachloroethene				2	2	2						0.8						0.8		3	0.5	0.5	
Trichloroethane (1,1,1-)				42	42	42						0.7	4						0.6	32	0.4	0.8	
Trichloroethene				0.8	0.8	0.8						2.4						1.4		5	1.1	2.1	
Total CVOCs												3.9	4					2.2	2.4	51	2	3.4	
TCE*/TCA*												3.5	ND / 4					1.4 / ND	4.1	0.63	2.8	2.7	
Total VOCs												4.5	75		51		35	8.9	10	259	4.8	10.2	
PAHs																							
Methylnaphthalene (2-)				150	150	150							16		40				5	60			
Naphthalene				5	5	5							8		30				3	40			
Phenanthrene ‡				480	2,400	5,000																	
Total PAHs													24		70				8	100			
Petroleum Hydrocarbons																							
VPH C6-C9 ¶				10,000	10,000	10,000						30	100		80		70	30	5	400	8	30	
VPH C10-C12 ¶				10,000	10,000	10,000					3	40	400	0.9	200		300	200	30	1,000	50	100	1
TPH ¶				10,000	10,000	10,000						8,100	22,000	3,600	39,000		9,700	25,000	7,400	50,000	6,500	8,700	
Polychlorinated Biphenyls																							
Total PCBs *			40	1	1	2						0.8	2		3		2	2	1	4	0.7	0.9	
Metals																							
Arsenic £	60	100	10	12	12	12	9	12	17	5	4	8		4		4	3	4	8	8	11	2	6
Cadmium £	20	20	4	32	230	230	0.14	1.9	2	0.5 HJ	0.6 HJ	0.9 HJ	0.6 HJ	0.5 HJ	0.4 HJ	0.4 HJ	0.6 HJ	0.8 HJ	1 HJ	0.9 HJ	0.9 HJ	0.6 HJ	0.7 HJ
Chromium (Total) # £	0.4	10	1	130	460	540	12.8	33	29	13	11	14	9.8	13	11	9.8	9.6	16	17	13	11	8.8	22
Lead @ £	500	900	50	400	400	400	16.6	54	99	4	6	1,100	560	28	100	5	780	470	350	1,000	320	310	27

TABLE 10
Summary of Deep Soil Data
Phase 3 Screening Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg									Concentrations in mg/kg												
	Risk Threshold Screening Levels						Reference Background Values (Metals Only)			Phase 3 Screening Level Analytical Results (Sampling Depth in feet)												
	Oak Ridge			NHDES						SP-113/S-8	SP-114/S-4	SP-115/S-12	SP-115/S-12 Dup.	SP-116/S-13	SP-117/S-8	SP-118/S-5	SP-119/S-12	SP-120/S-11	SP-121/S-7	SP-122/S-6	SP-123/S-5	SP-124/S-4
	1	2	3	S-1	S-2	S-3	Site	NHDES	MADEP	14 - 16'	6 - 8'	22 - 24'	22 - 24'	24 - 26'	14 - 16'	8 - 10'	22 - 24'	20 - 22'	12 - 14'	10 - 12'	8 - 10'	6 - 8'
VOCs																						
Benzene				0.3	0.3	0.3						5		8	0.5		5					
Ethylbenzene				140	140	140				5.1		44	15	17	7.7		11	7		10		
Toluene			200	100	100	100				1.4		57	17	38	6.5		14			13		
Xylene (m,p-) †				500	1,000	1,100				8.6	2.2	130	39	51	24		31	9		29	8	
Xylene (o-) †				500	1,000	1,100				6.2	2.2	57	19	24	13		16	8		15	8	
Total AVOCs (BTEX)										21.3	4.4	293	90	138	51.7		77	24		67	16	
BT/BTEX										0.066	ND / 4.4	0.21	0.19	0.33	0.14		0.25	ND / 24		0.19	ND / 16	
Dichloroethene (cis-1,2-)				2	2	2								8								
Tetrachloroethene				2	2	2									1	0.1						
Trichloroethane (1,1,1-)				42	42	42								14	0.6							
Trichloroethene				0.8	0.8	0.8																
Total CVOCs														22	1.6	0.1						
TCE*/TCA*														0.79	ND / 0.6							
Total VOCs										21.3	4.4	293	90	160	53.3	0.1	77	24		67	16	
PAHs																						
Methylnaphthalene (2-)				150	150	150				3.6	16	120	120	60	34		30	50		9	6	
Naphthalene				5	5	5				2	3	54	54	30	12		10	10		3		
Phenanthrene ‡				480	2,400	5,000					2	13	12									
Total PAHs										5.6	21	187	186	90	46		40	60		12	6	
Petroleum Hydrocarbons																						
VPH C6-C9 ¶				10,000	10,000	10,000				200	40	1,000	400	400	100	0.6	200	200		200	200	1
VPH C10-C12 ¶				10,000	10,000	10,000				400	300	2,000	900	700	600	7	600	900		1,000	1,000	3
TPH ¶				10,000	10,000	10,000				5,300	4,100	47,000	45,000	29,000	11,000	4,100	14,000	11,000		5,600	4,300	
Polychlorinated Biphenyls																						
Total PCBs *			40	1	1	2					0.7	5	5	4	0.9	3	2	1		1		
Metals																						
Arsenic £	60	100	10	12	12	12	9	12	17	6	8	3	4	3	4		6	3	3	4		6
Cadmium £	20	20	4	32	230	230	0.14	1.9	2	0.5 HJ	0.7 HJ	0.5 HJ	0.5 HJ	1.1 HJ	0.8 HJ	0.5 HJ	0.7 HJ	0.3 HJ	0.4 HJ	0.9 HJ	0.5 HJ	0.6 HJ
Chromium (Total) # £	0.4	10	1	130	460	540	12.8	33	29	7.8	11	9.8	18	11	10	8	10	5.2	7.6	18	10	9.1
Lead @ £	500	900	50	400	400	400	16.6	54	99	13	13	180	200	440	230	4	870	42	4	390	5	6

TABLE 10
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Phase 3 Screening Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg									Concentrations in mg/kg													
	Risk Threshold Screening Levels						Reference Background Values (Metals Only)			Phase 3 Screening Level Analytical Results (Sampling Depth in feet)													
	Oak Ridge			NHDES						SP-125/S-5	SP-126/S-4	SP-127/S-3	SP-128/S-5	SP-129/S-4	SP-130/S-3	SP-131/S-3	SP-132/S-7	SP-133/S-11	SP-134/S-4	SP-134/S-4 Dup.	SP-134/S-7	SP-135/S-4	SP-135/S-5
	1	2	3	S-1	S-2	S-3	Site	NHDES	MADEP	8 - 10'	6 - 8'	4 - 6'	8 - 10'	6 - 8'	4 - 6'	4 - 6'	12 - 14'	20 - 22'	6 - 8'	6 - 8'	12 - 14'	6 - 8'	8 - 10'
VOCs																							
Benzene				0.3	0.3	0.3																NA	
Ethylbenzene				140	140	140				5.4	5.7	1.2							1	0.8	0.8	NA	
Toluene			200	100	100	100													1.3	0.8	0.5	NA	
Xylene (m,p-) †				500	1,000	1,100				6.4	2.5	0.8	0.8					8	2.6	1.9	2.4	NA	
Xylene (o-) †				500	1,000	1,100				6.1	6.6	1	0.8					7	1.7	1.2	1.3	NA	
Total AVOCs (BTEX)										17.9	14.8	3.0	1.6					15	6.6	4.7	5	NA	
BT/BTEX										ND / 17.9	ND / 14.8	ND / 3.0	ND / 1.6					ND / 15	0.20	0.17	0.10	NA	
Dichloroethene (cis-1,2-)				2	2	2																NA	
Tetrachloroethene				2	2	2																NA	
Trichloroethane (1,1,1-)				42	42	42																NA	
Trichloroethene				0.8	0.8	0.8																NA	
Total CVOCs																						NA	
TCE*/TCA*																						NA	
Total VOCs										17.9	14.8	3	1.6					15	6.6	4.7	5	NA	
PAHs																							
Methylnaphthalene (2-)				150	150	150				5	11							23	5	3	1	NA	
Naphthalene				5	5	5				2								10				NA	
Phenanthrene ‡				480	2,400	5,000																NA	
Total PAHs										7	11							33	5	3	1	NA	
Petroleum Hydrocarbons																							
VPH C6-C9 ¶				10,000	10,000	10,000				100	200	20	20	0.6				100	6		3	NA	
VPH C10-C12 ¶				10,000	10,000	10,000				900	1,000	300	200	1	1	2	1	2,000	40	10	60	NA	
TPH ¶				10,000	10,000	10,000				2,000	7,200	3,700	5,000					9,800	6,800	4,500	1,300	NA	
Polychlorinated Biphenyls																							
Total PCBs *			40	1	1	2												1	1	1			
Metals																							
Arsenic £	60	100	10	12	12	12	9	12	17	4	2	5	3	3	4	7	2	4	8	8	3	NA	4
Cadmium £	20	20	4	32	230	230	0.14	1.9	2	0.9 HJ	0.7 HJ	1 HJ	0.6 HJ	0.4 HJ	0.6 HJ	0.7 HJ	0.6 HJ	0.4 HJ	0.8 HJ	0.9 HJ	0.7 HJ	NA	0.5 HJ
Chromium (Total) # £	0.4	10	1	130	460	540	12.8	33	29	20	9.9	12	9.4	13	14	12	12	11	15	17	11	NA	9.6
Lead @ £	500	900	50	400	400	400	16.6	54	99	8	7	4	6	5	6	8	5	6	270	180	19	NA	6

TABLE 10
Summary of Deep Soil Data
Phase 3 Screening Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg									Concentrations in mg/kg											
	Risk Threshold Screening Levels						Reference Background Values (Metals Only)			Phase 3 Screening Level Analytical Results (Sampling Depth in feet)											
	Oak Ridge			NHDES						SP-136/S-7	SP-137/S-11	SP-138/S-7	SP-139/S-7	SP-140/S-11	SP-141/S-6	SP-142/S-8	SP-143/S-1	SP-143/S-1 Dup.	SP-144/S-1	SP-145/S-1	SP-146/S-1
	1	2	3	S-1	S-2	S-3	Site	NHDES	MADEP	12 - 14'	20 - 22'	12 - 14'	12 - 14'	20 - 22'	10 - 12'	14 - 16'	6 - 8'	6 - 8'	6 - 8'	6 - 8'	6 - 8'
VOCs																					
Benzene				0.3	0.3	0.3				0.5											
Ethylbenzene				140	140	140				11											
Toluene			200	100	100	100				17											
Xylene (m,p-) †				500	1,000	1,100				36											
Xylene (o-) †				500	1,000	1,100				19											
Total AVOCs (BTEX)										83.5											
BT/BTEX										0.21											
Dichloroethene (cis-1,2-)				2	2	2				3.1											
Tetrachloroethene				2	2	2				1.4	0.2										
Trichloroethane (1,1,1-)				42	42	42				6.6											
Trichloroethene				0.8	0.8	0.8				0.3											
Total CVOCs										11.4	0.2										
TCE*/TCA*										0.69											
Total VOCs										94.9	0.2										
PAHs																					
Methylnaphthalene (2-)				150	150	150				29											
Naphthalene				5	5	5				18											
Phenanthrene ‡				480	2,400	5,000															
Total PAHs										47											
Petroleum Hydrocarbons																					
VPH C6-C9 ¶				10,000	10,000	10,000				200	30	1									
VPH C10-C12 ¶				10,000	10,000	10,000				500	60	0.6		1			1	1			
TPH ¶				10,000	10,000	10,000				36,000	1,700										
Polychlorinated Biphenyls																					
Total PCBs *			40	1	1	2				2											
Metals																					
Arsenic £	60	100	10	12	12	12	9	12	17	3	5	3	6	3	6	3	6	6	5	7	8
Cadmium £	20	20	4	32	230	230	0.14	1.9	2	0.6 HJ	0.5 HJ	0.4 HJ	0.7 HJ	0.5 HJ	0.8 HJ	0.5 HJ	0.6 HJ	0.8 HJ	0.6 HJ	0.6 HJ	1.1 HJ
Chromium (Total) # £	0.4	10	1	130	460	540	12.8	33	29	15	12	8	14	9.8	17	16	12	19	8.8	12	40
Lead @ £	500	900	50	400	400	400	16.6	54	99	460	17	5	7	6	11	6	9	9	6	6	13

TABLE 10
Summary of Deep Soil Data
Phase 3 Screening Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. between December 9, 1997 and January 15, 1998; see Table 1 for specific dates and identity of sample delivery groups (SDGs). SP-5/S-9 was collected as part of Phase 2 sampling, but is included here because of its depth (11 to 13 feet bgs).
2. Samples were analyzed by Eastern Analytical, Inc. of Concord, New Hampshire. Analyses are screening level and all concentrations are considered to be estimated.
3. Concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).
4. Only those parameters detected in one or more of the samples presented herein are listed.
5. Total concentrations listed (e.g., Total PAHs) are the sum of the detected concentrations of the relevant analytes.
6. A blank indicates the parameter was not detected.
7. "Dup." indicates sample is a field duplicate.
8. Sample SP-135/S-4 was analyzed for PCBs only.
9. "Oak Ridge 1" refers to "Table 1. Screening benchmark concentrations for the toxicity of chemicals to earthworms" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
   "Oak Ridge 2" refers to "Table 2. Screening benchmark concentrations for the toxicity of chemicals to soil microorganisms and microbial processes" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
   "Oak Ridge 3" refers to "Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
   "NHDES S-1" refers to the S-1 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision).
   "NHDES S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision).
   "NHDES S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision).
   "Site" reference background values are the maximum concentrations detected at background locations at the Site.
   "NHDES" reference background values refers to background concentrations of metals in soil values as listed in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
   "MADEP" refers to background concentrations of metals in soil values as listed in "Guidance for Disposal Site Risk Characterization; In Support of the Massachusetts Contingency Plan; Interim Final Policy # WSC/ORS-95-141," Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup, and Office of Research and Standards (July 1995).
10. "*" indicates S-1 and S-2 values for total PCBs are based on USEPA's August 1990 "Guidance on Remedial Actions for Superfund Sites with PCB Contamination" for residential areas.
11. "£" indicates priority pollutant metal.
12. "†" indicates that the S-1, S-2, and S-3 standards are for xylene (mixed isomers).
13. "‡" indicates the values presented for S-1, S-2, and S-3 are a combined total for benzo[g,h,i]perylene, phenanthrene, and pyrene.
14. "¶" indicates the values presented for S-1, S-2, and S-3 are for total petroleum hydrocarbons.
15. "#" indicates Oak Ridge 1, 2, and 3; S-1; S-2; and S-3 values are for chromium (VI). Chromium (III) values for S-1, S-2, and S-3 are 1,000 mg/kg, 2,500 mg/kg, and 5,000 mg/kg, respectively. Analytical results are for total chromium.
16. "@" indicates the S-1, S-2, and S-3 values for lead are based on the USEPA's 1994 "Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities."
17. "HJ" indicates cadmium values are biased high based on review of data by Data Validator/Project QA Officer.
    "NA" indicates not analyzed.
18. "VOCs" are volatile organic compounds.
    "AVOCs" are non-chlorinated aromatic volatile organic compounds.
    "CVOCs" are chlorinated volatile organic compounds.
    "PAHs" are polynuclear aromatic hydrocarbons.
    "VPH" is volatile petroleum hydrocarbons.
    "TPH" is total petroleum hydrocarbons.
19. "BT" indicates the sum of benzene and toluene detected concentrations.
    "BTEX" indicates the sum of benzene, ethylbenzene, toluene, o-xylene, and m/p-xylene detected concentrations.
    "TCE*" indicates the sum of trichloroethene, chloroethane, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride detected concentrations.
    "TCA*" indicates the sum of 1,1,1-trichloroethane, 1,1-dichloroethane, and 1,1-dichloroethene detected concentrations.
20. The CVOC ratios are generally shown as molar ratios, except in the instances where either the numerator or denominator is shown as "ND". In these instances the other value (i.e., denominator or numerator) is presented as the detected concentration in mg/kg.
21. See appendices for field logs/forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 11A
Summary of Deep Soil Data - Full Level Volatile Organic Compounds
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg						Concentrations in mg/kg															
	Oak Ridge			NHDES			SP-109/S-12	SP-117/S-8	SP-122/S-6	SP-125/S-5	SP-134/S-4	SP-134/S-4 Dup.	SP-200/S-1	SP-202/S-1	SP-203/S-7	TP-127/139	TP-136	TP-137	TP-138	TP-140	TP-142	TP-143
	1	2	3	S-1	S-2	S-3	22 - 24'	14 - 16'	10 - 12'	8 - 10'	6 - 8'	6 - 8'	6 - 8'	6 - 8'	12 - 14'	8 - 10'	2 - 3'	12 - 13'	12 - 13'	5 - 6'	3 - 4'	4 - 6'
Benzene				0.3	0.3	0.3					0.014 J	0.010 J	0.52 J					0.021				
Ethylbenzene				140	140	140	33	7.3	9.1		0.70 J	0.27 J		0.49 J	1.5 J			0.082		1.4		
Isopropylbenzene (Cumene)				123	123	123	6.4				0.03 J	0.034 J			0.52 J			0.011		0.65 J		
Naphthalene				5	5	5	35	24	11	3.8	0.52	0.39		3.2 J	3.0 J	R		0.16	0.0070 J	1.2		
Toluene			200	100	100	100	60	6.5	14		1.7 J	0.52 J		0.54 J			0.0020 J	0.11		1.9		
Xylene (m,p-) †				500	1,000	1,100	110 J	26 J	31	2.4 J	2.1 J	0.82 J		1.4 J	2.9 J			0.18		4.0		
Xylene (o-) †				500	1,000	1,100	55 J	14 J	16		1.3 J	0.55 J	2.8 J	1.1 J	2.1 J			0.089		2.5		
Butylbenzene (n-) &				59	59	59										R						
Butylbenzene (sec-) &				59	59	59	6.0			1.2 J	0.022 J	0.020 J	0.73 J	0.57 J	0.75 J	R		0.013		1.0		
Butylbenzene (tert-) &				59	59	59										R						
Isopropyltoluene (p- / 4-) &				59	59	59				1.6	0.02 J	0.0090 J	0.87 J	0.87 J	0.85 J	R		0.012		1.2		
Propylbenzene (n-) &				59	59	59	25	6.3	7.7		0.11 J	0.10 J	1.3 J	0.54 J	1.0 J	R		0.026		1.8		
Trimethylbenzene (1,2,4-) &				59	59	59	190	55	58	10 J	1.3 J	0.65 J	0.75 J	4.4 J	11 J	R		0.14		9.1		
Trimethylbenzene (1,3,5-) &				59	59	59	84	21	21	4.7 J	0.48 J	0.20 J	5.8 J	3.5 J	6.2 J	R		0.14		6.0		
Total Alkylbenzenes &				59	59	59	305	82.3	86.7	17.5	1.932	0.979	9.45	9.88	19.8			0.331		19.1		
Total AVOCs							604.4	160.1	167.8	23.7	8.296	3.573	12.77	16.61	29.82		0.0020	0.984	0.0070	30.75		
BT/BTEX							0.23	0.12	0.20	ND / 2.4	0.29	0.24	0.16	0.15	ND / 6.5		1.0	0.27		0.19		
BT/Total AVOCs							0.10	0.041	0.083	ND / 23.7	0.21	0.15	0.041	0.033	ND / 29.82		1.0	0.13	ND / 0.0070	0.062		
BTEX/Total AVOCs							0.43	0.34	0.42	0.10	0.70	0.61	0.26	0.21	0.22		1.0	0.49	ND / 0.0070	0.32		
Chlorotoluene (2- / o-)				30	30	30										R						
Chlorotoluene (4- / p-)				21	21	21										R						
Dichlorobenzene (1,2- / o-)				66	66	66					0.38	0.23	1.0 J		0.65 J	R		0.012				
Dichlorobenzene (1,3- / m-)				45	45	45					0.0030 J	0.0050 J				R						
Dichlorobenzene (1,4- / p-)	20			6	9	9					0.0090 J	0.012 J				R		0.0030				
Dichloroethane (1,1-)				3	3	3					0.0070 J	0.0050 J					0.0020 J	0.011	0.0010 J			
Dichloroethene (cis-1,2-)				2	2	2	11				0.10 J	0.095 J					0.0050 J	0.094	0.0030		0.0010 J	
Hexachlorobutadiene				0.2	0.8	3										R						
Methylene Chloride (Dichloromethane)				0.1	0.1	0.1					0.0090 J	0.0070 J				0.018 J	0.0070 J		0.0050			
Tetrachloroethene				2	2	2					0.019 J	0.019 J	0.58 J				0.011 J	0.0020 J			0.0050	0.0020 J
Trichlorobenzene (1,2,3-)	20															R						
Trichlorobenzene (1,2,4-)	20			15	15	15					0.0050 J	0.0050 J				R			0.0030 J			
Trichloroethane (1,1,1-)				42	42	42	32				0.036 J	0.020 J	0.54 J			0.0020 J	0.011 J	0.0040			0.0020	
Trichloroethene				0.8	0.8	0.8	8.7						2.1 J									
Trichloropropane (1,2,3-)				1.4	1.4	1.4										R						
Total CVOCs							51.7				0.568	0.398	4.22		0.65	0.020	0.036	0.126	0.012		0.0080	0.0020
TCE*/TCA* (molar ratio)							0.75				3.0	4.9	3.9			ND / 0.0020	0.50	6.9	3.1		0.69	
TCE/TCE$_B$ (molar ratio)							0.58				<0.015	<0.016	2.1 / ND				<0.30	<0.016	<0.49		<1.5	
TCA/TCA$_B$ (molar ratio)							32 / ND				3.8	3.0	0.54 / ND			0.0020 / ND	4.1	0.27	<1.5		0.0020 / ND	
Acetone				9	9	9					0.79	0.49				0.031 J		0.039 J				
Bromobenzene																R						
Butanone (2-) (MEK)				2	2	2					0.034 J	0.046 J		R								
Dibromo-3-Chloropropane (1,2-) *				0.01	0.01	0.01										R						
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)				10	10	10						0.013 J										
Tetrahydrofuran				7	7	7								R								
Trichlorofluoromethane				1,000	2,500	5,000					0.0050 J	0.0030 J				0.020 J	0.0040 J		0.0020 J		0.0010 J	0.0090 J
Total VOCs							656.1	160.1	167.8	23.7	9.693	4.523	16.99	16.61	30.47	0.071	0.042	1.149	0.021	30.75	0.0090	0.011

TABLE 11A
Summary of Deep Soil Data - Full Level Volatile Organic Compounds
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg						Concentrations in mg/kg	
	Oak Ridge			NHDES			TP-145	TP-147
	1	2	3	S-1	S-2	S-3	6.5	4 - 6'
Benzene				0.3	0.3	0.3		
Ethylbenzene				140	140	140		
Isopropylbenzene (Cumene)				123	123	123		
Naphthalene				5	5	5		
Toluene			200	100	100	100		
Xylene (m,p-) †				500	1,000	1,100		
Xylene (o-) †				500	1,000	1,100		
Butylbenzene (n-) &				59	59	59		
Butylbenzene (sec-) &				59	59	59		
Butylbenzene (tert-) &				59	59	59		
Isopropyltoluene (p- / 4-) &				59	59	59		
Propylbenzene (n-) &				59	59	59		
Trimethylbenzene (1,2,4-) &				59	59	59		
Trimethylbenzene (1,3,5-) &				59	59	59		
Total Alkylbenzenes &				59	59	59		
Total AVOCs								
BT/BTEX								
BT/Total AVOCs								
BTEX/Total AVOCs								
Chlorotoluene (2- / o-)				30	30	30		
Chlorotoluene (4- / p-)				21	21	21		
Dichlorobenzene (1,2- / o-)				66	66	66		
Dichlorobenzene (1,3- / m-)				45	45	45		
Dichlorobenzene (1,4- / p-)	20			6	9	9		
Dichloroethane (1,1-)				3	3	3		
Dichloroethene (cis-1,2-)				2	2	2		
Hexachlorobutadiene				0.2	0.8	3		
Methylene Chloride (Dichloromethane)				0.1	0.1	0.1	0.0070 J	0.0030
Tetrachloroethene				2	2	2	0.012 J	
Trichlorobenzene (1,2,3-)	20							
Trichlorobenzene (1,2,4-)	20			15	15	15		
Trichloroethane (1,1,1-)				42	42	42	0.011 J	
Trichloroethene				0.8	0.8	0.8		
Trichloropropane (1,2,3-)				1.4	1.4	1.4		
Total CVOCs							0.030	0.0030
TCE*/TCA* (molar ratio)							ND / 0.011	
TCE/TCE_B (molar ratio)								
TCA/TCA_B (molar ratio)							0.011 / ND	
Acetone				9	9	9		
Bromobenzene								
Butanone (2-) (MEK)				2	2	2		
Dibromo-3-Chloropropane (1,2-) *				0.01	0.01	0.01		
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)				10	10	10		
Tetrahydrofuran				7	7	7		
Trichlorofluoromethane				1,000	2,500	5,000	0.012 J	
Total VOCs							0.042	0.0030

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) between December 17, 1997 and May 21, 1998; see Table 1 for specific dates and identity of sample delivery groups (SDGs). Samples from test pits (TP-series) from deeper than 1 foot bgs are included herein because contamination does not appear to be originating from a surficial source at these locations. Refer to text for further discussion.

2. Analyses were performed by New Hampshire Department of Environmental Services (NHDES) Laboratory, Concord, New Hampshire, by United States Environmental Protection Agency (USEPA) Method 8260.

3. A sample from TP-145 (4 feet) was analyzed (screening level) for ethylene glycol by Direct Injection GC/FID by NHDES Laboratory. No ethylene glycol was detected.

4. All concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

5. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

6. Total concentrations listed (e.g., Total AVOCs) are the sum of the detected concentrations of the relevant analytes.

7. A blank indicates the parameter was not detected.

8. "Dup." indicates the sample is a field duplicate.

9. "Oak Ridge 1" refers to "Table 1. Screening benchmark concentrations for the toxicity of chemicals to earthworms" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
"Oak Ridge 2" refers to "Table 2. Screening benchmark concentrations for the toxicity of chemicals to soil microorganisms and microbial processes" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
"Oak Ridge 3" refers to "Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
"S-1" refers to the S-1 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision).
"S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision).
"S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision).

10. "*" indicates values for S-1, S-2, and S-3 are for dibromochloropropane (isomer unspecified).
"†" indicates values for S-1, S-2, and S-3 are for xylene (mixed isomers).
"&" indicates that NHDES includes 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, n-propylbenzene, n-butylbenzene, 4-isopropyltoluene, tert-butylbenzene, and sec-butylbenzene as alkylbenzenes. NHDES evaluated the risk posed by alkylbenzenes as a group because of the similar structures of these compounds and the lack of toxicological data for all compounds in this class of chemicals. The total concentration of these compounds is compared to the S-1, S-2, and S-3 standards.

11. "J" indicates an estimated value.
"R" indicates data (non-detects) rejected during validation.
"<" indicates the compound in the numerator was not detected, and the detection limit was used to calculate the ratio.
"ND" indicates none of the relevant compounds were detected, and other value of fraction shown (numerator or denominator) is the concentration detected in mg/kg.

12. "VOCs" are volatile organic compounds.
"AVOCs" are non-chlorinated aromatic volatile organic compounds.
"CVOCs" are chlorinated volatile organic compounds.

13. "BT" indicates the sum of benzene and toluene detected concentrations.
"BTEX" indicates the sum of benzene, ethylbenzene, toluene, o-xylene, and m/p-xylene detected concentrations.
"BXTMB" indicates the sum of benzene, o-xylene, and 1,2,4-trimethylbenzene detected concentrations.
"TCE*" indicates the sum of trichloroethene, chloroethane, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride detected concentrations.
"TCA*" indicates the sum of 1,1,1-trichloroethane, 1,1-dichloroethane, and 1,1-dichloroethene detected concentrations.
"TCEB" indicates the sum of chloroethane, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride detected concentrations.
"TCAB" indicates the sum of 1,1-dichloroethane and 1,1-dichloroethene detected concentrations.

14. The CVOC ratios are generally shown as molar ratios, except in the instances where either the numerator or denominator is shown as "ND". In these instances the other value (i.e., denominator or numerator) is presented as the detected concentration in mg/kg.

15. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 11B
Summary of Deep Soil Data - Full Level Semi-Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg						Concentrations in mg/kg														
	Risk Threshold Screening Limits						SP-109/S-12	SP-117/S-8	SP-122/S-6	SP-125/S-5	SP-134/S-4	SP-134/S-4 (Dup.)	SP-200/S-1	SP-202/S-1	SP-203/S-7	TP-127/139	TP-136	TP-137	TP-138	TP-140	TP-142
	OR 1	OR 2	OR 3	S-1	S-2	S-3	22 - 24'	14 - 16'	10 - 12'	8 - 10'	6 - 8'	6 - 8'	6 - 8'	6 - 8'	12 - 14'	8 - 10'	2 - 3'	12 - 13'	12 - 13'	5 - 6'	3 - 4'
PAHs																					
Acenaphthene			20	270	270	270	†	1.4 J	0.37 †	0.12 †	0.15 †	0.27 †	0.063 J†	0.26 J	0.85 J				†	0.28 J†	
Acenaphthylene				300	300	300	†	†	0.19 †	†	†	†	†	†	0.17 J				†	†	0.15 J
Anthracene				1,000	1,700	1,700	†	0.86 J	0.23 †	†	0.12 †	0.19 †	0.084 †	†	0.61 J				†	0.14 J†	0.056 J
Benzo[a]anthracene				0.7	2	40	†	†	0.18 J†	†	†	†	0.16 J	†	0.44 J				†	†	0.25 J
Benzo[a]pyrene				0.7	0.7	4	†	†	†	†	†	†	0.058 J†	†	0.26 J				†	†	0.22 J
Benzo[b]fluoranthene				7	20	400	†	†	†	†	†	†	0.067 J†	†	0.23 J				†	†	0.24 J
Benzo[g,h,i]perylene ‡				480	2,400	5,000	†	†	†	†	†	†	0.15 †	†	0.19 J				0.032 J†	†	0.045 J
Benzo[k]fluoranthene				7	20	400	†	†	†	†	†	†	†	†	0.23 J				†	†	0.16 J
Chrysene				70	200	4,000	†	†	0.16 J†	†	†	0.23 †	0.32 J	†	0.49 J	0.15 J			0.022 J†	0.15 J†	0.24 J
Fluoranthene				810	2,500	5,000	1.3 †	0.35 J	0.26 †	†	0.16 †	0.22 †	0.28 J	†	1.2 J	0.064 J	0.041 J		0.023 J†	0.16 J†	0.21 J
Fluorene	30			510	510	510	2.7 †	1.4 †	0.69 †	0.30 †	0.47 †	0.54 †	0.34 J	0.38 J	1.1 J				†	0.46 J†	
Indeno[1,2,3-cd]pyrene				0.7	2	40	†	†	†	†	†	†	†	†	0.15 J				†	†	0.035 J
Methylnaphthalene (1-)							11 †	6.8 †	6.3 †	1.6 †	1.5 †	4.8 †	0.19 †	1.5 †	2.2 †	NA	NA	NA	0.031 J†	1.7 J†	NA
Methylnaphthalene (2-)				150	150	150	29 †	15 †	11 †	3.1 †	3.4 J†	10 J†	0.096 †	5.1	8.9			0.10 J	0.036 J†	2.6 J†	0.14 J
Naphthalene				5	5	5	8.8 †	2.5 †	2.9 †	0.52 †	0.59 J†	3.3 J†	0.12 J†	1.4 J	2.3			0.058 J	†	0.20 J†	0.059 J
Phenanthrene ‡				480	2,400	5,000	6.2 †	4.2 †	2.5 †	0.72 †	1.5 †	2.0 †	0.21 J	0.71 J	3.0	0.068 J			0.033 J†	1.8 J†	0.36 J
Pyrene ‡				480	2,400	5,000	2.6 †	†	0.51 †	†	0.35 †	0.45 †	0.57 J	0.21 J	1.2 J	0.099 J	0.055 J		0.050 J†	0.30 J†	0.47
Total PAHs							61.6	32.51	25.29	6.36	8.24	22.00	2.708	9.56	23.52	0.381	0.096	0.158	0.227	7.79	2.635
2-Methylnaphthalene + Lighter / Total PAHs							0.79	0.75	0.80	0.82	0.67	0.82	0.15	0.84	0.57			1.0	0.30	0.58	0.076
Fluorene + Lighter / Total PAHs							0.84	0.83	0.85	0.89	0.74	0.86	0.30	0.90	0.66			1.0	0.30	0.67	0.13
Pyrene + Lighter / Total PAHs							1.0	1.0	0.99	1.0	1.0	0.99	0.72	1.0	0.92	0.61	1.0	1.0	0.76	0.98	0.55
Other SVOCs																					
bis(2-Ethylhexyl)phthalate (Di(ethylhexyl)phthalate)				39	110	2,200	7.3	2.6 J	3.6	0.098 J	2.2	2.3	2.6 J	1.5 J	1.3 J	0.49 J			44	0.96 J	0.045 J
Butylbenzylphthalate																					
Chloroaniline (4- / p-)				1.3	1.3	1.3															
Di-n-butylphthalate			200	1,000	2,500	5,000								0.57 J							
Dibenzofuran								1.0 J	0.36 J			0.20 J			0.66 J						
Dichlorobenzene (1,2-)				66	66	66	2.7 J	0.42 J			0.55 J	0.71 J	0.58 J								
Nitrosodiphenylamine (N-)	20							4.3	1.1 J			0.60 J									

TABLE 11B
Summary of Deep Soil Data - Full Level Semi-Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg						Concentrations in mg/kg		
	Risk Threshold Screening Limits						TP-143	TP-145	TP-147
	OR 1	OR 2	OR 3	S-1	S-2	S-3	4 - 6'	6.5'	4 - 6'
PAHs									
Acenaphthene			20	270	270	270		†	
Acenaphthylene				300	300	300		†	
Anthracene				1,000	1,700	1,700	0.039 J	†	
Benzo[a]anthracene				0.7	2	40	0.094 J	†	
Benzo[a]pyrene				0.7	0.7	4	0.10 J	†	
Benzo[b]fluoranthene				7	20	400	0.21 J	0.029 J†	
Benzo[g,h,i]perylene ‡				480	2,400	5,000	0.052 J	0.089 J†	
Benzo[k]fluoranthene				7	20	400	0.24 J	0.029 J†	
Chrysene				70	200	4,000	0.16 J	†	
Fluoranthene				810	2,500	5,000	0.17 J	†	
Fluorene	30			510	510	510		†	
Indeno[1,2,3-cd]pyrene				0.7	2	40		0.058 J†	
Methylnaphthalene (1-)							NA	0.033 J†	NA
Methylnaphthalene (2-)				150	150	150		0.062 J†	
Naphthalene				5	5	5		0.036 J†	
Phenanthrene ‡				480	2,400	5,000	0.11 J	0.035 J†	
Pyrene ‡				480	2,400	5,000	0.26 J	0.099 J†	
Total PAHs							1.435	0.47	
2-Methylnaphthalene + Lighter Total PAHs								0.28	
Fluorene + Lighter Total PAHs								0.28	
Pyrene + Lighter Total PAHs							0.40	0.56	
Other SVOCs									
bis(2-Ethylhexyl)phthalate (Di(ethylhexyl)phthalate)				39	110	2,200	0.37 J	3.0	
Butylbenzylphthalate							0.34 J	0.41 J	
Chloroaniline (4- / p-)				1.3	1.3	1.3		5.4	
Di-n-butylphthalate			200	1,000	2,500	5,000		0.38 J	
Dibenzofuran									
Dichlorobenzene (1,2-)				66	66	66			
Nitrosodiphenylamine (N-)	20								

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) between December 17, 1997 and May 21, 1998; see Table 1 for specific dates and identity of sample delivery groups (SDGs). Samples from test pits (TP-series) from deeper than 1 foot bgs are included herein because contamination does not appear to be originating from a surficial source at these locations. Refer to text for further discussion.

2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, by United States Environmental Protection Agency (USEPA) Method 8270. On many samples selective ion monitoring (SIM) for polynuclear aromatic hydrocarbons (PAHs) was also performed. During validation either the 8270 or SIM value was selected by the validator for use by the end user. Results indicated by "†" are by SIM.

3. All concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. Total PAHs listed are the sum of the detected concentrations of the individual PAHs.

6. A blank indicates the parameter was not detected.

7. "Dup." indicates the sample is a field duplicate.

8. "OR 1" refers to "Table 1. Screening benchmark concentrations for the toxicity of chemicals to earthworms" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
"OR 2" refers to "Table 2. Screening benchmark concentrations for the toxicity of chemicals to soil microorganisms and microbial processes" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
"OR 3" refers to "Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
"S-1" refers to the S-1 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
"S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
"S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).

9. "‡" indicates the values for S-1, S-2, and S-3 are a combined total for benzo(g,h,i)perylene, phenanthrene, and pyrene.

10. "J" indicates an estimated value.
"R" indicates data (non-detects) rejected during validation.
"NA" indicates data for 1-methylnaphthalene are not available because 1-methylnaphthalene was only identified in SIM analysis, and SIM analysis was not completed on the sample.

11. "2-Methylnaphthalene + Lighter / Total PAHs" indicates the ratio of the concentrations of 2-methylnaphthalene, 1-methylnaphthalene, and naphthalene divided by Total PAHs as defined in Note 5.
"Fluorene + Lighter / Total PAHs" indicates the ratio of the concentrations of fluorene, acenaphthene, acenaphthylene, 2-methylnaphthalene, 1-methylnaphthalene, and naphthalene divided by Total PAHs as defined in Note 5.
"Pyrene + Lighter / Total PAHs" indicates the ratio of the concentrations of pyrene, fluoranthene, anthracene, phenanthrene, fluorene, acenaphthene, acenaphthylene, 2-methylnaphthalene, 1-methylnaphthalene, and naphthalene divided by Total PAHs as defined in Note 5.

12. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 11C
Summary of Deep Soil Data - Full Level Petroleum Hydrocarbons
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg											
	RTSLs			SP-109/S-12	SP-117/S-8	SP-122/S-6	SP-125/S-5	SP-134/S-4	SP-134/S-4 (Dup.)	SP-200/S-1	SP-202/S-1	SP-203/S-7
	S-1	S-2	S-3	22 - 24'	14 - 16'	10 - 12'	8 - 10'	6 - 8'	6 - 8'	6 - 8'	6 - 8'	12 - 14'
VPH												
C_5-C_8 Aliphatics *	10,000	10,000	10,000	180 J	22	71	67 J		4.3	21 J	22 J	36 J
C_9-C_{12} Aliphatics *	10,000	10,000	10,000					9.9 J	7.7 J	27 J	65 J	
C_9-C_{10} Aromatics *	10,000	10,000	10,000	400 J	170 J	200 J	340 J	4.2 J		68 J	49 J	120 J
Total VPH *	10,000	10,000	10,000	580	192	271	407	14.1	12.0	116	136	156
EPH												
C_9-C_{18} Aliphatics *	10,000	10,000	10,000	1,430	1,630	400	1,090 J	400	410	150	260	180
C_{19}-C_{36} Aliphatics *	10,000	10,000	10,000	37,700	4,860	1,390 J	270	5,490	5,290	5,010 J	1,270 J	2,420 J
C_{10}-C_{22} Aromatics *	10,000	10,000	10,000	2,640	990	170 J	210 J	460	720	400 J	120 J	190 J
Total EPH *	10,000	10,000	10,000	41,770	7,480	1,960	1,570	6,350	6,420	5,560	1,650	2,790

Parameter	Concentrations in mg/kg											
	RTSLs			TP-127/139	TP-136	TP-137	TP-138	TP-140	TP-142	TP-143	TP-145	TP-147
	S-1	S-2	S-3	8 - 10'	2 - 3'	12 - 13'	12 - 13'	5 - 6'	3 - 4'	4 - 6'	6.5'	4 - 6'
VPH												
C_5-C_8 Aliphatics *	10,000	10,000	10,000					72 J				
C_9-C_{12} Aliphatics *	10,000	10,000	10,000			34 J	6.5 J					
C_9-C_{10} Aromatics *	10,000	10,000	10,000					120 J				
Total VPH *	10,000	10,000	10,000			34	6.5	192				
EPH												
C_9-C_{18} Aliphatics *	10,000	10,000	10,000	110 J	3.9 J	7.8 J	33 J	560		120 J	870 J	
C_{19}-C_{36} Aliphatics *	10,000	10,000	10,000	6,200 JEB		150 JEB	180 JEB	3,360 JEB	120 JEB	740 JEB	1,930 JEB	23 JEB
C_{10}-C_{22} Aromatics *	10,000	10,000	10,000	1,000 J			53 J	240 J	10 J	230	560 J	
Total EPH *	10,000	10,000	10,000	7,310	3.9	157.8	266	4,160	130	1,090	3,360	23

TABLE 11C
Summary of Deep Soil Data - Full Level Petroleum Hydrocarbons
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) between December 17, 1997 and May 21, 1998; see Table 1 for specific dates and identity of sample delivery groups (SDGs). Samples from test pits (TP-series) from deeper than 1 foot bgs are included herein because contamination does not appear to be originating from a surficial source at these locations. Refer to text for further discussion.

2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, using Massachusetts Department of Environmental Protection (MADEP) volatile petroleum hydrocarbon (VPH) and extractable petroleum hydrocarbon (EPH) Methods (modified).

3. All concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. Total concentrations listed (e.g., Total VPH) are the sum of the detected concentrations of the relevant analytes.

6. A blank indicates the parameter was not detected.

7. "Dup." indicates the sample is a field duplicate.

8. "S-1" refers to the S-1 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
   "S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
   "S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).

9. "*" indicates the S-1, S-2, and S-3 values are for total petroleum hydrocarbons.

10. "J" indicates an estimated value.
    "EB" indicates parameter was detected in the associated aqueous equipment blank.
    "RTSLs" are Risk Threshold Screening Levels.

11. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 11D
Summary of Deep Soil Data - Full and Screening Level PCB and Full Level Pesticides
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg																		
	RTSLs				SP-109/S-12	SP-117/S-8	SP-122/S-6	SP-125/S-5	SP-134/S-4	SP-134/S-4 (Dup.)	SP-200/S-1	SP-202/S-1	SP-203/S-7	TP-127/139	TP-136	TP-137	TP-138	TP-140	TP-142
	OR 3	S-1	S-2	S-3	22 - 24'	14 - 16'	10 - 12'	8 - 10'	6 - 8'	6 - 8'	6 - 8'	6 - 8'	12 - 14'	8 - 10'	2 - 3'	12 - 13'	12 - 13'	5 - 6'	3 - 4'
PCBs																			
Aroclor 1242					2.4	0.64 J	0.60		0.81 J	0.93 J	0.32	0.095	0.11	NA	NA	NA	NA	NA	NA
Aroclor 1260					1.2	0.18	0.12		0.23 J	0.24 J	0.17	0.054	0.33	NA	NA	NA	NA	NA	NA
Total PCBs *	40	1	1	2	3.6	0.82	0.72		1.04	1.17	0.49	0.149	0.44	1.6 J			15 J	4.9 J	0.8 J
Pesticides																			
Aldrin		0.09	0.2	1							R	R	R						
BHC (alpha-)		0.06	0.06	0.06							R	R	R	R	R	R	R	R	R
BHC (beta-)		0.06	0.06	0.06							R	R	R	0.012 J				0.0050 J	
BHC (gamma-) (Lindane)		0.09	0.09	0.09							0.0022 J	R	R	R	R	R	R	R	R
DDD (4,4'-)		0.7	2	64							R	R	0.0063 J	0.012 J				0.0066 J	
DDE (4,4'-)		0.7	2	56	R	R	R	R	R	R	R	R	R						
DDT (4,4'-)		0.9	3	11	R	R	R	R	R	R	R	R	R						
Endosulfan I **		45	45	45							0.0028 J	R	R	R	R	R	R	0.0023 J	R
Endosulfan II **		45	45	45							R	R	0.0079 J						
Endrin		8	54	54							R	R	0.016 J						
Endrin Ketone											R	R	R					0.014 J	
Heptachlor		0.2	0.7	9	R	R	R	R	R	R	R	R	R						
Heptachlor Epoxide		0.1	0.3	0.5	R	R	R	R	R	R	R	R	0.0028 J						
Methoxychlor		38	170	170							R	R	0.085 J						
Total Pesticides											0.0050		0.118	0.024				0.0279	

Parameter	Concentrations in mg/kg						
	RTSLs				TP-143	TP-145	TP-147
	OR 3	S-1	S-2	S-3	4 - 6'	6.5'	4 - 6'
PCBs							
Aroclor 1242					NA	NA	NA
Aroclor 1260					NA	NA	NA
Total PCBs *	40	1	1	2	27 J	2.9 J	
Pesticides							
Aldrin		0.09	0.2	1		0.0064 J	
BHC (alpha-)		0.06	0.06	0.06	R	R	R
BHC (beta-)		0.06	0.06	0.06			
BHC (gamma-) (Lindane)		0.09	0.09	0.09	R	R	R
DDD (4,4'-)		0.7	2	64			
DDE (4,4'-)		0.7	2	56			
DDT (4,4'-)		0.9	3	11			
Endosulfan I **		45	45	45	R	R	R
Endosulfan II **		45	45	45			
Endrin		8	54	54			
Endrin Ketone							
Heptachlor		0.2	0.7	9			
Heptachlor Epoxide		0.1	0.3	0.5			
Methoxychlor		38	170	170			
Total Pesticides						0.0064	

Notes:
1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) between December 17, 1997 and May 21, 1998; see Table 1 for specific dates and identity of sample delivery groups (SDGs). Samples from test pits (TP-series) from deeper than 1 foot bgs are included herein because contamination does not appear to be originating from a surficial source at these locations. Refer to text for further discussion.
2. Full level analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, using United States Environmental Protection Agency (USEPA) Method 8080A. Screening level total PCBs were performed by Eastern Analytical, Inc. of Concord, New Hampshire, using USEPA Method 8080 (Modified) on the test pit samples presented herein.
3. All concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).
4. Only those parameters detected or rejected in one or more of the samples presented herein are listed, except for samples SP-200/S-1, SP-202/S-1, and SP-203/S-7 which had the results (non-detects) for all the remaining pesticide compounds rejected during validation.
5. Total concentrations listed (e.g., Total PCBs) are the sum of the detected concentrations of the relevant analytes, with the exception of Total PCBs for the test pit samples which are screening level total PCBs.
6. A blank indicates the parameter was not detected.
7. "Dup." indicates the sample is a field duplicate.
8. "S-1" refers to the S-1 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
"S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
"S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
"OR 3" refers to "Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants: 1994 Revision" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy.
No reference limits were available from "Table 1. Screening benchmark concentrations for the toxicity of chemicals to earthworms" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process", or "Table 2. Screening benchmark concentrations for the toxicity of chemicals to soil microorganisms and microbial processes" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (Rev. 11/97).
9. "*" indicates S-1 and S-2 values for total PCBs are based on USEPA's August 1990 "Guidance on Remedial Actions for Superfund Sites with PCB Contamination" for residential areas.
"**" indicates S-1, S-2, and S-3 values are for Endosulfan (unspecified).
10. "J" indicates an estimated value.
"R" indicates data (non-detects) rejected during validation.
"NA" indicates not analyzed.
11. "PCBs" are polychlorinated biphenyls.
" RTSLs" are Risk Threshold Screening Levels.
12. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 11E
Summary of Deep Soil Data - Full Level PCBs (Homologs/Congeners)
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg				
	SP-201/S-1	TP-138	TP-140	TP-143	TP-145
	5/21/1998	4/22/1998	4/22/1998	4/22/1998	4/23/1998
Congeners					
PCB-1	0.12	6.9E-04 J	0.026 J		0.26 J
PCB-3	0.069	4.0E-04 J	0.013 J		0.065 J
PCB-8	0.18	0.11 J	0.092 J	0.017 J	0.069 J
PCB-15	0.056	0.54 J	0.040 J	1.6 J	0.028 J
PCB-18	0.16	1.2 JEB	0.098 JEB	1.1 JEB	0.0086 JEB
PCB-28	0.38 J	2.1 JEB	0.34 JEB	6.1 JEB	0.024 JEB
PCB-37	0.053 J	0.57 J	0.058 J	0.97 J	0.010 J
PCB-44	0.072	1.0 JEB	0.12 JEB	2.2 JEB	0.030 JEB
PCB-49	0.045	0.62 J	0.061 J	1.3 J	0.0070 J
PCB-52	0.071	1.4 JEB	0.13 JEB	2.4 JEB	0.044 JEB
PCB-66	0.080	1.1 JEB	0.093 JEB	2.1 JEB	0.010 JEB
PCB-70	0.10	1.3 JEB	0.14 JEB	2.7 JEB	0.015 JEB
PCB-74	0.050	0.57 J	0.099 J	1.4 J	0.0038 J
PCB-77	0.0074	0.099 J	0.014 J	0.20 J	0.0026 J
PCB-81		0.0079 J	6.1E-04 J	0.016 J	5.6E-04 J
PCB-87/115	0.021	0.26 J	0.034 J	0.46 J	0.026 J
PCB-90/101	0.050	0.49 JEB	0.072 JEB	0.84 JEB	0.12 JEB
PCB-99	0.019	0.25 JEB	0.030 JEB	0.44 JEB	0.031 JEB
PCB-105	0.016	0.14 J	0.038 J	0.28 J	0.0065 J
PCB-110	0.046	0.51 JEB	0.064 JEB	0.89 JEB	0.16 JEB
PCB-114		0.020 J	0.0037 J	0.052 J	0.0020 J
PCB-118	0.030	0.26 J		0.41 J	0.015 J
PCB-119	0.015	0.013 J	0.0014 J	0.026 J	0.0024 J
PCB-123	0.0054	0.048 J		0.11 J	0.022 J
PCB-126		0.0013 J	4.5E-04 J	0.0029 J	0.0023 J
PCB-128/167	0.0051	0.042 J	0.0081 J	0.060 J	0.055 J
PCB-138/158	0.060	0.16 J	0.068 J	0.23 J	0.46 J
PCB-149	0.064	0.11 J	0.065 J	0.18 J	0.38 J
PCB-151	0.033	0.021 J	0.011 J	0.040 J	0.064 J
PCB-153/168	0.061	0.12 J	0.077 J	0.19 J	0.39 J
PCB-156	0.0045	0.020 J	0.0049 J	0.026 J	0.013 J
PCB-157		0.0045 J	7.4E-04 J	0.0061 J	0.0035 J
PCB-170	0.064	0.023 J	0.033 J	0.073 J	0.32 J
PCB-177	0.029	0.0085 J	0.014 J	0.028 J	0.14 J
PCB-180	0.11	0.036 J	0.070 J	0.15 J	0.68 J
PCB-183	0.024	0.0082 J	0.013 J	0.027 J	0.13 J
PCB-187	0.058	0.016 J	0.032 J	0.064 J	0.28 J
PCB-189		8.1E-04 J		0.0020 J	0.0079 J
PCB-194	0.025	0.0043 J	0.0084 J	0.020 J	0.085 J
PCB-195	0.011	0.0021 J	0.0047 J	0.011 J	0.048 J
PCB-201	0.031	0.0063 J	0.018 J	0.040 J	0.17 J
PCB-202	0.0033	0.0011 J	0.0023 J	0.0057 J	0.025 J
PCB-206	0.0079	0.0030 J	0.0044 J	0.011 J	0.038 J
PCB-207		2.6E-04 J	4.6E-04 J	0.0011 J	0.0042 J
PCB-209		0.0014 J	3.8E-04 J	0.0032 J	0.0023 J

TABLE 11E
Summary of Deep Soil Data - Full Level PCBs (Homologs/Congeners)
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg				
	SP-201/S-1	TP-138	TP-140	TP-143	TP-145
	5/21/1998	4/22/1998	4/22/1998	4/22/1998	4/23/1998
Homologs					
Total monoCB	0.20	0.0011 J	0.041 J	2.4E-04 J	0.34 J
Total diCB	0.37	0.85 J	0.19 J	2.2 J	0.18 J
Total triCB	1.0	7.5 JEB	0.89 JEB	20 JEB	0.085 JEB
Total tetraCB	0.69	11 JEB	1.4 JEB	24 JEB	0.23 JEB
Total pentaCB	0.26	3.1 JEB	0.47 JEB	5.8 JEB	0.69 JEB
Total hexaCB	0.26	0.67 J	0.28 J	1.0 J	1.8 J
Total heptaCB	0.39	0.13 J	0.22 J	0.47 J	2.2 J
Total octaCB	0.089	0.020 J	0.041 J	0.12 J	0.56 J
Total nonaCB	0.0079	0.0042 J	0.0057 J	0.015 J	0.050 J
Total PCBs	3.2669	23.2767	3.53808	53.60844	6.1373

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. personnel on the dates indicated and belong to sample delivery groups (SDGs) BW506 (TP-138, TP-140, TP-143, and TP-145) and BW507 (SP-201/S-1). Samples from test pits (TP-series) from deeper than 1 foot bgs are included herein because contamination does not appear to be originating from a surficial source at these locations. Refer to text for further discussion.

2. Analyses were performed by Alta Analytical Laboratory Inc. of El Dorado Hills, California, by USEPA Method 1668 (Modified).

3. All concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

4. Only those parameters detected in the sample presented herein are listed.

5. Total PCBs were calculated by summing the detected concentrations of homologs and congener 209.

6. Soil Risk Threshold Screening Levels for total PCBs include New Hampshire Department of Environmental Services (NHDES) S-1/S-2/S-3 standards of 1/1/2 mg/kg (NHDES Contaminated Sites Risk Characterization and Management Policy, January, 1998), and Oak Ridge value of 40 mg/kg ("Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy, November, 1997).

7. "J" indicates an estimated value.
"EB" indicates the analyte was detected in the associated aqueous equipment blank.

8. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 11F
Summary of Deep Soil Data - Metals
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg																											
	Risk Threshold Screening Levels						Background			SP-109/S-12	SP-117/S-8	SP-122/S-6	SP-125/S-5	SP-134/S-4	SP-134/S-4 (Dup.)	SP-200/S-1	SP-202/S-1	SP-203/S-7	TP-127/139	TP-136	TP-137	TP-138	TP-140	TP-142	TP-143	TP-145	TP-145	TP-147
	OR1	OR2	OR3	S-1	S-2	S-3	Site	NHDES	MADEP	22 - 24'	14 - 16'	10 - 12'	8 - 10'	6 - 8'	6 - 8'	6 - 8'	6 - 8'	12 - 14'	8 - 10'	2 - 3'	12 - 13'	12 - 13'	5 - 6'	3 - 4'	4 - 6'	6.5'	10 - 14'	4 - 6'
Antimony ¶			5	8	26	26	0.31		1.4	0.11 J		0.16 J	0.14 J	0.10 J	0.14 J	0.10 J		0.10 J	18.9 J							3.2 J		
Arsenic ¶	60	100	10	12	12	12	9.0	12	17	3.2	4.1	3.7	3.6	5.2	6.6	12.1 J	8.0 J	2.2 J	4.1 J	6.5 J	3.4 J	5.4 J	3.4 J	6.5 J	11.9 J	6.7 J	4.5 J	13.3 J
Barium		3,000	500	750	2,500	3,400	22.0		45	90.5 J	64.9 J	52.6 J	32.1 J	38.1 J	24.2 J	58.1	153	32.6	140 J	14.6 J	17.8 J	39.1 J	98.2 J	66.5 J	77.4 J	546 J	15.0 J	18.4 J
Beryllium ¶ *			10	0.1	0.1	1	0.42	1.0	0.4	0.23 J	0.20 J	0.36 J	0.28 J	0.35 J	1.2 J	0.38 J	0.51 J		0.20 J	0.38 J	0.41	0.41	0.27 J	0.39	0.42	0.36	0.49 J	0.38
Cadmium ¶	20	20	4	32	230	230	0.14	1.9	2		0.23 J	0.22 J						0.26 J	7.5	0.25	0.35	0.75	0.70	0.38	1.8	44.0		0.66
Calcium							248			540 J	526 J	932 J	792 J	437 J	766 J	NA	NA	NA	2,090 J	132 J	623 J	1,630 J	612 J	520 J	1,760 J	32,400 J	690 J	595 J
Chromium (Total) † ¶	0.4	10	1	130	460	540	12.8	33	29	10.9	8.8	13.8	12.1	13.8	11.8	11.3	30.9	6.1	173	10.0	11.4	20.4	10.0	13.1	25.6	194	9.1 J	16.3
Copper ¶	50	100	100				4.0		38	6.7 J	6.1 J	9.9 J	5.5 J	6.5 J	3.8 J	NA	NA	NA	1,760 J	3.3 J	3.5 J	20.0 J	7.7 J	9.2 J	46.0 J	985 J	6.6 J	10.5 J
Iron		200					9,100		17,000	6,400	6,650	10,700	6,920	8,470	5,070	15,500 J	16,100 J	5,500 J	10,200	8,330	10,600	11,700	5,330	8,420	15,700	19,200	7,900 J	12,900
Lead ‡ ¶	500	900	50	400	400	400	16.6	54	99	748 J	267 J	361 J	4.7 J	225 J	136 J	1,070 J	20.4 J	118 J	282	17.0	3.2 J	103	813	175	667	1,190	3.5 J	9.9
Magnesium							951		4,900	1,740 J	1,490 J	2,230 J	2,020 J	2,180 J	1,550 J	NA	NA	NA	717 J	624 J	1,470 J	1,800 J	1,340 J	1,440 J	2,740 J	3,930 J	1,500 J	2,630 J
Manganese		100	500				182		300	67.4 J	62.6 J	102 J	74.0 J	98.0 J	79.9 J	116	116	85.4	313 J	55.3 J	113 J	92.6 J	61.4 J	96.0 J	294 J	136 J	51.0 J	124 J
Mercury ¶	0.1	30	0.3	1	7	7	0.056	0.33	0.3			0.035 J				0.0036 J	0.012 J	0.016 J	0.47	0.046 J		0.17	0.041 J	0.54	0.16	0.94		0.0058 J
Molybdenum *		200	2					3.5		0.78 J		0.82 J			0.61 J	0.93			1.2 J		0.74 J	0.96 J		0.71 J	1.5 J	92.7 J		0.61 J
Nickel ¶	200	90	30	580	2,500	3,900	6.8	24	17	5.1	5.5	11.9	9.2	10.0	7.3	13.7	23.0	5.7	69.5	4.8	17.5	10.8	8.3	9.5	17.3	54.0	7.9 J	10.6
Potassium							221			1,100 J	870 J	953 J	1,250 J	767 J	424 J	NA	NA	NA	668 J	137 J	485 J	688 J	563 J	631 J	517 J	1,070 J	870 J	1,170 J
Selenium ¶	70	100	1	260	2,500	4,200	0.81	2.2	0.5		0.069 J	0.12	0.074 J	0.11 J	0.24	NA	NA	NA	R	0.72 J						1.3		
Sodium							34.3			62.9	55.8	59.5	56.2	58.1	71.2	NA	NA	NA	272	10.9 J	27.9 J	48.1 J	40.7 J	47.7 J	36.0	198	67.0 J	30.0 J
Thallium (thallium chloride) ¶			1	10	21	32			0.6							NA	NA	NA		0.12 J		0.058 J	0.083 J		0.052 J	0.070 J		0.081 J
Tin		2,000	50																22.5 J						1.4 J	12.9 J		
Vanadium		20	2				15.2		29	9.6	8.0	13.7	10.0	13.4	8.6	NA	NA	NA	12.1 J	12.7 J	8.0 J	17.1 J	9.3 J	12.4 J	16.5 J	17.4 J	11.0 J	16.4 J
Zinc ¶	200	100	50	1,000	2,500	5,000	22.4	98	116	47.0 J	64.8 J	61.0 J	15.9 J	33.2 J	19.3 J	95.9	61.3	18.2	1,730	12.7	41.4	181	106	36.6	137	536	21.0 J	24.2

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) personnel between December 17, 1997 and May 21, 1998; see Table 1 for specific dates. Samples from test pits (TP-series) from deeper than 1 foot bgs are included herein because contamination does not appear to be originating from a surficial source at these locations. Refer to text for further discussion.

2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, by United States Environmental Protection Agency (USEPA) Methods 6010, 7000 Series, and 7471.

3. Sample TP-145 (10-14') was analyzed by Woods Hole Group Environmental Laboratories, but was not a part of an SDG, and as such the results are considered screening level and are estimated.

4. All concentrations are shown in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

5. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

6. A blank indicates the parameter was not detected.

7. "Dup." indicates the sample is a field duplicate.

8. "OR1" refers to "Table 1. Screening benchmark concentrations for the toxicity of chemicals to earthworms" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with Oct
"OR2" refers to "Table 2. Screening benchmark concentrations for the toxicity of chemicals to soil microorganisms and microbial processes" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energ
"OR3" refers to "Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and Novemb
"S-1" refers to the S-1 soil standard established under the New Hampshire Department of Environmental Services (NHDES) Contaminated Sites Risk Characterization and Management Policy (January 1998).
"S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
"S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
"Site" background values are the maximum concentrations detected at background locations at the Site.
"NHDES" refers to background concentrations of metals in soil values as listed in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
"MADEP" refers to background concentrations of metals in soil values as listed in "Guidance for Disposal Site Risk Characterization; In support of the Massachusetts Contingency Plan; Interim Final Policy # WSC/ORS-95-141," Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup, and Office of Research and Standards (July 1995).

9. "†" indicates OR1, OR2, OR3, S-1, S-2, and S-3 values are for chromium (VI). Chromium (III) values for S-1, S-2, and S-3 are 1,000 mg/kg, 2,500 mg/kg, and 5,000 mg/kg, respectively. Analytical results are for total chromium.
"‡" indicates the S-1, S-2, and S-3 values for lead are based on the USEPA's 1994 "Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities."
"¶" indicates priority pollutant metal.
"*" indicates NHDES background value from SHA 1998d.

10. "J" indicates an estimated value.
"R" indicates data (non-detects) rejected during validation.
"NA" indicates sample not analyzed for parameter.

11. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 12A
Summary of Soil Pile Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg						Concentrations in mg/kg																	
	Oak Ridge			NHDES			Pile 1		Pile 2		Pile 3		Pile 4			Pile 5A					Pile 5B		Pile 6	
	1	2	3	S-1	S-2	S-3	P1-1	P1-2	P2-1	P2-2	P3-1	P3-2	P4-1	P4-1 Dup.	P4-2	P5A-1	P5A-2	P5A-3	P5A-4	P5A-5	P5B-1	P5B-2	P6-1	P6-2
Ethylbenzene				140	140	140									0.65 J									
Isopropylbenzene (Cumene)				123	123	123																		
Naphthalene				5	5	5								R					0.0050					
Toluene			200	100	100	100																		
Xylene (m,p-) †				500	1,000	1,100	0.83 J								0.72 J									
Xylene (o-) †				500	1,000	1,100	1.6																	
Butylbenzene (n-) &				59	59	59								R										
Butylbenzene (sec-) &				59	59	59								R	0.78 J									
Butylbenzene (tert-) &				59	59	59								R										
Isopropyltoluene (p- / 4-) &				59	59	59								R	0.81 J				0.0060					
Propylbenzene (n-) &				59	59	59								R	1.0									
Trimethylbenzene (1,2,4-) &				59	59	59	3.4							R	5.5				0.010					
Trimethylbenzene (1,3,5-) &				59	59	59	3.1							R	1.2									
Total Alkylbenzenes &				59	59	59	6.5								9.29				0.016					
Total AVOCs							8.93								10.66				0.021					
Chlorotoluene (2- / o-)				30	30	30								R										
Chlorotoluene (4- / p-)				21	21	21								R										
Dichlorobenzene (1,2- / o-)				66	66	66								R										
Dichlorobenzene (1,3- / m-)				45	45	45								R										
Dichlorobenzene (1,4- / p-)	20			6	9	9								R										
Dichloropropane (1,2-)	700			0.1	0.1	0.1																		
Hexachlorobutadiene				0.2	0.8	3								R										
Methylene Chloride (Dichloromethane)				0.1	0.1	0.1			0.0025		0.0060					0.0040 J								
Tetrachloroethene				2	2	2																		
Trichlorobenzene (1,2,3-)	20													R										
Trichlorobenzene (1,2,4-)	20			15	15	15								R										
Trichloropropane (1,2,3-)				1.4	1.4	1.4								R										
Total CVOCs									0.0025		0.0060					0.0040								
Acetone				9	9	9			0.055 J	0.051 J	R	R						R	0.057 J	R				
Bromobenzene														R										
Butanone (2-) (MEK)				2	2	2													0.014 J					
Dibromo-3-Chloropropane (1,2-) *				0.01	0.01	0.01								R										
Dichlorodifluoromethane				1,000	2,500	5,000																		
Methyl Tert-Butyl Ether (MTBE)				0.13	0.13	0.13																		
Tetrahydrofuran				7	7	7													0.099					
Trichlorofluoromethane				1,000	2,500	5,000			0.0034	0.0030 J	0.0030 J		0.0072 J	0.014 J		0.0030 J	0.0043	0.0040 J			0.0034 J	0.0040	0.0024 J	0.0024
Total VOCs							8.93		0.0609	0.054	0.0090		0.0072	0.014	10.66	0.0070	0.0043	0.0040	0.191		0.0034	0.0040	0.0024	0.0024

TABLE 12A
Summary of Soil Pile Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg						Concentrations in mg/kg																	
	Oak Ridge			NHDES			Pile 7		Pile 8												Pile 9			
	1	2	3	S-1	S-2	S-3	P7-1	P7-2	P8-1	P8-1 Dup.	P8-2	P8-3	P8-4	P8-5	P8-5 Dup.	P8-6	P8-7	P8-8	P8-9	P8-10	P9-1	P9-2	P9-3	P9-4
Ethylbenzene				140	140	140					0.033							0.26 J		0.010 J				
Isopropylbenzene (Cumene)				123	123	123					0.035							0.071		0.0080 J				
Naphthalene				5	5	5					0.13							0.51		0.22				
Toluene			200	100	100	100												0.020 J						
Xylene (m,p-) †				500	1,000	1,100					0.0054	0.0040						0.11		0.017				
Xylene (o-) †				500	1,000	1,100												0.11		0.0070 J				
Butylbenzene (n-) &				59	59	59																		
Butylbenzene (sec-) &				59	59	59					0.082							0.092		0.040				
Butylbenzene (tert-) &				59	59	59																		
Isopropyltoluene (p- / 4-) &				59	59	59					0.098							0.11		0.051				
Propylbenzene (n-) &				59	59	59					0.071							0.15		0.021				
Trimethylbenzene (1,2,4-) &				59	59	59					0.12							1.7		0.30				
Trimethylbenzene (1,3,5-) &				59	59	59					0.14							0.18						
Total Alkylbenzenes &				59	59	59					0.511							2.232		0.412				
Total AVOCs											0.7144	0.0040						3.313		0.674				
Chlorotoluene (2- / o-)				30	30	30																		
Chlorotoluene (4- / p-)				21	21	21																		
Dichlorobenzene (1,2- / o-)				66	66	66																		
Dichlorobenzene (1,3- / m-)				45	45	45																		
Dichlorobenzene (1,4- / p-)	20			6	9	9																		
Dichloropropane (1,2-)	700			0.1	0.1	0.1																		
Hexachlorobutadiene				0.2	0.8	3																		
Methylene Chloride (Dichloromethane)				0.1	0.1	0.1				0.0022													0.0030	0.0030
Tetrachloroethene				2	2	2			0.0032	0.0032														
Trichlorobenzene (1,2,3-)	20																							
Trichlorobenzene (1,2,4-)	20			15	15	15																		
Trichloropropane (1,2,3-)				1.4	1.4	1.4																		
Total CVOCs									0.0032	0.0054													0.0030	0.0030
Acetone				9	9	9			R	R	0.041 J	R	R					0.12 J		0.095 J				
Bromobenzene																								
Butanone (2-) (MEK)				2	2	2														0.025 J				
Dibromo-3-Chloropropane (1,2-) *				0.01	0.01	0.01																		
Dichlorodifluoromethane				1,000	2,500	5,000					0.033													
Methyl Tert-Butyl Ether (MTBE)				0.13	0.13	0.13																		
Tetrahydrofuran				7	7	7																		
Trichlorofluoromethane				1,000	2,500	5,000	0.0028	0.0044 J						0.0020 J	0.0010 J	0.0010 J								
Total VOCs							0.0028	0.0044	0.0032	0.0054	0.7884	0.0040		0.0020	0.0010	0.0010		3.433		0.794			0.0030	0.0030

TABLE 12A
Summary of Soil Pile Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg						Concentrations in mg/kg																	
	Oak Ridge			NHDES			Pile 9 (cont.)											Pile 10					Pile 10A	
	1	2	3	S-1	S-2	S-3	P9-5	P9-6	P9-7	P9-8	P9-9	P9-10	P9-11	P9-12	P9-13	P9-14	P9-15	P10-1	P10-2	P10-3	P10-4	P10-5	P10A-1	P10A-2
Ethylbenzene				140	140	140													0.044	0.042				
Isopropylbenzene (Cumene)				123	123	123													0.022	0.050				
Naphthalene				5	5	5						0.032 J			0.010 J	0.023 J			0.057	0.11		0.029		
Toluene			200	100	100	100																		
Xylene (m,p-) †				500	1,000	1,100													0.020	1.5		0.081		
Xylene (o-) †				500	1,000	1,100														0.036	0.0049	0.0035		
Butylbenzene (n-) &				59	59	59																		
Butylbenzene (sec-) &				59	59	59													0.040	0.077	0.0025	0.0081		
Butylbenzene (tert-) &				59	59	59																		
Isopropyltoluene (p- / 4-) &				59	59	59			0.0030			0.0020 J			0.0060				0.023	0.054	0.0049	0.010		
Propylbenzene (n-) &				59	59	59													0.054	0.10		0.0028		
Trimethylbenzene (1,2,4-) &				59	59	59													0.026	14	0.0047	0.28		
Trimethylbenzene (1,3,5-) &				59	59	59													0.010		0.0037	0.33		
Total Alkylbenzenes &				59	59	59			0.0030			0.0020			0.0060				0.153	14.231	0.0158	0.6309		
Total AVOCs									0.0030			0.034			0.016	0.023			0.296	15.969	0.0207	0.7444		
Chlorotoluene (2- / o-)				30	30	30																		
Chlorotoluene (4- / p-)				21	21	21																		
Dichlorobenzene (1,2- / o-)				66	66	66																		
Dichlorobenzene (1,3- / m-)				45	45	45																		
Dichlorobenzene (1,4- / p-)	20			6	9	9																		
Dichloropropane (1,2-)	700			0.1	0.1	0.1															0.0037			
Hexachlorobutadiene				0.2	0.8	3																		
Methylene Chloride (Dichloromethane)				0.1	0.1	0.1	0.0020					0.0090			0.0090	0.017	0.0050 J							
Tetrachloroethene				2	2	2																		
Trichlorobenzene (1,2,3-)	20																							
Trichlorobenzene (1,2,4-)	20			15	15	15																		
Trichloropropane (1,2,3-)				1.4	1.4	1.4																		
Total CVOCs							0.0020					0.0090			0.0090	0.017	0.0050				0.0037			
Acetone				9	9	9												R	0.074 J	R	R	0.039 J		
Bromobenzene																								
Butanone (2-) (MEK)				2	2	2																		
Dibromo-3-Chloropropane (1,2-) *				0.01	0.01	0.01																		
Dichlorodifluoromethane				1,000	2,500	5,000																		
Methyl Tert-Butyl Ether (MTBE)				0.13	0.13	0.13															0.0096			
Tetrahydrofuran				7	7	7																		
Trichlorofluoromethane				1,000	2,500	5,000						0.0030			0.0020 J						0.0011 J		0.0016 J	0.0024
Total VOCs							0.0020		0.0030			0.046			0.027	0.040	0.0050		0.37	15.969	0.0351	0.7834	0.0016	0.0024

TABLE 12A
Summary of Soil Pile Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg						Concentrations in mg/kg						
	Oak Ridge			NHDES			Pile 11			Pile 12			Pile 13
	1	2	3	S-1	S-2	S-3	P11-1	P11-1 Dup.	P11-2	P12-1	P12-2	P12-3	P13-1
Ethylbenzene				140	140	140							
Isopropylbenzene (Cumene)				123	123	123							
Naphthalene				5	5	5	1.9	2.7	0.98 J			0.018	
Toluene			200	100	100	100							
Xylene (m,p-) †				500	1,000	1,100							
Xylene (o-) †				500	1,000	1,100							
Butylbenzene (n-) &				59	59	59							
Butylbenzene (sec-) &				59	59	59	2.1	2.1	0.54 J				
Butylbenzene (tert-) &				59	59	59							
Isopropyltoluene (p- / 4-) &				59	59	59	3.5	3.5					
Propylbenzene (n-) &				59	59	59	0.72 J	0.71 J	0.54 J				
Trimethylbenzene (1,2,4-) &				59	59	59	4.1	4.5	22 J				
Trimethylbenzene (1,3,5-) &				59	59	59							
Total Alkylbenzenes &				59	59	59	10.42	10.81	23.08				
Total AVOCs							12.32	13.51	24.06			0.018	
Chlorotoluene (2- / o-)				30	30	30							
Chlorotoluene (4- / p-)				21	21	21							
Dichlorobenzene (1,2- / o-)				66	66	66							
Dichlorobenzene (1,3- / m-)				45	45	45							
Dichlorobenzene (1,4- / p-)	20			6	9	9							
Dichloropropane (1,2-)	700			0.1	0.1	0.1							
Hexachlorobutadiene				0.2	0.8	3							
Methylene Chloride (Dichloromethane)				0.1	0.1	0.1				0.0060	0.0050		
Tetrachloroethene				2	2	2							
Trichlorobenzene (1,2,3-)	20												
Trichlorobenzene (1,2,4-)	20			15	15	15							
Trichloropropane (1,2,3-)				1.4	1.4	1.4							
Total CVOCs										0.0060	0.0050		
Acetone				9	9	9				R	R	R	
Bromobenzene													
Butanone (2-) (MEK)				2	2	2							
Dibromo-3-Chloropropane (1,2-) *				0.01	0.01	0.01							
Dichlorodifluoromethane				1,000	2,500	5,000							
Methyl Tert-Butyl Ether (MTBE)				0.13	0.13	0.13							
Tetrahydrofuran				7	7	7							
Trichlorofluoromethane				1,000	2,500	5,000				0.0020 J	0.0030 J	0.0040 J	
Total VOCs							12.32	13.51	24.06	0.0080	0.0080	0.022	

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) between April 2 and 24, 1998; see Table 1 for specific dates and identity of sample delivery groups (SDGs).

2. Analyses were performed by New Hampshire Department of Environmental Services (NHDES) Laboratory, Concord, New Hampshire, by United States Environmental Protection Agency (USEPA) Method 8260.

3. All concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. Total concentrations listed (e.g., Total AVOCs) are the sum of the detected concentrations of the relevant analytes.

6. A blank indicates the parameter was not detected.

7. "Dup." indicates the sample is a field duplicate.

8. "Oak Ridge 1" refers to "Table 1. Screening benchmark concentrations for the toxicity of chemicals to earthworms" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.

"Oak Ridge 2" refers to "Table 2. Screening benchmark concentrations for the toxicity of chemicals to soil microorganisms and microbial processes" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.

"Oak Ridge 3" refers to "Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.

"S-1" refers to the S-1 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision).

"S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision).

"S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision).

9. "*" indicates values for S-1, S-2, and S-3 are for dibromochloropropane (isomer unspecified).
"†" indicates values for S-1, S-2, and S-3 are for xylene (mixed isomers).
"&" indicates that NHDES includes 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, n-propylbenzene, n-butylbenzene, 4-isopropyltoluene, tert-butylbenzene, and sec-butylbenzene as alkylbenzenes. NHDES evaluated the risk posed by alkylbenzenes as a group because of the similar structures of these compounds and the lack of toxicological data for all compounds in this class of chemicals. The total concentration of these compounds is compared to the S-1, S-2, and S-3 standards.

10. "J" indicates an estimated value.
"R" indicates data (non-detects) rejected during validation.

11. "VOCs" are volatile organic compounds.
"AVOCs" are non-chlorinated aromatic volatile organic compounds.
"CVOCs" are chlorinated volatile organic compounds.

12. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 12B
Summary of Soil Pile Data - Semi-Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg						Concentrations in mg/kg															
	Risk Threshold Screening Levels						Pile 1			Pile 2			Pile 3			Pile 4				Pile 5A		
	OR 1	OR 2	OR 3	S-1	S-2	S-3	P1-1	P1-2	Average	P2-1	P2-2	Average	P3-1	P3-2	Average	P4-1	P4-1 Dup.	P4-2	Average	P5A-1	P5A-2	P5A-3
PAHs																						
Acenaphthene			20	270	270	270	0.33 †	0.090 J †					†	0.013 J †		0.060 J †	0.022 J †	0.22 J †			†	0.030 J †
Acenaphthylene				300	300	300	†	†					†	0.015 J †		0.048 J †	0.024 J †	0.13 J †		0.045 J	0.075 †	0.055 J †
Anthracene				1,000	1,700	1,700	0.20 J †	0.076 J †					†	0.048 †		0.18 J †	0.074 J †	0.24 †		0.060 J	0.066 †	0.084 J †
Benzo[a]anthracene				0.7	2	40	0.17 J †	0.13 J †					†	0.11 †		0.44 J †	0.19 J †	0.44 †		0.26 J	0.13 †	0.38 J †
Benzo[a]pyrene				0.7	0.7	4	†	0.086 J †					†	0.15 †		0.35 J †	0.17 J †	0.35 †		0.17 J	0.15 †	0.37 J †
Benzo[b]fluoranthene				7	20	400	†	0.087 J †			0.094 J		†	0.17 †		0.33 J †	0.16 J †	0.30 †		0.19 J	0.17 †	0.36 J †
Benzo[g,h,i]perylene ‡				480	2,400	5,000	0.16 J †	0.15 J †					†	0.26 †		0.22 J †	0.11 J †	0.28 †			0.19 †	0.37 J †
Benzo[k]fluoranthene				7	20	400	†	0.054 J †			0.11 J		†	0.14 †		0.27 J †	0.12 J †	0.26 †		0.20 J	0.12 †	0.30 J †
Chrysene				70	200	4,000	0.24 †	0.18 J †			0.051 J		0.28 J †	0.17 †		0.43 J †	0.19 J †	0.57 †		0.25 J	0.22 †	0.42 J †
Dibenzo(a,h)anthracene				0.7	0.7	4	†	†					†	0.028 J †		0.045 J †	0.023 J †	†			0.031 J †	0.053 J †
Fluoranthene				810	2,500	5,000	0.29 †	0.15 J †					0.35 J †	0.16 †		0.84 J †	0.39 J †	0.77 †		0.47	0.13 †	0.43 J †
Fluorene	30			510	510	510	0.46 †	0.14 J †					†	0.011 J †		0.056 J †	0.021 J †	0.32 †			†	0.019 J †
Indeno[1,2,3-cd]pyrene				0.7	2	40	†	0.053 J †					†	0.15 †		0.20 J †	0.095 J †	0.20 J †		0.054 J	0.13 †	0.29 J †
Methylnaphthalene (1-)							2.4 †	0.22 J †		NA	NA		†	0.011 J †		0.029 J †	†	2.1 †		NA	0.030 J †	†
Methylnaphthalene (2-)				150	150	150	3.2 †	0.23 J †					†	0.020 J †		0.058 J †	0.026 J †	3.1 †			0.047 †	†
Naphthalene				5	5	5	0.59 †	0.088 J †					†	0.012 J †		0.035 J †	†	0.86 †			†	†
Phenanthrene ‡				480	2,400	5,000	1.2 †	0.23 J †					0.76 J †	0.11 †		0.64 J †	0.26 J †	1.2 †		0.17 J	0.069 †	0.19 J †
Pyrene ‡				480	2,400	5,000	0.64 †	0.53 J †		0.041 J	0.055 J		0.63 J †	0.22 †		0.83 J †	0.36 J †	0.99 †		0.49	0.35 †	0.66 J †
Total PAHs							9.88	2.494	6.187	0.041	0.31	0.176	2.02	1.798	1.909	5.061	2.235	12.33	7.989	2.359	1.908	4.011
Other SVOCs																						
bis(2-Chloroethyl)ether				0.7	0.7	0.7	R	R		R	R					R	R	R		R	R	
bis(2-Ethylhexyl)phthalate (Di(ethylhexyl)phthalate)				39	110	2,200	21	16		0.36 J	0.39		9.5 J	16		3.7 J	3.4 J	13		2.2	7.6	1.6 J
Butylbenzylphthalate																				1.3	2.3	
Di-n-butylphthalate			200	1,000	2,500	5,000																
Di-n-octylphthalate																		15 J				
Dibenzofuran																						
Nitrosodiphenylamine (N-)	20																	1.0 J				
Pentachlorophenol	6	400	3	3.3	3.3	3.3																

TABLE 12B
Summary of Soil Pile Data - Semi-Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg						Concentrations in mg/kg																	
	Risk Threshold Screening Levels						Pile 5A (cont.)			Pile 5B			Pile 6			Pile 7			Pile 8					
	OR 1	OR 2	OR 3	S-1	S-2	S-3	P5A-4	P5A-5	Average	P5B-1	P5B-2	Average	P6-1	P6-2	Average	P7-1	P7-2	Average	P8-1	P8-1 Dup.	P8-2	P8-3	P8-4	P8-5
PAHs																								
Acenaphthene			20	270	270	270	0.038 J †	0.016 J †		†	†		0.052 J	0.063 †		†	†				0.13 J †	†	0.027 J †	†
Acenaphthylene				300	300	300	0.076 †	0.092 †		0.054 †	0.15 †		0.054 J	0.066 †		0.040 J †	0.049 †				0.061 J †	0.051 †	0.029 J †	0.070 J †
Anthracene				1,000	1,700	1,700	0.12 †	0.12 †		0.089 †	0.20 †		0.21 J	0.22 †		0.031 J †	0.074 †				0.17 J †	0.042 J †	0.11 J †	0.080 J †
Benzo[a]anthracene				0.7	2	40	0.23 †	0.23 †		0.25 †	0.34 †		0.58	0.54 †		0.033 J †	0.15 †			0.038 J	0.13 J †	0.014 J †	0.32 J †	0.10 J †
Benzo[a]pyrene				0.7	0.7	4	0.22 †	0.23 †		0.25 †	0.29 †		0.60	0.49 †		0.043 †	0.14 †			0.037 J	0.11 J †	0.021 J †	0.26 J †	0.099 J †
Benzo[b]fluoranthene				7	20	400	0.20 †	0.21 †		0.22 †	0.23 †		0.69	0.43 †		0.043 †	0.14 †			0.045 J	0.093 J †	0.017 J †	0.23 J †	0.086 J †
Benzo[g,h,i]perylene ‡				480	2,400	5,000	0.25 †	0.26 †		0.28 †	0.31 †		0.20 J	0.42 †		0.15 †	0.22 †				0.084 J †	0.16 †	0.25 J †	0.31 J †
Benzo[k]fluoranthene				7	20	400	0.20 †	0.19 †		0.24 †	0.26 †		0.67	0.35 †		0.039 J †	0.12 †			0.040 J	0.086 J †	0.011 J †	0.22 J †	0.079 J †
Chrysene				70	200	4,000	0.29 †	0.26 †		0.28 †	0.45 †		0.61	0.56 †		0.061 †	0.16 †			0.042 J	0.14 J †	0.017 J †	0.31 J †	0.12 J †
Dibenzo(a,h)anthracene				0.7	0.7	4	0.032 J †	0.035 J †		0.036 J †	0.047 †			0.068 †		†	0.025 J †				0.014 J †	†	0.030 J †	0.020 J †
Fluoranthene				810	2,500	5,000	0.40 †	0.38 †		0.52 †	0.63 †		1.3	1.1 †		0.042 J †	0.25 †			0.036 J	0.30 J †	†	0.61 J †	0.23 J †
Fluorene	30			510	510	510	0.044 J †	†		†	†		0.060 J	0.075 †		†	†				0.25 J †	†	0.049 J †	†
Indeno[1,2,3-cd]pyrene				0.7	2	40	0.17 †	0.19 †		0.20 †	0.21 †		0.20 J	0.34 †		0.072 †	0.14 †				0.065 J †	0.065 †	0.19 J †	0.17 J †
Methylnaphthalene (1-)							0.14 †	†		†	†		NA	0.021 J †		†	†		NA	NA	1.2 J †	†		†
Methylnaphthalene (2-)				150	150	150	0.17 †	0.011 J †		†	†		0.056 J	0.035 J †		†	†				2.0 J †	0.011 J †	0.016 J †	†
Naphthalene				5	5	5	0.034 J †	†		†	†		0.040 J	0.023 J †		†	†				0.22 J †	†	†	†
Phenanthrene ‡				480	2,400	5,000	0.26 †	0.19 †		0.31 †	0.56 †		0.91	0.73 †		0.021 J †	0.14 †				1.1 J †	0.012 J †	0.43 J †	0.16 J †
Pyrene ‡				480	2,400	5,000	0.51 †	0.48 †		0.51 †	0.80 †		1.2	1.1 †		0.078 †	0.27 †			0.051 J	0.39 J †	0.024 J †	0.63 J †	0.20 J †
Total PAHs							3.384	2.894	2.911	3.239	4.477	3.858	7.432	6.631	7.032	0.653	1.878	1.266		0.289	6.543	0.445	3.711	1.724
Other SVOCs																								
bis(2-Chloroethyl)ether				0.7	0.7	0.7				R	R		R	R		R	R							
bis(2-Ethylhexyl)phthalate (Di(ethylhexyl)phthalate)				39	110	2,200	67	1.9 J					0.39 J	3.5 J		130	1.8 J				0.22 J	3.2		5.9
Butylbenzylphthalate							4.2 J	0.54 J					0.088 J				0.66 J							
Di-n-butylphthalate			200	1,000	2,500	5,000							0.048 J											
Di-n-octylphthalate														1.4 J										
Dibenzofuran													0.040 J											
Nitrosodiphenylamine (N-)	20																							
Pentachlorophenol	6	400	3	3.3	3.3	3.3																		

TABLE 12B
Summary of Soil Pile Data - Semi-Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg						Concentrations in mg/kg																	
	Risk Threshold Screening Levels						Pile 8 (cont.)							Pile 9										
	OR 1	OR 2	OR 3	S-1	S-2	S-3	P8-5 Dup.	P8-6	P8-7	P8-8	P8-9	P8-10	Average	P9-1	P9-2	P9-3	P9-4	P9-5	P9-6	P9-7	P9-8	P9-9	P9-10	P9-11
PAHs																								
Acenaphthene			20	270	270	270	†	†		0.52 †	†	0.35 †		0.098 †	†	0.042 J †	0.023 J †	0.076 J †	†	0.10 J †	†		0.27 J †	†
Acenaphthylene				300	300	300	0.062 J †	0.036 J †	0.037 J	0.21 †	0.049 †	0.12 †		0.17 †	0.32 †	0.088 J †	0.056 †	0.098 J †	0.059 J †	0.11 J †	0.045 J †	0.058 J	0.92 †	0.32 J †
Anthracene				1,000	1,700	1,700	0.067 J †	0.057 †	0.054 J	0.60 †	0.078 †	0.44 †		0.39 †	0.58 †	0.20 J †	0.13 †	0.27 †	0.14 J †	0.41 †	0.074 †		1.5 †	0.34 J †
Benzo[a]anthracene				0.7	2	40	0.031 J †	0.11 †	0.18 J	1.6 †	0.24 †	1.0 †		1.1 †	1.7 †	0.64 J †	0.43 †	0.79 †	0.29 J †	1.2 †	0.26 †	0.12 J	2.2 †	0.45 J †
Benzo[a]pyrene				0.7	0.7	4	0.041 J †	0.082 †	0.16 J	1.1 †	0.24 †	0.73 †		0.99 †	1.6 †	0.53 J †	0.38 †	0.68 †	0.18 J †	1.0 †	0.26 †	0.11 J	1.7 †	0.45 J †
Benzo[b]fluoranthene				7	20	400	0.038 J †	0.082 †	0.29 J	0.86 †	0.24 †	0.59 †		0.83 †	1.4 †	0.42 J †	0.35 †	0.60 †	0.17 J †	0.87 †	0.26 †	0.14 J	1.3 †	0.36 J †
Benzo[g,h,i]perylene ‡				480	2,400	5,000	0.23 J †	0.21 †		0.82 †	0.36 †	0.50 †		0.80 †	1.3 †	0.44 J †	0.32 †	0.53 †	0.15 J †	0.80 †	0.26 †	0.053 J	1.2 †	0.36 J †
Benzo[k]fluoranthene				7	20	400	0.026 J †	0.091 †	0.18 J	0.76 †	0.22 †	0.57 †		0.86 †	1.3 †	0.47 J †	0.30 †	0.55 †	0.18 J †	0.78 †	0.22 †	0.098 J	1.5 †	0.39 J †
Chrysene				70	200	4,000	0.061 J †	0.11 †	0.19 J	2.0 †	0.35 †	1.2 †		1.1 †	1.7 †	0.62 J †	0.43 †	0.78 †	0.29 J †	1.1 †	0.28 †	0.12 J	2.1 †	0.44 J †
Dibenzo(a,h)anthracene				0.7	0.7	4	0.018 J †	0.019 J †		0.19 J †	0.044 †	0.10 J †		0.13 J †	0.20 J †	0.076 J †	0.056 †	0.11 †	0.036 J †	0.14 J †	0.043 †		0.23 J †	0.058 J †
Fluoranthene				810	2,500	5,000	0.049 J †	0.22 †	0.26 J	2.4 †	0.57 †	1.9 †		2.1 †	3.3 †	1.2 J †	0.75 †	1.5 †	0.67 J †	2.3 †	0.44 †	0.17 J	5.6 †	0.78 J †
Fluorene	30			510	510	510	†	†		0.80 †	†	0.49 †		0.10 †	0.082 J †	0.060 J †	0.031 J †	0.094 J †	0.086 J †	0.15 J †	†		1.0 †	†
Indeno[1,2,3-cd]pyrene				0.7	2	40	0.11 J †	0.13 †		0.61 †	0.23 †	0.42 †		0.66 †	1.1 †	0.41 J †	0.27 †	0.46 †	0.13 J †	0.71 †	0.21 †	0.044 J	1.0 †	0.32 J †
Methylnaphthalene (1-)							†	†	NA	2.5 †	†	1.5 †		0.049 J †	†	†	†	0.026 J †	†	0.062 J †	†	NA	0.39 J †	†
Methylnaphthalene (2-)				150	150	150	†	†	0.045 J	2.8 †	0.034 J †	1.6 †		0.095 †	†	0.026 J †	0.024 J †	0.044 J †	†	0.099 J †	†		0.41 J †	†
Naphthalene				5	5	5	†	†		0.41 †	†	0.25 †		0.043 J †	†	†	†	0.038 J †	†	0.078 J †	†		0.28 J †	†
Phenanthrene ‡				480	2,400	5,000	0.034 J †	0.14 †	0.13 J	3.4 †	0.38 †	2.1 †		1.2 †	1.2 †	0.68 J †	0.41 †	1.0 J †	0.72 J †	1.6 J †	0.19 J †	0.053 J	4.5 †	0.27 J †
Pyrene ‡				480	2,400	5,000	0.066 J †	0.17 †	0.29 J	3.3 †	0.55 †	2.2 †		2.0 †	3.1 †	1.1 J †	0.74 †	1.3 †	0.49 J †	2.2 †	0.42 †	0.29 J	4.9 †	0.81 J †
Total PAHs							0.833	1.457	1.816	24.88	3.585	16.06	5.992	12.715	18.882	7.002	4.7	8.946	3.591	13.709	2.962	1.256	31.0	5.348
Other SVOCs																								
bis(2-Chloroethyl)ether				0.7	0.7	0.7																		R
bis(2-Ethylhexyl)phthalate (Di(ethylhexyl)phthalate)				39	110	2,200	7.2	5.0	0.092 J	52	0.88 J	20		0.59 J		0.54 J	0.69 J		2.6 J	1.5 J		0.066 J	0.64 J	R
Butylbenzylphthalate																								R
Di-n-butylphthalate			200	1,000	2,500	5,000																		R
Di-n-octylphthalate										27		10												R
Dibenzofuran																							0.42 J	R
Nitrosodiphenylamine (N-)	20																							R
Pentachlorophenol	6	400	3	3.3	3.3	3.3																		R

TABLE 12B
Summary of Soil Pile Data - Semi-Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg						Concentrations in mg/kg																	
	Risk Threshold Screening Levels						Pile 9 (cont.)					Pile 10						Pile 10A			Pile 11			
	OR 1	OR 2	OR 3	S-1	S-2	S-3	P9-12	P9-13	P9-14	P9-15	Average	P10-1	P10-2	P10-3	P10-4	P10-5	Average	P10A-1	P10A-2	Average	P11-1	P11-1 Dup.	P11-2	Average
PAHs																								
Acenaphthene			20	270	270	270	†	0.15 J				0.027 J †	0.12 †	0.13 J †	0.085 J †	0.019 J †		†	†		0.29 †	0.40 †	0.12 J	
Acenaphthylene				300	300	300	†	0.34 J	0.11 J	0.047 J		0.048 J †	0.066 †	0.15 J †	0.051 J †	0.013 J †		†	†		0.17 J †	0.23 †		
Anthracene				1,000	1,700	1,700	0.022 J †	0.39	0.058 J	0.057 J		0.14 J †	0.21 †	0.43 †	0.13 J †	0.012 J †		†	†		0.54 †	0.75 †		
Benzo[a]anthracene				0.7	2	40	0.038 J †	0.89	0.22 J	0.24 J		0.42 J †	0.47 †	0.74 †	0.27 J †	0.054 †		†	†		1.1 †	1.5 †	0.12 J	
Benzo[a]pyrene				0.7	0.7	4	0.039 J †	0.65 J	0.19 J	0.19 J		0.40 J †	0.40 †	0.58 †	0.25 J †	0.048 †		†	†		0.84 †	1.0 †	0.11 J	
Benzo[b]fluoranthene				7	20	400	0.034 J †	0.83 J	0.27 J	0.27 J		0.37 J †	0.35 †	0.50 †	0.21 J †	0.049 †		†	†		0.60 †	0.79 †	0.16 J	
Benzo[g,h,i]perylene ‡				480	2,400	5,000	0.042 J †	0.12 J	0.072 J	0.087 J		0.45 J †	0.32 †	0.37 †	0.21 J †	0.042 J †		0.11 †	0.11 †		0.57 †	0.73 †		
Benzo[k]fluoranthene				7	20	400	0.035 J †	0.79 J	0.19 J	0.19 J		0.34 J †	0.35 †	0.50 †	0.22 J †	0.046 †		†	†		0.82 †	0.97 †	0.11 J	
Chrysene				70	200	4,000	0.043 J †	0.87	0.23 J	0.24 J		0.45 J †	0.51 †	0.74 †	0.29 J †	0.077 †		0.083 †	0.062 †		1.0 †	1.3 †	0.16 J	
Dibenzo(a,h)anthracene				0.7	0.7	4	†					0.055 J †	0.057 †	0.078 J †	0.037 J †	†		†	†		0.11 J †	0.13 J †		
Fluoranthene				810	2,500	5,000	0.070 J †	2.0	0.36 J	0.31 J		0.66 J †	0.97 †	1.4 †	0.59 J †	0.066 †		†	†		2.7 †	3.4 †	0.14 J	
Fluorene	30			510	510	510	†	0.22 J				0.032 J †	0.21 J †	0.28 J †	0.12 J †	0.028 J †		†	†		0.58 †	0.81 †	0.28 J	
Indeno[1,2,3-cd]pyrene				0.7	2	40	0.030 J †	0.13 J	0.068 J	0.089 J		0.29 J †	0.26 †	0.31 †	0.17 J †	0.031 J †		0.029 J †	0.031 J †		0.51 †	0.64 †		
Methylnaphthalene (1-)							†	NA	NA	NA		0.018 J †	0.75 †	0.85 †	0.27 J †	0.073 †		†	†		3.5 J †	4.6 †	NA	
Methylnaphthalene (2-)				150	150	150	†	0.066 J				0.033 J †	0.84 †	4.5 †	0.23 J †	0.11 †		†	†		3.3 †	4.3 †	3.6	
Naphthalene				5	5	5	†	0.055 J				0.013 J †	0.23 †	2.5 †	0.089 J †	0.052 †		†	†		0.37 †	0.48 †	0.68	
Phenanthrene ‡				480	2,400	5,000	0.035 J †	1.6	0.16 J	0.19 J		0.43 J †	1.1 †	1.2 †	0.58 J †	0.042 J †		†	†		2.1 †	2.8 †	0.75	
Pyrene ‡				480	2,400	5,000	0.074 J †	2.8	0.53	0.45 J		0.72 J †	1.0 †	1.4 †	0.67 J †	0.16 †		†	0.025 J †		2.0 †	2.6 †	0.32 J	
Total PAHs							0.462	11.901	2.458	2.36	8.486	4.896	8.213	16.658	4.472	0.922	7.032	0.222	0.228	0.225	21.1	27.43	6.55	15.41
Other SVOCs																								
bis(2-Chloroethyl)ether				0.7	0.7	0.7												R	R					
bis(2-Ethylhexyl)phthalate (Di(ethylhexyl)phthalate)				39	110	2,200		0.42	0.073 J	0.041 J		0.78 J	1.7 J	6.1	6.2	35		1.3 J	2.7		0.54 J	0.45 J	0.97	
Butylbenzylphthalate																								
Di-n-butylphthalate			200	1,000	2,500	5,000																		
Di-n-octylphthalate												0.41 J			0.58 J	1.7 J								
Dibenzofuran								0.16 J													0.43 J		0.054 J	
Nitrosodiphenylamine (N-)	20												0.97 J		0.95 J									
Pentachlorophenol	6	400	3	3.3	3.3	3.3	R																	

TABLE 12B
Summary of Soil Pile Data - Semi-Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg						Concentrations in mg/kg				
	Risk Threshold Screening Levels						Pile 12				Pile 13
	OR 1	OR 2	OR 3	S-1	S-2	S-3	P12-1	P12-2	P12-3	Average	P13-1
PAHs											
Acenaphthene			20	270	270	270					
Acenaphthylene				300	300	300		0.14 J	0.12 J		
Anthracene				1,000	1,700	1,700		0.16 J	0.061 J		
Benzo[a]anthracene				0.7	2	40	0.053 J	1.3	0.34 J		0.046 J
Benzo[a]pyrene				0.7	0.7	4	0.055 J	0.46	0.21 J		0.049 J
Benzo[b]fluoranthene				7	20	400	0.099 J	1.4 J	0.38 J		0.068 J
Benzo[g,h,i]perylene ‡				480	2,400	5,000		0.096 J			
Benzo[k]fluoranthene				7	20	400	0.061 J	1.2	0.30 J		0.057 J
Chrysene				70	200	4,000	0.073 J	2.3	0.35 J		0.066 J
Dibenzo(a,h)anthracene				0.7	0.7	4					
Fluoranthene				810	2,500	5,000	0.090 J	2.0	0.60		0.085 J
Fluorene	30			510	510	510					
Indeno[1,2,3-cd]pyrene				0.7	2	40		0.12 J	0.055 J		
Methylnaphthalene (1-)							NA	NA	NA		NA
Methylnaphthalene (2-)				150	150	150					
Naphthalene				5	5	5					
Phenanthrene ‡				480	2,400	5,000	0.040 J	0.089 J	0.11 J		
Pyrene ‡				480	2,400	5,000	0.13 J	1.7	0.56		0.10 J
Total PAHs							0.601	10.965	3.086	4.884	0.471
Other SVOCs											
bis(2-Chloroethyl)ether				0.7	0.7	0.7					R
bis(2-Ethylhexyl)phthalate (Di(ethylhexyl)phthalate)				39	110	2,200			0.069 J		
Butylbenzylphthalate											
Di-n-butylphthalate			200	1,000	2,500	5,000					
Di-n-octylphthalate											
Dibenzofuran											
Nitrosodiphenylamine (N-)	20										
Pentachlorophenol	6	400	3	3.3	3.3	3.3					

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) between April 2 and 24, 1998; see Table 1 for specific dates and identity of sample delivery groups (SDGs).

2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, by United States Environmental Protection Agency (USEPA) Method 8270. On many samples selective ion monitoring (SIM) for polynuclear aromatic hydrocarbons (PAHs) was also performed. During validation either the 8270 or SIM value was selected by the validator for use by the end user. Results indicated by "†" are by SIM.

3. All concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed, except sample P9-11 which had all non-PAH compounds (all reported as non detected) rejected during validation.

5. Total PAHs listed are the sum of the detected concentrations of the individual PAHs.

6. Averages for total PAHs are arithmetic averages of sums calculated as indicated in Note 5. The concentrations of a sample and its duplicate were averaged and counted as one sample in the calculation of pile averages

7. A blank indicates the parameter was not detected.

8. "Dup." indicates the sample is a field duplicate.

9. "OR 1" refers to "Table 1. Screening benchmark concentrations for the toxicity of chemicals to earthworms" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.

"OR 2" refers to "Table 2. Screening benchmark concentrations for the toxicity of chemicals to soil microorganisms and microbial processes" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.

"OR 3" refers to "Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.

"S-1" refers to the S-1 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).

"S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).

"S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).

10. "‡" indicates the values for S-1, S-2, and S-3 are a combined total for benzo(g,h,i)perylene, phenanthrene, and pyrene.

11. "J" indicates an estimated value.

"R" indicates data (non-detects) rejected during validation.

"NA" indicates data for 1-methylnaphthalene are not available because 1-methylnaphthalene was only identified in SIM analysis, and SIM analysis was not completed on the sample.

12. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 12C
Summary of Soil Pile Data - Petroleum Hydrocarbons
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg																					
	RTSLs			Pile 1			Pile 2			Pile 3			Pile 4		Pile 4 (cont.)		Pile 5A					
	S-1	S-2	S-3	P1-1	P1-2	Average	P2-1	P2-2	Average	P3-1	P3-2	Average	P4-1	P4-1 Dup.	P4-2	Average	P5A-1	P5A-2	P5A-3	P5A-4	P5A-5	Average
VPH																						
C_5-C_8 Aliphatics *	10,000	10,000	10,000																			
C_9-C_{12} Aliphatics *	10,000	10,000	10,000	27 J	73 J		12 J	12 J		5.7 J			6.5 J		34 J			5.3 J		39 J		
C_9-C_{10} Aromatics *	10,000	10,000	10,000	69 J	40 J										57 J							
Total VPH *	10,000	10,000	10,000	96	113	104.5	12	12	12	5.7		2.85	6.5		91	47.1		5.3		39		8.86
EPH																						
C_9-C_{18} Aliphatics *	10,000	10,000	10,000	1,430 J	1,130 J		50 J	66 J		2,290 J	76		5.8 J	5.3 J	500 J		24 J	150 J	85 J	250	30	
C_{19}-C_{36} Aliphatics *	10,000	10,000	10,000	4,670 J	4,280 J		950 J	1,240 J		950	1,930		340 J	250 J	1,160 J		680 J	1,840 J	500	1,240	350	
C_{10}-C_{22} Aromatics *	10,000	10,000	10,000	630 J	530 J		73 J	200 J			130 J		200 J	160 J	800 J		210 J	400 J	120 J	110 J	26 J	
Total EPH *	10,000	10,000	10,000	6,730	5,940	6,335	1,073	1,506	1,290	3,240	2,136	2,688	545.8	415.3	2,460	1,470	914	2,390	705	1,600	406	1,203

Parameter	Concentrations in mg/kg																					
	RTSLs			Pile 5B			Pile 6			Pile 7			Pile 8									
	S-1	S-2	S-3	P5B-1	P5B-2	Average	P6-1	P6-2	Average	P7-1	P7-2	Average	P8-1	P8-1 Dup.	P8-2	P8-3	P8-4	P8-5	P8-5 Dup.	P8-6	P8-7	P8-8
VPH																						
C_5-C_8 Aliphatics *	10,000	10,000	10,000																			25 J
C_9-C_{12} Aliphatics *	10,000	10,000	10,000				12 J	17 J					19 J		58 J	7.6 J	8.7 J	21 J	16 J	13 J	4.8 J	36 J
C_9-C_{10} Aromatics *	10,000	10,000	10,000												50 J							75 J
Total VPH *	10,000	10,000	10,000				12	17	14.5				19		108	7.6	8.7	21	16	13	4.8	136
EPH																						
C_9-C_{18} Aliphatics *	10,000	10,000	10,000	11 J	15 J		16 J	100 J		64 J	36 J		21	16	830	71	7.9	98 J	63	63	15	460
C_{19}-C_{36} Aliphatics *	10,000	10,000	10,000	1,020 J	750 J		160 J	350 J		840 J	830 J		20	25	240	530	160	540 J	620 J	350 J	180 J	720 J
C_{10}-C_{22} Aromatics *	10,000	10,000	10,000	84 J	60 J		56 J	120 J		60 J	45 J				310 J	45 J	19 J	81 J	53 J	49 J	32 J	740 J
Total EPH *	10,000	10,000	10,000	1,115	825	970	232	570	401	964	911	938	41	41	1,380	646	186.9	719	736	462	227	1,920

Parameter	Concentrations in mg/kg																					
	RTSLs			Pile 8 (cont.)			Pile 9															
	S-1	S-2	S-3	P8-9	P8-10	Average	P9-1	P9-2	P9-3	P9-4	P9-5	P9-6	P9-7	P9-8	P9-9	P9-10	P9-11	P9-12	P9-13	P9-14	P9-15	Average
VPH																						
C_5-C_8 Aliphatics *	10,000	10,000	10,000																			
C_9-C_{12} Aliphatics *	10,000	10,000	10,000	7.4 J	67 J		5.4 J									12 J			6.4 J			
C_9-C_{10} Aromatics *	10,000	10,000	10,000		40 J																	
Total VPH *	10,000	10,000	10,000	7.4	107	42.1	5.4									12			6.4			1.59
EPH																						
C_9-C_{18} Aliphatics *	10,000	10,000	10,000	9.2	570		7.1	10	7.8	4.0	5.8 J	15 J	15 J			47 J	3.4 J		23			
C_{19}-C_{36} Aliphatics *	10,000	10,000	10,000	95 J	620 J		120 J	140 J	120 J	130 J	210 J	1,400 J	250 J	180 J	110 J	180 JEB	46 J	50 J	150 JEB	67 JEB	110 JEB	
C_{10}-C_{22} Aromatics *	10,000	10,000	10,000	38 J	500 J		61 J	95 J	55 J	78 J	99 J	81 J	86 J	19 J	130 J	140 J	40 J	20 J	70	15	34	
Total EPH *	10,000	10,000	10,000	142.2	1,690	742	188.1	245	182.8	212	314.8	1,496	351	199	240	367	89.4	70	243	82	144	295

TABLE 12C
Summary of Soil Pile Data - Petroleum Hydrocarbons
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg																				
	RTSLs			Pile 10						Pile 10A			Pile 11				Pile 12				Pile 13
	S-1	S-2	S-3	P10-1	P10-2	P10-3	P10-4	P10-5	Average	P10A-1	P10A-2	Average	P11-1	P11-1 Dup.	P11-2	Average	P12-1	P12-2	P12-3	Average	P13-1
VPH																					
C_5-C_8 Aliphatics *	10,000	10,000	10,000			32 J								18 J	18 J						
C_9-C_{12} Aliphatics *	10,000	10,000	10,000		57 J		43 J	26 J					69 J	83 J	10 J						
C_9-C_{10} Aromatics *	10,000	10,000	10,000		56 J	220 J		12 J					110 J	160 J	130 J						
Total VPH *	10,000	10,000	10,000		113	252	43	38	89.2				179	261	158	189					
EPH																					
C_9-C_{18} Aliphatics *	10,000	10,000	10,000	16	440	330	290	37		58 J	38 J		1,150	1,320	800			7.2	7.4		
C_{19}-C_{36} Aliphatics *	10,000	10,000	10,000	150	610	780	320	250		630 J	510 J		86 JEB	120 JEB	1,020 JEB		26	120	160		18 JEB
C_{10}-C_{22} Aromatics *	10,000	10,000	10,000	38 J	290 J	220 J	120 J	23 J		68 J	56 J		220	340	510		10 J	28 J	30 J		
Total EPH *	10,000	10,000	10,000	204	1,340	1,330	730	310	783	756	604	680	1,456	1,780	2,330	1,974	36	155.2	197.4	130	18

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) between April 2 and 24, 1998; see Table 1 for specific dates and identity of sample delivery groups (SDGs).

2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, by Massachusetts Department of Environmental Protection (MADEP) volatile petroleum hydrocarbon (VPH) and extractable petroleum hydrocarbon (EPH) Methods (modified).

3. All concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. Total concentrations listed (e.g., Total VPH) are the sum of the detected concentrations of the relevant analytes.

6. Averages for total VPH and total EPH are arithmetic averages of sums calculated as indicated in Note 5. The concentrations of a sample and its duplicate were averaged and counted as one sample in the calculation of pile averages.

7. A blank indicates the parameter was not detected.

8. "Dup." indicates the sample is a field duplicate.

9. "S-1" refers to the S-1 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
"S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
"S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).

10. "*" indicates the values indicated for S-1, S-2, and S-3 are for total petroleum hydrocarbons.

11. "J" indicates an estimated value.
"EB" indicates the parameter was detected in the associated aqueous equipment blank.

12. "RTSLs" indicates Risk Threshold Screening Levels.

13. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 12D
Summary of Soil Pile Data - Pesticides and Screening Level PCBs
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg																									
	RTSLs				Pile 1			Pile 2			Pile 3			Pile 4				Pile 5A						Pile 5B		
	OR 3	S-1	S-2	S-3	P1-1	P1-2	Average	P2-1	P2-2	Average	P3-1	P3-2	Average	P4-1	P4-1 Dup.	P4-2	Average	P5A-1	P5A-2	P5A-3	P5A-4	P5A-5	Average	P5B-1	P5B-2	Average
PCBs																										
Total PCBs *	40	1	1	2	7 J	5 J	6	2 J	2 J	2	2 J	5 J	3.5	0.7 J	0.8 J	0.7 J	0.73	17 J	9 J	7 J	4 J	3 J	8	3 J	1 J	2
Pesticides																										
Aldrin		0.09	0.2	1	R	R		R	R					R	R	R		R	R					R	R	
BHC (alpha-)		0.06	0.06	0.06	R	R		R	R		0.0021 J			R	R	R		R	R					R	R	
BHC (beta-)		0.06	0.06	0.06	R	0.011 J		R	R		0.0056 J	0.0034 J		R	R	R		R	R	0.012 J	0.0036 J			R	0.0019 J	
BHC (delta-)											0.0063 J															
BHC (gamma-) (Lindane)		0.09	0.09	0.09							0.0046 J															
Chlordane (alpha-) †		0.8	2	2							0.010 J					0.0061 J				0.022 J	0.0045 J	0.0029 J		0.0065 J		
Chlordane (gamma-) †		0.8	2	2																						
DDD (4,4'-)		0.7	2	64															0.027 J	0.037 J	0.029 J			0.0051 J		
DDE (4,4'-)		0.7	2	56							0.062 J															
DDT (4,4'-)		0.9	3	11												0.0070 J										
Dieldrin		0.06	0.2	3							0.016 J															
Endosulfan I **		45	45	45							0.055 J	R								R	R	R				
Endosulfan II **		45	45	45							0.015 J									0.0054 J						
Endosulfan Sulfate									0.017 J		0.024 J							0.010 J	0.013 J					0.0047 J		
Endrin		8	54	54														0.012 J						0.013 J		
Endrin Aldehyde											0.056 J															
Endrin Ketone					R	R		R	R			0.0097 J		R	R	R		R	0.013 J	0.0045 J	0.0075 J			R	R	
Heptachlor		0.2	0.7	9							0.0026 J															
Heptachlor Epoxide		0.1	0.3	0.5							0.0035 J															
Methoxychlor		38	170	170				0.023 J			0.14 J									0.034 J						
Total Pesticides						0.011	0.0055	0.023	0.017	0.020	0.4027	0.0131	0.208			0.0131	0.00655	0.022	0.053	0.1149	0.0446	0.0029	0.0475	0.0293	0.0019	0.0156

Parameter	Concentrations in mg/kg																									
	RTSLs				Pile 6			Pile 7			Pile 8													Pile 9		
	OR 3	S-1	S-2	S-3	P6-1	P6-2	Average	P7-1	P7-2	Average	P8-1	P8-1 Dup.	P8-2	P8-3	P8-4	P8-5	P8-5 Dup.	P8-6	P8-7	P8-8	P8-9	P8-10	Average	P9-1	P9-2	P9-3
PCBs																										
Total PCBs *	40	1	1	2	7 J	2 J	4.5	20 J	3 J	11.5		6 J		5 J		3 J	3 J	3 J				2 J	1.7			1 J
Pesticides																										
Aldrin		0.09	0.2	1	R	R		R	R																	
BHC (alpha-)		0.06	0.06	0.06	R	R		R	R													0.021 J				
BHC (beta-)		0.06	0.06	0.06	0.015 J	0.0054 J		R	R							0.0044 J	0.0049 J					0.0046 J				
BHC (delta-)																										
BHC (gamma-) (Lindane)		0.09	0.09	0.09																						
Chlordane (alpha-) †		0.8	2	2		0.0041 J										0.013 J			0.0039 J			0.0030 J		0.0035 J		0.0040 J
Chlordane (gamma-) †		0.8	2	2		0.0042 J													0.0042 J							0.0047 J
DDD (4,4'-)		0.7	2	64	0.0066 J	0.014 J																				
DDE (4,4'-)		0.7	2	56																						
DDT (4,4'-)		0.9	3	11																						
Dieldrin		0.06	0.2	3																						
Endosulfan I **		45	45	45							R	R	R	R	R											
Endosulfan II **		45	45	45																						
Endosulfan Sulfate																										
Endrin		8	54	54																						
Endrin Aldehyde																										
Endrin Ketone					R	0.0053 J		R	R							0.0041 J				0.0045 J		0.018 J				
Heptachlor		0.2	0.7	9																						
Heptachlor Epoxide		0.1	0.3	0.5																		0.0070 J				
Methoxychlor		38	170	170													0.050 J					0.029 J				
Total Pesticides					0.0216	0.033	0.0273									0.0215	0.0549		0.0081	0.0045		0.0826	0.0133	0.0035		0.0087

TABLE 12D
Summary of Soil Pile Data - Pesticides and Screening Level PCBs
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg																									
	RTSLs				Pile 9 (cont.)													Pile 10						Pile 10A		
	OR 3	S-1	S-2	S-3	P9-4	P9-5	P9-6	P9-7	P9-8	P9-9	P9-10	P9-11	P9-12	P9-13	P9-14	P9-15	Average	P10-1	P10-2	P10-3	P10-4	P10-5	Average	P10A-1	P10A-2	Average
PCBs																										
Total PCBs *	40	1	1	2	3 J	2 J	3 J	2 J	0.9 J								0.94			1 J	1 J	34 J	7.3	4 J	5 J	4.5
Pesticides																										
Aldrin		0.09	0.2	1																				R	R	
BHC (alpha-)		0.06	0.06	0.06				0.0022 J		0.010 J	R			R	R	R								R	R	
BHC (beta-)		0.06	0.06	0.06	0.0023 J			0.0071 J	0.0071 J	0.011 J					0.0034 J					0.0031 J	0.0023 J			R	R	
BHC (delta-)										0.0038 J																
BHC (gamma-) (Lindane)		0.09	0.09	0.09					0.0061 J		R			R	R	R					0.0020 J					
Chlordane (alpha-) †		0.8	2	2							0.0040 J	0.012 J		0.0073 J	0.037 J			0.0026 J							0.0035 J	
Chlordane (gamma-) †		0.8	2	2			0.0027 J					0.0091 J		0.0068 J	0.018 J											
DDD (4,4'-)		0.7	2	64	0.0054 J			0.0076 J			0.0057 J				0.0051 J											
DDE (4,4'-)		0.7	2	56		0.0064 J	0.0086 J											0.0045 J	0.0037 J							
DDT (4,4'-)		0.9	3	11		0.023 J					0.0051 J															
Dieldrin		0.06	0.2	3																						
Endosulfan I **		45	45	45							R			R	R	R		R	R	R	R	R				
Endosulfan II **		45	45	45																						
Endosulfan Sulfate																										
Endrin		8	54	54																						
Endrin Aldehyde														0.0082 J												
Endrin Ketone								0.0080 J	0.021 J	0.011 J	0.011 J	0.010 J		0.0087 J							0.0050 J			R	R	
Heptachlor		0.2	0.7	9																						
Heptachlor Epoxide		0.1	0.3	0.5			0.0028 J																			
Methoxychlor		38	170	170								0.030 J		0.019 J												
Total Pesticides					0.0077	0.0294	0.0141	0.0249	0.0342	0.0358	0.0258	0.0611		0.050	0.0635		0.0239	0.0071	0.0037	0.0031	0.0093		0.00464		0.0035	0.00175

Parameter	Concentrations in mg/kg												
	RTSLs				Pile 11				Pile 12				Pile 13
	OR 3	S-1	S-2	S-3	P11-1	P11-1 Dup.	P11-2	Average	P12-1	P12-2	P12-3	Average	P13-1
PCBs													
Total PCBs *	40	1	1	2						0.7 J	0.7 J	0.55	
Pesticides													
Aldrin		0.09	0.2	1									R
BHC (alpha-)		0.06	0.06	0.06	R	R	R						R
BHC (beta-)		0.06	0.06	0.06									R
BHC (delta-)													
BHC (gamma-) (Lindane)		0.09	0.09	0.09	R	R	R						
Chlordane (alpha-) †		0.8	2	2									
Chlordane (gamma-) †		0.8	2	2									
DDD (4,4'-)		0.7	2	64									
DDE (4,4'-)		0.7	2	56									
DDT (4,4'-)		0.9	3	11									
Dieldrin		0.06	0.2	3									
Endosulfan I **		45	45	45	R	R	R		R	R	R		
Endosulfan II **		45	45	45							0.0078 J		
Endosulfan Sulfate													
Endrin		8	54	54									
Endrin Aldehyde													
Endrin Ketone													R
Heptachlor		0.2	0.7	9									
Heptachlor Epoxide		0.1	0.3	0.5									
Methoxychlor		38	170	170									
Total Pesticides											0.0078	0.0026	

Notes:
1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) between April 2 and 24, 1998; see Table 1 for specific dates and identity of sample delivery groups (SDGs).
2. Pesticide analyses are full level analyses and were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, by United States Environmental Protection Agency (USEPA) Method 8080A. Total PCBs analyses were screening level analyses and were performed by Eastern Analytical, Inc. of Concord, New Hampshire, by USEPA Method 8080 (modified).
3. All concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).
4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.
5. Total pesticide concentrations listed are the sum of the detected concentrations of the individual pesticides.
6. Averages for total PCBs are arithmetic averages of detected concentrations and one-half the detection limit (detection limit = 0.5 mg/kg) for non-detects. Averages for total pesticides are arithmetic averages of sums calculated as indicated in Note 5. The concentrations of a sample and its duplicate were averaged and counted as one sample in the calculation of pile averages
7. A blank indicates the parameter was not detected.
8. "Dup." indicates the sample is a field duplicate.
9. "OR 3" refers to "Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates. No references were available from "Table 1. Screening benchmark concentrations for the toxicity of chemicals to earthworms" or "Table 2. Screening benchmark concentrations for the toxicity of chemicals to soil microorganisms and microbial processes" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
   "S-1" refers to the S-1 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
   "S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
   "S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
10. "*" indicates S-1 and S-2 values for total PCBs are based on USEPA's August 1990 "Guidance on Remedial Actions for Superfund Sites with PCB Contamination" for residential areas.
   "**" indicates S-1, S-2, and S-3 values are for Endosulfan (unspecified).
   "†" indicates S-1, S-2, and S-3 values are for total chlordane, including alpha-chlordane and gamma-chlordane.
11. "J" indicates an estimated value.
   "R" indicates the data (non-detects) was rejected during validation.
12. "PCBs" indicates polychlorinated biphenyls
   "RTSLs" indicates Risk Threshold Screening Levels.
13. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 12E
Summary of Soil Pile Data - PCBs (Congeners/Homologs)
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg													
	Pile 1	Pile 2	Pile 3	Pile 4	Pile 5A	Pile 5B	Pile 5B	Pile 6	Pile 7	Pile 8	Pile 9	Pile 10	Pile 10A	Pile 12
	P1-1	P2-1	P3-2	P4-1	P5A-1	P5B-1	P5B-1 Dup.	P6-1	P7-1	P8-3	P9-6	P10-5	P10A-2	P12-2
Congeners														
PCB-1	0.0037 J				6.2E-04 J					3.3E-04 J		0.015 J		
PCB-3	9.2E-04 J				4.7E-04 J							0.0013 J		
PCB-8	0.12 J	9.9E-04 J	0.0031 J	0.0020 J	0.015 J	4.2E-04 J	3.5E-04 J	0.0024 J	0.069 J	0.0090 J	0.011 J	0.87 J	0.0014 J	
PCB-15	0.10 J	0.0031 J	0.058 J	0.0089 J	0.26 J	0.0063 J	0.0012 J	0.19 J	0.59 J	0.055 J	0.060 J	1.2 J	0.0066 J	3.8E-04 J
PCB-18	0.74 J	0.0060 J	0.16 J	0.018 J	0.45 J	0.014 J		0.48 J	2.3 J	0.12 J	0.084 J	5.3 J	0.020 J	
PCB-28	0.74 J	0.011 J	0.20 J	0.034 J	2.0 J	0.081 J	0.0034 J	0.64 J	3.2 J	0.30 J	0.30 J	8.0 J	0.033 J	
PCB-37	0.15 J	0.0040 J	0.13 J	0.012 J	0.36 J	0.018 J	0.0013 J	0.16 J	0.72 J	0.049 J	0.080 J	1.5 J	0.0073 J	4.4E-04 J
PCB-44	0.40 J	0.050 J	0.58 J	0.085 J	1.0 J	0.044 J	0.0043 J	0.43 J	1.5 J	0.62 J	0.21 J	1.9 J	0.34 J	8.6E-04 J
PCB-49	0.26 J	0.020 J	0.34 J	0.040 J	0.75 J	0.029 J	0.0025 J	0.32 J	1.1 J	0.44 J	0.12 J	1.4 J	0.15 J	6.1E-04 J
PCB-52	0.40 J	0.045 J	0.54 J	0.098 J	1.2 J	0.047 J	0.0053 J	0.51 J	1.6	0.67 J	0.22 J	2.2 J	0.31 J	0.0015 J
PCB-66	0.33 J	0.013 J	0.56 J	0.039 J	0.96 J	0.037 J	0.0039 J	0.40 J	1.6 J	0.59 J	0.12 J	2.1 J	0.28 J	0.0013 J
PCB-70	0.34 J	0.0084 J	0.51 J	0.037 J	1.2 J	0.038 J	0.0032 J	0.44 J	1.6 J	0.64 J	0.13 J	2.3 J	0.24 J	0.0010 J
PCB-74	0.17 J	0.0037 J	0.15 J	0.013 J	0.36 J	0.021 J	0.0012 J	0.11 J	0.83 J	0.059 J	0.063 J	1.2 J	0.014 J	3.5E-04 J
PCB-77	0.036 J	0.0046 J	0.095 J	0.0082 J	0.099 J	0.0034 J	8.3E-04 J	0.050 J	0.15 J	0.062 J	0.030 J	0.23 J	0.030 J	2.8E-04 J
PCB-81	0.0019 J	7.1E-04 J	0.0044 J	5.4E-04 J	0.0047 J	2.8E-04 J		0.0026 J	0.010 J	0.0035 J	0.0017 J	0.015 J	0.0023 J	
PCB-87/115	0.075 J	0.044 J	0.18 J	0.024 J	0.18 J	0.0090 J	0.0039 J	0.10 J	0.38 J	0.10 J	0.081 J	0.46 J	0.091 J	0.0019 J
PCB-90/101	0.14 J	0.087 J	0.33 J	0.051 J	0.50 J	0.022 J	0.013 J	0.20 J	0.67 J	0.20 J	0.14 J	0.75 J	0.19 J	0.013 J
PCB-99	0.071 J	0.045 J	0.17 J	0.025 J	0.25 J	0.010 J	0.0056 J	0.10 J	0.36 J	0.10 J	0.079 J	0.41 J	0.087 J	0.0022 J
PCB-105	0.061 J	0.0082 J	0.15 J	0.013 J	0.13 J	0.0068 J	0.0022 J	0.072 J	0.28 J	0.072 J	0.045 J	0.37 J	0.042 J	0.0012 J
PCB-110	0.14 J	0.12 J	0.38 J	0.076 J	0.49 J	0.040 J	0.031 J	0.22 J	0.72 J	0.21 J	0.18 J	0.90 J	0.22 J	0.0099 J
PCB-114	0.0064 J	0.0016 J	0.012 J	0.0015 J	0.012 J	6.8E-04 J		0.0057 J	0.030 J	0.0048 J	0.0047 J	0.039 J	0.0035 J	3.6E-04 J
PCB-118	0.11 J	0.021 J	0.27 J	0.026 J	0.33 J	0.011 J	0.0047 J	0.14 J	0.48 J	0.16 J	0.089 J	0.62 J	0.12 J	0.0034 J
PCB-119	0.0038 J	0.0020 J	0.0084 J	0.0016 J	0.014 J	6.6E-04 J	4.0E-04 J	0.0050 J	0.020 J	0.0064 J	0.0024 J	0.023 J	0.0047 J	
PCB-123	0.016 J	0.0063 J	0.032 J	0.0046 J	0.046 J	0.0044 J	0.0033 J	0.021 J	0.068 J	0.022 J	0.012 J	0.082 J	0.017 J	0.0024 J
PCB-126	7.7E-04 J	2.9E-04 J	0.0022 J	2.7E-04 J	0.0012 J			7.7E-04 J	0.0026 J	7.6E-04 J	6.0E-04 J	0.0032 J	8.3E-04 J	
PCB-128/167	0.010	0.010	0.025	0.0051	0.030	0.0070	0.0067	0.017	0.041	0.011	0.017 J	0.040	0.013	0.0047
PCB-138/158	0.077	0.088	0.14	0.029	0.22	0.078	0.075	0.098	0.21	0.066	0.080 J	0.18	0.078	0.050
PCB-149	0.065	0.078	0.098	0.020	0.18	0.096	0.091	0.072	0.13	0.042	0.052 J	0.10	0.055	0.052
PCB-151	0.021 J	0.039 J	0.037 J	0.0075 J	0.081 J	0.054 J	0.051 J	0.028 J	0.044 J	0.013 J	0.011 J	0.031 J	0.021 J	0.025 J
PCB-153/168	0.062	0.074	0.094	0.019	0.17	0.070	0.066	0.068	0.12	0.040	0.049 J	0.099	0.053	0.049
PCB-156	0.0053	0.0022	0.012	0.0018	0.014	0.0015	0.0013	0.0062	0.017	0.0042	0.0054 J	0.020	0.0050	0.0013
PCB-157	0.0010	9.3E-04	0.0028	5.6E-04	0.0030	5.5E-04	5.2E-04	0.0018	0.0049	0.0012	0.0016 J	0.0047	0.0013	3.8E-04
PCB-170	0.034	0.046	0.037	0.0078	0.093	0.060	0.058	0.030	0.038	0.014	0.016 J	0.023	0.022	0.033
PCB-177	0.015	0.021	0.015	0.0032	0.040	0.030	0.028	0.013	0.014	0.0052	0.0071 J	0.0080	0.0086	0.016
PCB-180	0.068	0.098	0.073	0.016	0.19	0.15	0.14	0.056	0.063	0.024	0.034 J	0.033	0.039	0.068
PCB-183	0.015	0.020	0.015	0.0034	0.037	0.032	0.031	0.011	0.013	0.0048	0.0075 J	0.0071	0.0082	0.014
PCB-187	0.031	0.044	0.032	0.0076	0.079	0.071	0.068	0.026	0.027	0.011	0.017 J	0.014	0.016	0.033
PCB-189	8.6E-04	0.0011	0.0010		0.0023	0.0012	0.0012	8.9E-04	0.0012	4.0E-04	4.7E-04 J	7.6E-04	6.6E-04	9.4E-04
PCB-194	0.013	0.019	0.013	0.0036	0.033	0.032	0.032	0.0093	0.0097	0.0033	0.0078 J	0.0038	0.0058	0.013

TABLE 12E
Summary of Soil Pile Data - PCBs (Congeners/Homologs)
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg													
	Pile 1	Pile 2	Pile 3	Pile 4	Pile 5A	Pile 5B	Pile 5B	Pile 6	Pile 7	Pile 8	Pile 9	Pile 10	Pile 10A	Pile 12
	P1-1	P2-1	P3-2	P4-1	P5A-1	P5B-1	P5B-1 Dup.	P6-1	P7-1	P8-3	P9-6	P10-5	P10A-2	P12-2
PCB-195	0.0070	0.011	0.0068	0.0016	0.019	0.018	0.018	0.0052	0.0051	0.0019	0.0033 J	0.0020	0.0032	0.0071
PCB-201	0.019 J	0.024	0.018	0.0055	0.046	0.045	0.044	0.015	0.014	0.0053	0.013 J	0.0074	0.0073	0.016
PCB-202	0.0023	0.0034	0.0027	9.7E-04	0.0066	0.0064	0.0065	0.0021	0.0023	7.5E-04	0.0025 J	0.0013	0.0010	0.0024
PCB-206	0.0037	0.0049	0.0042	0.0022	0.010	0.0098	0.0099	0.0033	0.0046	0.0011	0.0070 J	0.0030	0.0016	0.0030
PCB-207	4.2E-04	5.8E-04	5.0E-04		0.0012	0.0012	0.0012	3.6E-04	4.9E-04		6.1E-04 J	2.6E-04		3.2E-04
PCB-209	2.9E-04	3.4E-04	5.7E-04	6.9E-04	0.0025	0.0018	0.0013	0.0022	0.0011		0.0012 J	7.3E-04	2.6E-04	2.7E-04
Homologs														
Total monoCB	0.0047 J				0.0011 J					3.3E-04 J		0.017 J		
Total diCB	0.39 J	0.0045 J	0.069 J	0.014 J	0.32 J	0.0085 J	0.0021 J	0.22 J	0.92 J	0.074 J	0.087 J	4.0 J	0.012 J	3.8E-04 J
Total triCB	3.0 J	0.055 J	0.86 J	0.15 J	5.6 J	0.18 J	0.011 J	2.4 J	12 J	1.4 J	0.75 J	28 J	0.34 J	
Total tetraCB	3.4 J	0.41 J	4.8 J	0.58 J	8.5 J	0.37 J	0.039 J	4.1 J	15 J	4.5 J	1.7 J	18 J	2.4 J	0.0080 J
Total pentaCB	0.97 J	0.61 J	2.3 J	0.39 J	3.0 J	0.19 J	0.13 J	1.4 J	4.7 J	1.4 J	1.0 J	5.6 J	1.2 J	0.056 J
Total hexaCB	0.30	0.38	0.53	0.11	0.92	0.40	0.38	0.38	0.76	0.23	0.30 J	0.63	0.29	0.23
Total heptaCB	0.22	0.31	0.24	0.051	0.60	0.47	0.45	0.19	0.21	0.079	0.11 J	0.12	0.13	0.23
Total octaCB	0.058	0.082	0.058	0.017	0.15	0.15	0.15	0.044	0.046	0.016	0.040 J	0.021	0.025	0.055
Total nonaCB	0.0048	0.0065	0.0058	0.0029	0.014	0.013	0.013	0.0047	0.0065	0.0014	0.0093 J	0.0042	0.0020	0.0039
Total PCBs	8.34779	1.85834	8.86337	1.31559	19.1076	1.7833	1.1764	8.7409	33.6436	7.70073	3.9975	56.39293	4.39926	0.58355

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. personnel between April 2 and 24, 1998; see Table 1 for specific dates and identity of sample delivery groups (SDGs).

2. Analyses were performed by Alta Analytical Laboratory Inc. of El Dorado Hills, California, by USEPA Method 1668 (Modified).

3. All concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

4. Only those parameters detected in the sample presented herein are listed.

5. Total PCBs were calculated by summing the detected concentrations of homologs and congener 209.

6. A blank indicates the parameter was not detected.

7. "Dup." indicates the sample is a field duplicate.

8. Soil Risk Threshold Screening Levels for total PCBs include New Hampshire Department of Environmental Services (NHDES) S-1/S-2/S-3 standards of 1/1/2 mg/kg (NHDES Contaminated Sites Risk Characterization and Management Policy, January, 1998), and Oak Ridge value of 40 mg/kg ("Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy, November, 1997).

9. "J" indicates an estimated value.

10. Some congeners were detected in the equipment blank at concentrations of at least a factor of 1,000 below those concentrations detected in the soil samples. See validated analytical data reports for more information.

11. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 12F
Summary of Soil Pile Data - Metals
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg																											
	Risk Threshold Screening Levels						Background			Pile 1			Pile 2			Pile 3			Pile 4				Pile 5A					
	OR 1	OR 2	OR 3	S-1	S-2	S-3	Site	NHDES	MADEP	P1-1	P1-2	Average	P2-1	P2-2	Average	P3-1	P3-2	Average	P4-1	P4-1 Dup.	P4-2	Average	P5A-1	P5A-2	P5A-3	P5A-4	P5A-5	Average
Antimony ¶			5	8	26	26	0.31		1.4	0.35 J	0.36 J	0.355	0.35 J		0.283	1.1 J	2.3 J	1.70	0.75 J		1.2 J	0.844	0.68 J	1.2 J	0.38 J	0.26 J	0.22 J	0.548
Arsenic ¶	60	100	10	12	12	12	9.0	12	17	6.4 J	6.3 J	6.35	7.1 J	7.2 J	7.15	6.4 J	4.8 J	5.60	6.6 J	6.0 J	8.2 J	7.25	6.4 J	6.2 J	6.2 J	6.3 J	5.3 J	6.08
Barium		3,000	500	750	2,500	3,400	22.0		45	80.5	105	92.8	132	130	131	59.8	75.9	67.9	66.7	60.1	82.2	72.8	70.8	101	87.7	68.0	75.7	80.6
Beryllium ¶ *			10	0.1	0.1	1	0.42	1.0	0.4	0.37	0.47	0.42	0.53	0.55	0.540	0.34	0.42	0.380	1.1	1.1	1.8	1.45	0.38	0.49	0.33	0.32	0.34	0.372
Cadmium ¶	20	20	4	32	230	230	0.14	1.9	2	0.45	0.85	0.65	0.84	0.90	0.870	1.9	0.80	1.35	0.70	0.67	0.56	0.623	0.78	0.57	1.2	0.72	0.75	0.804
Calcium							248			1,620 J	1,270 J	1,445	4,390 J	7,560 J	5,975	1,460	10,300	5,880	2,230 J	2,050 J	2,880 J	2,510	1,090 J	1,320 J	1,840	3,980	1,540	1,954
Chromium (Total) † ¶	0.4	10	1	130	460	540	12.8	33	29	14.1	17.6	15.9	25.5	19.7	22.6	20.6	14.3	17.5	31.4	28.4	41.0	35.5	16.2	18.8	18.4	19.4	19.7	18.5
Copper ¶	50	100	100				4.0		38	9.2	11.5	10.4	13.3	13.1	13.2	53.3	12.6	33.0	89.8	83.6	220	153	17.3	18.4	21.2	15.7	17.6	18.0
Iron		200					9,100		17,000	7,260	10,100	8,680	11,000	11,100	11,050	33,200	10,700	21,950	14,200	17,300	17,500	16,625	8,590	8,420	11,000	8,670	8,630	9,062
Lead ‡ ¶	500	900	50	400	400	400	16.6	54	99	424	539	482	676	702	689	306 J	377 J	342	209	213	315	263	400	645	517 J	492 J	411 J	493
Magnesium							951		4,900	1,750 J	2,350 J	2,050	2,680 J	2,560 J	2,620	1,430	1,890	1,660	2,600 J	2,720 J	3,130 J	2,895	1,480 J	1,510 J	1,250	1,340	1,420	1,400
Manganese		100	500				182		300	98	173	136	181	267	224	154	115	135	195	214	213	209	121	121	108	121	96	113
Mercury ¶	0.1	30	0.3	1	7	7	0.056	0.33	0.3	0.066 J	0.31 J	0.188	0.23 J	0.32 J	0.275	0.25 J	0.13 J	0.190	0.33 J	0.16 J	0.084 J	0.165	4.3 J	1.7 J	2.3 J	4.3 J	0.97 J	2.71
Molybdenum *		200	2					3.5			1.1	0.725	1.1	1.0	1.05	1.5 J	1.4 J	1.45	1.9	1.5	3.5	2.60	1.7	1.1		2.2 J		1.16
Nickel ¶	200	90	30	580	2,500	3,900	6.8	24	17	9.6	11.1	10.4	13.6	11.3	12.5	18.2	10.0	14.1	36.4	33.8	98.9	67.0	11.3	12.2	10.0	10.0	9.5	10.6
Potassium							221			917	1,400	1,159	1,600	1,500	1,550	588	1,010	799	1,030	968	1250	1,125	538	419	473	535	548	503
Selenium ¶	70	100	1	260	2,500	4,200	0.81	2.2	0.5	0.36 J	0.19 J	0.275	0.25 J	0.32 J	0.285	0.88 J	0.18 J	0.530	0.29 J	0.16 J	0.29 J	0.258	0.28 J	0.35 J	0.47 J	0.28 J	0.19 J	0.314
Sodium							34.3			20.6 J	43.0	31.8	121	69.5	95.3	146	118	132	137	92.9	204	159	26.6 J	41.5	41.6	40.7	38.5	37.8
Thallium (thallium chloride) ¶			1	10	21	32			0.6	0.076 J	0.092 J	0.0840	0.15 J	0.098 J	0.124			ND	0.055 J	0.031 J	0.045 J	0.0440		0.062 J	0.028 J		0.035 J	0.0299
Tin		2,000	50							0.98 J	1.2 J	1.09	1.0 J	1.2 J	1.10	2.3 J		1.35	2.8 J	2.3 J	5.2 J	3.88				2.6 J		0.862
Vanadium		20	2				15.2		29	12.7	18.5	15.6	18.9	18.3	18.6	13.9	12.8	13.4	37.8	39.4	36.3	37.5	13.1	13.3	12.5	11.1	11.8	12.4
Zinc ¶	200	100	50	1,000	2,500	5,000	22.4	98	116	69.7	82.8	76.3	107	110	109	227	96.2	162	241	224	474	353	103	164	178	121	141	141

Parameter	Concentrations in mg/kg																											
	Risk Threshold Screening Levels						Background			Pile 5B			Pile 6			Pile 7			Pile 8									
	OR 1	OR 2	OR 3	S-1	S-2	S-3	Site	NHDES	MADEP	P5B-1	P5B-2	Average	P6-1	P6-2	Average	P7-1	P7-2	Average	P8-1	P8-1 Dup.	P8-2	P8-3	P8-4	P8-5	P8-5 Dup.	P8-6	P8-7	P8-8
Antimony ¶			5	8	26	26	0.31		1.4	1.4 J	0.61 J	1.01	0.58 J		0.393	0.64 J	0.43 J	0.535	0.25 J	0.3 J	0.62 J	0.52 J	0.49 J	0.75 J	0.80 J	0.40 J	0.17 J	0.32 J
Arsenic ¶	60	100	10	12	12	12	9.0	12	17	5.4 J	5.2 J	5.30	8.0 J	5.5 J	6.75	6.4 J	6.4 J	6.40	1.6 J	1.7 J	6.9 J	4.0 J	10 J	4.9	5.3	5.8	9.7	8.7
Barium		3,000	500	750	2,500	3,400	22.0		45	98.4	76.9	87.7	92.8	69.1	81.0	45.3	227	136	47.8	48.8	39.3	36.1	48.1	32.5 J	32.4 J	45.9 J	41.4 J	147 J
Beryllium ¶ *			10	0.1	0.1	1	0.42	1.0	0.4	0.44	0.33	0.385	0.42	0.74	0.580	0.31	0.36	0.335	0.46	0.45	0.33	0.31	0.61	0.28	0.29	0.28	0.34	0.49
Cadmium ¶	20	20	4	32	230	230	0.14	1.9	2	1.4	1.1	1.25	1.1	2.0	1.55	0.89	1.0	0.945	0.40	0.28 J	0.66	0.92	0.46	0.37 J	0.49 J	0.47 J	0.61 J	0.65 J
Calcium							248			2,700 J	2,490 J	2,595	3,690 J	2,840 J	3,265	846 J	1,500 J	1,173	1,390	1,330	872	426	2,510	536 J	483 J	648 J	1,380 J	1,790 J
Chromium (Total) † ¶	0.4	10	1	130	460	540	12.8	33	29	23.3	17.5	20.4	22.3	28.3	25.3	18.5	16.2	17.4	10.7	10.0	16.9	16.4	20.4	12.5 J	13.5 J	15.0 J	15.0 J	26.3 J
Copper ¶	50	100	100				4.0		38	30.4	24.7	27.6	33.3	44.9	39.1	16.7	21.9	19.3	15.8	17.1	25.0	27.7	32.5	17.0 J	17.6 J	17.4 J	14.8 J	20.8 J
Iron		200					9,100		17,000	15,200	13,600	14,400	14,800	20,000	17,400	9,430	10,100	9,765	10,900	10,700	14,000	14,100	11,900	9,480	10,500	9,250	9,560	14,200
Lead ‡ ¶	500	900	50	400	400	400	16.6	54	99	406	532	469	179	104	142	217	765	491	19.7 J	25.3 J	327 J	445 J	97.3 J	220	217	264	74.7	86.9
Magnesium							951		4,900	3,090 J	1,290 J	2,190	3,860 J	4,030 J	3,945	1,630 J	1,380 J	1,505	1,380	1,360	1,760	1,660	2,870	1,590	1,560	1,650	2,540	3,960
Manganese		100	500				182		300	196	107	152	280	338	309	97.1	109	103	202	229	114	95.9	187	83 J	92.3 J	85.8 J	150 J	300 J
Mercury ¶	0.1	30	0.3	1	7	7	0.056	0.33	0.3	24.2 J	5.0 J	14.6	0.58 J	0.062 J	0.321	0.37 J	0.65 J	0.510	0.065 J	0.066 J	0.054 J	0.35 J	0.11 J	0.15	0.18	0.18	0.094	0.079
Molybdenum *		200	2					3.5		1.1	0.57 J	0.835	1.2 J		0.728	1.3	1.2	1.25			11.5 J	2.1 J	0.63 J	2.9 J	2.4 J	2.8 J	0.49 J	1.0 J
Nickel ¶	200	90	30	580	2,500	3,900	6.8	24	17	19.6	12.1	15.9	19.2	26.2	22.7	10.0	13.8	11.9	7.8	8.2	11.1	12.0	19.7	9.2	9.2	8.8	13.0	25.4
Potassium							221			1,240	440	840	1,210	1,710	1,460	648	508	578	574	472	758	583	1,320	811 J	666 J	804 J	933 J	1,560 J
Selenium ¶	70	100	1	260	2,500	4,200	0.81	2.2	0.5	0.32 J	0.23 J	0.275	0.30 J	0.13 J	0.215	0.20 J	0.32 J	0.260	0.16 J	0.10 J	0.094 J	0.080 J	0.21 J					
Sodium							34.3			45.6	32.2	38.9	121	104	113	36.5	60.0	48.3	55.5	48.8	65.5	24.9 J	215	28.7 J	30.1	36.5	57.2	129
Thallium (thallium chloride) ¶			1	10	21	32			0.6	0.12 J	0.049 J	0.0845	0.14 J	0.17 J	0.155	0.031 J	0.032 J	0.0315		0.027 J	0.099 J	0.078 J	0.064 J					
Tin		2,000	50							0.63 J	0.55 J	0.590	36.8 J		18.8	1.2 J	0.85 J	1.03					2.3 J					
Vanadium		20	2				15.2		29	20.0	13.3	16.7	20.4	30.2	25.3	12.8	12.4	12.6	20.0	18.7	15.4	15.4	21.5	12.3 J	12.3 J	13.0 J	17.1 J	31.1 J
Zinc ¶	200	100	50	1,000	2,500	5,000	22.4	98	116	196	153	175	122	284	203	77.3	139	108	32.3	32.4	83.5	82.8	116	64.4 J	67.3 J	66.8 J	58.6 J	65.3 J

TABLE 12F
Summary of Soil Pile Data - Metals
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg																											
	Risk Threshold Screening Levels						Background			Pile 8 (cont.)			Pile 9															
	OR 1	OR 2	OR 3	S-1	S-2	S-3	Site	NHDES	MADEP	P8-9	P8-10	Average	P9-1	P9-2	P9-3	P9-4	P9-5	P9-6	P9-7	P9-8	P9-9	P9-10	P9-11	P9-12	P9-13	P9-14	P9-15	Average
Antimony ¶			5	8	26	26	0.31		1.4	0.28 J	0.19 J	0.404	0.55 J	0.55 J	0.73 J	0.77 J	0.45 J	0.66 J	2.0 J	0.26 J	0.15 J		0.13 J	0.072 J				0.440
Arsenic ¶	60	100	10	12	12	12	9.0	12	17	11.2	7.1	7.02	8.1	8.6	5.3	8.9	7.5	8.2	8.4	4.5	4.6	3.9 J	5.1	3.5	4.4 J	4.7 J	5.1 J	6.05
Barium		3,000	500	750	2,500	3,400	22.0		45	71.2 J	55.4 J	56.5	97.6 J	69.6 J	50.9 J	67.7 J	31.9 J	67.1 J	98.1 J	47.7 J	27.8 J	33.0 J	42.2 J	16.9 J	35.6 J	45.4 J	43.4 J	51.7
Beryllium ¶ *			10	0.1	0.1	1	0.42	1.0	0.4	0.51	0.36	0.397	0.89	0.78	0.35	0.41	0.28	0.32	0.43	0.41	0.31	0.35	0.37	0.20 J	0.35 J	0.35	0.36	0.411
Cadmium ¶	20	20	4	32	230	230	0.14	1.9	2	0.85 J	0.81 J	0.620	0.75 J	0.73 J	0.60 J	0.78 J	0.76 J	0.92 J	0.99	0.62 J	0.32 J	0.29 J	0.22 J	0.33 J	0.29	0.41	1.7	0.647
Calcium							248			1,910 J	1,990 J	1,340	9,250 J	2,080 J	3,480 J	4,250 J	3,310 J	1,680 J	2,240 J	2,790 J	1,460 J	1,820 J	1,840 J	1,170 J	1,570 J	1,970 J	4,310 J	2,881
Chromium (Total) † ¶	0.4	10	1	130	460	540	12.8	33	29	36.7 J	28.9 J	19.9	42.9 J	24.3 J	19.9 J	26.8 J	12.2 J	13.3 J	17.4 J	18.1 J	14.6 J	19.2	19.4 J	7.8 J	18.4	18.0	16.1	19.2
Copper ¶	50	100	100				4.0		38	20.3 J	17.5 J	21.0	36.9 J	45.5 J	32.8 J	54.6 J	30.9 J	71.7 J	120 J	21.7 J	10.0 J	6.9 J	7.4 J	7.6 J	10.5 J	7.8 J	29.8 J	32.9
Iron		200					9,100		17,000	16,800	12,100	12,270	18,100	19,500	12,700	19,500	8,750	10,800	17,900	13,200	7,620	7,740	7,190	4,770	7,770	7,250	20,100	12,193
Lead ‡ ¶	500	900	50	400	400	400	16.6	54	99	83.8	139	176	97.3	182	87.4	107	56.1	194	508	78.2	44.3	30.7	65.6	19.7	100	108	47.5	115
Magnesium							951		4,900	5,640	2,370	2,540	4,380	4,600	2,330	3,570	1,810	1,910	3,000	2,970	2,050	2,640 J	2,340	1,080	2,430 J	2,460 J	3,250 J	2,721
Manganese		100	500				182		300	319 J	270 J	182	1120 J	286 J	213 J	287 J	151 J	172 J	320 J	268 J	108 J	104 J	93.3 J	52.2 J	99.3 J	96.7 J	359 J	249
Mercury ¶	0.1	30	0.3	1	7	7	0.056	0.33	0.3	0.072	0.052	0.122	0.078	0.053	0.36	0.27	0.17	0.72	2.3	0.22	0.061	0.038 J	0.051	0.018 J	0.041 J	0.053	0.30	0.316
Molybdenum *		200	2					3.5		0.43 J	0.44 J	2.21	0.41 J	0.46 J	0.32 J	8.2 J	0.30 J	0.32 J	0.36 J	0.44 J	0.29 J		0.10 J	0.11 J				0.848
Nickel ¶	200	90	30	580	2,500	3,900	6.8	24	17	31.3	11.0	15.0	18.7	25.6	12.4	30.0	8.6	12.0	16.7	13.8	8.9	12.3	12.7	5.8	12.8	12.6	16.8	14.6
Potassium							221			1,780 J	881 J	988	2,530 J	2,550 J	957 J	1,270 J	760 J	763 J	1,050 J	1,040 J	902 J	1,260 J	1,160 J	597 J	1,280 J	1,250 J	723 J	1,206
Selenium ¶	70	100	1	260	2,500	4,200	0.81	2.2	0.5			0.0832																ND
Sodium							34.3			86.3	96.6	79.3	230	138	56.1	53.8	40.1	45.7	58.4	69.4	52.2	127	78.9		107	91.9	32.2 J	79.4
Thallium (thallium chloride) ¶			1	10	21	32			0.6			0.0648										0.071 J			0.12 J	0.073 J	0.12 J	0.0856
Tin		2,000	50									0.576																ND
Vanadium		20	2				15.2		29	32.3 J	18.5 J	19.6	57.6 J	32.8 J	18.6 J	24.5 J	14.3 J	19.0 J	24.9 J	20.3 J	13.8 J	16.3 J	15.7 J	8.3 J	15.5 J	14.3 J	15.6 J	20.8
Zinc ¶	200	100	50	1,000	2,500	5,000	22.4	98	116	59.5 J	66.7 J	69.7	91.3 J	116 J	86.7 J	132 J	54.7 J	108 J	250 J	97.3 J	37.6 J	35.8	46.6 J	25.7 J	39.2	63.5	190	91.6

Parameter	Concentrations in mg/kg																											
	Risk Threshold Screening Levels						Background			Pile 10						Pile 10A			Pile 11				Pile 12				Pile 13
	OR 1	OR 2	OR 3	S-1	S-2	S-3	Site	NHDES	MADEP	P10-1	P10-2	P10-3	P10-4	P10-5	Average	P10A-1	P10A-2	Average	P11-1	P11-1 Dup.	P11-2	Average	P12-1	P12-2	P12-3	Average	P13-1
Antimony ¶			5	8	26	26	0.31		1.4	0.48 J	0.48 J	0.91 J	3.2 J	0.91 J	1.20	0.39 J	0.25 J	0.320				ND	0.14 J	0.53 J	0.39 J	0.353	0.14 J
Arsenic ¶	60	100	10	12	12	12	9.0	12	17	7.1 J	4.8 J	5.4 J	5.7 J	2.6 J	5.12	4.6 J	4.8 J	4.70	4.7 J	5.7 J	4.7 J	4.95	2.1 J	3.8 J	3.4 J	3.10	2.5 J
Barium		3,000	500	750	2,500	3,400	22.0		45	62.9	55.0	58.4	49.4	26.3	50.4	54.1	31.1	42.6	47.3 J	87.7 J	40.0 J	53.8	11.5	48.6	46.6	35.6	12.4
Beryllium ¶ *			10	0.1	0.1	1	0.42	1.0	0.4	0.79	1.1	0.35	0.41	0.43	0.616	0.36	0.28	0.320	0.27 J	0.32	0.38	0.338	0.26	0.36	0.37	0.330	0.26 J
Cadmium ¶	20	20	4	32	230	230	0.14	1.9	2	0.71	0.58	0.76	0.54	0.43	0.604	0.64	0.36	0.500	0.35	0.46	0.86	0.633		0.74	0.70	0.513	0.27 J
Calcium							248			2,190	2,170	2,760	1,900	1,370	2,078	593 J	507 J	550	3,880 J	2,820 J	1,410 J	2,380	250	5,300	6,900	4,150	242 J
Chromium (Total) † ¶	0.4	10	1	130	460	540	12.8	33	29	32.7	22.0	13.9	14.7	11.2	18.9	18.8	14.8	16.8	6.2	8.8	71.0	39.3	6.9	13.0	8.5	9.47	6.7
Copper ¶	50	100	100				4.0		38	45.8	63.5	27.7	28.3	9.4	34.9	11.2	10.0	10.6	55.0 J	63.2 J	76.9 J	68.0	2.0	13.0	14.0	9.67	2.0
Iron		200					9,100		17,000	14,200	12,400	12,600	12,000	11,700	12,580	9,010	7,180	8,095	8,630	10,700	13,900	11,783	3,510	16,800	18,400	12,903	4,030
Lead ‡ ¶	500	900	50	400	400	400	16.6	54	99	114 J	163 J	132 J	108 J	27.6 J	109	139	102	121	65.4	70.3	38.7	53.3	13.8 J	32.3 J	34.4 J	26.8	
Magnesium							951		4,900	3,400	2,220	2,280	2,690	2,410	2,600	2,570 J	1,840 J	2,205	1,210 J	2,230 J	4,350 J	3,035	627	4,180	4,470	3,092	620 J
Manganese		100	500				182		300	203	239	241	204	211	220	90.9	70.5	80.7	776 J	361 J	228 J	398	28.8	375	436	280	28.9
Mercury ¶	0.1	30	0.3	1	7	7	0.056	0.33	0.3	0.20 J	0.093 J	0.43 J	0.38 J	0.024 J	0.225	0.092 J	0.11 J	0.101	1.7	2.3	0.064	1.03	0.034 J	0.17 J	0.12 J	0.108	0.035 J
Molybdenum *		200	2					3.5			1.1 J				0.426		1.2	0.780		0.81 J	1.4 J	0.965				ND	
Nickel ¶	200	90	30	580	2,500	3,900	6.8	24	17	25.1	31.6	12.2	13.0	10.9	18.6	12.7	9.5	11.1	8.8	10.0	25.3	17.4	3.4	13.0	12.8	9.73	2.6
Potassium							221			1,490	837	773	1,080	593	955	868	874	871	578 J	1,290 J	1,070 J	1,002	217	1,290	652	720	211
Selenium ¶	70	100	1	260	2,500	4,200	0.81	2.2	0.5	0.35 J	0.24 J	0.17 J	0.25 J	0.10 J	0.222			ND				ND	0.33 J	0.20 J	0.16 J	0.230	0.24 J
Sodium							34.3			145	132	79.0	118	89.6	113	24.8 J	28.5 J	26.7	37.5 J	46.9 J	42.2 J	42.2	37.7	35.3 J	32.2 J	35.1	
Thallium (thallium chloride) ¶			1	10	21	32			0.6	0.094 J	0.053 J		0.066 J	0.032 J	0.0514	0.053 J	0.065 J	0.0590	0.083 J	0.053 J	0.13 J	0.0990		0.083 J	0.088 J	0.0613	0.038 J
Tin		2,000	50							2.1 J	3.7 J				1.34	2.5 J	3.0 J	2.75	1.5 J	1.1 J		0.823				ND	0.29 J
Vanadium		20	2				15.2		29	25.4	20.1	20.8	22.9	18.2	21.5	15.3	11.6	13.5	10.0 J	12.8 J	21.3 J	16.4	8.6	16.0	13.8	12.8	7.8
Zinc ¶	200	100	50	1,000	2,500	5,000	22.4	98	116	140	270	92.2	87.8	64.8	131	58.5	48.0	53.3	61.2	71.3	67.3	66.8	8.3	63.6	64.0	45.3	10.0

TABLE 12F
Summary of Soil Pile Data - Metals
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) between April 2 and 24, 1998; see Table 1 for specific dates and identity of sample delivery groups (SDGs).

2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, using United States Environmental Protection Agency (USEPA) Methods 6010, 7000 Series, and 7471.

3. All concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. A blank indicates the parameter was not detected.

6. "Dup." indicates the sample is a field duplicate.

7. Average concentrations are arithmetic averages of detected concentrations and one-half the detection limit for non-detects. The concentrations of a sample and its duplicate were averaged and counted as one sample in the calculation of pile averages.

8. "OR 1" refers to "Table 1. Screening benchmark concentrations for the toxicity of chemicals to earthworms" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
   "OR 2" refers to "Table 2. Screening benchmark concentrations for the toxicity of chemicals to soil microorganisms and microbial processes" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
   "OR 3" refers to "Table 1. Screening benchmark concentrations for the phytotoxicity of chemicals in soil and soil solution" from "Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants" by Environmental Sciences Division, Oak Ridge National Laboratory, for the U.S. Department of Energy (1994), and consistent with October 1996 and November 1997 updates.
   "S-1" refers to the S-1 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
   "S-2" refers to the S-2 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
   "S-3" refers to the S-3 soil standard established under the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
   "Site" background values are the maximum concentrations detected at background locations at the Site.
   "NHDES" refers to background concentrations of metals in soil values as listed in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998).
   "MADEP" refers to background concentrations of metals in soil values as listed in "Guidance for Disposal Site Risk Characterization; In support of the Massachusetts Contingency Plan; Interim Final Policy # WSC/ORS-95-141," Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup, and Office of Research and Standards (July 1995).

9. "†" indicates OR1, OR2, OR3, S-1, S-2, and S-3 values are for chromium (VI). Chromium (III) values for S-1, S-2, and S-3 are 1,000 mg/kg, 2,500 mg/kg, and 5,000 mg/kg, respectively. Analytical results are for total chromium.
   "‡" indicates the S-1, S-2, and S-3 values for lead are based on the USEPA's 1994 "Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities."
   "¶" indicates priority pollutant metal.
   "*" indicates NHDES background value from SHA 1998d.

10. "J" indicates an estimated value.
    "ND" indicates not detected.

11. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 13A
Summary of Product Data - Density, PCB Aroclors, Metals, and Petroleum Hydrocarbons
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	AE-8-P	AE-9-P	AE-11S-P	AE-16-P	BR-25-P	BR-28-P	SH-5S-P	SH-5S-P Dup.	SH-6S-P	SH-7S-P	SH-10S-P
	3/30/1998	3/30/1998	3/27/1998	3/30/1998	3/30/1998	3/30/1998	3/27/1998	3/27/1998	3/27/1998	3/27/1998	3/27/1998
Density	**Concentrations in g/ml**						**Concentrations in g/ml**				
Density	0.91	0.82	0.86	0.86	0.83	0.86	0.89	0.90	0.87	0.89	0.78
PCBs	**Concentrations in mg/kg**						**Concentrations in mg/kg**				
Aroclor 1242	21	29	25	11	16	12	53 J	31 J	7.6	37	8.0
Aroclor 1254											29
Aroclor 1260	9.6	12	11	37	43	46	24	16	53	23	26
Total PCBs	30.6	41	36	48	59	58	77	47	60.6	60	63
Metals	**Concentrations in mg/kg**						**Concentrations in mg/kg**				
Arsenic	R	R	R	R	R	R	R	R	R	R	R
Barium	19.3 J	56.2 J	6.4 J	30.4 J	40.5 J	8.6 J	5.1 J	8.4 J	12.9 J	25.6 J	39.6 J
Cadmium	R	R	R	R	R	R	R	R	R	R	R
Chromium	R	R	6.6 J	R	R	R	7.2 J	7.9 J	R	4.3 J	R
Mercury	0.015 J	0.0095 J									
Lead	381 J	214 J	584 J	90.7 J	133 J	65.1 J	608 J	693 J	55 J	999 J	76.9 J
Silver	R	R	R	R	R	R	R	R	R	R	R
PHCs	**Concentrations in percent**						**Concentrations in percent**				
Carbon Range	C_9-C_{24}	C_9-C_{24}	C_9-C_{18}	C_9-C_{24}	C_9-C_{24}	C_9-C_{24}	C_9-C_{18}	C_9-C_{24}	C_9-C_{20}	C_9-C_{18}	C_9-C_{20}
Percentage	24 J	33 J	5 J	16 J	19 J	15 J	6 J	6 J	12 J	2 J	51 J
Description	Kerosene and Fuel Oil No. 2/ Diesel	Kerosene and Fuel Oil No. 2/ Diesel	Gasoline and Fuel Oil No. 2/ Diesel	Kerosene and Fuel Oil No. 2/ Diesel	Kerosene and Fuel Oil No. 2/ Diesel	Kerosene and Gasoline	Gasoline and Fuel Oil No. 2/ Diesel	Gasoline and Fuel Oil No. 2/ Diesel	Kerosene	Fuel Oil No. 2/ Diesel	Kerosene
Carbon Range	C_{24}-C_{36}	C_{24}-C_{36}	C_{18}-C_{36}	C_{24}-C_{36}	C_{24}-C_{36}	C_{24}-C_{36}	C_{18}-C_{36}	C_{24}-C_{36}	C_{20}-C_{36}	C_{18}-C_{36}	C_{20}-C_{36}
Percentage	76 J	67 J	95 J	84 J	81 J	85 J	94 J	94 J	88 J	98 J	49 J
Description	Lubricating Oil	Lubricating Oil	Lubricating Oil	Lubricating Oil	Lubricating Oil	Lubricating Oil	Lubricating Oil	Lubricating Oil	Lubricating Oil	Lubricating Oil	Lubricating Oil

Notes:
1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) personnel on the dates indicated and belong to sample delivery groups (SDGs) BW410 (density, PCBs, and metals) and BW316 (petroleum hydrocarbon [PHC] fingerprinting).
2. Analyses were performed by the following laboratories and methods:
   Density – Woods Hole Group Environmental Laboratories (WHG) of Raynham, Massachusetts – United States Environmental Protection Agency (USEPA) Method 2710F
   PCBs – WHG – USEPA Method 8080 (Modified)
   Metals – WHG – USEPA Methods 6010A and 7471
   PHC Fingerprinting – Eastern Analytical, Inc. of Concord, New Hampshire – USEPA Method 8100 (Modified)
3. Density concentrations are presented in grams per milliliter (g/mL).
   PCB and metal concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).
   PHC fingerprinting concentrations are presented in percent.
4. The identification of PHC types is based on SHA's interpretation of EAI's USEPA Method 8100 (modified) chromatograms. The identification of PHC types in the samples is based on similarities in chromatographic patterns between standards provided by the analytical laboratory and the samples, and is somewhat subjective. In addition, the chromatographic patterns of oils may be modified by their use and/or degradation in the subsurface. The PHCs which appear to best fit the pattern of a sample are indicated.
5. Only those parameters detected or rejected in one or more of the samples presented herein are listed.
6. Total PCBs listed are the sum of the detected concentrations of the individual PCB Aroclors.
7. A blank indicates the parameter was not detected.
8. "Dup." indicates the sample is a field duplicate.
9. There are no applicable Risk Threshold Screening Levels available for product.
10. "J" indicates an estimated value.
    "R" indicates data (non-detects) rejected during validation.
    "PCBs" are polychlorinated biphenyls.
11. See appendices for field forms and validated analytical data reports for the full list of parameters analyzed.

TABLE 13B
Summary of Product Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg										
	AE-8-P	AE-9-P	AE-11S-P	AE-16-P	BR-25-P	BR-28-P	SH-5S-P	SH-5S-P Dup.	SH-6S-P	SH-7S-P	SH-10S-P
	3/30/1998	3/30/1998	3/27/1998	3/30/1998	3/30/1998	3/30/1998	3/27/1998	3/27/1998	3/27/1998	3/27/1998	3/27/1998
Benzene			48 J		35 J	160	69 J	56 J			
Ethylbenzene	41 J	270	380	150	320	2,100	500	420	150	29	550 J
Isopropylbenzene (Cumene)	16 J	73	69	46 J	82	190	88 J	80 J	59	9.8 J	120 J
Naphthalene	300	780	630	480	760	760	780	670	180	82	760 J
Toluene	54 J	350	820	120	460	1,600	2,000	1,700	19 J	12 J	
Xylene (m,p-)	390	1,300	1,400	450	1,100	4,100	1,800	1,600	440	96	1,300 J
Xylene (o-)	210	690	630	340	580	1,500	770	690	160	74	400 J
Butylbenzene (n-)			260		290	240	330 J		200		600 J
Butylbenzene (sec-)	43 J	110	51 J	55 J	95	110 J	75 J	67 J	79	11 J	270 J
Isopropyltoluene (p- / 4-)	54 J	99	39 J	57 J	97	110 J	59 J	55 J	85	10 J	300 J
Propylbenzene (n-)	49 J	220	280	130	250	240	340	290	140	36	350 J
Trimethylbenzene (1,2,4-)	870	1,900	1,800	1,100	1,700	2,000	2,200	2,000	860	280	3,000 J
Trimethylbenzene (1,3,5-)	360	660	540	390	590	870	700	640	390	110	1,300 J
Total Alkylbenzenes † &	1,376	2,989	2,970	1,732	3,022	3,570	3,704	3,052	1,754	447	5,820
Total AVOCs	2,387	6,452	6,947	3,318	6,359	13,980	9,711	8,268	2,762	749.8	8,950
BT / BTEX	0.078	0.13	0.26	0.11	0.20	0.19	0.40	0.39	0.025	0.057	0
BT / Total AVOCs	0.023	0.054	0.12	0.036	0.078	0.13	0.21	0.21	0.0069	0.016	0
BTEX / Total AVOCs	0.29	0.40	0.47	0.32	0.39	0.68	0.53	0.54	0.28	0.28	0.25
Dichlorobenzene (1,2- / o-)	20 J	40 J	37 J	42 J	61	71 J	55 J	49 J	20 J	12 J	
Dichlorobenzene (1,4- / p-)					14 J						
Dichloroethane (1,1-)		35 J			95 J	96 J					
Dichloroethene (cis-1,2-)			89 J		120 J	70 J	610 J	480 J			
Tetrachloroethene			12 J				150	150		6.5 J	180 J
Trichloroethane (1,1,1-)	14 J	98	330		230	110 J	1,500	1,300		23 J	
Trichloroethene			110				1,300	1,100			
Vinyl Chloride						100 J					
Total CVOCs	34	173	578	42	520	447	3,615	3,079	20	41.5	180
TCE*/TCA* (molar ratio)	ND / 14	ND / 133	0.71		0.46	1.3	1.4	1.4		ND / 23	
TCE/TCE_B (molar ratio)			0.91		<0.35	<0.36	1.6	1.7			
TCA/TCA_B (molar ratio)	14 / ND	2.1	330 / ND		1.8	0.85	1,500 / ND	1,300 / ND		23 / ND	
Total VOCs	2,421	6,625	7,525	3,360	6,879	14,427	13,326	11,347	2,782	791.3	9,130

TABLE 13B
Summary of Product Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) on the dates indicated and belong to sample delivery group (SDG) BW410.

2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, by United States Environmental Protection Agency (USEPA) Method 8260B.

3. All concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. Total concentrations listed (e.g., Total AVOCs) are the sum of the detected concentrations of the relevant analytes.

6. A blank indicates the parameter was not detected.

7. "Dup." indicates the sample is a field duplicate.

8. There are no applicable Risk Threshold Screening Levels available for product.

9. "J" indicates an estimated value.
   "<" indicates the compound in the numerator was not detected, and the detection limit was used to calculate the ratio.
   "ND" indicates none of the relevant compounds were detected, and other value of fraction shown (numerator or denominator) is the concentration detected in mg/kg.

10. "VOCs" are volatile organic compounds.
    "AVOCs" are non-chlorinated aromatic volatile organic compounds.
    "CVOCs" are chlorinated volatile organic compounds.

11. "BT" indicates the sum of benzene and toluene detected concentrations.
    "BTEX" indicates the sum of benzene, ethylbenzene, toluene, o-xylene, and m/p-xylene detected concentrations.
    "TCE*" indicates the sum of trichloroethene, chloroethane, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride detected concentrations.
    "TCA*" indicates the sum of 1,1,1-trichloroethane, 1,1-dichloroethane, and 1,1-dichloroethene detected concentrations.
    "TCEB" indicates the sum of chloroethane, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride detected concentrations.
    "TCAB" indicates the sum of 1,1-dichloroethane and 1,1-dichloroethene detected concentrations.

12. The CVOC ratios are generally shown as molar ratios, except in the instances where either the numerator or denominator is shown as "ND". In these instances the other value (i.e., denominator or numerator) is presented as the detected concentration in mg/kg.

13. See appendices for field forms and validated analytical data reports for the full list of parameters analyzed.

TABLE 13C
Summary of Product Data - Polynuclear Aromatic Hydrocarbons
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg										
	AE-8-P	**AE-9-P**	**AE-11S-P**	**AE-16-P**	**BR-25-P**	**BR-28-P**	**SH-5S-P**	**SH-5S-P Dup.**	**SH-6S-P**	**SH-7S-P**	**SH-10S-P**
	3/30/1998	**3/30/1998**	**3/27/1998**	**3/30/1998**	**3/30/1998**	**3/30/1998**	**3/27/1998**	**3/27/1998**	**3/27/1998**	**3/27/1998**	**3/27/1998**
Acenaphthene	25	55	9.0 J	32	43	10	15 J	12	8.0 J		23 J
Acenaphthylene	7 J		16	19 J	26	5.0 J	17	14	8.0 J		18 J
Anthracene	14	25 J	11 J	13 J	18 J	5.0 J	14 J	9.0 J	6.0 J		
Benzo(a)anthracene	11	15 J	10 J			6.0 J	9.0 J	9.0 J	5.0 J	5.0 J	
Benzo(a)pyrene	5.0 J										
Benzo(b)fluoranthene	5.0 J	R	R	R	R	R	R	R	R	5.0 J	R
Benzo(g,h,i)perylene	8.0		10 J			5.0 J		8.0 J	5.0 J	11	
Benzo(k)fluoranthene	5.0 J									5.0 J	
Chrysene	13	16 J	12 J	12 J	17 J	13	20	12	14	12	15 J
Fluoranthene	17	26 J	22	15 J	20 J	14	19	20	12	7.0 J	14 J
Fluorene	45	93	38	54	81	21	50	39	15	7.0 J	51
Indeno(1,2,3-cd)pyrene										4.0 J	
Methylnaphthalene (1-)	440	1,100	380	600	900	370	490	400	240	56	1,300
Methylnaphthalene (2-)	700	1,900	850	1,100	1,700	650	1,100	850	420	100	2,100
Naphthalene	230	700	600	410	650	760	690	540	170	60	760
Phenanthrene	120	240	64	120	180	52	91	71	39	13	81
Pyrene	34	49	34	26	35	21	41	32	20	26	24 J
Total PAHs	1,679	4,219	2,056	2,401	3,670	1,932	2,556	2,016	962	311	4,386
2-Methylnaphthalene + Lighter TPAHs	0.82	0.88	0.89	0.88	0.89	0.92	0.89	0.89	0.86	0.69	0.95
Fluorene + Lighter TPAHs	0.86	0.91	0.92	0.92	0.93	0.94	0.92	0.92	0.90	0.72	0.97
Pyrene + Lighter TPAHs	0.97	0.99	0.98	1.0	1.0	0.99	0.99	0.99	0.98	0.86	1.0

TABLE 13C
Summary of Product Data - Polynuclear Aromatic Hydrocarbons
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. personnel on the dates indicated and belong to the sample delivery group (SDG) BW410.

2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, by United States Environmental Protection Agency (USEPA) Method 8270 with selective ion monitoring (SIM) for polynuclear aromatic hydrocarbons (PAHs).

3. All concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. Total PAHs listed are the sum of the detected concentrations of the individual PAHs.

6. A blank indicates the parameter was not detected.

7. "Dup." indicates the sample is a field duplicate.

8. There are no applicable Risk Threshold Screening Levels available.

9. "J" indicates an estimated value.
"R" indicates data (non-detects) rejected during validation.

10. "2-Methylnaphthalene + Lighter / Total PAHs" indicates the ratio of the concentrations of 2-methylnaphthalene, 1-methylnaphthalene, and naphthalene divided by Total PAHs as defined in Note 5.
"Fluorene + Lighter / Total PAHs" indicates the ratio of the concentrations of fluorene, acenaphthene, acenaphthylene, 2-methylnaphthalene, 1-methylnaphthalene, and naphthalene divided by Total PAHs as defined in Note 5.
"Pyrene + Lighter / Total PAHs" indicates the ratio of the concentrations of pyrene, fluoranthene, anthracene, phenanthrene, fluorene, acenaphthene, acenaphthylene, 2-methylnaphthalene, 1-methylnaphthalene, and naphthalene divided by Total PAHs as defined in Note 5.

11. See appendices for field forms and validated analytical data reports for the full list of parameters analyzed.

TABLE 14A
Summary of Groundwater Data - Field Screening Parameters
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Location	Sample Date	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)	pH (standard units)	Specific Conductance (uS/cm)	Temperature (ºC)	Turbidity (NTU)
AE-01	9/17/97	7.7	-135	5.8	192	13.8	0.65
AE-02	10/15/97	4.1	103	5.7	115	17.0	63
AE-03 **	7/22/98	3.5	-20	5.9	246	16.9	25
AE-04	9/18/97	1.0	-69	6.4	175	14.5	3.9
AE-04 **	7/22/98	2.5	-92	6.2	523	16.4	32
AE-05 **	7/22/98	3.4	-72	6.2	336	18.9	25
AE-08 * †	3/31/98	0.0	NM	7.3	252	17.3	NM
AE-09 * †	4/1/98	0.5	NM	6.2	200	8.4	NM
AE-10	10/13/97	12.1	180	5.9	21	15.0	3.7
AE-10	7/27/98	10.8	186	5.8	30	12.2	0.44
AE-11S *	3/31/98	0.0	NM	6.4	292	19.7	NM
AE-11D	10/16/97	1.4	79	6.8	69	15.0	8.7
AE-12	10/14/97	2.8	176	5.3	40	14.6	0.22
AE-14	10/14/97	6.8	178	5.8	51	14.8	0.36
AE-16 * †	4/1/98	4.4	NM	6.4	341	7.1	NM
AE-17S	9/30/97	2.7	225	6.1	26	12.6	0.43
AE-17D	10/15/97	0.1	104	5.8	169	14.6	4.3
AE-18S	10/17/97	1.8	-103	6.5	172	17.5	8.8
AE-18D	9/30/97	0.1	-112	7.7	167	13.4	6.4
AE-20	9/25/97	2.0	-268	5.7	47	10.3	0.61
AE-21	9/25/97	11.4	-211	5.5	55	13.7	0.89
AE-21	7/23/98	9.3	253	5.4	26	13.8	0.94
AE-22	9/24/97	7.9	181	5.5	72	15.9	0.32
AE-22	7/24/98	7.0	248	5.1	148	14.9	0.24
BR-25 * †	4/1/98	1.1	NM	6.9	352	6.9	NM
BR-28 * †	4/1/98	0.0	NM	7.2	336	7.9	NM
Lot 51-1-1-OB	10/1/97	5.5	-183	6.4	73	11.4	0.69
Lot 51-1-1-OB †	4/2/98	5.4	-111	6.4	57	8.8	0.31
Lot 51-1-1-COB	10/1/97	0.0	-16	6.4	278	13.3	28
Lot 51-1-1-COB †	4/2/98	0.5	-194	6.9	147	9.3	26
MW-4	10/1/97	5.8	-180	5.7	41	13.5	0.59
RFW-1	10/9/97	5.1	-201	5.7	730	11.3	0.76
RFW-2	10/9/97	2.9	231	5.5	761	12.1	0.85
SH-01I	9/22/97	7.3	94	5.5	663	12.1	0.20
SH-01D	9/23/97	3.2	44	8.0	62	11.8	89
SH-02S	9/29/97	6.6	431	5.9	80	11.2	0.53
SH-02I	10/16/97	0.1	-5	6.1	238	13.8	21
SH-02D	10/7/97	0.0	59	8.2	169	11.1	30
SH-03S	9/23/97	8.4	436	5.8	37	9.1	0.19
SH-03I	9/24/97	0.7	218	6.0	176	10.7	9.8
SH-03D	9/25/97	0.5	-331	7.1	119	10.0	81
SH-04S	9/23/97	0.9	-30	6.3	239	9.9	1.0
SH-04I	9/24/97	1.0	13	6.7	217	10.8	28
SH-04D	9/24/97	1.0	52	8.4	161	9.9	2.3
SH-05S * †	3/31/98	0.0	NM	7.4	302	17.4	NM
SH-06S * †	4/1/98	0.4	NM	6.4	451	6.9	NM
SH-07S *	3/31/98	0.0	NM	6.3	193	17.8	NM
SH-08S	9/19/97	0.8	189	5.8	138	15.4	1.8
SH-09S	9/26/97	6.5	-197	5.5	52	9.3	0.51
SH-10S * †	4/1/98	0.3	NM	7.0	< 10	5.5	NM
SH-10I	10/13/97	0.8	79	6.5	72	16.4	3.8
SH-10D	10/8/97	0.5	-326	8.5	130	12.8	12
SH-11S	9/23/97	11.2	424	6.0	28	10.3	0.66
SH-12S	9/29/97	9.6	445	5.7	418	11.3	0.54
SH-13D	10/9/97	0.1	90	7.9	236	13.4	340
SH-14S	10/2/97	1.2	191	6.0	34	10.9	0.78
SH-14I	10/2/97	0.0	-46	6.6	180	10.9	3.1

TABLE 14A
Summary of Groundwater Data - Field Screening Parameters
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Location	Sample Date	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)	pH (standard units)	Specific Conductance (uS/cm)	Temperature (ºC)	Turbidity (NTU)
SH-14D	10/6/97	0.4	-327	7.2	1408	12.9	56
SH-15S	10/2/97	1.0	-308	5.7	207	14.0	0.93
SH-15I	10/2/97	3.1	-270	6.7	243	10.5	2.3
SH-15D	9/23/97	0.8	-125	7.6	294	13.3	17
SH-16S	9/22/97	7.7	-190	5.6	121	11.7	2.3
SH-16I	9/22/97	1.0	-281	6.0	325	11.4	2.2
SH-16D	10/8/97	0.0	-130	8.0	171	13.0	110
SH-17I	10/13/97	2.0	34	6.3	113	17.0	26
SH-17D	10/7/97	0.0	-55	7.7	142	16.5	110
SH-18D	10/8/97	0.0	25	7.8	94	14.1	14
SH-19S	10/7/97	2.1	149	5.7	436	14.8	0.66
SH-19I	10/8/97	9.7	351	6.2	165	12.0	2.5
SH-19D	10/8/97	0.4	164	8.0	124	12.0	5.0
SH-20S	9/25/97	2.7	192	5.8	407	12.2	1.4
SH-20I	9/25/97	1.1	110	7.2	177	11.8	49
SH-20D	9/25/97	0.6	99	8.1	181	11.9	130
SH-21S	9/30/97	0.6	146	6.2	258	11.8	2.9
SH-21I	9/30/97	8.9	326	6.1	154	11.1	1.6
SH-21D	10/1/97	0.0	-58	8.5	184	10.6	9.2
SH-22S	9/29/97	7.3	-158	5.3	1060	13.7	2.4
SH-22D	9/29/97	0.6	-281	7.0	434	12.1	3.8
SH-22R	4/7/98	0.4	-268	8.1	337	10.6	78
SH-23S	9/29/97	0.3	206	6.2	749	14.0	1.0
SH-23I	9/29/97	0.3	73	6.2	520	13.8	4.4
SH-23D	9/29/97	0.4	-24	7.3	178	14.0	18
SH-24S	10/6/97	10.2	-157	4.9	1216	12.8	0.48
SH-24I	10/6/97	2.1	-242	5.7	288	11.3	0.81
SH-24D	10/9/97	1.9	27	8.0	751	13.9	33
SH-25S	10/7/97	7.1	275	5.7	68	13.0	0.78
SH-25I	10/7/97	7.2	230	6.2	119	11.6	0.67
SH-25D	10/10/97	1.4	60	9.2	397	18.6	120
SH-26S	10/3/97	0.0	201	5.7	685	11.2	1.6
SH-27S	9/19/97	9.5	-160	5.9	31	15.2	1.2
SH-28S	9/22/97	1.2	31	5.7	111	20.3	13
SH-29S	9/22/97	0.9	6	6.1	248	16.6	2.1
SH-30S	9/29/97	10.2	465	5.5	35	14.5	0.67
SH-31S	9/29/97	9.1	-196	5.6	38	14.4	0.82
SH-32S	10/9/97	5.7	369	5.3	48	12.5	0.84
SH-32S	7/23/98	9.2	262	5.5	37	12.5	0.71
SH-32I	7/17/98	10.6	161	8.5	32	13.3	16
SH-33S	10/9/97	0.7	-317	6.4	250	12.4	2.5
SH-33S	7/24/98	4.0	74	5.8	130	13.5	0.46
SH-34S	10/9/97	4.9	-323	6.0	159	12.8	0.53
SH-36S	9/18/97	2.7	-32	5.6	44	11.8	0.11
SH-37S **	10/14/97	12.1	87	6.2	57	4.7	NM
SH-38S	9/19/97	1.9	242	5.3	88	16.5	5.3
SH-38S	10/9/97	1.7	239	5.2	103	14.8	1.4
SH-40S	9/18/97	5.4	-151	6.0	75	14.6	1.1
SH-41S	10/1/97	7.2	-209	5.7	194	14.5	0.94
SH-42S	9/19/97	3.2	307	5.4	360	15.9	0.99
SH-43S	9/18/97	0.5	99	6.6	103	13.0	2.5
SH-44S	10/2/97	0.0	88	6.4	203	14.0	1.3
SH-45S	9/18/97	10.2	397	5.9	15	14.3	1.6
SH-46S	9/30/97	3.6	123	6.4	36	12.2	0.98
SH-47S	10/3/97	1.0	195	5.7	71	12.1	0.34
SH-48S	10/3/97	0.1	202	5.7	344	12.4	4.1
SH-49S	10/6/97	0.3	197	6.0	45	13.8	5.3

TABLE 14A
Summary of Groundwater Data - Field Screening Parameters
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Location	Sample Date	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)	pH (standard units)	Specific Conductance (uS/cm)	Temperature (ºC)	Turbidity (NTU)
SH-50S	9/26/97	5.1	218	5.9	32	14.0	8.4
SH-51S	9/26/97	6.7	212	6.0	27	11.1	1.3
SH-52S	10/6/97	0.0	192	6.0	140	12.9	1.7
SH-53S	4/7/98	12.4	148	6.4	24	8.6	1.4
SH-53S ‡	7/21/98	8.1	20	5.4	26	12.9	1.9
SH-54S ‡	7/21/98	8.9	9	6.1	26	12.7	1.5
SH-55S	7/17/98	9.4	161	7.4	43	15.7	0.91
SH-56S ‡	7/21/98	8.1	57	6.0	97	14.7	1.3
SH-57S	7/27/98	10.9	176	5.9	36	12.0	2.5
SH-58S	7/23/98	6.2	267	5.5	431	12.7	0.96
WP-03	10/6/97	0.9	-192	5.8	171	13.9	150
WP-04	10/1/97	8.6	34	5.8	262	11.3	27
WP-05	10/1/97	6.8	68	6.1	369	11.5	24
WP-06	10/3/97	0.8	-182	6.2	297	11.6	5.1
WP-10	10/2/97	8.7	267	6.2	345	12.9	92
WP-12	10/2/97	0.6	-115	6.1	183	10.3	3.0
WP-14	10/3/97	2.7	-378	6.0	1698	9.3	1.6
WP-15	10/3/97	0.9	-296	6.2	435	9.5	6.1
WP-17	9/22/97	5.4	187	5.8	68	12.9	11
WP-17A	10/6/97	0.5	-410	6.3	186	11.5	4.6
WP-18	9/22/97	4.9	-72	5.9	161	14.0	63
WS-1	4/7/98	0.3	-243	8.5	134	10.0	32

Notes:

1. Field screening was completed by Sanborn, Head & Associates, Inc. or New Hampshire Department of Environmental Services personnel at the time of sample collection on the dates indicated.

2. Values reported above have been rounded from values presented on Groundwater Quality Field Sampling Summaries.

3. For locations marked with "*", dissolved oxygen, pH (except those locations indicated in Note 4), specific conductance, and temperature were measured with an OI AquaCheck Water Analyzer. For all other locations, dissolved oxygen, oxidation-reduction potential, pH (except those locations indicated in Note 4), specific conductance, and temperature were measured with a QED Purge Saver model FC4000; and turbidity was measured with a Hach 2100P. For locations marked with "**", parameters were measured with the QED after collection of the sample due to presence of product in well.

4. For locations marked with "†", pH was measured with a Cole-Parmer® pHep-3 pH pen.
For locations marked with "‡", pH was measured with a Beckman Model 39841 pH meter.

5. "NM" indicates not measured.
"mg/L" indicates milligrams per liter and is equivalent to parts per million (ppm).
"mV" indicates millivolts.
"uS/cm" indicates microSiemens per centimeter.
"ºC" indicates degrees centigrade.
"NTU" indicates nephelometric turbidity units.

6. "Lot 51-1-1-OB" indicates inactive overburden well at residence on Lot 51-1-1.
"Lot 51-1-1-COB" indicates inactive overburden well at condominium on Lot 51-1-1.

7. Refer to appendices for Groundwater Quality Field Sampling Summaries for further information.

TABLE 14B
Summary of Groundwater Data - Water Quality Parameters
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Location	Sample Date	SDG	Concentrations in mg/L						
			Alkalinity	Chloride	Hardness	Nitrate	o-Phosphate	Sulfate	TKN
AE-2	10/15/1997	BW215	43	18	29	0.05 J	0.097	4	0.4
AE-8	3/31/1998	BW223	120	8	80	NA	NA		1 J
AE-8	4/6/1998	BW223	NS	NS	NS		0.19	NS	NS
AE-9	4/1/1998	BW223	110	2	26	NA	NA		1.4 J
AE-9 Dup.	4/1/1998	BW223	110	2	27	NA	NA		
AE-9	4/6/1998	BW223	NS	NS	NS		0.12	NS	NS
AE-9 Dup.	4/6/1998	BW223	NS	NS	NS		0.12	NS	NS
AE-10	10/13/1997	BW215	5.7	4	6.9		0.063	3	0.2
AE-11S	3/31/1998	BW223	99	15	29	NA	NA	1	1.1 J
AE-11S	4/6/1998	BW223	NS	NS	NS		0.21	NS	NS
AE-11D	10/16/1997	BW215	41	7	35	0.09 J	0.18	3	
AE-12	10/14/1997	BW215	17	2	16	0.57 J	0.095	6	0.4
AE-12 Dup.	10/14/1997	BW215	17	2	15	0.55 J	0.096	6	0.2
AE-14	10/14/1997	BW215	18	4	14	0.52 J	0.13	7	0.2
AE-16	4/1/1998	BW223	180	4	160	NA	NA	3	1.1 J
AE-16	4/6/1998	BW223	NS	NS	NS		0.12	NS	NS
AE-17S	9/30/1997	BW212	4.1		6.3	0.36	0.076	4	
AE-17D	10/15/1997	BW215	65	29	53		0.19	12	0.2
AE-18S	10/17/1997	BW215	70	12	35		0.15	7	0.9
AE-18D	9/30/1997	BW212	48	14	55		0.21	9	
AE-20	9/25/1997	BW211	6.2	8	6.8		0.06	2	
BR-25	4/1/1998	BW223	140	6	48		0.16 J	6	1.2 J
BR-28	4/1/1998	BW223	97	14	41		0.089 J	4	
SH-1I	9/22/1997	BW210	11	210	160	6	0.13	9	
SH-1D	9/23/1997	BW211	25	4	27	0.3	0.35	3	
SH-2S	9/29/1997	BW212	19	11	24	0.34	0.12	3	0.1
SH-2I	10/16/1997	BW215	100	57	100	0.09 J	0.20	1	0.2
SH-2D	10/7/1997	BW214	62		40		0.29 J	15	
SH-3S	9/23/1997	BW211	12	3	9.5		0.11	2	
SH-3I	9/24/1997	BW211	48	22	61	0.36	0.17	17	
SH-3D	9/25/1997	BW211	36	9	46		0.12	11	0.13
SH-4S	9/23/1997	BW211	82	2	21		0.18	14	0.88
SH-4I	9/24/1997	BW211	71	18	83		0.18	14	
SH-4D	9/24/1997	BW211	24	17	52	0.13	0.34	27	0.1
SH-5S	3/31/1998	BW223	93	7	54	NA	NA	2	
SH-5S	4/6/1998	BW223	NS	NS	NS		0.13	NS	NS
SH-6S	4/1/1998	BW223	120	6	59		0.044 J	34	11 J
SH-7S	3/31/1998	BW223	77	5	21	NA	NA	1	1.6 J
SH-7S	4/6/1998	BW223	NS	NS	NS		0.13	NS	NS
SH-10S	4/1/1998	BW223	65	3	24		0.082 J		
SH-10I	10/13/1997	BW215	27	13	32	0.05	0.15	8	0.1
SH-10D	10/8/1997	BW214	52		32		0.24	10	
SH-13D	10/9/1997	BW214	100		60		0.15 J	19	0.3
SH-14S	10/2/1997	BW213	10	2	10		0.083	3	
SH-14I	10/2/1997	BW213	54	19	44		0.28	5	0.1
SH-14D	10/6/1997	BW214	69 J	290	420		0.13	240	
SH-15S	10/2/1997	BW213	34	41	51		0.11	3	0.1
SH-15S Dup.	10/2/1997	BW213	34	40	51		0.11	3	0.1
SH-15I	10/2/1997	BW213	42	39	77	1 J	0.16	15	
SH-15D	9/23/1997	BW210	95	27	88		0.15	27	

TABLE 14B
Summary of Groundwater Data - Water Quality Parameters
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Location	Sample Date	SDG	Concentrations in mg/L						
			Alkalinity	Chloride	Hardness	Nitrate	o-Phosphate	Sulfate	TKN
SH-16S	9/22/1997	BW210	22	9	36	0.91	0.11	19	
SH-16I	9/22/1997	BW210	57	43	77	0.38	0.18	46	0.18 J
SH-16D	10/8/1997	BW214	92		41		0.3	2	0.3
SH-17I	10/13/1997	BW215	55	16	64		0.18	12	0.2
SH-17D	10/7/1997	BW214	60		32		0.16 J	11	0.1
SH-18D	10/8/1997	BW214	39		28		0.27	8	
SH-20S	9/25/1997	BW211	15	100	36	0.15	0.098	12	
SH-20I	9/25/1997	BW211	47	16	65	0.2	0.1	15	
SH-20D	9/25/1997	BW211	77	3	64	0.18	0.14	15	
SH-22S	9/29/1997	BW212	7.8	360	40	1.4	0.12	7	
SH-22D	9/29/1997	BW212	58	92	140		0.17	33	
SH-22R	4/7/1998	BW223	55	80 J	140		0.086	16	
SH-23S	9/29/1997	BW212	77	180	130	0.17	0.084	17	
SH-23I	9/29/1997	BW212	53	110	110	0.97	0.11	12	0.2
SH-23I Dup.	9/29/1997	BW212	53	120	110	0.99	0.11	12	0.2
SH-23D	9/29/1997	BW212	31	23	57		0.17	15	0.1
SH-24S	10/6/1997	BW214	3.5 J	390	18	0.37 J	0.062	7	
SH-24I	10/6/1997	BW214	34 J	27	30	14 J	0.15	5	0.1
SH-24D	10/9/1997	BW214	360		260	0.22	0.14	72	0.8
SH-28S	9/22/1997	BW210	19	13	20	1.1	0.12	8	1.2 J
SH-29S	9/22/1997	BW210	87	11	27		0.13	8	2.4 J
SH-31S	9/29/1997	BW212	5.8	5	8.7	0.47	0.074	3	
SH-53S	4/7/1998	BW223	5.5	2 J	9.2		0.025	4	
WS-1	4/7/1998	BW223	52	14 J	19		0.13	6	

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. or New Hampshire Department of Environmental Services personnel on the dates indicated.
2. Analyses were completed by NHDES Laboratory of Concord, New Hampshire using the following methods:

Parameter	Method	Typical Detection Limit (mg/L)	MCL (mg/L)	GW-1 (mg/L)
Alkalinity	USEPA Method 600	1	None	None
Chloride	Lachat method 10-117-07-1-A	2	250 (SMCL)	None
Hardness	Calculation from USEPA Method 6010A	2.9	None	None
Nitrate	Lachat method 10-107-04-1-A	0.05	10	10
o-Phosphate	Lachat method 10-115-01-1-B	0.01	None	None
Sulfate	USEPA Method 300.0	1	250 - SMCL	400
TKN	Lachat method 10-107-06-2-E	0.1	None	None

3. Wells AE-8, AE-9, AE-9 Dup., AE-11S, AE-16, SH-5S, and SH-7S were resampled on April 6, 1998 for nitrate and o-phosphate due to the hold times for these analyses being exceeded for the samples collected on March 31 and April 1, 1998.
4. Concentrations are presented in milligrams per liter (mg/L) which are equivalent to parts per million (ppm).
5. A blank indicates the parameter was not detected.
6. "NA" indicates not analyzed due to exceedance of hold time.
   "NS" indicates not sampled.
   "Dup." indicates a field duplicate sample.
   "J" indicates an estimated value.
   "MCL" refers to the United States Environmental Protection Agency (USEPA) maximum contaminant levels (Summer 2000).
   "GW-1" refers to the New Hampshire Groundwater Category GW-1 standards as defined in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998). This category applies to groundwater as drinking water. These values are equivalent to Ambient Groundwater Quality Standards (AGQSs) as established in NHDES Env-Wm 1403 (February 1999).
   "SDG" indicates sample delivery group.
   "SMCL" refers to the USEPA secondary maximum contaminant levels (Summer 2000).
7. Refer to appendices for Groundwater Quality Field Sampling Summaries for further sample information and the validated analytical data reports.

TABLE 14C
Summary of Groundwater Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L			Concentrations in µg/L																			
	Risk Threshold			AE-1	AE-2	AE-3	AE-4	AE-4	AE-5	AE-8	AE-9	AE-9 Dup.	AE-10	AE-10	AE-11S	AE-11D	AE-12	AE-12 Dup.	AE-14	AE-16	AE-17S	AE-17D	AE-18S
	Screening Levels			9/17/1997	10/15/1997	7/22/1998	9/18/1997	7/22/1998	7/22/1998	3/31/1998	4/1/1998	4/1/1998	10/13/1997	7/27/1998	3/31/1998	10/16/1997	10/14/1997	10/14/1997	10/14/1997	4/1/1998	9/30/1997	10/15/1997	10/17/1997
	MCL	NHGW-1	NHGW-2	BW210	BW215	BW230	BW210	BW230	BW230	BW223	BW223	BW223	BW215	BW230	BW223	BW215	BW215	BW215	BW215	BW223	BW212	BW215	BW215
Benzene	5	5	2,000			3.9	2.0	9.0	46	25	45	49			120 J					51		27	38
Ethylbenzene	700	700	30,000		26	51	89	77	180	21	120	120			120 J					66			82
Isopropylbenzene (Cumene)		280	NA		11	15	28	16	15	2.5	10	11			R					6.6		3.0	12
Naphthalene		20	6,000		40	170	190	110	160	120	190	230			87 J					140		58	67
Styrene	100	100	900												R								
Toluene	1,000	1,000	6,000			8.8		2.9	470	93	390	440			510 J					170			13
Xylene (m,p-) ¥	10,000	10,000	6,000		4.0	200	99	120	520	140 J	420 J	480 J			320 J					150 J			46
Xylene (o-) ¥	10,000	10,000	6,000		61	130	6.0	87	320	97 J	300 J	330 J			240 J					150 J		46	79
Butylbenzene (n-) † &		50			5.0										R								4.0 J
Butylbenzene (sec-) † &		50			6.0	15	21	9.0	9.3	3.6	8.5	9.2			R					4.2		2.0	5.0
Butylbenzene (tert-) † &		50													R								
Isopropyltoluene (p- / 4-) † &		50			4.0	15	13	8.8	5.8	2.6	6.0 J	7.1			R					3.7			
Propylbenzene (n-) † &		50			18	23	44	22	38	5.6	26	27			30 J					16			11
Trimethylbenzene (1,2,4-) † &		50			98	330	140	100	350	140	260	290			260 J					160		46	130
Trimethylbenzene (1,3,5-) † &		50				150	72	68	150	72	100	120			100 J					67			14
Total Alkylbenzenes † &		50			131	533	290	207.8	553.1	223.8	400.5	453.3			390					250.9		48	164
Total AVOCs					273	1,111.7	704	629.7	2,264.1	722.3	1,875.5	2,113.3			1,787					984.5		182	501
BT / BTEX					ND / 91	0.032	0.010	0.040	0.34	0.31	0.34	0.34			0.48					0.38		0.37	0.20
BT / Total AVOCs					ND / 273	0.011	0.0028	0.019	0.23	0.16	0.23	0.23			0.35					0.22		0.15	0.10
BTEX / Total AVOCs					0.33	0.35	0.28	0.47	0.68	0.52	0.68	0.67			0.73					0.60		0.40	0.51
BXTMB / Total AVOCs					0.58	0.42	0.21	0.31	0.32	0.36	0.32	0.32			0.35					0.37		0.65	0.49
Chlorobenzene		100	1,000												R								
Chloroethane						R		R	R	12				R						230			18
Chloromethane †		3																					
Chlorotoluene (2- / o-) * †		100													R								
Chlorotoluene (4- / p-) * †		100													R								
Dichlorobenzene (1,2- / o-)	600	600	10,000						19	8.1	12	14			10 J					14		3.0	8.0
Dichlorobenzene (1,3- / m-)		600	10,000												R								
Dichlorobenzene (1,4- / p-)	75	75	30,000							1.3 J					R					3.2 J			
Dichloroethane (1,1-)		81	9,000						55	150	470	510			37		6.0	6.0		120		14	110
Dichloroethane (1,2-)	5	5	20						6.9	12	5.9 J	6.6 J			18 J							7.0	
Dichloroethene (1,1-)	7	7	1																			5.0	
Dichloroethene (cis-1,2-)	70	70	NA		R			1.2 J	110	120	190	210	R		1,400	R	R	R	R	5.6		390 J	320 J
Dichloroethene (trans-1,2-)	100	100	NA																				20
Methylene Chloride (Dichloromethane)	5	5	50,000							15					12 J								
Tetrachloroethane (1,1,2,2-)		0.17	20																				
Tetrachloroethene	5	5	3,000							1.3 J							15	15	8.0			14	
Trichlorobenzene (1,2,3-)															R								
Trichlorobenzene (1,2,4-)	70	70	600												R								
Trichloroethane (1,1,1-)	200	200	4,000						39	45	240	270			400		9.0	9.0		6.9		70	79
Trichloroethene £	5	5	300			R		R	R	1.5 J				R	12 J		2.0	2.0				17	8.0
Vinyl Chloride £	2	2	2						16	8.5										2.8			120
Total CVOCs								1.2	245.9	374.7	917.9	1,010.6			1,889		32	32	8.0	382.5		520	683
TCE*/TCA* (molar ratio)								1.2 / ND	1.6	0.85	0.30	0.30			4.3		0.12	0.12		2.9		5.8	3.4
TCE/TCE$_B$ (molar ratio)								< 1.2 ‡	< 0.011 ‡	0.0070	< 0.026	< 0.023			0.0060		2.0 / ND	2.0 / ND		< 0.0070		0.032	0.011
TCA/TCA$_B$ (molar ratio)									0.53	0.22	0.38	0.39			8.0		1.1	1.1		0.043		2.7	0.53
Acetone		700	50,000							58 J	R	R								R			
Bromobenzene															R								
Bromochloromethane																							
Butanone (2-) (MEK)		170	50,000	R			R			25			R						R	17			
Diethyl Ether (Ethyl Ether)																							
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)		350	50,000							32					62 J								
Methyl Tert-Butyl Ether (MTBE)		13	50,000	3.0				3.4		11													
Tetrahydrofuran †		154			R											R	R	R				R	
Total VOCs				3.0	273	1,111.7	704	634.3	2,510	1,223	2,793.4	3,123.9			3,738		32	32	8.0	1,384		702	1,184

TABLE 14C
Summary of Groundwater Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L			Concentrations in µg/L																			
	Risk Threshold			AE-18D	AE-20	AE-21	AE-21	AE-22	AE-22 Dup.	AE-22	BR-25	BR-28	MW-4	RFW-1	RFW-2	SH-1I	SH-1D	SH-2S	SH-2I	SH-2D	SH-3S	SH-3I	SH-3D
	Screening Levels			9/30/1997	9/25/1997	9/25/1997	7/23/1998	9/24/1997	9/24/1997	7/24/1998	4/1/1998	4/1/1998	10/1/1997	10/9/1997	10/9/1997	9/22/1997	9/23/1997	9/29/1997	10/16/1997	10/7/1997	9/23/1997	9/24/1997	9/25/1997
	MCL	NHGW-1	NHGW-2	BW212	BW211	BW211	BW230	BW211	BW211	BW230	BW223	BW223	BW212	BW215	BW215	BW210	BW211	BW212	BW215	BW214	BW211	BW211	BW211
Benzene	5	5	2,000								170	240							58				
Ethylbenzene	700	700	30,000								110	490											
Isopropylbenzene (Cumene)		280	NA									19 J							7.0				
Naphthalene		20	6,000								76	83											
Styrene	100	100	900																				
Toluene	1,000	1,000	6,000								510	480											
Xylene (m,p-) ¥	10,000	10,000	6,000								330 J	660 J											
Xylene (o-) ¥	10,000	10,000	6,000								230 J	330 J							44				
Butylbenzene (n-) † &		50																					
Butylbenzene (sec-) † &		50																					
Butylbenzene (tert-) † &		50																					
Isopropyltoluene (p- / 4-) † &		50																					
Propylbenzene (n-) † &		50									20	26							9.0				
Trimethylbenzene (1,2,4-) † &		50									200	240							110				
Trimethylbenzene (1,3,5-) † &		50									91	130											
Total Alkylbenzenes † &		50									311	396							119				
Total AVOCs											1,737	2,698							228				
BT / BTEX											0.50	0.33							0.57				
BT / Total AVOCs											0.39	0.27							0.25				
BTEX / Total AVOCs											0.78	0.82							0.45				
BXTMB / Total AVOCs											0.35	0.30							0.93				
Chlorobenzene		100	1,000																				
Chloroethane							R			R	100	71											
Chloromethane †		3																					
Chlorotoluene (2- / o-) * †		100																					
Chlorotoluene (4- / p-) * †		100																					
Dichlorobenzene (1,2- / o-)	600	600	10,000								15 J	13 J											
Dichlorobenzene (1,3- / m-)		600	10,000																				
Dichlorobenzene (1,4- / p-)	75	75	30,000																				
Dichloroethane (1,1-)		81	9,000								1,100	310							27			5.0	
Dichloroethane (1,2-)	5	5	20																15				
Dichloroethene (1,1-)	7	7	1																12				
Dichloroethene (cis-1,2-)	70	70	NA								1,300	1,700		R	R			15	500 J				25
Dichloroethene (trans-1,2-)	100	100	NA								28	97											
Methylene Chloride (Dichloromethane)	5	5	50,000				500																
Tetrachloroethane (1,1,2,2-)		0.17	20																				
Tetrachloroethene	5	5	3,000															9.0	16			7.0	
Trichlorobenzene (1,2,3-)																			63				
Trichlorobenzene (1,2,4-)	70	70	600																				
Trichloroethane (1,1,1-)	200	200	4,000				1.1 J				390	630						6.0	57			13	
Trichloroethene £	5	5	300				140 J			R		13 J						2.0	79				
Vinyl Chloride £	2	2	2								250	730											
Total CVOCs							641.1				3,183	3,564						32	769			25	25
TCE*/TCA* (molar ratio)							130				1.4	4.0						3.8	7.0			ND / 18	25 / ND
TCE/TCE$_B$ (molar ratio)							140 / ND				< 0.0080	0.0030						0.098	0.12				< 0.059
TCA/TCA$_B$ (molar ratio)							1.1 / ND				0.26	1.5						6.0 / ND	1.1			1.9	
Acetone		700	50,000																	R			
Bromobenzene																							
Bromochloromethane																							
Butanone (2-) (MEK)		170	50,000											R	R	R							
Diethyl Ether (Ethyl Ether)																							
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)		350	50,000																				
Methyl Tert-Butyl Ether (MTBE)		13	50,000																				
Tetrahydrofuran †		154																	R				
Total VOCs							641.1				4,920	6,262						32	997			25	25

TABLE 14C
Summary of Groundwater Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L			Concentrations in µg/L																				
	Risk Threshold			SH-4S	SH-4I	SH-4D	SH-5S	SH-6S	SH-7S	SH-8S	SH-9S	SH-10S	SH-10I	SH-10D	SH-11S	SH-12S	SH-13D	SH-14S	SH-14I	SH-14D	SH-15S	SH-15S Dup.	SH-15I	SH-15D
	Screening Levels			9/23/1997	9/24/1997	9/24/1997	3/31/1998	4/1/1998	3/31/1998	9/19/1997	9/26/1997	4/1/1998	10/13/1997	10/8/1997	9/23/1997	9/29/1997	10/9/1997	10/2/1997	10/2/1997	10/6/1997	10/2/1997	10/2/1997	10/2/1997	9/23/1997
	MCL	NHGW-1	NHGW-2	BW211	BW211	BW211	BW223	BW223	BW223	BW210	BW211	BW223	BW215	BW214	BW211	BW211	BW214	BW213	BW213	BW214	BW213	BW213	BW213	BW210
Benzene	5	5	2,000				59	5.3	1.5 J			6.5							13					
Ethylbenzene	700	700	30,000				58	50	31			47												
Isopropylbenzene (Cumene)		280	NA					6.5	3.7			3.7							3.0					
Naphthalene		20	6,000				74	41	37	8.0		42							7.0					
Styrene	100	100	900																					
Toluene	1,000	1,000	6,000				550	16	38			73							5.0					
Xylene (m,p-) ¥	10,000	10,000	6,000				180 J	110 J	65 J			100 J												
Xylene (o-) ¥	10,000	10,000	6,000				100 J	55 J	68 J	3.0		44 J							4.0					
Butylbenzene (n-) † &		50																						
Butylbenzene (sec-) † &		50						3.8	2.7			3.8												
Butylbenzene (tert-) † &		50																						
Isopropyltoluene (p- / 4-) † &		50						3.7	1.2 J			3.2												
Propylbenzene (n-) † &		50					20 J	13	12			8.2												
Trimethylbenzene (1,2,4-) † &		50		2.0			150	93	120	12		91							3.0					
Trimethylbenzene (1,3,5-) † &		50					50	53	57			50												
Total Alkylbenzenes † &		50		2.0			220	166.5	192.9	12		156.2							3.0					
Total AVOCs				2.0			1241	450.3	437.1	23		472.4							35					
BT / BTEX							0.64	0.090	0.19	ND / 3.0		0.29							0.82					
BT / Total AVOCs				ND / 2.0			0.49	0.047	0.090	ND / 23		0.17							0.51					
BTEX / Total AVOCs				ND / 2.0			0.76	0.52	0.47	0.13		0.57							0.63					
BXTMB / Total AVOCs				1.0			0.25	0.34	0.43	0.65		0.30							0.57					
Chlorobenzene		100	1,000																					
Chloroethane																			2.0					
Chloromethane †		3																						
Chlorotoluene (2- / o-) * †		100																						
Chlorotoluene (4- / p-) * †		100																						
Dichlorobenzene (1,2- / o-)	600	600	10,000					4.7	5.4			1.9 J												
Dichlorobenzene (1,3- / m-)		600	10,000																					
Dichlorobenzene (1,4- / p-)	75	75	30,000					1.1 J	1.3 J															
Dichloroethane (1,1-)		81	9,000	2.0			27	2.1	11	7.0		4.1							19		3.0	3.0		
Dichloroethane (1,2-)	5	5	20				14 J																	
Dichloroethene (1,1-)	7	7	1																					
Dichloroethene (cis-1,2-)	70	70	NA		10		2,200		16	4.0		45	R					22	160					
Dichloroethene (trans-1,2-)	100	100	NA					1.5 J											4.0					
Methylene Chloride (Dichloromethane)	5	5	50,000				26																	
Tetrachloroethane (1,1,2,2-)		0.17	20					1.9 J																
Tetrachloroethene	5	5	3,000					1.2 J	2.0 J	2.0	7.0	8.8							2.0					
Trichlorobenzene (1,2,3-)																								
Trichlorobenzene (1,2,4-)	70	70	600																					
Trichloroethane (1,1,1-)	200	200	4,000				500		48	15		11						6.0	20					
Trichloroethene £	5	5	300				83			14		1.4 J							5.0					
Vinyl Chloride £	2	2	2																84					
Total CVOCs				2.0	10		2,850	12.5	83.7	42	7.0	72.2						28	296		3.0	3.0		
TCE*/TCA* (molar ratio)				ND / 2.0	10 / ND		5.8	0.73	0.35	0.81		3.8						5.0	9.1		ND / 3.0	ND / 3.0		
TCE/TCE$_B$ (molar ratio)					< 0.15		0.028	< 0.98	< 0.092	2.6		0.023						< 0.067	0.012					
TCA/TCA$_B$ (molar ratio)				< 0.74			14	< 0.71	3.2	1.6		2.0						6.0 / ND	0.78		< 0.49	< 0.49		
Acetone		700	50,000						22 J			14 J								R				R
Bromobenzene																								
Bromochloromethane																								
Butanone (2-) (MEK)		170	50,000						R	R			R											R
Diethyl Ether (Ethyl Ether)																								
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)		350	50,000				110		8.8 J															
Methyl Tert-Butyl Ether (MTBE)		13	50,000																					
Tetrahydrofuran †		154																						R
Total VOCs				4.0	10		4,201	462.8	551.6	65	7.0	558.6						28	331		3.0	3.0		

TABLE 14C
Summary of Groundwater Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L			Concentrations in µg/L																				
	Risk Threshold			SH-16S	SH-16I	SH-16D	SH-17I	SH-17D	SH-18D	SH-19S	SH-19S Dup.	SH-19I	SH-19D	SH-20S	SH-20I	SH-20D	SH-21S	SH-21I	SH-21D	SH-22S	SH-22D	SH-22R	SH-23S	SH-23I
	Screening Levels			9/22/1997	9/22/1997	10/8/1997	10/13/1997	10/7/1997	10/8/1997	10/7/1997	10/7/1997	10/8/1997	10/8/1997	9/25/1997	9/25/1997	9/25/1997	9/30/1997	9/30/1997	10/1/1997	9/29/1997	9/29/1997	4/7/1998	9/29/1997	9/29/1997
	MCL	NHGW-1	NHGW-2	BW210	BW210	BW214	BW215	BW214	BW214	BW214	BW214	BW214	BW214	BW211	BW211	BW211	BW212	BW212	BW212	BW212	BW212	BW223	BW212	BW212
Benzene	5	5	2,000																					
Ethylbenzene	700	700	30,000																					
Isopropylbenzene (Cumene)		280	NA																					
Naphthalene		20	6,000																					
Styrene	100	100	900																					
Toluene	1,000	1,000	6,000																					
Xylene (m,p-) ¥	10,000	10,000	6,000																					
Xylene (o-) ¥	10,000	10,000	6,000																					
Butylbenzene (n-) † &		50																						
Butylbenzene (sec-) † &		50																						
Butylbenzene (tert-) † &		50																						
Isopropyltoluene (p- / 4-) † &		50																						
Propylbenzene (n-) † &		50																						
Trimethylbenzene (1,2,4-) † &		50																						
Trimethylbenzene (1,3,5-) † &		50																						
Total Alkylbenzenes † &		50																						
Total AVOCs																								
BT / BTEX																								
BT / Total AVOCs																								
BTEX / Total AVOCs																								
BXTMB / Total AVOCs																								
Chlorobenzene		100	1,000																					
Chloroethane																								
Chloromethane †		3																						
Chlorotoluene (2- / o-) * †		100																						
Chlorotoluene (4- / p-) * †		100																						
Dichlorobenzene (1,2- / o-)	600	600	10,000																					
Dichlorobenzene (1,3- / m-)		600	10,000																					
Dichlorobenzene (1,4- / p-)	75	75	30,000																					
Dichloroethane (1,1-)		81	9,000		8.0																2.0			
Dichloroethane (1,2-)	5	5	20																					
Dichloroethene (1,1-)	7	7	1																					
Dichloroethene (cis-1,2-)	70	70	NA		4.0		R														24			13
Dichloroethene (trans-1,2-)	100	100	NA																					
Methylene Chloride (Dichloromethane)	5	5	50,000																					
Tetrachloroethane (1,1,2,2-)		0.17	20																					
Tetrachloroethene	5	5	3,000	3.0	6.0									2.0										
Trichlorobenzene (1,2,3-)																								
Trichlorobenzene (1,2,4-)	70	70	600																					
Trichloroethane (1,1,1-)	200	200	4,000		8.0																			
Trichloroethene £	5	5	300																					4.0
Vinyl Chloride £	2	2	2																					
Total CVOCs				3.0	26									2.0							26			17
TCE*/TCA* (molar ratio)					0.29																12			17 / ND
TCE/TCE_B (molar ratio)					< 0.37																< 0.061			0.23
TCA/TCA_B (molar ratio)					0.74																< 0.74			
Acetone		700	50,000			R		R	R	R	R	R	R									R		
Bromobenzene																								
Bromochloromethane																								
Butanone (2-) (MEK)		170	50,000	R	R		R																	
Diethyl Ether (Ethyl Ether)																								
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)		350	50,000																					
Methyl Tert-Butyl Ether (MTBE)		13	50,000																				13	2.0
Tetrahydrofuran †		154																						
Total VOCs				3.0	26									2.0							26		13	19

TABLE 14C
Summary of Groundwater Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L			Concentrations in µg/L																			
	Risk Threshold			SH-23I Dup.	SH-23D	SH-24S	SH-24I	SH-24D	SH-25S	SH-25I	SH-25D	SH-26S	SH-27S	SH-27S Dup.	SH-28S	SH-29S	SH-30S	SH-31S	SH-32S	SH-32S	SH-32I	SH-33S	SH-33S
	Screening Levels			9/29/1997	9/29/1997	10/6/1997	10/6/1997	10/9/1997	10/7/1997	10/7/1997	10/10/1997	10/3/1997	9/19/1997	9/19/1997	9/22/1997	9/22/1997	9/29/1997	9/29/1997	10/9/1997	7/23/1998	7/17/1998	10/9/1997	7/24/1998
	MCL	NHGW-1	NHGW-2	BW212	BW212	BW214	BW214	BW214	BW214	BW214	BW214	BW213	BW210	BW210	BW210	BW210	BW212	BW212	BW215	BW230	BW230	BW215	BW230
Benzene	5	5	2,000																				
Ethylbenzene	700	700	30,000																				
Isopropylbenzene (Cumene)		280	NA																				
Naphthalene		20	6,000				4.0																
Styrene	100	100	900																				
Toluene	1,000	1,000	6,000																				
Xylene (m,p-) ¥	10,000	10,000	6,000																				
Xylene (o-) ¥	10,000	10,000	6,000																				
Butylbenzene (n-) † &		50																					
Butylbenzene (sec-) † &		50																					
Butylbenzene (tert-) † &		50																					
Isopropyltoluene (p- / 4-) † &		50																					
Propylbenzene (n-) † &		50																					
Trimethylbenzene (1,2,4-) † &		50					7.0																
Trimethylbenzene (1,3,5-) † &		50					4.0																
Total Alkylbenzenes † &		50					11																
Total AVOCs							15																
BT / BTEX																							
BT / Total AVOCs							ND / 15																
BTEX / Total AVOCs							ND / 15																
BXTMB / Total AVOCs							0.47																
Chlorobenzene		100	1,000																				
Chloroethane																				R	R		R
Chloromethane †		3																					
Chlorotoluene (2- / o-) * †		100																					
Chlorotoluene (4- / p-) * †		100																					
Dichlorobenzene (1,2- / o-)	600	600	10,000																				
Dichlorobenzene (1,3- / m-)		600	10,000																				
Dichlorobenzene (1,4- / p-)	75	75	30,000																				
Dichloroethane (1,1-)		81	9,000									3.0											
Dichloroethane (1,2-)	5	5	20																				
Dichloroethene (1,1-)	7	7	1																				
Dichloroethene (cis-1,2-)	70	70	NA	13	19							3.0							R			R	
Dichloroethene (trans-1,2-)	100	100	NA																				
Methylene Chloride (Dichloromethane)	5	5	50,000																	43			
Tetrachloroethane (1,1,2,2-)		0.17	20																				
Tetrachloroethene	5	5	3,000																				
Trichlorobenzene (1,2,3-)																							
Trichlorobenzene (1,2,4-)	70	70	600																				
Trichloroethane (1,1,1-)	200	200	4,000																				3.6
Trichloroethene £	5	5	300	4.0	4.0															10 J	R		R
Vinyl Chloride £	2	2	2																				
Total CVOCs				17	23							6.0								53			3.6
TCE*/TCA* (molar ratio)				17 / ND	23 / ND							1.0								10			ND / 3.6
TCE/TCE$_B$ (molar ratio)				0.23	0.16							< 0.49								10			
TCA/TCA$_B$ (molar ratio)												< 0.49											3.6 / ND
Acetone		700	50,000			R	R		R	R			R							11			
Bromobenzene																							
Bromochloromethane																							
Butanone (2-) (MEK)		170	50,000									R	R		R	R			R			R	
Diethyl Ether (Ethyl Ether)																							
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)		350	50,000																				
Methyl Tert-Butyl Ether (MTBE)		13	50,000	2.0																			
Tetrahydrofuran †		154											R										
Total VOCs				19	23		15					6.0								64			3.6

TABLE 14C
Summary of Groundwater Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L			Concentrations in µg/L																				
	Risk Threshold			SH-34S	SH-36S	SH-37S	SH-38S	SH-40S	SH-41S	SH-42S	SH-43S	SH-44S	SH-45S	SH-46S	SH-47S	SH-48S	SH-49S	SH-50S	SH-51S	SH-52S	SH-53S	SH-53S	SH-54S	SH-55S
	Screening Levels			10/9/1997	9/18/1997	10/14/1997	9/19/1997	9/18/1997	10/1/1997	9/19/1997	9/18/1997	10/2/1997	9/18/1997	9/30/1997	10/3/1997	10/3/1997	10/6/1997	9/26/1997	9/26/1997	10/6/1997	4/7/1998	7/21/1998	7/21/1998	7/17/1998
	MCL	NHGW-1	NHGW-2	BW215	BW210	BW215	BW210	BW210	BW212	BW210	BW210	BW213	BW210	BW212	BW213	BW213	BW213	BW211	BW211	BW213	BW223	BW230	BW230	BW230
Benzene	5	5	2,000			3.0	10				140	9.0												
Ethylbenzene	700	700	30,000								940	4.0												
Isopropylbenzene (Cumene)		280	NA								39	3.0												
Naphthalene		20	6,000			19	15				170	6.0												
Styrene	100	100	900																					
Toluene	1,000	1,000	6,000								140	3.0												
Xylene (m,p-) ¥	10,000	10,000	6,000			2.0	3.0				1000	4.0												
Xylene (o-) ¥	10,000	10,000	6,000			17	14				680	73												
Butylbenzene (n-) † &		50																						
Butylbenzene (sec-) † &		50									8.0													
Butylbenzene (tert-) † &		50																						
Isopropyltoluene (p- / 4-) † &		50									10													
Propylbenzene (n-) † &		50				2.0					43	2.0												
Trimethylbenzene (1,2,4-) † &		50				25	15				460	27												
Trimethylbenzene (1,3,5-) † &		50				3.0	2.0				200													
Total Alkylbenzenes † &		50				30	17				721	29												
Total AVOCs						71	59				3830	131												
BT / BTEX						0.14	0.37				0.097	0.13												
BT / Total AVOCs						0.042	0.17				0.073	0.092												
BTEX / Total AVOCs						0.31	0.46				0.76	0.71												
BXTMB / Total AVOCs						0.63	0.66				0.33	0.83												
Chlorobenzene		100	1,000																					
Chloroethane											35	5.0										R	R	R
Chloromethane †		3						5.0																
Chlorotoluene (2- / o-) * †		100																						
Chlorotoluene (4- / p-) * †		100																						
Dichlorobenzene (1,2- / o-)	600	600	10,000								22	3.0												
Dichlorobenzene (1,3- / m-)		600	10,000																					
Dichlorobenzene (1,4- / p-)	75	75	30,000																					
Dichloroethane (1,1-)		81	9,000		14	5.0	8.0				140	36				30	3.0			32				
Dichloroethane (1,2-)	5	5	20				10																	
Dichloroethene (1,1-)	7	7	1								8.0	2.0												
Dichloroethene (cis-1,2-)	70	70	NA	R	4.0	10 J	170				2,500	900				52	41			81				
Dichloroethene (trans-1,2-)	100	100	NA								100	36				3.0				3.0				
Methylene Chloride (Dichloromethane)	5	5	50,000				11														1,900	33	1.0 J	
Tetrachloroethane (1,1,2,2-)		0.17	20																					
Tetrachloroethene	5	5	3,000		15	8.0	16	13	25	6.0		3.0									15	2.3		
Trichlorobenzene (1,2,3-)																								
Trichlorobenzene (1,2,4-)	70	70	600																					
Trichloroethane (1,1,1-)	200	200	4,000		10	24	100				560	210				17	13			22	7.0			
Trichloroethene £	5	5	300			7.0	20				5.0	8.0				7.0	3.0			3.0	700	78 J	R	R
Vinyl Chloride £	2	2	2								320	38								2.0				
Total CVOCs					43	54	335	18	25	6.0	3,690	1,241				109	60			143	2,622	113.3	1.0	
TCE*/TCA* (molar ratio)					0.19	0.68	2.3				5.7	5.3				1.4	3.5			1.9	100	78 / ND		
TCE/TCE$_B$ (molar ratio)					< 0.37	0.52	0.087				0.0010	0.0060				0.094	0.054			0.025	700 / ND	78 / ND		
TCA/TCA$_B$ (molar ratio)					0.53	3.6	9.3				2.8	4.1				0.42	3.2			0.51	7.0 / ND			
Acetone		700	50,000								27										R			
Bromobenzene																								
Bromochloromethane																					2.4			
Butanone (2-) (MEK)		170	50,000	R			R				R				R	R	R			R				
Diethyl Ether (Ethyl Ether)																								
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)		350	50,000																					
Methyl Tert-Butyl Ether (MTBE)		13	50,000																					
Tetrahydrofuran †		154																						
Total VOCs					43	125	394	18	25	6.0	7,547	1,372				109	60			143	2,624.4	113.3	1.0	

TABLE 14C
Summary of Groundwater Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L			Concentrations in µg/L															
	Risk Threshold			SH-56S	SH-56S Dup.	SH-57S	SH-58S	WP-3	WP-4	WP-5	WP-6	WP-10	WP-12	WP-14	WP-15	WP-17	WP-17A	WP-18	WS-1
	Screening Levels			7/21/1998	7/21/1998	7/27/1998	7/23/1998	10/6/1997	10/1/1997	10/1/1997	10/3/1997	10/2/1997	10/2/1997	10/3/1997	10/3/1997	9/22/1997	10/6/1997	9/22/1997	4/7/1998
	MCL	NHGW-1	NHGW-2	BW230	BW230	BW230	BW230	BW214	BW213	BW213	BW213	BW213	BW213	BW213	BW213	BW210	BW213	BW210	BW223
Benzene	5	5	2,000												11		7.0		
Ethylbenzene	700	700	30,000																
Isopropylbenzene (Cumene)		280	NA														3.0		
Naphthalene		20	6,000																
Styrene	100	100	900																
Toluene	1,000	1,000	6,000																
Xylene (m,p-) ¥	10,000	10,000	6,000																
Xylene (o-) ¥	10,000	10,000	6,000																
Butylbenzene (n-) † &		50																	
Butylbenzene (sec-) † &		50																	
Butylbenzene (tert-) † &		50																	
Isopropyltoluene (p- / 4-) † &		50																	
Propylbenzene (n-) † &		50																	
Trimethylbenzene (1,2,4-) † &		50																	
Trimethylbenzene (1,3,5-) † &		50																	
Total Alkylbenzenes † &		50																	
Total AVOCs															11		10		
BT / BTEX															1.0		1.0		
BT / Total AVOCs															1.0		0.70		
BTEX / Total AVOCs															1.0		0.70		
BXTMB / Total AVOCs															1.0		0.70		
Chlorobenzene		100	1,000											2.0					
Chloroethane				R	R	R	R							2.0	11				
Chloromethane †		3																	
Chlorotoluene (2- / o-) * †		100																	
Chlorotoluene (4- / p-) * †		100																	
Dichlorobenzene (1,2- / o-)	600	600	10,000														2.0		
Dichlorobenzene (1,3- / m-)		600	10,000																
Dichlorobenzene (1,4- / p-)	75	75	30,000																
Dichloroethane (1,1-)		81	9,000								4.0			12	36		15		
Dichloroethane (1,2-)	5	5	20																
Dichloroethene (1,1-)	7	7	1																
Dichloroethene (cis-1,2-)	70	70	NA								5.0			22	96	18	40		
Dichloroethene (trans-1,2-)	100	100	NA												5.0				
Methylene Chloride (Dichloromethane)	5	5	50,000	59	69	37													
Tetrachloroethane (1,1,2,2-)		0.17	20																
Tetrachloroethene	5	5	3,000	15	18											10	7.0		
Trichlorobenzene (1,2,3-)																			
Trichlorobenzene (1,2,4-)	70	70	600																
Trichloroethane (1,1,1-)	200	200	4,000		5.5 J						3.0			3.0	18	6.0	6.0		
Trichloroethene £	5	5	300	830 J	930 J	56 J	R				3.0				2.0	2.0	7.0		
Vinyl Chloride £	2	2	2								2.0			5.0	46		26		
Total CVOCs				904	1,023	93					17			46	214	36	103		
TCE*/TCA* (molar ratio)				830 / ND	170	56 / ND					1.7			2.4	3.9	4.5	4.5		
TCE/TCE$_B$ (molar ratio)				830 / ND	930 / ND	56 / ND					0.27			< 0.045	0.0080	0.082	0.064		
TCA/TCA$_B$ (molar ratio)					5.5 / ND						0.56			0.19	0.37	6.0 / ND	0.30		
Acetone		700	50,000					R						13		R		R	R
Bromobenzene																			
Bromochloromethane																			
Butanone (2-) (MEK)		170	50,000								R			R	R	R	R	R	
Diethyl Ether (Ethyl Ether)														9.0					
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)		350	50,000																
Methyl Tert-Butyl Ether (MTBE)		13	50,000					120	10						2.0		6.0		
Tetrahydrofuran †		154														R		R	
Total VOCs				904	1,022.5	93		120	10		17			68	227	36	119		

TABLE 14C
Summary of Groundwater Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. and New Hampshire Department of Environmental Services (NHDES) personnel on the dates indicated and belong to the sample delivery groups (SDGs) indicated (e.g., BW210).

2. Analyses were performed by NHDES Laboratory, Concord, New Hampshire, by United States Environmental Protection Agency (USEPA) Method 8260. Analysis for 1,2-dibromo-3-chloropropane and ethylene dibromide by USEPA Method 504.1 was generally performed by NHDES Laboratory on all groundwater samples with no CVOCs detected by USEPA Method 8260. No VOCs were detected by USEPA Method 504.1.

3. Analysis for ethylene glycol by direct injection GC-FID was performed by NHDES Laboratory on groundwater samples from wells AE-12, SH-38S, RFW-1, and RFW-2. No ethylene glycol was detected.

4. Samples from wells AE-10, AE-21, AE-22, SH-32S, SH-33S, and SH-57S which were collected between July 15 and 20, 1998 were resampled on July 23, 24, and 27, 1998 due to methylene chloride from apparent laboratory contamination detected in the associated trip blanks. Only the analytical results from the resampling are presented herein.

5. Refer to Table 15A for results from Lot 51-1-1-OB, Lot 51-1-1-COB, and Lot 32-3-11.

6. All concentrations are presented in micrograms per liter (µg/l) which are equivalent to parts per billion (ppb).

7. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

8. Total concentrations listed (e.g., Total AVOCs) are the sum of the detected concentrations of the relevant analytes.

9. A blank indicates the parameter was not detected.

10. "Dup." indicates the sample is a field duplicate.

11. "MCL" refers to the USEPA maximum contaminant levels (Summer 2000).
"NHGW-1" refers to the New Hampshire Groundwater Category GW-1 standards as defined in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision). This category applies to groundwater as drinking water. These values are equivalent to Ambient Groundwater Quality Standards (AGQSs) as established in NHDES Env-Wm 1403 (February 1999).
"NHGW-2" refers to the New Hampshire Groundwater Category GW-2 standards as defined in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision). This category applies to groundwater as a potential source of indoor air contamination.

12. "*" indicates values for NHGW-1 and NHGW-2 are for chlorotoluene (isomer unspecified).
"†" indicates that source document states NHGW-2 groundwater standards are not currently available for these chemicals.
"NA" indicates source document listes as "not applicable".
"¥" indicates the MCL, NHGW-1, and NHGW-2 are for total xylenes.
"&" indicates that NHDES includes 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, n-propylbenzene, n-butylbenzene, 4-isopropyltoluene, tert-butylbenzene, and sec-butylbenzene as alkylbenzenes. NHDES evaluated the risk posed by alkylbenzenes as a group because of the similar structures of these compounds and the lack of toxicological data for all compounds in this class of chemicals. The total concentration of these compounds is compared to the NHGW-1 standard.

13. "J" indicates an estimated value.
"R" indicates data (non-detects) rejected during validation.
"<" indicates the compound in the numerator was not detected, and the detection limit was used to calculate the ratio.
"ND" indicates none of the relevant compounds were detected, and other value of fraction shown (numerator or denominator) is the concentration detected in µg/l.
"‡" indicates the compound in the numerator was reported by the laboratory as "not detected" and rejected during validation; the detection limit was used to calculate the ratio.

14. "VOCs" are volatile organic compounds.
"AVOCs" are non-chlorinated aromatic volatile organic compounds.
"CVOCs" are chlorinated volatile organic compounds.

15. "BT" indicates the sum of benzene and toluene detected concentrations.
"BTEX" indicates the sum of benzene, ethylbenzene, toluene, o-xylene, and m/p-xylene detected concentrations.
"BXTMB" indicates the sum of benzene, o-xylene, and 1,2,4-trimethylbenzene detected concentrations.
"TCE*" indicates the sum of trichloroethene, chloroethane, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride detected concentrations.
"TCA*" indicates the sum of 1,1,1-trichloroethane, 1,1-dichloroethane, and 1,1-dichloroethene detected concentrations.
"TCE_B" indicates the sum of chloroethane, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride detected concentrations.
"TCA_B" indicates the sum of 1,1-dichloroethane and 1,1-dichloroethene detected concentrations.

16. The CVOC ratios are generally shown as molar ratios, except in the instances where either the numerator or denominator is shown as "ND". In these instances the other value (i.e., denominator or numerator) is presented as the detected concentration in µg/l.

17. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 14D
Summary of Groundwater Data - Semi-Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/l													
	RTSLs			AE-2	AE-10	AE-11D	AE-12	AE-12 Dup.	AE-14	AE-17D	AE-18S	SH-2I	SH-10I	SH-17I
	MCL	NHGW-1	NHGW-2	10/15/1997	10/13/1997	10/16/1997	10/14/1997	10/14/1997	10/14/1997	10/15/1997	10/17/1997	10/16/1997	10/13/1997	10/13/1997
PAHs														
Acenaphthene		420	NA	0.72			0.017	0.017		0.19	0.10	0.23		
Acenaphthylene		420	NA	0.21			0.016	0.017	0.024	0.12	0.078	0.096		
Anthracene		2,100	NA	0.085						0.055				
Fluorene		280	NA	2.4						0.38	0.24	0.25		
Methylnaphthalene (1-)				39			0.44	0.48		12	5.3	15		
Methylnaphthalene (2-)		280	10,000	37			0.44	0.48		19	7.7	26		
Naphthalene		20	6,000	38 J	0.028 J		0.44	0.48		29 J	35	35 J	0.013	
Phenanthrene		210	NA	1.8 J										
Total PAHs				119.215	0.028		1.353	1.474	0.024	60.745	48.418	76.576	0.013	
Other SVOCs														
Dibenzofuran				2.0 J										
Dichlorobenzene (1,2- / o-)	600	600	10,000							2.0 J	5.0	3.0		
Dichlorobenzene (1,4- / p-)	75	75	30,000								1.0 J			
Dimethylphenol (2,4-)		140	NA									2.0		

Notes:
1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) personnel on the dates indicated and belong to sample delivery group (SDG) BW405.
2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, using United States Environmental Protection Agency (USEPA) Method 8270 with selective ion monitoring (SIM) for polynuclear aromatic hydrocarbons (PAHs).
3. All concentrations are shown in micrograms per liter (µg/l) which are equivalent to parts per billion (ppb).
4. Only those parameters detected or rejected in one or more of the samples listed herein are listed.
5. Total PAHs are the sum of the detected concentrations of the individual PAHs.
6. A blank indicates the parameter was not detected.
7. "Dup." indicates the sample is a field duplicate.
8. "MCL" refers to the United States Environmental Protection Agency (USEPA) maximum contaminant levels (Summer 2000).
"NHGW-1" refers to the New Hampshire Groundwater Category GW-1 standards as defined in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998). This category applies to groundwater as drinking water. These values are equivalent to Ambient Groundwater Quality Standards (AGQSs) as established in Env-Wm 1403 (February 1999).
"NHGW-2" refers to the New Hampshire Groundwater Category GW-2 standards as defined in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998). This category applies to groundwater as a potential source of indoor air contamination.
9. "NA" indicates NHDES (1998a) lists as "Not Applicable".
"J" indicates an estimated value.
"RSTLs" are Risk Threshold Screening Levels.
10. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 14E
Summary of Groundwater Data - Petroleum Hydrocarbons
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/l										
	AE-2	AE-10	AE-11D	AE-12	AE-12 Dup.	AE-14	AE-17D	AE-18S	SH-2I	SH-10I	SH-17I
	10/15/1997	10/13/1997	10/16/1997	10/14/1997	10/14/1997	10/14/1997	10/15/1997	10/17/1997	10/16/1997	10/13/1997	10/13/1997
VPH											
C_5-C_8 Aliphatics							490	550	620		
C_9-C_{12} Aliphatics	93						140	120	150 J		
C_9-C_{10} Aromatics	780						260	510	380 J		
Total VPH	873						890	1,180	1,150		
EPH											
C_9-C_{18} Aliphatics	62								33 J		
C_{19}-C_{36} Aliphatics											
C_{10}-C_{22} Aromatics	220								87		
Total EPH	282								120		

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) personnel on the dates indicated and belong to sample delivery group (SDG) BW405.

2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, using Massachusetts Department of Environmental Protection (MADEP) volatile petroleum hydrocarbon (VPH) and extractable petroleum hydrocarbon (EPH) Methods (modified).

3. All concentrations are presented in micrograms per liter (µg/l) which are equivalent to parts per billion (ppb).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. Total concentrations (e.g., Total VPH) are the sum of the detected concentrations of the relevant analytes.

6. A blank indicates the parameter was not detected.

7. "Dup." indicates the sample is a field duplicate.

8. No Risk Threshold Screening Levels were available from the following references:
United States Environmental Protection Agency (USEPA) maximum contaminant levels (MCLs) (Summer 2000).
New Hampshire Groundwater Category GW-1 (NHGW-1) standards as defined in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998). This category applies to groundwater as drinking water. These values are equivalent to Ambient Groundwater Quality Standards (AGQSs) as established in Env-Wm 1403 (February 1999).
New Hampshire Groundwater Category GW-2 (NHGW-2) standards as defined in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998). This category applies to groundwater as a potential source of indoor air contamination.

9. "J" indicates an estimated value.

10. See appendices for field forms and validated analytical data reports for the full list of parameters analyzed.

TABLE 14F
Summary of Groundwater Data - PCBs (Congeners/Homologs)
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L										
	AE-2	AE-10	AE-11D	AE-12	AE-12 Dup.	AE-14	AE-17D	AE-18S	SH-2I	SH-10I	SH-17I
	10/15/1997	10/13/1997	10/16/1997	10/14/1997	10/14/1997	10/14/1997	10/15/1997	10/17/1997	10/16/1997	10/13/1997	10/13/1997
Congeners											
PCB-1				0.0011	0.0013		2.80E-04 J	0.0027	0.0058		
PCB-3								4.90E-04			
PCB-8							8.10E-04	8.40E-04			
PCB-15				7.20E-04	7.20E-04						
PCB-18				3.80E-04 J	3.70E-04 J			4.50E-04 J			
PCB-44				0.0019	0.0020						
PCB-52				0.0022	0.0024						
PCB-66				5.10E-04	5.30E-04						
PCB-87				4.60E-04 J							
PCB-90/101				7.90E-04	8.00E-04						
PCB-118					2.70E-04 J						
PCB-138				2.40E-04 J	2.60E-04 J						
Homologs											
Total monoCB				0.0011	0.0013		2.80E-04 J	0.0032	0.0058		
Total diCB				7.20E-04	0.0011 J		0.0026	0.0019 J	5.90E-04		
Total triCB				0.0015 J	0.0015 J			4.50E-04 J			
Total tetraCB				0.0105 J	0.012 J						
Total pentaCB				0.0033 J	0.0029 J						
Total hexaCB				2.40E-04 J	2.60E-04 J						
Total PCBs				0.01736	0.01906		0.00288	0.00555	0.00639		

Notes:
1. Samples were collected by Sanborn, Head & Associates, Inc. personnel on the dates indicated and belong to the sample delivery group BW504.
2. Analyses were performed by Alta Analytical Laboratory Inc. of El Dorado Hills, California, by United States Environmental Protection Agency (USEPA) Method 1668 (Modified).
3. All concentrations are presented in micrograms per liter (µg/l) which are equivalent to parts per billion (ppb).
4. Only those parameters detected in one or more of the samples presented herein are listed.
5. Total PCBs were calculated by summing the concentrations of detected homologs and congener 209.
6. A blank indicates the parameter was not detected.
7. "Dup." indicates the sample is a field duplicate.
8. The maximum contaminant level (MCL) for total PCBs in drinking water, established by the USEPA (Summer 2000), is 0.5 µg/L
9. The New Hampshire Groundwater Category GW-1 standard for total PCBs is 0.5 µg/L, established in the NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998). This category applies to groundwater as drinking water. These values are equivalent to Ambient Groundwater Quality Standards (AGQSs) as established in Env-Wm 1403 (February 1999).
10. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 14G
Summary of Groundwater Data - Pesticides
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/l													
	RTSLs			AE-2	AE-10	AE-11D	AE-12	AE-12 Dup.	AE-14	AE-17D	AE-18S	SH-2I	SH-10I	SH-17I
	MCL	NHGW-1	NHGW-2	10/15/1997	10/13/1997	10/16/1997	10/14/1997	10/14/1997	10/14/1997	10/15/1997	10/17/1997	10/16/1997	10/13/1997	10/13/1997
Aldrin		0.04	0.5	0.020 J			0.019 J	0.020 J	0.047 J	0.021 J		0.018 J	0.0040 J	0.0020 J
BHC (alpha-) ‡		0.006		0.012 J						0.026 J	0.0095 J	0.014 J		
BHC (beta-) ‡		0.02		0.12 J			0.010 J	0.011 J	0.0073 J	0.10 J	0.0086 J	0.075 J		
BHC (delta-)				0.0051 J			0.0013 J	0.0013 J	0.0012 J		0.0014 J			
BHC (gamma-) (Lindane)	0.2	0.02	NA				0.0037 J	0.0051 J	0.020 J	0.038 J		0.076		
Chlordane (alpha-) †	2	2	NA	0.0070 J					0.0018 J	0.0070 J				
Chlordane (gamma-) †	2	2	NA						0.0054 J	0.0036 J		0.0031 J		
DDT (4,4'-)		0.1	NA	0.053 J						0.022 J		0.024 J		
Dieldrin		0.002	NA	0.047 J			0.0046 J	0.0048 J		0.021 J		0.028 J		
Endosulfan I *		42	NA	0.033 J					0.0016 J	0.027 J	0.0025 J	0.0071 J		
Endosulfan II *		42	NA	0.17 J						0.038 J		0.023 J		
Endosulfan Sulfate				0.041 J						0.0052 J		0.0053 J		
Endrin	2	2	NA	0.020 J						0.010 J		0.014 J		
Endrin Aldehyde				0.036 J			0.0025 J		0.0034 J	0.0036 J	0.0039 J	0.0030 J		
Endrin Ketone										0.0032 J				
Heptachlor	0.4	0.4	NA	0.041 J						0.014 J		0.026 J		
Heptachlor Epoxide	0.2	0.2	NA	0.020 J		0.0010 J	0.0043 J	0.0041 J	0.0029 J	0.0059 J	0.0030 J	0.016 J		0.0012 J
Methoxychlor	40	40	NA	0.084 J			0.011 J						0.029 J	
Total Pesticides				0.7091		0.0010	0.0564	0.0463	0.0906	0.3455	0.0289	0.3325	0.033	0.0032

Notes:
1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) personnel on the dates indicated and belong to sample delivery group (SDG) BW405.
2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, using United States Environmental Protection Agency (USEPA) Method 8080A, modified per the National Oceanic and Atmospheric Administration National Status and Trends Program (NOAA NS&T).
3. All concentrations are shown in micrograms per liter (µg/l) which are equivalent to parts per billion (ppb).
4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.
5. Total pesticides are the sum of the detected concentrations of the individual pesticides.
6. A blank indicates the parameter was not detected.
7. "Dup." indicates the sample is a field duplicate.
8. "MCL" refers to the United States Environmental Protection Agency (USEPA) maximum contaminant levels (Summer 2000).
"NHGW-1" refers to the New Hampshire Groundwater Category GW-1 standards as defined in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998). This category applies to groundwater as drinking water. These values are equivalent to Ambient Groundwater Quality Standards (AGQSs) as established in Env-Wm 1403 (February 1999).
"NHGW-2" refers to the New Hampshire Groundwater Category GW-2 standards as defined in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998). This category applies to groundwater as a potential source of indoor air contamination.
9. "NA" indicates source lists as "Not Applicable."
"†" indicates NHGW-1 and MCL for Chlordane (isomer unspecified).
"‡" indicates source states NHGW-2 standard not currently available.
"*" indicates NHGW-1 and NHGW-2 are for Endosulfan (isomer unspecified).
10. "J" indicates an estimated value.
"RTSLs" are Risk Threshold Screening Levels.
11. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 14H
Summary of Groundwater Data - Metals
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Risk Threshold Screening Levels		Concentrations in µg/L																
			AE-1	AE-2	AE-4	AE-8	AE-9	AE-9 Dup.	AE-10	AE-11S	AE-11D	AE-12	AE-12 Dup.	AE-14	AE-16	AE-17S	AE-17D	AE-18S	AE-18D
			9/17/1997	10/15/1997	9/18/1997	3/31/1998	4/1/1998	4/1/1998	10/13/1997	3/31/1998	10/16/1997	10/14/1997	10/14/1997	10/14/1997	4/1/1998	9/30/1997	10/15/1997	10/17/1997	9/30/1997
	MCL	NHGW-1	BW210	BW215	BW210	BW223	BW223	BW223	BW215	BW223	BW215	BW215	BW215	BW215	BW223	BW212	BW215	BW215	BW212
Antimony ¶	6	6				NA	NA	NA		NA					NA				
Arsenic ‡ ¶	50 (10)	50 (10)			19 J	NA	NA	NA		NA					NA				
Barium	2,000	2,000				NA	NA	NA		NA					NA				
Cadmium ¶	5	5				NA	NA	NA		NA			1.0		NA				
Calcium			6,900	9,000	6,900	26,000	8,000	8,200	1,900	8,500	8,900	4,000	4,000	3,800	54,000	1,900	15,000	11,000	15,000
Chromium (Total) ¶	100	100		25 J		NA	NA	NA		NA					NA				
Copper * ¶	1,000	1,300				NA	NA	NA		NA					NA				
Iron *	300		NA	3,800	NA	41,000 (41,000)	45,000 (45,000)	47,000 (47,000)	440	78,000 (81,000)	770	360	360	78	38,000 (38,000)	NA	870	38,000	NA
Lead # ¶	15	15		R		NA	NA	NA	R	NA	R	R	R	R	NA		R	R	
Magnesium			1,100	1,500	1,300	3,900	1,600	1,600	530	1,900	3,100	1,400	1,300	1,000	5,100	360	3,800	2,200	4,300
Manganese *	50		NA	2,800	NA	6,400 (6,400)	4,900 (4,800)	4,900 (4,900)		2,200 (2,200)	50	610	600		650 (640)	NA	1,600	1,500	NA
Nickel ¶		100		66		NA	NA	NA		NA					NA				
Potassium		35,000	2,900	2,000	3,500	3,700	2,000	2,200	480	1,100 J	2,800	1,000	1,000	1,100	4,400	670 J	4,000	2,300	2,100 J
Selenium ¶	50	50				NA	NA	NA		NA					NA				
Sodium			61,000	13,000	24,000	6,300	5,300	5,600	3,400	12,000	5,600	3,600	3,500	9,200	2,700	1,400	23,000	12,000	7,300

Parameter	Risk Threshold Screening Levels		Concentrations in µg/L																
			AE-20	AE-21	AE-22	AE-22 Dup.	BR-25	BR-28	MW-4	RFW-1	RFW-2	SH-1I	SH-1D	SH-2S	SH-2I	SH-2D	SH-3S	SH-3I	SH-3D
			9/25/1997	9/25/1997	9/24/1997	9/24/1997	4/1/1998	4/1/1998	10/1/1997	10/9/1997	10/9/1997	9/22/1997	9/23/1997	9/29/1997	10/16/1997	10/7/1997	9/23/1997	9/24/1997	9/25/1997
	MCL	NHGW-1	BW211	BW211	BW211	BW211	BW223	BW223	BW212	BW215	BW215	BW210	BW211	BW212	BW215	BW214	BW211	BW211	BW211
Antimony ¶	6	6					NA	NA											
Arsenic ‡ ¶	50 (10)	50 (10)					NA	NA								11			
Barium	2,000	2,000					NA	NA											
Cadmium ¶	5	5					NA	NA											
Calcium			1,900	3,100	3,500	3,600	12,000	12,000	2,600	9,900	30,000	49,000	5,600	7,600	30,000	12,000	2,900	17,000	11,000
Chromium (Total) ¶	100	100					NA	NA									64		
Copper * ¶	1,000	1,300					NA	NA											
Iron *	300		NA	NA	NA	NA	92,000 (92,000)	79,000 (76,000)	NA	NA	NA	NA	NA	NA	11,000	NA	NA	NA	NA
Lead # ¶	15	15					NA	NA		R	R				R				
Magnesium			490	440	710	710	4,500	2,600	790	1,700	5,900	10,000	3,200	1,200	6,500	2,800	530	4,400	4,300
Manganese *	50		NA	NA	NA	NA	3,700 (3,900)	3,200 (3,100)	NA	NA	NA	NA	NA	NA	2,900	NA	NA	NA	NA
Nickel ¶		100					NA	NA			57								
Potassium		35,000	550 J	860	2,100	2,100	2,200	2,000	1,200 J	5,100	4,000	5,900	2,500	1,400 J	6,000	3,000 J	470 J	3,500	5,400
Selenium ¶	50	50					NA	NA											
Sodium							13,000	17,000	2,800	110,000	88,000	69,000		5,400	17,000	17,000			

Parameter	Risk Threshold Screening Levels		Concentrations in µg/L																
			SH-4S	SH-4I	SH-4D	SH-5S	SH-6S	SH-7S	SH-8S	SH-9S	SH-10S	SH-10I	SH-10D	SH-11S	SH-12S	SH-13D	SH-14S	SH-14I	SH-14D
			9/23/1997	9/24/1997	9/24/1997	3/31/1998	4/1/1998	3/31/1998	9/19/1997	9/26/1997	4/1/1998	10/13/1997	10/8/1997	9/23/1997	9/29/1997	10/9/1997	10/2/1997	10/2/1997	10/6/1997
	MCL	NHGW-1	BW211	BW211	BW211	BW223	BW223	BW223	BW210	BW211	BW223	BW215	BW214	BW211	BW211	BW214	BW213	BW213	BW214
Antimony ¶	6	6				NA	NA	NA			NA								
Arsenic ‡ ¶	50 (10)	50 (10)				NA	NA	NA			NA		11					19 J	
Barium	2,000	2,000				NA	NA	NA			NA								
Cadmium ¶	5	5				NA	NA	NA			NA								
Calcium			5,500	22,000	14,000	17,000	17,000	6,100	7,000	13,000	7,200	8,900	8,400	2,600	2,200	12,000	3,200	12,000	120,000
Chromium (Total) ¶	100	100				NA	NA	NA			NA					47			
Copper * ¶	1,000	1,300				NA	NA	NA			NA								
Iron *	300		NA	NA	NA	68,000 (63,000)	110,000 (110,000)	59,000 (56,000)	NA	NA	55,000 (54,000)	140	NA	NA	NA	NA	NA	NA	NA
Lead # ¶	15	15				NA	NA	NA			NA	R							
Magnesium			1,800	7,000 J	4,200	2,700	4,000	1,400	1,900	3,300	1,500	2,400	2,700	440	380	7,600 J	570	3,400	28,000
Manganese *	50		NA	NA	NA	3,400 (3,200)	4,100 (4,000)	1,100 (1,000)	NA	NA	960 (940)	70	NA	NA	NA	NA	NA	NA	NA
Nickel ¶		100				NA	NA	NA			NA								
Potassium		35,000	5,700	5,400	3,200	1,000 J	5,700	1,900	1,300	950	1,200	2,600	2,800 J	410 J	930	7,200 J	920	3,200	5,400 J
Selenium ¶	50	50				NA	NA	NA			NA						11 J		20 J
Sodium						11,000	4,700	5,100	14,000		2,800	7,800	14,000		72,000	36,000			130,000

TABLE 14H
Summary of Groundwater Data - Metals
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Risk Threshold Screening Levels		Concentrations in µg/L																
			SH-15S	SH-15S Dup.	SH-15I	SH-15D	SH-16S	SH-16I	SH-16D	SH-17I	SH-17D	SH-18D	SH-19S	SH-19S Dup.	SH-19I	SH-19D	SH-20S	SH-20I	SH-20D
			10/2/1997	10/2/1997	10/2/1997	9/23/1997	9/22/1997	9/22/1997	10/8/1997	10/13/1997	10/7/1997	10/8/1997	10/7/1997	10/7/1997	10/8/1997	10/8/1997	9/25/1997	9/25/1997	9/25/1997
	MCL	NHGW-1	BW213	BW213	BW213	BW210	BW210	BW210	BW214	BW215	BW214	BW214	BW214	BW214	BW214	BW214	BW211	BW211	BW211
Antimony ¶	6	6																	
Arsenic ‡ ¶	50 (10)	50 (10)							26										
Barium	2,000	2,000																	
Cadmium ¶	5	5																	
Calcium			15,000	15,000	22,000	23,000	10,000	23,000	9,800	16,000	5,800	6,600	10,000	11,000	14,000	10,000	10,000	19,000	19,000
Chromium (Total) ¶	100	100							63		23								
Copper * ¶	1,000	1,300																	
Iron *	300		NA	NA	NA	NA	NA	NA	NA	1,500	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead # ¶	15	15								R									
Magnesium			3,500	3,600	5,300	7,600	2,400	4,700	4,000	5,700	4,200	2,800	2,300	2,500	2,900	2,600	2,500	4,300	4,100
Manganese *	50		NA	NA	NA	NA	NA	NA	NA	260	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel ¶		100							42										
Potassium		35,000	2,300	2,300	2,400	3,200	1,300	3,500	3,600 J	4,200	4,800 J	1,700 J	1,700 J	1,800 J	2,200 J	2,100 J	2,000	3,000	2,600
Selenium ¶	50	50																	
Sodium						30,000	7,300	33,000	24,000	8,100	19,000	8,500	65,000	66,000	11,000	11,000	56,000		

Parameter	Risk Threshold Screening Levels		Concentrations in µg/L																
			SH-21S	SH-21I	SH-21D	SH-22S	SH-22D	SH-22R	SH-23S	SH-23I	SH-23I Dup.	SH-23D	SH-24S	SH-24I	SH-24D	SH-25S	SH-25I	SH-25D	SH-26S
			9/30/1997	9/30/1997	10/1/1997	9/29/1997	9/29/1997	4/7/1998	9/29/1997	9/29/1997	9/29/1997	9/29/1997	10/6/1997	10/6/1997	10/9/1997	10/7/1997	10/7/1997	10/10/1997	10/3/1997
	MCL	NHGW-1	BW212	BW212	BW212	BW212	BW212	BW223	BW212	BW212	BW212	BW212	BW214	BW214	BW214	BW214	BW214	BW214	BW213
Antimony ¶	6	6																	
Arsenic ‡ ¶	50 (10)	50 (10)						11							15				
Barium	2,000	2,000				240							470						
Cadmium ¶	5	5																	
Calcium			1,500	7,100	14,000	13,000	40,000	37,000	41,000	31,000	32,000	16,000	5,200	9,600	73,000	3,700	11,000	12,000	27,000
Chromium (Total) ¶	100	100													68			37	
Copper * ¶	1,000	1,300																	
Iron *	300		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead # ¶	15	15																	
Magnesium			180	1,800	3,500	2,400	9,800 J	11,000	6,600	8,000 J	8,300	4,200	1,200	1,500	18,000 J	740	1,600	7,200	6,400
Manganese *	50		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel ¶		100													51				
Potassium		35,000	1,200 J	1,700 J	2,600 J	2,700 J	4,000 J	3,400	11,000 J	12,000 J	12,000 J	3,700 J	3,700 J	2,100 J	6,100 J	1,300 J	2,400 J	25,000 J	4,700
Selenium ¶	50	50																	
Sodium			44,000	16,000	16,000	200,000	27,000	21,000	74,000	37,000	38,000	6,300	230,000	42,000	85,000	5,800	6,200	52,000	73,000

Parameter	Risk Threshold Screening Levels		Concentrations in µg/L																
			SH-27S	SH-27S Dup.	SH-28S	SH-29S	SH-30S	SH-31S	SH-32S	SH-33S	SH-34S	SH-36S	SH-37S	SH-38S	SH-40S	SH-41S	SH-42S	SH-43S	SH-44S
			9/19/1997	9/19/1997	9/22/1997	9/22/1997	9/29/1997	9/29/1997	10/9/1997	10/9/1997	10/9/1997	9/18/1997	10/14/1997	9/19/1997	9/18/1997	10/1/1997	9/19/1997	9/18/1997	10/2/1997
	MCL	NHGW-1	BW210	BW210	BW210	BW210	BW212	BW212	BW215	BW215	BW215	BW210	BW215	BW210	BW210	BW212	BW210	BW210	BW213
Antimony ¶	6	6												7.0					
Arsenic ‡ ¶	50 (10)	50 (10)								12	13							28 J	
Barium	2,000	2,000																	
Cadmium ¶	5	5																	
Calcium			3,200	3,300	5,900	9,400	2,600	2,500	1,700	6,000	7,100	4,600	2,800	5,100	18,000	21,000	28,000	12,000	26,000
Chromium (Total) ¶	100	100																	
Copper * ¶	1,000	1,300			60														
Iron *	300		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead # ¶	15	15							R	R	R		R		11				
Magnesium			500	510	1,400	810	510	590	520	1,500	1,900	1,700	1,400	2,100	4,100	3,800	6,600	2,400	4,700
Manganese *	50		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel ¶		100																	
Potassium		35,000	1,000	1,100	1,500	3,100	1,500 J	510 J	920	1,700	1,500	900	1,000	1,700	2,300	2,000 J	1,700	1,700	2,300
Selenium ¶	50	50																	
Sodium			1,900	1,900	9,200	29,000	2,100	3,300	5,600	17,000	11,000	11,000	7,800	8,800	9,800	10,000	30,000	6,500	

TABLE 14H
Summary of Groundwater Data - Metals
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L											
	Risk Threshold Screening Levels		SH-45S	SH-46S	SH-47S	SH-48S	SH-49S	SH-50S	SH-51S	SH-52S	SH-53S	WS-1
			9/18/1997	9/30/1997	10/3/1997	10/3/1997	10/6/1997	9/26/1997	9/26/1997	10/6/1997	4/7/1998	4/7/1998
	MCL	NHGW-1	BW210	BW212	BW213	BW213	BW213	BW211	BW211	BW213	BW223	BW223
Antimony ¶	6	6										
Arsenic ‡ ¶	50 (10)	50 (10)										
Barium	2,000	2,000										
Cadmium ¶	5	5										
Calcium			3,400	3,300	6,200	22,000	3,400	2,300	3,000	10,000	1,800	4,300
Chromium (Total) ¶	100	100										
Copper * ¶	1,000	1,300										
Iron *	300		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead # ¶	15	15										
Magnesium			640	510	1,200	5,200	740	480	530	2,300	1,100	2,000
Manganese *	50		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel ¶		100										
Potassium		35,000	950	890 J	550	3,600	590	480 J	740	1,900	810	3,200
Selenium ¶	50	50										
Sodium			2,100	1,700		20,000					2,500	24,000

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. and New Hampshire Department of Environmental Services (NHDES) personnel on the dates indicated and belong to the sample delivery groups (SDGs) indicated (e.g., BW210).

2. Analyses were performed by NHDES Laboratory, Concord, New Hampshire, using United States Environmental Protection Agency (USEPA) Methods 6010A, 245.1, and 700-Series.

3. All concentrations are presented in micrograms per liter (µg/l) which are equivalent to parts per billion (ppb).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. Refer to Table 15D for results from Lot 51-1-1-OB and Lot 51-1-1-COB.

6. A blank indicates the parameter was not detected.

7. Concentrations in parentheses are filtered; all others are non-filtered.

8. "Dup." indicates the sample is a field duplicate.

9. "MCL" refers to the USEPA maximum contaminant levels (Summer 2000).
"NHGW-1" refers to the New Hampshire Groundwater Category GW-1 standards as defined in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998). This category applies to groundwater as drinking water. These values are equivalent to Ambient Groundwater Quality Standards (AGQSs) as established in Env-Wm 1403 (February 1999). GW-2 standards have been deemed not applicable or otherwise not established by NHDES for the listed metals.

10. "*" indicates reported as Secondary MCLs.
"NA" indicates sample was not analyzed for this parameter.
"‡" indicates current MCL/NHGW-1 is 50 µg/l; however, 10 µg/l is the proposed MCL/NHGW-1.
"#" indicates MCL value is an Action Level for a treatment technique for lead "at tap".
"¶" indicates priority pollutant metal.

11. "J" indicates an estimated value.
"R" indicates data (non-detects) rejected during validation.

12. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 15A
Summary of Residential Well Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L			Concentrations in µg/L															
	Risk Threshold Screening Levels			Lot 32-2-4	Lot 32-2-5	Lot 32-2-5 Dup.	Lot 32-2-6	Lot 32-2-7	Lot 32-2-9	Lot 32-2-10	Lot 32-2-11	Lot 32-3-2	Lot 32-3-3-T	Lot 32-3-4-R	Lot 32-3-4-T	Lot 32-3-5-T	Lot 32-3-6	Lot 32-3-7	Lot 32-3-8
				9/4/1997	9/4/1997	9/4/1997	9/5/1997	9/3/1997	9/8/1997	9/4/1997	9/4/1997	9/8/1997	9/8/1997	9/8/1997	9/8/1997	9/8/1997	9/5/1997	9/5/1997	9/5/1997
	MCL	NHGW-1	NHGW-2	BW202	BW202	BW202	BW203	BW201	BW204	BW202	BW202	BW204	BW204	BW204	BW204	BW204	BW203	BW203	BW203
Benzene	5	5	2,000											0.52					
Isopropylbenzene (Cumene)		280	NA																
Toluene	1,000	1,000	6,000																
Butylbenzene (sec-) † &		50																	
Propylbenzene (n-) † &		50																	
Total Alkylbenzenes &		50																	
Total AVOCs														0.52					
Chlorobenzene		100	1,000																
Chloroform +	80	6	400							0.52									
Dichloroethane (1,1-)		81	9,000											1.5					
Dichloroethane (1,2-)	5	5	20											1.0					
Dichloroethene (cis-1,2-)	70	70	NA											29					
Dichloropropane (2,2-)																			
Tetrachloroethene	5	5	3,000																
Trichloroethane (1,1,1-)	200	200	4,000																
Trichloroethene £	5	5	300		0.57	0.58								4.1					
Vinyl Chloride £	2	2	2																
Total CVOCs					0.57	0.58				0.52				35.6					
TCE*/TCA* (molar ratio)					0.57 / ND	0.58 / ND								22					
TCE/TCEB (molar ratio)					0.57 / ND	0.58 / ND								0.10					
TCA/TCAB (molar ratio)														<0.25					
Acetone		700	50,000	R	R	R	R	R	R	R	R	R	R		R	R	R	R	R
Butanone (2-) (MEK)		170	50,000	R	R	R	R	R		R	R	R					R	R	R
Dibromo-3-Chloropropane (1,2-) * †	0.2	0.2		R	R	R	R	R		R	R						R	R	R
Dichlorodifluoromethane †		1,000			360	340													
Diethyl Ether (Ethyl Ether)																			
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)		350	50,000																
Methyl Tert-Butyl Ether (MTBE)		13	50,000	1.6 J				2.5		0.73	12 J								
Tetrahydrofuran †		154			R	R			R				R		R	R			
Total VOCs				1.6	360.57	340.58		2.5		1.25	12			36.12					

TABLE 15A
Summary of Residential Well Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L			Concentrations in µg/L															
	Risk Threshold Screening Levels			Lot 32-3-9	Lot 32-3-10-#1	Lot 32-3-10-#2	Lot 32-3-11	Lot 33-7-1	Lot 33-7-2	Lot 33-7-3	Lot 33-7-4	Lot 33-7-6	Lot 33-7-7	Lot 33-7-8	Lot 33-7-9	Lot 33-7-10	Lot 33-7-11	Lot 33-7-12	Lot 33-7-13
				9/5/1997	9/4/1997	9/4/1997	8/21/1997	9/3/1997	9/5/1997	9/5/1997	9/5/1997	9/5/1997	9/5/1997	9/15/1997	9/3/1997	9/4/1997	9/4/1997	9/4/1997	9/3/1997
	MCL	NHGW-1	NHGW-2	BW203	BW202	BW202	No SDG	BW201	BW203	BW203	BW203	BW203	BW203	BW206	BW201	BW202	BW202	BW202	BW201
Benzene	5	5	2,000																
Isopropylbenzene (Cumene)		280	NA				2.3												
Toluene	1,000	1,000	6,000																
Butylbenzene (sec-) † &		50					2.7												
Propylbenzene (n-) † &		50					2.3												
Total Alkylbenzenes &		50					5												
Total AVOCs							7.3												
Chlorobenzene		100	1,000																
Chloroform +	80	6	400		0.77														
Dichloroethane (1,1-)		81	9,000																
Dichloroethane (1,2-)	5	5	20																
Dichloroethene (cis-1,2-)	70	70	NA																
Dichloropropane (2,2-)													R						
Tetrachloroethene	5	5	3,000																
Trichloroethane (1,1,1-)	200	200	4,000																
Trichloroethene £	5	5	300																
Vinyl Chloride £	2	2	2																
Total CVOCs					0.77														
TCE*/TCA* (molar ratio)																			
TCE/TCEB (molar ratio)																			
TCA/TCAB (molar ratio)																			
Acetone		700	50,000	R	R	R		R	R	R	R	R	R	R	R	R	R	R	R
Butanone (2-) (MEK)		170	50,000	R	R	R		R	R	R	R	R	R	R	R	R	R	R	R
Dibromo-3-Chloropropane (1,2-) * †	0.2	0.2		R	R	R		R	R	R	R	R	R	R	R	R	R	R	R
Dichlorodifluoromethane †		1,000																	
Diethyl Ether (Ethyl Ether)						R					R		R					R	
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)		350	50,000											R					
Methyl Tert-Butyl Ether (MTBE)		13	50,000			13 J	5.6												
Tetrahydrofuran †		154			R								R			R	R	R	
Total VOCs					0.77	13	12.9												

TABLE 15A
Summary of Residential Well Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L			Concentrations in µg/L														
	Risk Threshold Screening Levels			Lot 33-7-14	Lot 33-8-13	Lot 33-8-13 Dup.	Lot 33-8-14	Lot 33-8-15	Lot 33-8-16	Lot 33-8-17	Lot 33-8-18	Lot 33-8-19	Lot 33-8-21	Lot 50-2-3	Lot 50-2-4	Lot 50-2-5	Lot 50-2-5 Dup.	Lot 50-2-6
				9/5/1997	9/8/1997	9/8/1997	9/8/1997	9/5/1997	9/4/1997	9/4/1997	9/4/1997	9/4/1997	9/15/1997	9/15/1997	9/3/1997	9/3/1997	9/3/1997	9/3/1997
	MCL	NHGW-1	NHGW-2	BW203	BW204	BW204	BW204	BW203	BW202	BW202	BW202	BW202	BW206	BW206	BW201	BW201	BW201	BW201
Benzene	5	5	2,000															
Isopropylbenzene (Cumene)		280	NA															
Toluene	1,000	1,000	6,000															
Butylbenzene (sec-) † &		50																
Propylbenzene (n-) † &		50																
Total Alkylbenzenes &		50																
Total AVOCs																		
Chlorobenzene		100	1,000															
Chloroform +	80	6	400															
Dichloroethane (1,1-)		81	9,000															
Dichloroethane (1,2-)	5	5	20															
Dichloroethene (cis-1,2-)	70	70	NA		2.2	2.3												
Dichloropropane (2,2-)																		
Tetrachloroethene	5	5	3,000															
Trichloroethane (1,1,1-)	200	200	4,000															
Trichloroethene £	5	5	300															
Vinyl Chloride £	2	2	2															
Total CVOCs					2.2	2.3												
TCE*/TCA* (molar ratio)					2.2 / ND	2.3 / ND												
TCE/TCEB (molar ratio)					<0.17	<0.16												
TCA/TCAB (molar ratio)																		
Acetone		700	50,000	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Butanone (2-) (MEK)		170	50,000	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Dibromo-3-Chloropropane (1,2-) * †	0.2	0.2		R				R	R	R	R	R	R	R	R	R	R	R
Dichlorodifluoromethane †		1,000																
Diethyl Ether (Ethyl Ether)																		R
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)		350	50,000										R	R				
Methyl Tert-Butyl Ether (MTBE)		13	50,000												0.91			
Tetrahydrofuran †		154							R		R	R				R	R	R
Total VOCs					2.2	2.3									0.91			

TABLE 15A
Summary of Residential Well Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L			Concentrations in µg/L												
	Risk Threshold Screening Levels			Lot 50-2-7	Lot 50-2-8	Lot 50-2-8 Dup.	Lot 50-2-9	Lot 51-1-1-BR	Lot 51-1-1-CBR-T1	Lot 51-1-1-CBR-T2	Lot 51-1-1-CBR-R	Lot 51-1-1-OB	Lot 51-1-1-COB	Lot 51-1-3	Lot 51-1-3 Dup.
				9/3/1997	9/5/1997	9/5/1997	9/3/1997	9/8/1997	9/8/1997	9/8/1997	9/8/1997	10/1/1997	10/1/1997	9/16/1997	9/16/1997
	MCL	NHGW-1	NHGW-2	BW201	BW203	BW203	BW201	BW204	BW204	BW204	BW204	BW212	BW212	BW206	BW206
Benzene	5	5	2,000												
Isopropylbenzene (Cumene)		280	NA												
Toluene	1,000	1,000	6,000				0.54								
Butylbenzene (sec-) † &		50													
Propylbenzene (n-) † &		50													
Total Alkylbenzenes &		50													
Total AVOCs							0.54								
Chlorobenzene		100	1,000												
Chloroform +	80	6	400												
Dichloroethane (1,1-)		81	9,000								1.0				
Dichloroethane (1,2-)	5	5	20												
Dichloroethene (cis-1,2-)	70	70	NA					1.1			12	6.0			
Dichloropropane (2,2-)					R										
Tetrachloroethene	5	5	3,000									4.0			
Trichloroethane (1,1,1-)	200	200	4,000									2.0			
Trichloroethene £	5	5	300								1.0				
Vinyl Chloride £	2	2	2								2.1				
Total CVOCs								1.1			16.1	12			
TCE*/TCA* (molar ratio)								1.1 / ND			16	4.1			
TCE/TCEB (molar ratio)								<0.34			0.048	<0.25			
TCA/TCAB (molar ratio)											<0.37	2.0 / ND			
Acetone		700	50,000	R	R	R	R	R	R	R				R	R
Butanone (2-) (MEK)		170	50,000	R	R	R	R							R	R
Dibromo-3-Chloropropane (1,2-) * †	0.2	0.2		R	R	R	R							R	R
Dichlorodifluoromethane †		1,000													
Diethyl Ether (Ethyl Ether)				R	R										
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)		350	50,000											R	R
Methyl Tert-Butyl Ether (MTBE)		13	50,000				7.5						2	0.8	0.79
Tetrahydrofuran †		154		R	R			R	R	R					
Total VOCs							8.04	1.1			16.1	12	2	0.8	0.79

TABLE 15A
Summary of Residential Well Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L			Concentrations in µg/L														
	Risk Threshold Screening Levels			Lot 51-1-4	Lot 51-1-5	Lot 51-1-6	Lot 51-1-6A	Lot 51-1-6B	Lot 51-1-7	Lot 51-1-8	Lot 51-1-8 MS (Dup.)	Lot 51-2-1	Lot 51-2-2	Lot 51-2-3	Lot 51-2-4-#1	Lot 51-2-4-#3	Lot 51-2-10	Lot 51-3-1
				9/5/1997	9/5/1997	9/3/1997	9/4/1997	9/4/1997	9/4/1997	9/8/1997	9/8/1997	9/3/1997	9/3/1997	9/8/1997	9/5/1997	9/5/1997	9/8/1997	9/3/1997
	MCL	NHGW-1	NHGW-2	BW203	BW203	BW201	BW202	BW202	BW202	BW204	BW204	BW201	BW201	BW204	BW203	BW203	BW204	BW201
Benzene	5	5	2,000															
Isopropylbenzene (Cumene)		280	NA															
Toluene	1,000	1,000	6,000															
Butylbenzene (sec-) † &		50																
Propylbenzene (n-) † &		50																
Total Alkylbenzenes &		50																
Total AVOCs																		
Chlorobenzene		100	1,000															
Chloroform +	80	6	400	0.85														
Dichloroethane (1,1-)		81	9,000															
Dichloroethane (1,2-)	5	5	20															
Dichloroethene (cis-1,2-)	70	70	NA							3.2	3.3							
Dichloropropane (2,2-)																		
Tetrachloroethene	5	5	3,000															
Trichloroethane (1,1,1-)	200	200	4,000															
Trichloroethene £	5	5	300															
Vinyl Chloride £	2	2	2															
Total CVOCs				0.85						3.2	3.3							
TCE*/TCA* (molar ratio)										3.2 / ND	3.3 / ND							
TCE/TCEB (molar ratio)										<0.12	<0.11							
TCA/TCAB (molar ratio)																		
Acetone		700	50,000	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Butanone (2-) (MEK)		170	50,000	R	R	R	R	R	R			R	R	R	R	R		R
Dibromo-3-Chloropropane (1,2-) * †	0.2	0.2		R	R	R	R	R	R			R	R		R	R		R
Dichlorodifluoromethane †		1,000																
Diethyl Ether (Ethyl Ether)												R						
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)		350	50,000															
Methyl Tert-Butyl Ether (MTBE)		13	50,000				0.79 J		1.7									
Tetrahydrofuran †		154				R		R		R	R	R	R				R	R
Total VOCs				0.85			0.79		1.7	3.2	3.3							

TABLE 15A
Summary of Residential Well Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L			Concentrations in µg/L					
	Risk Threshold Screening Levels			Lot 51-4-4	Lot 51-4-5	Lot 51-4-6	Lot 51-4-7	Lot 51-5-1	WS-2
				9/3/1997	9/3/1997	9/3/1997	9/16/1997	9/3/1997	9/4/1997
	MCL	NHGW-1	NHGW-2	BW201	BW201	BW201	BW206	BW201	BW202
Benzene	5	5	2,000						
Isopropylbenzene (Cumene)		280	NA						
Toluene	1,000	1,000	6,000					1.3	
Butylbenzene (sec-) † &		50							
Propylbenzene (n-) † &		50							
Total Alkylbenzenes &		50							
Total AVOCs								1.3	
Chlorobenzene		100	1,000					0.84	
Chloroform +	80	6	400						
Dichloroethane (1,1-)		81	9,000						
Dichloroethane (1,2-)	5	5	20						
Dichloroethene (cis-1,2-)	70	70	NA						
Dichloropropane (2,2-)									
Tetrachloroethene	5	5	3,000						
Trichloroethane (1,1,1-)	200	200	4,000						
Trichloroethene £	5	5	300						
Vinyl Chloride £	2	2	2						
Total CVOCs								0.84	
TCE*/TCA* (molar ratio)									
TCE/TCEB (molar ratio)									
TCA/TCAB (molar ratio)									
Acetone		700	50,000	R	R	R	R	R	R
Butanone (2-) (MEK)		170	50,000	R	R	R	R	R	R
Dibromo-3-Chloropropane (1,2-) * †	0.2	0.2		R	R	R	R	R	R
Dichlorodifluoromethane †		1,000							
Diethyl Ether (Ethyl Ether)								4.4	
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)		350	50,000				R		
Methyl Tert-Butyl Ether (MTBE)		13	50,000				1.9		
Tetrahydrofuran †		154		R	R	R		R	R
Total VOCs							1.9	6.54	

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. and New Hampshire Department of Environmental Services (NHDES) personnel on the dates indicated and belong to the sample delivery groups (SDGs) indicated (e.g., BW210). The sample from Lot 32-3-11 was collected by NHDES and New Hampshire Department of Health and Human Services personnel, was not part of an SDG, and was not validated.

2. Analyses were performed by NHDES Laboratory, Concord, New Hampshire, by United States Environmental Protection Agency (USEPA) Method 524. Analysis for 1,2-dibromo-3-chloropropane and ethylene dibromide by USEPA Method 504.1 was performed by NHDES Laboratory on all groundwater samples with no CVOCs detected by USEPA Method 524. No VOCs were detected by USEPA Method 504.1.

3. All concentrations are presented in micrograms per liter (µg/l) which are equivalent to parts per billion (ppb).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. Total concentrations listed (e.g., Total AVOCs) are the sum of the detected concentrations of the relevant analytes.

6. A blank indicates the parameter was not detected.

7. "Dup." indicates the sample is a field duplicate.

8. "MCL" refers to the USEPA maximum contaminant levels (Summer 2000).
"NHGW-1" refers to the New Hampshire Groundwater Category GW-1 standards as defined in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision). This category applies to groundwater as drinking water. These values are equivalent to Ambient Groundwater Quality Standards (AGQSs) as established in Env-Wm 1403 (February 1999).
"NHGW-2" refers to the New Hampshire Groundwater Category GW-2 standards as defined in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998, with May 2000 MTBE revision). This category applies to groundwater as a potential source of indoor air contamination.

9. "†" indicates that source states that NHGW-2 groundwater standards are not currently available for these chemicals.
"NA" indicates source lists as "not applicable".
"+" indicates MCL given is noted as "1998 Final Rule for Disinfectants and Disinfection By-products: The total for all trihalomethanes is 0.08 mg/L." NHGW-1 for THMs is 6 µg/l.
"*" indicates values for MCL, NHGW-1, and NHGW-2 are for dibromochloropropane (isomer unspecified).
"&" indicates that NHDES includes 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, n-propylbenzene, n-butylbenzene, 4-isopropyltoluene, tert-butylbenzene, and sec-butylbenzene as alkylbenzenes. NHDES evaluated the risk posed by alkylbenzenes as a group because of the similar structures of these compounds and the lack of toxicological data for all compounds in this class of chemicals. The total concentration of these compounds is compared to the NHGW-1 standard.

10. "J" indicates an estimated value.
"R" indicates data (non-detects) rejected during validation.

11. "VOCs" are volatile organic compounds.
"AVOCs" are non-chlorinated aromatic volatile organic compounds.
"CVOCs" are chlorinated volatile organic compounds.

12. Wells 51-1-1-OB and 51-1-1-COB are inactive. Well 32-3-11 is used for non-potable purposes. Water supplies for lots 32-3-3, 32-3-4, and 32-3-5 (provided by a common well located on lot 32-3-4), and 51-1-1-CBR (condominium bedrock well) receive treatment prior to use. Analytical results for both raw untreated water (designated with "R") and treated water (designated with "T") are presented.

13. See appendices for validated analytical data reports and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 15B
Summary of Residential Well Data - Polynuclear Aromatic Hydrocarbons and Pesticides
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L			Concentrations in µg/L							
	RTSLs			Lot 32-3-4-R	Lot 32-3-4-R Dup.	Lot 33-8-13	Lot 51-1-1-CBR-R	Lot 51-1-1-BR	Lot 51-1-1-COB	Lot 51-1-1-OB	Lot 51-1-8
	MCL	NHGW-1	NHGW-2	4/2/1998	4/2/1998	4/2/1998	4/2/1998	4/2/1998	4/2/1998	4/2/1998	4/2/1998
PAHs											
Benzo[k]fluoranthene		0.5	NA						0.013		
Naphthalene		20	6,000				0.024	0.011			
Phenanthrene		210	NA				0.012				0.011
Pesticides											
BHC (delta-)										0.0019 J	
Heptachlor	0.4	0.4	NA		0.0017 J		0.0013 J			0.0027 J	0.0027

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. personnel on the dates indicated and belong to sample delivery group (SDG) BW411.
2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, using the following methods:
   Polynuclear Aromatic Hydrocarbons (PAHs): United States Environmental Protection Agency (USEPA) Method 8270 with selective ion monitoring (SIM)
   Pesticides: USEPA Method 8080A, modified per the National Oceanic and Atmospheric Administration National Status and Trends Program (NOAA NS&T).
3. All concentrations are presented in micrograms per liter (µg/L) which are equivalent to parts per billion (ppb).
4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.
5. A blank indicates the parameter was not detected.
6. Location names ending in "R" are samples taken prior to treatment systems.
   Sample Lot 51-1-1-BR was taken from the bedrock well located at the residence located on Lot 51-1-1.
   Sample Lot 51-1-1-CBR-R was taken from the bedrock well, prior to treatment, located at the condominium located on Lot 51-1-1.
   Sample Lot 51-1-1-COB was taken from the inactive overburden well located at the condominium located on Lot 51-1-1.
   Sample Lot 51-1-1-OB was taken from the inactive overburden well located at the residence located on Lot 51-1-1.
7. "Dup." indicates the sample is a field duplicate.
8. "MCL" refers to the United States Environmental Protection Agency (USEPA) maximum contaminant levels (Summer 2000).
   "NHGW-1" refers to the New Hampshire Groundwater Category GW-1 standards as defined in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998). This category applies to groundwater as drinking water. These values are equivalent to Ambient Groundwater Quality Standards (AGQSs) as established in Env-Wm 1403 (February 1999).
   "NHGW-2" refers to the New Hampshire Groundwater Category GW-2 standards as defined in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998). This category applies to groundwater as a potential source of indoor air contamination.
9. "J" indicates an estimated value.
   "NA" indicates source lists as not applicable.
   "RTSLs" indicates Risk Threshold Screening Levels.
10. See appendices for field forms, validated analytical data reports and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 15C
Summary of Residential Well Data - PCB (Congeners/Homologs)
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L							
	Lot 32-3-4-R	Lot 32-3-4-R Dup.	Lot 33-8-13	Lot 51-1-1-CBR-R	Lot 51-1-1-BR	Lot 51-1-1-COB	Lot 51-1-1-OB	Lot 51-1-8
	4/2/1998	4/2/1998	4/2/1998	4/2/1998	4/2/1998	4/2/1998	4/2/1998	4/2/1998
Congeners								
PCB-90/101		2.5E-04 J			2.7E-04 J			
PCB-149					3.0E-04 J			
PCB-206			4.1E-04 J					
PCB-209			2.4E-04 J					
Homologs								
Total pentaCB		2.5E-04 J			2.7E-04 J			
Total hexaCB					3.0E-04 J			
Total nonaCB			4.1E-04 J					
Total PCBs		2.5E-04	6.5E-04		5.7E-04			

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. personnel on the dates indicated and belong to sample delivery group (SDG) BW505.
2. Analyses were performed by Alta Analytical Laboratory Inc. of El Dorado Hills, California, using United States Environmental Protection Agency (USEPA) Method 1668 (modified).
3. All concentrations are presented in micrograms per liter (µg/L) which are equivalent to parts per billion (ppb).
4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.
5. Total PCBs were calculated by summing the detected concentrations of homologs and congener 209.
6. Location names ending in "R" are samples taken prior to treatment systems.
   Sample Lot 51-1-1-BR was taken from the bedrock well located at the residence located on Lot 51-1-1.
   Sample Lot 51-1-1-CBR-R was taken from the bedrock well, prior to treatment, located at the condominium located on Lot 51-1-1.
   Sample Lot 51-1-1-COB was taken from the inactive overburden well located at the condominium located on Lot 51-1-1.
   Sample Lot 51-1-1-OB was taken from the inactive overburden well located at the residence located on Lot 51-1-1.
7. A blank indicates the parameter was not detected.
8. "Dup." indicates the sample is a field duplicate.
9. The MCL (USEPA maximum contaminant levels, Summer 2000) and New Hampshire Department of Environmental Services (NHDES) GW-1 Standard (defined in NHDES Contaminated Sites Risk Characterization and Management Policy, January 1998; equivalent to Ambient Groundwater Quality Standards as established in Env-Wm 1403, February 1999) for total PCBs in drinking water/groundwater are 0.5 µg/L.
10. "J" indicates an estimated value.
11. See appendices for field forms, validated analytical data reports and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 15D
Summary of Residential Well Data - Metals
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L													
	Risk Threshold Screening Levels		Lot 32-3-4-R	Lot 32-3-4-R Before Flush	Lot 32-3-4-R After Flush	Lot 32-3-9	Lot 33-8-13	Lot 33-8-13 Dup.	Lot 33-8-13 Before Flush	Lot 33-8-13 After Flush	Lot 51-1-1-CBR-R	Lot 51-1-1-COB	Lot 51-1-1-OB	Lot 51-1-8
			9/8/1997	12/18/1997	12/18/1997	9/5/1997	9/8/1997	9/8/1997	12/18/1997	12/18/1997	9/8/1997	10/1/1997	10/1/1997	9/8/1997
	MCL	NHGW-1	BW205	No SDG	No SDG	BW205	BW205	BW205	No SDG	No SDG	BW205	BW212	BW212	BW205
Arsenic ‡ ¶	50 (10)	50 (10)	6.0 J	NA	NA	NA			NA	NA				
Cadmium ¶	5	5		NA	NA	NA			NA	NA			8.0	
Calcium			24,000 J	NA	NA	NA	19,000 J	19,000 J	NA	NA	39,000 J	10,000	4,600	12,000 J
Copper * ¶	1,000	1,300	54 J	NA	NA	NA	120 J	25 J	NA	NA				32 J
Iron *	300		250	NA	NA	NA	290	270	NA	NA	720	NA	NA	
Lead # ¶	15	15	60 J	6.0		NA	18 J		6.0		4.5 J			
Magnesium			6,400	NA	NA	NA	3,600	3,600	NA	NA	11,000	1,500	710	2,400
Manganese *	50		47	NA	NA	NA	20	20	NA	NA	62	NA	NA	220
Mercury ¶	2	2		NA	NA				NA	NA				
Potassium		35,000	2,200	NA	NA	NA	1,300	1,300	NA	NA	1,100	3,700 J	1,100 J	2,000
Sodium			32,000	NA	NA	NA	28,000	28,000	NA	NA	57,000 J	33,000	4,400	7,600
Zinc † * ¶	5,000			NA	NA	NA	93 J		NA	NA		NA	NA	

Notes:

1. Samples were collected by New Hampshire Department of Environmental Services (NHDES) personnel on the dates indicated and belong to the sample delivery groups (SDGs) indicated (e.g., BW205). Samples Lot 32-3-4-R and Lot 33-8-13 collected on December 18, 1997 were collected to verify that the high lead concentrations in the September 8, 1997 samples were the result of not flushing the pipes thoroughly, and are not part of an SDG and were analyzed for lead only.

2. Analyses were performed by NHDES Laboratory of Concord, New Hampshire, using United States Environmental Protection Agency (USEPA) Methods 245.1, 6010A, and 700-series.

3. All concentrations are presented in micrograms per liter (µg/L) which are equivalent to parts per billion (ppb).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. Location Lot 32-3-9 (collected September 5, 1997) was analyzed for mercury only. No mercury was detected.

6. Location names ending in "R" are samples taken prior to a treatment system.
   Sample Lot 51-1-1-CBR-R was taken from the bedrock well, prior to treatment, located at the condominium located on Lot 51-1-1.
   Sample Lot 51-1-1-COB was taken from the inactive overburden well located at the condominium located on Lot 51-1-1.
   Sample Lot 51-1-1-OB was taken from the inactive overburden well located at the residence located on Lot 51-1-1.

7. A blank indicates the parameter was not detected.

8. "Dup." indicates the sample is a field duplicate.

9. "MCL" refers to the USEPA maximum contaminant levels (Summer 2000).
   "NHGW-1" refers to the New Hampshire Groundwater Category GW-1 standards as defined in NHDES Contaminated Sites Risk Characterization and Management Policy (January 1998). This category applies to groundwater as drinking water. These values are equivalent to Ambient Groundwater Quality Standards (AGQSs) as established in Env-Wm 1403 (February 1999). GW-2 standards have been deemed not applicable or otherwise not established by NHDES for the listed metals.

10. "*" indicates reported as Secondary MCLs.

11. "†" indicates source states NHGW-1 standard is not currently available for this chemical.
    "‡" indicates current MCL/NHGW-1 is 50 µg/l; however, 10 µg/l is the proposed MCL/NHGW-1.
    "#" indicates MCL value is an Action Level for a treatment technique for lead "at tap".
    "¶" indicates priority pollutant metal.

12. "J" indicates an estimated value.
    "NA" indicates not analyzed.

13. See appendices for validated analytical data reports and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 16A
Summary of Surface Water Data - Field Screening Parameters
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Location	Sample Date	Dissolved Oxygen (mg/L)	pH (standard units)	Specific Conductance (uS/cm)	Temperature (ºC)
SW-1	10/6/1997	6.6	6.5	170	24.2
SW-2	10/7/1997	5.1	7.0	391	17.7
SW-4	10/7/1997	3.8	6.4	230	15.3
SW-6	10/7/1997	5.1	6.5	238	16.0
SW-10	10/7/1997	10.4	6.6	271	13.6
SW-11	10/6/1997	3.2	6.4	238	13.9
SW-12	10/6/1997	6.4	6.2	292	13.9
SW-13	10/3/1997	11.0	6.6	277	9.2
SW-14	10/3/1997	7.9	6.3	446	8.8
SW-16	10/3/1997	6.2	6.8	519	9.7
SW-17	10/2/1997	2.1	6.3	475	13.2

Notes:

1. Field screening was completed by Sanborn, Head & Associates, Inc. personnel at the time of sample collection on the dates indicated.

2. Values reported above have been rounded from values presented on Surface Water Quality Field Sampling Summaries.

3. Parameters were measured with an OI AquaCheck Water Analyzer.

4. "mg/L" indicates milligrams per liter and is equivalent to parts per million (ppm).
"uS/cm" indicates microSiemens per centimeter.
"ºC" indicates degrees centigrade.

5. Refer to appendices for Surface Water Quality Field Sampling Summaries for further information.

TABLE 16B
Summary of Surface Water Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L													
	RTSLs		SW-1	SW-2	SW-4	SW-6	SW-10	SW-11	SW-12	SW-13	SW-14	SW-16	SW-16 Dup.	SW-17
	WQC (FCCC)	GLWQI Tier II	10/6/1997	10/7/1997	10/7/1997	10/7/1997	10/7/1997	10/6/1997	10/6/1997	10/3/1997	10/3/1997	10/3/1997	10/3/1997	10/2/1997
Dichloroethane (1,1-)		47										6	6	3
Dichloroethene (cis-1,2-)												11	11	5
Trichloroethane (1,1,1-)		62										2	2	
Vinyl Chloride												3	3	
Total CVOCs												22	22	8
Methyl Tert-Butyl Ether (MTBE)					180	79	60	13	11					
Total VOCs					180	79	60	13	11			22	22	8

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. personnel on the dates indicated and belong to sample delivery group (SDG) BW217.

2. Analyses were performed by New Hampshire Department of Environmental Services (NHDES) Laboratory of Concord, New Hampshire, by United States Environmental Protection Agency (USEPA) Method 8260. Analysis for 1,2-dibromo-3-chloropropane and ethylene dibromide by USEPA Method 504.1 was generally performed by NHDES Laboratory on all surface water samples with no CVOCs detected by USEPA Method 8260. No VOCs were detected by USEPA Method 504.1.

3. All concentrations are presented in micrograms per liter (µg/L) which are equivalent to parts per billion (ppb).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. Total concentrations (e.g., Total CVOCs) are the sum of the detected concentrations of the relevant analytes.

6. A blank indicates the parameter was not detected.

7. "Dup." indicates the sample is a field duplicate.

8. "WQC (FCCC)" refers to Fresh Criterion Continuous Concentration levels presented in "National Recommended Water Quality Criteria - Correction" by the USEPA Office of Water, April 1999; and NHDES Env-Ws 1703.21, adopted December 3, 1999.
"GLWQI Tier II" refers to the Great Lakes Water Quality Initiative Tier II method presented in the USEPA "ECO Update" dated January 1996.

9. "VOCs" are volatile organic compounds.
"CVOCs" are chlorinated volatile organic compounds.
"RTSLs" are Risk Threshold Screening Levels.

10. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 16C
Summary of Surface Water Data - Semi-Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L													
	RTSLs		SW-1	SW-2	SW-4	SW-6	SW-10	SW-11	SW-12	SW-13	SW-14	SW-16	SW-16 Dup.	SW-17
	WQC (FCCC)	GLWQI Tier II	10/6/1997	10/7/1997	10/7/1997	10/7/1997	10/7/1997	10/6/1997	10/6/1997	10/3/1997	10/3/1997	10/3/1997	10/3/1997	10/2/1997
PAHs														
Acenaphthene	520		0.020		0.032									
Acenaphthylene			0.018	0.018	0.17				0.012					
Anthracene			0.020	0.051	0.20			0.016	0.016		0.013			
Benzo[a]anthracene			0.022	0.040	0.39		0.011	0.015	0.030		0.019			
Benzo[a]pyrene		0.014	0.035	0.046	0.44		0.013	0.016	0.032		0.022			
Benzo[b]fluoranthene			0.035	0.047	0.41		0.012	0.016	0.029		0.020	0.010		
Benzo[g,h,i]perylene			0.032	0.044	0.35		0.013	0.014	0.027	0.011	0.019	0.012		
Benzo[k]fluoranthene			0.030	0.039	0.35		0.011	0.013	0.029		0.020			
Chrysene			0.036	0.046	0.42		0.012	0.017	0.030		0.022			
Dibenzo(a,h)anthracene					0.061									
Fluoranthene			0.074	0.084	0.81		0.020	0.033	0.059	0.018	0.037	0.011		0.013
Fluorene		3.9	0.017		0.016									
Indeno[1,2,3-cd]pyrene			0.034	0.049	0.42		0.014	0.015	0.030	0.011	0.021	0.013		
Methylnaphthalene (1-)			0.011											
Methylnaphthalene (2-)			0.026		0.016									
Naphthalene	620	24	0.017		0.022	0.012	0.016					0.039	0.039	0.023
Phenanthrene			0.059	0.042	0.33		0.011	0.022	0.032	0.015	0.020			0.010
Pyrene			0.059	0.065	0.61		0.017	0.027	0.048	0.014	0.032			0.010
Total PAHs			0.545	0.571	5.047	0.012	0.15	0.204	0.374	0.069	0.245	0.085	0.039	0.056
Total EPH					51									
2-Methylnaphthalene + Lighter / Total PAHs			0.099	ND / 0.571	0.0075	1.0	0.11	ND / 0.204	ND / 0.374	ND / 0.069	ND / 0.245	0.46	1.0	0.41
Fluorene + Lighter / Total PAHs			0.20	0.032	0.051	1.0	0.11	ND / 0.204	0.032	ND / 0.069	ND / 0.245	0.46	1.0	0.41
Pyrene + Lighter / Total PAHs			0.59	0.46	0.44	1.0	0.43	0.48	0.45	0.68	0.42	0.59	1.0	1.0
Total PAHs / Total EPH			0.545 / ND	0.571 / ND	0.10	0.012 / ND	0.15 / ND	0.204 / ND	0.374 / ND	0.069 / ND	0.245 / ND	0.085 / ND	0.039 / ND	0.056 / ND
Other SVOCs														
bis(2-Ethylhexyl)phthalate (Di(ethylhexyl)phthalate) †	3	32								1 J				
Pentachlorophenol *	4.05			R	R	R	R							

TABLE 16C
Summary of Surface Water Data - Semi-Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) personnel on the dates indicated and belong to sample delivery group (SDG) BW402.

2. Analyses were performed by Woods Hole Group Environmental Laboratories (WHG) of Raynham, Massachusetts, by United States Environmental Protection Agency (USEPA) Method 8270 with selected ion monitoring (SIM) for the polynuclear aromatic hydrocarbons (PAHs).

3. All concentrations are shown in micrograms per liter (µg/L) which are equivalent to parts per billion (ppb).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. Total concentrations listed (e.g., Total PAHs) are the sum of the detected concentrations of the relevant analytes.

6. A blank indicates the parameter was not detected.

7. "Dup." indicates the sample is a field duplicate.

8. "WQC (FCCC)" refers to Fresh Criterion Continuous Concentration levels presented in "National Recommended Water Quality Criteria - Correction" by the USEPA Office of Water, April 1999; and NHDES Env-Ws 1703.21, adopted December 3, 1999.
"GLWQI Tier II" refers to the Great Lakes Water Quality Initiative Tier II method presented in the USEPA "ECO Update" dated January 1996.

9. "*" indicates FCCC value is pH dependent and a pH of 6.5 is assumed pursuant to NHDES Env-Ws 1703.21.

10. "†" indicates FCCC value presented for total phthalate esters pursuant to NHDES Env-Ws 1703.21.

11. "J" indicates an estimated value
"R" indicates data (non-detects) rejected during validation.
"RTSLs" indicates Risk Threshold Screening Levels.

12. "2-Methylnaphthalene + Lighter / Total PAHs" indicates the ratio of the concentrations of 2-methylnaphthalene, 1-methylnaphthalene, and naphthalene divided by Total PAHs as defined in Note 5.
"Fluorene + Lighter / Total PAHs" indicates the ratio of the concentrations of fluorene, acenaphthene, acenaphthylene, 2-methylnaphthalene, 1-methylnaphthalene, and naphthalene divided by Total PAHs as defined in Note 5.
"Pyrene + Lighter / Total PAHs" indicates the ratio of the concentrations of pyrene, fluoranthene, anthracene, phenanthrene, fluorene, acenaphthene, acenaphthylene, 2-methylnaphthalene, 1-methylnaphthalene, and naphthalene divided by Total PAHs as defined in Note 5.
"Total PAHs / Total EPH" indicates the ratio of Total PAHs as defined in Note 5 divided by Total EPH (see Table 16D).

13. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 16D
Summary of Surface Water Data - Petroleum Hydrocarbons
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L											
	SW-1	SW-2	SW-4	SW-6	SW-10	SW-11	SW-12	SW-13	SW-14	SW-16	SW-16 Dup.	SW-17
	10/6/1997	10/7/1997	10/7/1997	10/7/1997	10/7/1997	10/6/1997	10/6/1997	10/3/1997	10/3/1997	10/3/1997	10/3/1997	10/2/1997
VPH												
C5-C8 Aliphatics			200	98	78					NA		
C9-C12 Aliphatics										NA		
Total VPH			200	98	78					NA		
EPH												
C19-C36 Aliphatics			51									
Total EPH			51									

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) personnel on the dates indicated and belong to sample deliverable group (SDG) BW402.

2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, by Massachusetts Department of Environmental Protection (MADEP) Methods (modified) for volatile petroleum hydrocarbons (VPH) and extractable petroleum hydrocarbons (EPH).

3. All concentrations are presented in micrograms per liter (µg/L) which are equivalent to parts per billion (ppb).

4. Only those parameters detected, rejected, or not analyzed in one or more of the samples presented herein are listed.

5. Total concentrations listed (e.g., Total VPH) are the sum of the detected concentrations of the relevant analytes.

6. A blank indicates the parameter was not detected.

7. "Dup." indicates the sample is a field duplicate.

8. Risk Threshold Screening Levels are currently not available for the above-listed parameters from Fresh Criterion Continuous Concentrations levels presented in "National Recommended Water Quality Criteria - Correction" by the United States Environmental Protection Agency (USEPA) Office of Water, April 1999; and NHDES Env-Ws 1703.21, adopted December 3, 1999; or the Great Lakes Water Quality Initiative Tier II method presented in the USEPA ECO Update dated January 1996.

9. "NA" indicates the sample was not analyzed for this parameter due to laboratory equipment failure.

10. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 16E
Summary of Surface Water Data - Pesticides
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L													
	RTSLs		SW-1	SW-2	SW-4	SW-6	SW-10	SW-11	SW-12	SW-13	SW-14	SW-16	SW-16 Dup.	SW-17
	WQC (FCCC)	GLWQI Tier II	10/6/1997	10/7/1997	10/7/1997	10/7/1997	10/7/1997	10/6/1997	10/6/1997	10/3/1997	10/3/1997	10/3/1997	10/3/1997	10/2/1997
BHC (alpha-)				0.0023 J	0.0018 J		0.0013 J				0.0011 J			
BHC (beta-)			0.0041	0.0030 J			0.0035 J	0.0021 J						
BHC (delta-)			0.0013 J	0.0033 J	0.0068 J		0.0018 J					0.0011 J		
BHC (gamma-) (Lindane)	0.08				0.0058 J	0.0017 J	0.0045 J	0.0033 J	0.0019 J		0.0022 J	0.0018 J		0.0018 J
DDT (4,4'-) ‡	0.001	0.013	0.0028				0.0025 J	0.0022 J	0.0032	0.0022 J			0.0033	
Endosulfan I	0.056	0.051									0.0019 J	0.0012 J		
Endosulfan Sulfate					0.019 J				0.0021 J	0.0037				
Heptachlor Epoxide	0.0038		0.0013 J				0.0015 J	0.0014 J	0.0017 J		0.0011 J			
Total Pesticides			0.0095	0.0086	0.0334	0.0017	0.0151	0.0090	0.0089	0.0059	0.0063	0.0041	0.0033	0.0018

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) personnel on the dates indicated and belong to sample deliverable group (SDG) BW402.

2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, using United States Environmental Protection Agency (USEPA) Method 8080A, modified per the National Oceanic and Atmospheric Administration National Status and Trends Program (NOAA NS&T).

3. All concentrations are shown in micrograms per liter (µg/l) which are equivalent to parts per billion (ppb).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. A blank indicates the parameter was not detected.

6. "Dup." indicates the sample is a field duplicate.

7. Total concentrations listed (e.g., Total Pesticides) are the sum of the detected concentrations of the relevant analytes.

8. "WQC (FCCC)" refers to Fresh Criterion Continuous Concentration levels presented in "National Recommended Water Quality Criteria - Correction" by the USEPA Office of Water, April 1999; and NHDES Env-WS 1703.21, adopted December 3, 1999.
"GLWQI Tier II" refers to the Great Lakes Water Quality Initiative Tier II method presented in the USEPA "ECO Update" dated January 1996.

9. "‡" indicates the GLWQI Tier II value is for DDT (isomer unspecified).

10. "J" indicates an estimated value.
"RTSLs" indicates Risk Threshold Screening Levels.

11. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 16F
Summary of Surface Water Data - Metals
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in µg/L													
	RTSLs		SW-1	SW-2	SW-4	SW-6	SW-10	SW-11	SW-12	SW-13	SW-14	SW-16	SW-16 Dup.	SW-17
	WQC (FCCC)	GLWQI Tier II	10/6/97	10/7/97	10/7/97	10/7/97	10/7/97	10/6/97	10/6/97	10/3/97	10/3/97	10/3/97	10/3/97	10/2/97
Arsenic * ¶ £	150	8.1	24 J					2.8 J	3.8		2.5		2.9 J	
Barium		3.9	100 J	37	22	30	29	28 J	40	14	36	39	50 J	30
Cadmium + ¶ *	0.80		1.1 J											
Calcium			11,000 J	44,000	16,000	16,000	17,000	15,000 J	19,000	9,600	11,000	22,000	23,000 J	20,000
Chromium ** ¶ + *	11		18 J											
Copper + ¶ *	2.7		13 J										19 J	
Iron	1000		19,000 J	1,600	2,000	3,200	3,500	3,200 J	7,600	210	3,800	3,200	4,900 J	1,500
Lead + ¶ *	0.54		52 J	14	4.8 J	5.6 J	8.0 J	10	7.4 J	3.4 J	13	18	21 J	4.8 J
Magnesium			4,000 J	11,000	3,900	3,900	4,100	4,100 J	5,100	2,800	3,300	6,400	6,600 J	5,900
Manganese		80	1,000 J	200	450	650	1,200	370 J	640	620	1,200	660	770 J	570
Mercury ¶ * ‡	0.77		0.11 J	0.0060		0.0060	0.0060	0.0060 J	0.0070		0.018	0.013	0.024 J	0.010
Molybdenum		240				49 J								
Nickel + ¶ *	16.1		36 J											
Potassium			3,800 J	3,900	2,000	2,300	2,500	2,900 J	2,800	2,000	2,200	3,000	3,200 J	2,900
Selenium ¶	5													2.6
Sodium			18,000 J	15,000	20,000	24,000	26,000	24,000 J	25,000	34,000	36,000	61,000	61,000 J	58,000
Vanadium		19	24 J											
Zinc + ¶ *	36.5		110 J	16 J	14 J	12 J	12 J	17 J	16 J		19 J	24 J	37 J	11 J

TABLE 16F
Summary of Surface Water Data - Metals
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) personnel on the dates indicated and belong to sample delivery group (SDG) BW402.

2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, by United States Environmental Protection Agency (USEPA) Methods 6010A, 200 and 7000-Series, and ultra-trace mercury determination by gold amalgamation after Perkin-Elmer Corporation Technical Summaries TSAA-36 and TSAA-49E.

3. All concentrations are shown in micrograms per liter (µg/l) which are equivalent to parts per billion (ppb).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. A blank indicates the parameter was not detected.

6. "Dup." indicates the sample is a field duplicate.

7. "WQC (FCCC)" refers to Fresh Criterion Continuous Concentration levels presented in "National Recommended Water Quality Criteria - Correction" by the USEPA Office of Water, April 1999; and NHDES Env-Ws 1703.21, adopted December 3, 1999.
"GLWQI Tier II" refers to the Great Lakes Water Quality Initiative Tier II method presented in the USEPA "ECO Update" dated January 1996.

8. "*" indicates WQC (FCCC) value is expressed as a function of a water effect ratio (WER) (as defined in 40 CFR 131.36(c)) with a value of 1.0.
"**" indicates WQC (FCCC) chromium value presented is for chromium (VI). Chromium (III) value is 24 µg/l and is hardness dependent (25 mg/l $CaCO_3$ assumed pursuant to NHDES Env-Ws 1703.21).
"+" indicates WQC (FCCC) value is hardness dependent; FCCC value is for dissolved concentration, with a hardness of 25 mg/l $CaCO_3$ assumed pursuant to NHDES Env-Ws 1703.21.
"¶" indicates priority pollutant metal.
"£" indicates GLWQI Tier II value is for arsenic (V), and the FCCC value is for arsenic (III).
"‡" indicates if the FCCC value is exceeded more than once in a 3-year period in the ambient water, the edible portion of aquatic species of concern shall be analyzed to determine whether the concentration of methyl mercury exceeds the FDA action level of 1.0 mg/kg.

9. "J" indicates an estimated value.
"RTSLs" indicates Risk Threshold Screening Levels.

10. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 17A
Summary of Sediment Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg				Concentrations in mg/kg																			
	RTSLs				OS-5	OS-5A	OS-5B	OS-5C	OS-6	OS-6A	OS-7	OS-8	OS-8 Dup.	OS-9	OS-10	OS-10	OS-12	OS-13	OS-14	SS-1	SS-1	SS-2	SS-3A	SS-3A Dup.	SS-4
	NOAA ER-L		NOAA ER-M		10/9/1997	5/28/1998	5/28/1998	5/28/1998	10/9/1997	10/9/1997	10/9/1997	10/9/1997	10/9/1997	10/8/1997	10/8/1997	5/29/1998	10/8/1997	10/8/1997	10/8/1997	10/6/1997	5/29/1998	10/7/1997	5/28/1998	5/28/1998	10/8/1997
	(1990)	(1995)	(1990)	(1995)	BW219	BW418	BW418	BW418	BW219	BW219	BW219	BW219	BW219	BW219	BW219	BW418	BW219	BW219	BW219	BW218	BW418	BW218	BW418	BW418	BW218
Benzene							0.074		0.047 J	0.067 J	0.067 J												0.025	0.021	
Ethylbenzene					0.046 J		0.007 J		0.28 J	0.044 J															
Isopropylbenzene (Cumene)					0.043 J		0.028		0.091 J	0.073 J	0.050 J														
Naphthalene	0.34	0.16	2.1	2.1	0.037 J		0.043 J		0.76	0.31 J	0.018 J	0.010 J	0.007 J		R		R		R				0.004 J	0.003 J	
Toluene					0.044 J	0.002 J	0.003 J		0.012 J	0.009 J	0.005 J					0.43							0.006 J	0.008 J	
Xylene (m,p-)					0.057 J				0.098 J	0.015 J	0.007 J														
Xylene (o-)					0.044 J		0.007 J		0.45 J	0.17 J	0.007 J														
Butylbenzene (n-)					0.11 J		0.014 J		0.047	0.027 J	0.011 J	R	R		R		R		R				0.012 J	0.018 J	
Butylbenzene (sec-)					0.092 J		0.009 J		0.045	0.035 J	0.019 J	R	R		R		R		R				0.030	0.033	
Butylbenzene (tert-)							0.004 J		0.016 J	0.010 J	0.006 J	R	R		R		R		R						
Isopropyltoluene (p-)					0.033 J		0.003 J		0.023 J			R	R		R	0.008 J	R		R				0.014 J	0.010 J	
Propylbenzene (n-)					0.093 J		0.007 J		0.11	0.084 J		R	R		R		R		R						
Trimethylbenzene (1,2,4-)					0.21 J				0.67	0.15 J	0.11 J	R	R		R		R		R						
Trimethylbenzene (1,3,5-)					0.068 J							R	R		R		R		R						
Total Alkylbenzenes					0.606		0.037		0.911	0.306	0.146					0.008							0.056	0.061	
Total AVOCs					0.877	0.002	0.199		2.649	0.994	0.30	0.010	0.007			0.438							0.091	0.093	
BT / BTEX					0.23	1.0	0.85		0.067	0.25	0.84					1.0							1.0	1.0	
BT / Total AVOCs					0.05	1.0	0.39		0.022	0.076	0.24	ND / 0.010	ND / 0.007			0.98							0.34	0.31	
BTEX / Total AVOCs					0.22	1.0	0.46		0.33	0.31	0.29	ND / 0.010	ND / 0.007			0.98							0.34	0.31	
Chlorobenzene																		0.014 J							
Chloroethane							0.21		0.026 J	0.007 J	0.021 J														
Chlorotoluene (2- / o-)										0.018 J		R	R		R		R		R							
Chlorotoluene (4- / p-)												R	R		R		R		R							
Dichlorobenzene (1,2- / o-)					0.054 J		0.16 J		0.15	0.20 J	0.057 J	R	R		R		R		R							
Dichlorobenzene (1,3- / m-)							0.012 J		0.014 J	0.012 J		R	R		R		R		R							
Dichlorobenzene (1,4- / p-)					0.025 J		0.062 J		0.049 J	0.039 J	0.010 J	R	R		R		R		R							
Dichloroethane (1,1-)					0.010		0.16			0.18 J															
Dichloroethane (1,2-)											0.005 J														
Dichloroethene (cis-1,2-)							0.005 J				0.067 J		0.006 J												
Dichloroethene (trans-1,2-)																									
Hexachlorobutadiene												R	R		R		R		R						
Methylene Chloride (Dichloromethane)									0.011 J		0.010 J			0.008 J				0.015 J		0.041 EB		0.025 EB			0.016 EB
Tetrachloroethene																									
Trichlorobenzene (1,2,3-)												R	R		R		R		R						
Trichlorobenzene (1,2,4-)												R	R		R		R		R						
Trichloroethane (1,1,1-)											0.008 J														
Trichloroethene							0.006 J				0.016 J														
Trichloropropane (1,2,3-)												R	R		R		R		R						
Vinyl Chloride											0.011 J														
Total CVOCs					0.089		0.615		0.25	0.456	0.205		0.006	0.008				0.029		0.041		0.025			0.016
TCE* / TCA* (molar ratio)					ND / 0.010		2.1		0.026 / ND	0.060	22		0.006 / ND												
TCE / TCE_B (molar ratio)							0.014		<0.13	<0.49	0.10		<0.74												
TCA / TCA_B (molar ratio)					<0.67		<0.074			<0.029	0.008 / ND														
Acetone					0.18	0.24	1.1 J	0.18 TB	0.29 J	0.20 J	0.16 J	0.18 J	0.096 J	0.032 J	0.18 J	1.0 J	0.039 J	0.093 J	0.22 J	0.086 EB	0.20 TB	0.19 EB	0.51 TB	0.47	0.11 EB
Bromobenzene												R	R		R		R		R						
Butanone (2-) (MEK)						0.027 J	0.11 J	0.037 J	0.099 J	0.051 J	0.048 J	0.056 J	0.042 J			0.11 J			0.077 J		0.035 J	0.057	0.078 J	0.076 J	
Carbon Disulfide						0.011	0.007 J									0.027					0.009 J		0.013 J	0.012 J	
Dibromo-3-Chloropropane (1,2-)												R	R		R		R		R						
Diethyl Ether (Ethyl Ether)																			0.031 J						
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)							0.005 J																		
Methyl Tert-Butyl Ether (MTBE)						0.002 J		0.066						0.016 J	0.075 J	0.064							6.5	6.2	0.22
Tetrahydrofuran							0.017 J																		
Trichlorofluoromethane												0.012 J	0.014 J				0.007 J								
Total VOCs					1.146	0.282	2.053	0.283	3.288	1.701	0.713	0.258	0.165	0.056	0.255	1.639	0.046	0.122	0.328	0.127	0.244	0.272	7.192	6.851	0.346

TABLE 17A
Summary of Sediment Data - Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg				Concentrations in mg/kg								
	RTSLs				SS-10	SS-11	SS-12	SS-13	SS-14	SS-16	SS-16 Dup.	SS-16	SS-17
	NOAA ER-L		NOAA ER-M		10/7/1997	10/6/1997	10/6/1997	10/3/1997	10/3/1997	10/3/1997	10/3/1997	5/29/1998	10/2/1997
	(1990)	(1995)	(1990)	(1995)	BW218	BW218	BW218	BW218	BW218	BW218	BW218	BW418	BW218
Benzene										0.015	0.018	0.12	
Ethylbenzene													
Isopropylbenzene (Cumene)										0.043	0.054	0.16	
Naphthalene	0.34	0.16	2.1	2.1			0.006		0.009 J	0.096	0.14	0.17	
Toluene												0.14	
Xylene (m,p-)													
Xylene (o-)												0.033	
Butylbenzene (n-)										0.014	0.019	0.033	
Butylbenzene (sec-)										0.017	0.022	0.036	
Butylbenzene (tert-)													
Isopropyltoluene (p-)										0.019	0.018	0.023 J	
Propylbenzene (n-)													
Trimethylbenzene (1,2,4-)													
Trimethylbenzene (1,3,5-)													
Total Alkylbenzenes										0.050	0.059	0.092	
Total AVOCs							0.006		0.009	0.204	0.271	0.715	
BT / BTEX										1.0	1.0	0.89	
BT / Total AVOCs							ND / 0.006		ND / 0.009	0.074	0.066	0.36	
BTEX / Total AVOCs							ND / 0.006		ND / 0.009	0.074	0.066	0.41	
Chlorobenzene								0.033					
Chloroethane												0.13	
Chlorotoluene (2- / o-)													
Chlorotoluene (4- / p-)													
Dichlorobenzene (1,2- / o-)								0.031		0.046	0.056	0.12	0.011 J
Dichlorobenzene (1,3- / m-)													0.010 J
Dichlorobenzene (1,4- / p-)								0.084				0.026 J	0.011 J
Dichloroethane (1,1-)										0.040	0.049	0.25	0.020
Dichloroethane (1,2-)													
Dichloroethene (cis-1,2-)												0.041 J	0.021
Dichloroethene (trans-1,2-)												0.014 J	
Hexachlorobutadiene													
Methylene Chloride (Dichloromethane)					0.029 EB	0.023 EB	0.008 EB			0.020 EB			0.047 EB
Tetrachloroethene												0.023 J	
Trichlorobenzene (1,2,3-)													
Trichlorobenzene (1,2,4-)													
Trichloroethane (1,1,1-)												0.14	
Trichloroethene												0.010 J	
Trichloropropane (1,2,3-)													
Vinyl Chloride												0.023 J	
Total CVOCs					0.029	0.023	0.008	0.148		0.106	0.105	0.777	0.12
TCE* / TCA* (molar ratio)										ND / 0.040	ND / 0.049	0.85	1.1
TCE / TCE_B (molar ratio)												0.026	<0.32
TCA / TCA_B (molar ratio)										<0.22	<0.20	0.42	<0.33
Acetone						0.060 EB	0.062 EB	0.15 EB	0.33 EB	0.11 EB	0.17 EB	0.54 TB	0.24 EB
Bromobenzene													
Butanone (2-) (MEK)									0.11			0.11 J	0.075
Carbon Disulfide												0.062	
Dibromo-3-Chloropropane (1,2-)													
Diethyl Ether (Ethyl Ether)									0.013				
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)													
Methyl Tert-Butyl Ether (MTBE)						0.017	0.013					0.020 J	
Tetrahydrofuran													
Trichlorofluoromethane													
Total VOCs					0.029	0.10	0.089	0.298	0.462	0.42	0.546	2.224	0.435

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) on the dates indicated and belong to the sample deliverable groups (SDGs) indicated. VOCs were not analyzed for samples collected in October 1999 (SDG BW420).

2. Analyses for all samples in SDGs BW218 and BW219 were performed by New Hampshire Department of Environmental Services (NHDES) Laboratory, Concord, New Hampshire, by United States Environmental Protection Agency (USEPA) Method 8260. Analyses for all samples in SDG BW418 were performed by Woods Hole Group Environmental Laboratories, Raynham, Massachusetts, by USEPA Method 8260.

3. Samples in SDGs BW218 and BW219 were collected using a stainless steel scoop to place the sample into an unpreserved glass jar. Samples in SDG BW418 were collected using Sampling Protocol Method 5035. This method utilizes a plastic syringe to collect the sample and place it into four pre-preserved sample vials and one un-preserved glass jar. Three of the sample vials are preserved with sodium bisulfate, and one is preserved with methanol.

4. All concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

5. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

6. Total concentrations listed (e.g., Total AVOCs) are the sum of the detected concentrations of the relevant analytes.

7. A blank indicates the parameter was not detected.

8. "Dup." indicates the sample is a field duplicate.

9. "NOAA ER-L" or "ER-M (1990)" refers to the National Oceanic and Atmospheric Administration (NOAA) effects range-low (ER-L) or effects range-median (ER-M) threshold concentrations in sediment from "The Potential for Biological Effects of Sediment-Sorbed Contaminants Tested in the National Status and Trends Program" (1990).
"NOAA ER-L" or "ER-M (1995)" refers to NOAA ER-L or ER-M threshold concentrations in sediment from Long et al., 1995, "Incidence of Adverse Biological Effects Within Ranges of Chemical Concentrations in Marine and Estuarine Sediments," Environmental Management, 19(1):81-97.
No values for VOCs in sediment were available from Ontario Ministry of the Environment and Energy, Lowest Effect Levels (1993/1994).

10. "J" indicates an estimated value.
"R" indicates data (non-detects) rejected during validation.
"EB" indicates parameter was detected in the associated aqueous equipment blank.
"TB" indicates parameter was detected in the associated trip blank.
"<" indicates the compound in the numerator was not detected, and the detection limit was used to calculate the ratio.
"ND" indicates none of the relevant compounds were detected, and other value of fraction shown (numerator or denominator) is the concentration detected in mg/kg.

11. "VOCs" are volatile organic compounds.
"AVOCs" are non-chlorinated aromatic volatile organic compounds.
"CVOCs" are chlorinated volatile organic compounds.
"RTSLs" are Risk Threshold Screening Levels.

12. "Total Alkylbenzenes" indicates the sum of 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, n-propylbenzene, n-butylbenzene, 4-isopropyltoluene, tert-butylbenzene, and sec-butylbenzene detected concentrations.
"BT" indicates the sum of benzene and toluene detected concentrations.
"BTEX" indicates the sum of benzene, ethylbenzene, toluene, o-xylene, and m/p-xylene detected concentrations.
"TCE*" indicates the sum of trichloroethene, chloroethane, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride detected concentrations.
"TCA*" indicates the sum of 1,1,1-trichloroethane, 1,1-dichloroethane, and 1,1-dichloroethene detected concentrations.
"TCE_B" indicates the sum of chloroethane, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride detected concentrations.
"TCA_B" indicates the sum of 1,1-dichloroethane and 1,1-dichloroethene detected concentrations.

13. The CVOC ratios are generally shown as molar ratios, except in the instances where either the numerator or denominator is shown as "ND". In these instances, the other value (i.e., denominator or numerator) is presented as the detected concentration in mg/kg.

14. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 17B
Summary of Sediment Data - Semi-Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations mg/kg					Concentrations mg/kg															
	RTSLs					OS-5	OS-5A	OS-5B	OS-5C	OS-6	OS-6A	OS-7	OS-8	OS-8 Dup.	OS-9	OS-10	OSPG-10A	OSPG-10A Dup.	OSPG-10B	OSPG-10C	OS-12
	NOAA ER-L		NOAA ER-M		Ontario	10/9/1997	5/28/1998	5/28/1998	5/28/1998	10/9/1997	10/9/1997	10/9/1997	10/9/1997	10/9/1997	10/8/1997	10/8/1997	10/4/1999	10/4/1999	10/4/1999	10/4/1999	10/8/1997
	1990	1995	1990	1995	LEL	BW404	BW418	BW418	BW418	BW404	BW404	BW404	BW404	BW404	BW404	BW404	BW420	BW420	BW420	BW420	BW404
PAHs																					
Acenaphthene *	0.15	0.016	0.65	0.5		R		0.007		0.012 J	0.009 J	R	R	R	R	R	0.006	0.004			R
Acenaphthylene *		0.044		0.64		R	0.081	0.090	0.048 J	0.035 J	R	R	0.012 J	0.021 J	R	R	0.026	0.021	0.031	0.018	0.027 J
Anthracene *	0.085	0.0853	0.96	1.1	0.22	R	0.077	0.10	0.041 J	0.030 J	R	R	0.011 J	0.020 J	R	R	0.021	0.016	0.024	0.012	0.028 J
Benzo[a]anthracene **	0.23	0.261	1.6	1.6	0.32	R	0.11	0.11	0.058 J	0.044 J	0.009 J	R	0.016 J	0.023 J	0.007 J	0.015 J	0.045	0.031	0.052	0.018	0.050 J
Benzo[a]pyrene **	0.4	0.43	2.5	1.6	0.37	R	0.11	0.13	0.058 J	0.057 J	0.009 J	R	0.018 J	0.029 J	0.007 J	0.015 J	0.045	0.032	0.056	0.030	0.056 J
Benzo[b]fluoranthene						R	0.11	0.16	0.063 J	0.058 J	0.010 J	R	0.022 J	0.028 J	0.008 J	0.016 J	0.052	0.037	0.073	0.037	0.055 J
Benzo[g,h,i]perylene					0.17	R	0.10	0.076	0.051 J	0.045 J	0.007 J	R	0.015 J	0.022 J	0.006 J	0.012 J	0.033	0.024	0.041	0.023	0.040 J
Benzo[k]fluoranthene					0.24	R	0.11	0.15	0.050 J	0.047 J	0.008 J	R	0.014 J	0.032 J	0.006 J	0.012 J	0.040	0.026	0.050	0.029	0.045 J
Chrysene **	0.4	0.384	2.8	2.8	0.34	0.14 J	0.14	0.15	0.078 J	0.073 J	0.012 J	R	0.024 J	0.036 J	0.009 J	0.018 J	0.061	0.042	0.087	0.027	0.060 J
Dibenzo(a,h)anthracene **	0.06	0.0634	0.26	0.26	0.06	R	0.019	0.035	0.011 J	0.012 J	R	R	R	0.010 J	R	R	0.004	0.003 J	0.005	0.003	0.008 J
Fluoranthene **	0.6	0.6	3.6	5.1	0.75	0.12 J	0.23	0.23	0.12 J	0.096 J	0.022 J	0.005 J	0.043 J	0.066 J	0.016 J	0.032 J	0.14	0.10	0.16	0.087	0.12 J
Fluorene *	0.035	0.019	0.64	0.54	0.19	0.10 J		0.007		0.021 J	0.013 J	R	R	R	R	R	0.004	0.003 J	0.004	0.003 J	R
Indeno[1,2,3-cd]pyrene					0.2	R	0.086	0.058	0.043 J	0.042 J	0.008 J	R	0.016 J	0.024 J	0.006 J	0.013 J	0.033	0.024	0.041	0.023	0.048 J
Methylnaphthalene (1-)	NA		NA			0.46		0.013		0.24	0.22	0.007 J	R	R	R	R	NR	NR	NR	NR	R
Methylnaphthalene (2-) *	0.065	0.07	0.67	0.67		0.15 J		0.007		0.14 J	0.016 J	R	R	R	R	R	0.005	0.004 J	0.004	0.003 J	R
Naphthalene *	0.34	0.16	2.1	2.1		R		0.023		0.58 J	0.44 J	0.034 J	R	R	R	R	0.009	0.007	0.006	0.005	0.006 J
Phenanthrene *	0.225	0.24	1.38	1.5	0.56	0.25 JEB	0.098	0.11	0.058 J	0.063 JEB	0.012 JEB	R	0.030 JEB	0.044 JEB	0.010 JEB	0.018 JEB	0.082	0.060	0.090	0.052	0.062 JEB
Pyrene **	0.35	0.665	2.2	2.6	0.49	0.24 J	0.22 J	0.18	0.12 J	0.11 J	0.017 J	0.005 J	0.041 J	0.056 J	0.014 J	0.028 J	0.12	0.083	0.14	0.047	0.099 J
Total PAHs	4	4.022	35	44.792	4	1.46	1.491	1.636	0.799	1.705	0.812	0.051	0.262	0.411	0.089	0.179	0.726	0.517	0.864	0.417	0.704
Total EPH						14,700	26	383	20.1	393	98	107	201	635.7	26	272	92	120	170	100	58
2-Methylnaphthalene + Lighter / Total PAHs						0.42	ND / 1.491	0.026	ND / 0.799	0.56	0.83	0.80	ND / 0.262	ND / 0.411	ND / 0.089	ND / 0.179	0.019	0.021	0.012	0.019	0.0085
Fluorene + Lighter / Total PAHs						0.49	0.054	0.090	0.060	0.60	0.86	0.80	0.046	0.051	ND / 0.089	ND / 0.179	0.069	0.075	0.055	0.070	0.047
Pyrene + Lighter / Total PAHs						0.90	0.47	0.47	0.48	0.78	0.92	1.0	0.52	0.50	0.45	0.44	0.57	0.58	0.53	0.54	0.49
Total PAHs / Total EPH						9.9E-05	0.057	0.0043	0.040	0.0043	0.0083	4.8E-04	0.0013	6.5E-04	0.0034	6.6E-04	0.0079	0.0043	0.0051	0.0042	0.012
Other SVOCs																					
Benzoic Acid							0.10 J	0.29 J		0.23 J	0.10 J	0.048 J	0.78 J	0.11 J	0.31	0.14 J					0.082 J
Benzyl Alcohol								0.033 J													
bis(2-Ethylhexyl)phthalate (Di(ethylhexyl)phthalate)							0.11 JEB	0.71 JEB		0.31											
Butylbenzylphthalate							0.024 J														
Di-n-octylphthalate							0.021 J	R													
Dichlorobenzene (1,2-)								0.059 J		0.18	0.22	0.045 J									
Dichlorobenzene (1,4-)																					
Hexachloroethane						R				R	R	R	R	R	R	R					R
Pentachlorophenol						R				R	R	R	R	R	R	R					R

TABLE 17B
Summary of Sediment Data - Semi-Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations mg/kg					Concentrations mg/kg																
	RTSLs					OS-13	OS-14	SS-1	SS-2	SS-3A	SS-3A Dup.	SSB-3B	SS-4	SSB-8A	SS-10	SSB-10A	SSB-10B	SSB-10C	SS-11	SS-12	SSB-12A	SS-13
	NOAA ER-L		NOAA ER-M		Ontario	10/8/1997	10/8/1997	10/6/1997	10/7/1997	5/28/1998	5/28/1998	10/6/1999	10/8/1997	10/5/1999	10/7/1997	10/5/1999	10/5/1999	10/5/1999	10/6/1997	10/6/1997	10/6/1999	10/3/1997
	1990	1995	1990	1995	LEL	BW404	BW404	BW403	BW403	BW418	BW418	BW420	BW403	BW420	BW403	BW420	BW420	BW420	BW403	BW403	BW420	BW403
PAHs																						
Acenaphthene *	0.15	0.016	0.65	0.5		R	R		0.014 J	0.021	0.021	0.006	0.010 J	0.003		0.002 J	0.005	0.005			0.002 J	
Acenaphthylene *		0.044		0.64		R	R		0.059	0.15	0.13	0.021	0.030	0.014	0.037	0.008	0.028	0.020	0.020	0.014	0.007	
Anthracene *	0.085	0.0853	0.96	1.1	0.22	R	R		0.073	0.19	0.17	0.057	1.6	0.012	0.034	0.006	0.022	0.015	0.026	0.015	0.006	
Benzo[a]anthracene **	0.23	0.261	1.6	1.6	0.32	R	0.014 J		0.17	0.26	0.26	0.10	0.46	0.038	0.073	0.015	0.049	0.024	0.057	0.031	0.016	
Benzo[a]pyrene **	0.4	0.43	2.5	1.6	0.37	R	0.012 J	R	0.23 J	0.27	0.26	0.077	0.28 J	0.032	0.067 J	0.015	0.051	0.030	0.050 J	0.038 J	0.014	R
Benzo[b]fluoranthene						R	0.013 J	0.006 J	0.26 J	0.33	0.31	0.081	0.27 J	0.042	0.069 J	0.017	0.057	0.035	0.045 J	0.041 J	0.016	R
Benzo[g,h,i]perylene					0.17	R	0.009 J	R	0.13 J	0.18	0.17	0.045	0.13 J	0.020	0.043 J	0.010	0.036	0.021	0.032 J	0.026 J	0.010	R
Benzo[k]fluoranthene					0.24	R	0.010 J	0.007 J	0.17 J	0.26	0.27	0.068	0.20 J	0.031	0.053 J	0.013	0.045	0.027	0.042 J	0.029 J	0.015	R
Chrysene **	0.4	0.384	2.8	2.8	0.34	R	0.014 J	0.009 J	0.19	0.28	0.28	0.090	1.5 J	0.047	0.078	0.019	0.066	0.034	0.070	0.040	0.020	
Dibenzo(a,h)anthracene **	0.06	0.0634	0.26	0.26	0.06	R	R	R	0.049 J	0.037	0.035	0.007	0.030 J	0.004	0.019 J	0.002 J	0.006	0.004 J	0.014 J	0.008 J		R
Fluoranthene **	0.6	0.6	3.6	5.1	0.75	0.019 J	0.032 J	0.010 J	0.32	0.62	0.58	0.30	0.93	0.11	0.13	0.041	0.13	0.10	0.076	0.072	0.044	0.012 J
Fluorene *	0.035	0.019	0.64	0.54	0.19	R	R		0.014 J	0.033	0.039	0.010	0.025	0.003		0.002 J	0.004	0.004			0.002 J	
Indeno[1,2,3-cd]pyrene					0.2	R	0.010 J	R	0.14 J	0.15	0.15	0.048	0.17 J	0.021	0.051 J	0.010	0.039	0.023	0.039 J	0.029 J	0.010	R
Methylnaphthalene (1-)	NA		NA			R	R					NR		NR		NR	NR	NR			NR	
Methylnaphthalene (2-) *	0.065	0.07	0.67	0.67		R	R		0.008 J	0.016	0.015	0.003		0.002 J			0.004	0.003 J			0.002 J	
Naphthalene *	0.34	0.16	2.1	2.1		R	R		0.014 J	0.026	0.023	0.005	0.010 J	0.008	0.006 J	0.003	0.007	0.006		0.005 J	0.003 J	
Phenanthrene *	0.225	0.24	1.38	1.5	0.56	R	0.018 JEB	0.007 JEB	0.16 JEB	0.21	0.20	0.12	0.46 JEB	0.041	0.063 JEB	0.025	0.075	0.060	0.044 JEB	0.037 JEB	0.024	
Pyrene **	0.35	0.665	2.2	2.6	0.49	0.016 J	0.027 J	0.010 J	0.26 J	0.49	0.49	0.23	0.60 J	0.10	0.14 J	0.039	0.12	0.068	0.070 J	0.070 J	0.045	
Total PAHs	4	4.022	35	44.792	4	0.035	0.159	0.049	2.261	3.523	3.403	1.268	6.705	0.528	0.863	0.227	0.744	0.479	0.585	0.455	0.236	0.012
Total EPH						125	119	266	57	186	149	100	76	65	62	58		130	90	26	82	23
2-Methylnaphthalene + Lighter / Total PAHs						ND / 0.035	ND / 0.159	ND / 0.049	0.0097	0.012	0.011	0.0063	0.0015	0.019	0.0070	0.013	0.015	0.019	ND / 0.585	0.011	0.021	ND / 0.012
Fluorene + Lighter / Total PAHs						ND / 0.035	ND / 0.159	ND / 0.049	0.048	0.070	0.067	0.035	0.011	0.057	0.050	0.066	0.065	0.079	0.034	0.042	0.068	ND / 0.012
Pyrene + Lighter / Total PAHs						1.0	0.48	0.55	0.41	0.50	0.49	0.59	0.55	0.55	0.48	0.56	0.53	0.59	0.40	0.47	0.57	1.0
Total PAHs / Total EPH						2.8E-04	0.0013	1.8E-04	0.040	0.019	0.023	0.013	0.088	0.0081	0.014	0.0039	0.744 / ND	0.0037	0.0065	0.018	0.0029	5.2E-04
Other SVOCs																						
Benzoic Acid						0.17 J		0.066 J	0.11 J	0.086 J	0.14 J		0.17 J		0.16 J				0.092 J	0.11 J		0.21 J
Benzyl Alcohol																						
bis(2-Ethylhexyl)phthalate (Di(ethylhexyl)phthalate)									0.087 J	0.28 JEB	0.41 JEB		0.56		0.043 J							
Butylbenzylphthalate										0.046 J	0.075 J											
Di-n-octylphthalate											0.12 J											
Dichlorobenzene (1,2-)																						
Dichlorobenzene (1,4-)																						0.26
Hexachloroethane						R	R															
Pentachlorophenol						R	R	R	R				R		R				R	R		R

TABLE 17B
Summary of Sediment Data - Semi-Volatile Organic Compounds
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations mg/kg					Concentrations in mg/kg								
	RTSLs					SS-14	SSB-14A	SS-16	SS-16 Dup.	SSB-16A	SS-17	SSB-19	SSBPG-Sea	SSBPG-McQ
	NOAA ER-L		NOAA ER-M		Ontario	10/3/1997	10/5/1999	10/3/1997	10/3/1997	10/5/1999	10/2/1997	10/6/1999	10/6/1999	10/7/1999
	1990	1995	1990	1995	LEL	BW403	BW420	BW403	BW403	BW420	BW403	BW420	BW420	BW420
PAHs														
Acenaphthene *	0.15	0.016	0.65	0.5			0.002 J	0.011 J	0.018	0.001 J			0.011	
Acenaphthylene *		0.044		0.64		0.050 J	0.008	0.076	0.061	0.004		0.003	0.061	0.004
Anthracene *	0.085	0.0853	0.96	1.1	0.22	0.055 J	0.006	0.072	0.072	0.003		0.002	0.051	0.003
Benzo[a]anthracene **	0.23	0.261	1.6	1.6	0.32	0.074 J	0.013	0.061	0.090	0.007	0.012 J	0.006	0.099	0.007
Benzo[a]pyrene **	0.4	0.43	2.5	1.6	0.37	0.12 J	0.014	0.066 J	0.068 J	0.007	0.013 J	0.006	0.11	0.008
Benzo[b]fluoranthene						0.076 J	0.014	0.15 J	0.15 J	0.008	0.014 J	0.007	0.11	0.009
Benzo[g,h,i]perylene					0.17	0.079 J	0.009	0.043 J	0.049 J	0.005	0.011 J	0.004	0.083	0.006
Benzo[k]fluoranthene					0.24	0.084 J	0.013	0.12 J	0.13 J	0.008	0.011 J	0.005	0.10	0.008
Chrysene **	0.4	0.384	2.8	2.8	0.34	0.15 J	0.018	0.13	0.18	0.012	0.015	0.008	0.12	0.011
Dibenzo(a,h)anthracene **	0.06	0.0634	0.26	0.26	0.06	R	0.001 J	0.021 J	0.030 J		R		0.012	
Fluoranthene **	0.6	0.6	3.6	5.1	0.75	0.15	0.039	0.17	0.23	0.026	0.029 J	0.018	0.29	0.027
Fluorene *	0.035	0.019	0.64	0.54	0.19		0.002 J	0.019 J	0.047 J	0.003			0.009	
Indeno[1,2,3-cd]pyrene					0.2	0.060 J	0.009	0.10 J	0.096 J	0.005	0.012 J	0.004	0.083	0.006
Methylnaphthalene (1-)	NA		NA				NR	0.14	0.15	NR	0.020	NR	NR	NR
Methylnaphthalene (2-) *	0.065	0.07	0.67	0.67			0.002 J	0.26 J	0.056 J	0.014	0.008 J		0.004	
Naphthalene *	0.34	0.16	2.1	2.1			0.004	0.87 J	0.49 J	0.078	0.017		0.006	
Phenanthrene *	0.225	0.24	1.38	1.5	0.56	0.052 EB	0.024	0.094 JEB	0.12 JEB	0.017	0.016 JEB	0.009	0.17	0.017
Pyrene **	0.35	0.665	2.2	2.6	0.49	0.14 J	0.037	0.18 J	0.25 J	0.026	0.025 J	0.016	0.22	0.021
Total PAHs	4	4.022	35	44.792	4	1.09	0.215	2.583	2.287	0.224	0.203	0.088	1.539	0.127
Total EPH						30	39	207	71	30		41	120	61
2-Methylnaphthalene + Lighter / Total PAHs						ND / 1.09	0.028	0.49	0.30	0.41	0.22	ND / 0.88	0.0065	ND / 0.127
Fluorene + Lighter / Total PAHs						0.046	0.084	0.53	0.36	0.45	0.22	0.034	0.059	0.031
Pyrene + Lighter / Total PAHs						0.41	0.58	0.73	0.65	0.77	0.57	0.55	0.53	0.57
Total PAHs / Total EPH						0.036	0.0055	0.012	0.032	0.0075	0.203 / ND	0.0021	0.013	0.0021
Other SVOCs														
Benzoic Acid								0.27 J	0.23 J		0.15 J			
Benzyl Alcohol														
bis(2-Ethylhexyl)phthalate (Di(ethylhexyl)phthalate)									0.083 J					
Butylbenzylphthalate														
Di-n-octylphthalate								R						
Dichlorobenzene (1,2-)								0.15 J	0.17					
Dichlorobenzene (1,4-)														
Hexachloroethane														
Pentachlorophenol						R		R	R		R			

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) personnel on the dates indicated and belong to the sample deliverable groups (SDGs) indicated (e.g., BW403). SDG BW420 was validated using a Tier I validation, and all qualifiers presented are from the laboratory. All other SDGs were validated using a Tier II validation, and qualified by the data validator as noted in the table.

2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, using United States Environmental Protection Agency (USEPA) Method 8270 with selective ion monitoring (SIM) for the polynuclear aromatic hydrocarbons (PAHs).

3. All concentrations are shown in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. Total concentrations listed (e.g., Total PAHs) are the sum of the detected concentrations of the relevant analytes.

6. A blank indicates the parameter was not detected.

7. "Dup." indicates the sample is a field duplicate.

8. "NOAA ER-L" or "ER-M (1990)" refers to the National Oceanic and Atmospheric Administration (NOAA) effects range-low (ER-L) or effects range-median (ER-M) threshold concentrations in sediment from "The Potential for Biological Effects of Sediment-Sorbed Contaminants Tested in the National Status and Trends Program" (1990).

"NOAA ER-L" or "ER-M (1995)" refers to NOAA ER-L or ER-M threshold concentrations in sediment from Long et al., 1995, "Incidence of Adverse Biological Effects Within Ranges of Chemical Concentrations in Marine and Estuarine Sediments," Environmental Management, 19(1):81-97.

"Ontario LEL" refers to Ontario Ministry of the Environment and Energy Lowest Effect Levels (1993/1994).

9. "*" indicates NOAA (1995) lists an ER-L of 0.552 mg/kg and an ER-M of 3.16 mg/kg for the sum of the "LPAH" compounds: acenaphthene, acenaphthylene, anthracene, fluorene, 2-methylnaphthalene, naphthalene, and phenanthrene.

"**" indicates NOAA (1995) lists an ER-L of 1.7 mg/kg and an ER-M of 9.6 mg/kg for the sum of the "HPAH" compounds: benzo[a]anthracene, benzo[a]pyrene, chrysene, dibenzo[a,h]anthracene, fluoranthene, and pyrene.

10. "J" indicates an estimated value.
"JEB" indicates the parameter was detected in the equipment blank.
"R" indicates data (non-detects) rejected during validation.
"NR" indicates not reported.
"RTSLs" indicates Risk Threshold Screening Levels.
"NA" indicates source lists no NOAA ER-L 1990 value available.

11. "2-Methylnaphthalene + Lighter / Total PAHs" indicates the ratio of the concentrations of 2-methylnaphthalene, 1-methylnaphthalene, and naphthalene divided by Total PAHs as defined in Note 5.

"Fluorene + Lighter / Total PAHs" indicates the ratio of the concentrations of fluorene, acenaphthene, acenaphthylene, 2-methylnaphthalene, 1-methylnaphthalene, and naphthalene divided by Total PAHs as defined in Note 5.

"Pyrene + Lighter / Total PAHs" indicates the ratio of the concentrations of pyrene, fluoranthene, anthracene, phenanthrene, fluorene, acenaphthene, acenaphthylene, 2-methylnaphthalene, 1-methylnaphthalene, and naphthalene divided by Total PAHs as defined in Note 5.

"Total PAHs / Total EPH" indicates the ratio of Total PAHs as defined in Note 5 divided by Total EPH or TPH (see Table 17C).

12. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 17C
Summary of Sediment Data - Petroleum Hydrocarbons
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg																				
	OS-5	OS-5A	OS-5B	OS-5C	OS-6	OS-6A	OS-7	OS-8	OS-8 Dup.	OS-9	OS-10	OS-12	OS-13	OS-14	OSPG-10A	OSPG-10A Dup.	OSPG-10B	OSPG-10C	SS-1	SS-2	SS-3A
	10/9/1997	5/28/1998	5/28/1998	5/28/1998	10/9/1997	10/9/1997	10/9/1997	10/9/1997	10/9/1997	10/8/1997	10/8/1997	10/8/1997	10/8/1997	10/8/1997	10/4/1999	10/4/1999	10/4/1999	10/4/1999	10/6/1997	10/7/1997	5/28/1998
	BW404	BW418	BW418	BW418	BW404	BW404	BW404	BW404	BW404	BW404	BW404	BW404	BW404	BW404	BW420	BW420	BW420	BW420	BW403	BW403	BW418
VPH																					
C9-C12 Aliphatics	14 J				18 J										NA	NA	NA	NA			
C9-C10 Aromatics	5.6 J				8.3 J										NA	NA	NA	NA			
Total VPH	19.6				26.3										NA	NA	NA	NA			
EPH																					
C9-C18 Aliphatics	800 J								5.7 J						NA	NA	NA	NA	2.0		
C19-C36 Aliphatics	11,910 J	12	330	9.1	310 J	77 J	83 J	160 J	510 J	26 J	230 J	39 J	79 J	86 J	NA	NA	NA	NA	200	57	120
C10-C22 Aromatics	1,990 J	14 J	53	11 J	83 J	21 J	24 J	41 J	120 J		42 J	19 J	46 J	33 J	NA	NA	NA	NA	64		66 J
Total EPH	14,700	26	383	20.1	393	98	107	201	635.7	26	272	58	125	119	NA	NA	NA	NA	266	57	186
TPH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	92	120	170	100	NA	NA	NA

Parameter	Concentrations in mg/kg																				
	SS-3A Dup.	SSB-3B	SS-4	SS-10	SSB-8A	SSB-10A	SSB-10B	SSB-10C	SS-11	SS-12	SSB-12A	SS-13	SS-14	SSB-14A	SS-16	SSB-16A	SS-16 Dup.	SS-17	SSB-19	SSB-PGSea	SSB-McQ
	5/28/1998	10/6/1999	10/8/1997	10/7/1997	10/5/1999	10/5/1999	10/5/1999	10/6/1999	10/6/1997	10/6/1997	10/6/1999	10/3/1997	10/3/1997	10/5/1999	10/3/1997	10/5/1999	10/3/1997	10/2/1997	10/6/1999	10/6/1999	10/7/1999
	BW418	BW420	BW403	BW403	BW420	BW420	BW420	BW420	BW403	BW403	BW420	BW403	BW403	BW420	BW403	BW420	BW403	BW403	BW420	BW420	BW420
VPH																					
C9-C12 Aliphatics		NA			NA	NA	NA	NA			NA			NA		NA			NA	NA	NA
C9-C10 Aromatics		NA			NA	NA	NA	NA			NA			NA		NA			NA	NA	NA
Total VPH		NA			NA	NA	NA	NA			NA			NA		NA			NA	NA	NA
EPH																					
C9-C18 Aliphatics		NA			NA	NA	NA	NA			NA			NA		NA			NA	NA	NA
C19-C36 Aliphatics	110	NA	56	43	NA	NA	NA	NA	69	26	NA	23	30 J	NA	160 J	NA	71 J		NA	NA	NA
C10-C22 Aromatics	39 J	NA	20	19	NA	NA	NA	NA	21		NA			NA	47 J	NA			NA	NA	NA
Total EPH	149	NA	76	62	NA	NA	NA	NA	90	26	NA	23	30	NA	207	NA	71		NA	NA	NA
TPH	NA	100	NA	NA	65	58		130	NA	NA	82	NA	NA	39	NA	30	NA	NA	41	120	61

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) personnel on the dates indicated and belong to the sample deliverable groups (SDGs) indicated (e.g., BW403). SDG BW420 was validated using a Tier I validation, and all qualifiers presented are from the laboratory. All other SDGs were validated using a Tier II validation, and qualified by the data validator as noted in the table.

2. Analyses were performed by Woods Hole Group Environmental Laboratories of Raynham, Massachusetts, using Massachusetts Department of Environmental Protection (MADEP) Methods (modified) for volatile petroleum hydrocarbons (VPH) and extractable petroleum hydrocarbons (EPH) for all SDGs except BW420. Samples in SDG BW420 were analyzed for total petroleum hydrocarbons (TPH) using United States Environmental Protection Agency (USEPA) Method 8100 (modified).

3. All concentrations are shown in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. Total concentrations listed (e.g., Total VPH) are the sum of the detected concentrations of the relevant analytes.

6. A blank indicates the parameter was not detected.

7. "Dup." indicates the sample is a field duplicate.

8. There were no values available for Risk Threshold Screening Levels from the following sources:
"NOAA ER-L" or "ER-M (1990)" refers to the National Oceanic and Atmospheric Administration (NOAA) effects range-low (ER-L) or effects range-median (ER-M) threshold concentrations in sediment from "The Potential for Biological Effects of Sediment-Sorbed Contaminants Tested in the National Status and Trends Program" (1990).
"NOAA ER-L" or "ER-M (1995)" refers to NOAA ER-L or ER-M threshold concentrations in sediment from Long et al., 1995, "Incidence of Adverse Biological Effects Within Ranges of Chemical Concentrations in Marine and Estuarine Sediments," Environmental Management, 19(1):81-97.
"Ontario LEL" refers to Ontario Ministry of the Environment and Energy Lowest Effect Levels (1993/1994).

9. "J" indicates an estimated value.
"NA" indicates the sample was not analyzed for this parameter.

10. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 17D
Summary of Sediment Data - PCB Aroclors and Pesticides
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg																									
	RTSLs					OS-5	OS-5A	OS-5B	OS-5C	OS-6	OS-6A	OS-7	OS-8	OS-8 Dup.	OS-9	OS-10	OSPG-10A	OSPG-10A Dup.	OSPG-10B	OSPG-10C	OS-12	OS-13	OS-14	SS-1	SS-2	SS-3A
	NOAA ER-L		NOAA ER-M		Ontario	10/9/1997	5/28/1998	5/28/1998	5/28/1998	10/9/1997	10/9/1997	10/9/1997	10/9/1997	10/9/1997	10/8/1997	10/8/1997	10/4/1999	10/4/1999	10/4/1999	10/4/1999	10/8/1997	10/8/1997	10/8/1997	10/6/1997	10/7/1997	5/28/1998
	1990	1995	1990	1995	LEL	BW404	BW418	BW418	BW418	BW404	BW404	BW404	BW404	BW404	BW404	BW404	BW420	BW420	BW420	BW420	BW404	BW404	BW404	BW403	BW403	BW418
PCB Aroclors																										
Aroclor 1242						NS		0.91		NS	NS	NS	NS	NS	NS	NS					NS	NS	NS	NS	NS	0.15
Aroclor 1248					0.03	NS				NS	NS	NS	NS	NS	NS	NS					NS	NS	NS	NS	NS	
Aroclor 1260					0.005	NS		0.64 J		NS	NS	NS	NS	NS	NS	NS	0.0046	0.071	0.088		NS	NS	NS	NS	NS	
Total PCBs	0.05	0.023	0.4	0.18	0.07	NS		1.55		NS	NS	NS	NS	NS	NS	NS	0.0046	0.071	0.088		NS	NS	NS	NS	NS	0.15
Pesticides																										
Aldrin	NA		NA		0.002	0.0015 J				0.0017 J	9.3E-05 J	4.5E-05 J	2.9E-04 J	1.0E-04 J		1.2E-04 J	NS	NS	NS	NS						
BHC (alpha-) ¥					0.006	2.9E-04 J		3.7E-04 J		4.2E-04 J	3.2E-04 J	R	R	R	R	R	NS	NS	NS	NS	R	R	R		7.9E-05 J	
BHC (beta-) ¥					0.005	0.0031 J	2.5E-04 J	2.4E-04 J		0.0056 J	0.0027 J					1.2E-04 J	NS	NS	NS	NS					5.2E-04 J	0.0021 J
BHC (delta-) ¥								0.0014 J									NS	NS	NS	NS						
BHC (gamma-) (Lindane) ¥	NA		NA		0.003		1.7E-04 J	8.3E-04 J	3.8E-04 J	4.4E-04 J	5.0E-04 J	1.5E-04 J	4.7E-04 J	2.3E-04 J	3.0E-04 J		NS	NS	NS	NS					1.8E-04 J	0.0014 J
Chlordane (alpha-) †	5.0E-04		0.006		0.007	6.4E-04 J	1.3E-04 J			6.8E-04 J	7.9E-05 J		7.3E-05 J	2.6E-04 J	2.5E-04 J	1.2E-04 J	NS	NS	NS	NS	1.5E-04 J				1.4E-04 J	
Chlordane (gamma-) †	5.0E-04		0.006		0.007		2.3E-04 J	0.0066 J		3.3E-04 J			2.4E-04 J	3.0E-04 J	6.8E-05 J	3.0E-04 J	NS	NS	NS	NS					1.0E-04 J	
DDD (4,4'-) ‡	0.002		0.02		0.008		0.0012 J	7.2E-04 J	8.0E-04 J	0.0015 J	3.4E-04 J	0.0014 J	0.0035 J	0.0039 J		0.0028 J	NS	NS	NS	NS	1.1E-04 J	3.7E-04 J		0.0021 J	7.9E-04 J	0.0026 J
DDE (4,4'-) ‡	0.002	0.0022	0.015	0.027	0.005	0.0016 J	0.0042 J	0.0075 J	0.0093 J	0.0022 J	3.1E-04 J	2.8E-04 J	0.0017 J	0.0024 J	0.0013 J	9.2E-04 J	NS	NS	NS	NS	0.0018 J	7.2E-04 J	3.6E-04 J	0.0015 J	0.0018 J	0.0081 J
DDT (4,4'-) @	0.001	0.00158	0.007	0.0461	0.008	0.0013 J	9.5E-04 J	R	0.0019 J	0.0063 J	0.0023 J	5.0E-04 J	8.7E-04 J	7.9E-04 J	0.0066 J	0.0084 J	NS	NS	NS	NS	7.9E-04 J				7.2E-04 J	0.0032 J
Dieldrin	2.0E-05		0.008		0.002	0.0016 J	7.8E-04 J	0.0080 J	R	6.0E-04 J	3.5E-04 J		0.0014 J	4.1E-04 J	8.7E-04 J	6.1E-04 J	NS	NS	NS	NS	1.8E-04 J					0.0012 J
Endosulfan I						7.1E-04 J										4.0E-04 J	NS	NS	NS	NS						
Endosulfan II						0.0025 J	R	0.0020 J	R	0.0013 J	0.0010 J	2.1E-04 J	0.0044 J	0.0033 J	0.0021 J	0.0020 J	NS	NS	NS	NS	2.9E-04 J	R	R			R
Endosulfan Sulfate						1.8E-04 J		0.0020 J			7.8E-04 J				1.5E-04 J		NS	NS	NS	NS					3.2E-04 J	5.0E-04 J
Endrin	2.0E-05		0.045		0.003	R		0.0053 J		0.0012 J			0.0011 J		4.4E-04 J	4.0E-04 J	NS	NS	NS	NS						
Endrin Aldehyde						0.0066 J	9.1E-04 J	0.0039 J		0.0018 J	9.7E-04 J	2.8E-04 J	0.0054 J	0.0029 J	0.0025 J	0.0016 J	NS	NS	NS	NS						0.0016 J
Endrin Ketone							2.9E-04 J	4.6E-04 J	2.7E-04 J					3.8E-04 J			NS	NS	NS	NS				0.0020 J		
Heptachlor	NA		NA		I			2.7E-04 J	1.3E-04 J		7.7E-05 J		1.4E-04 J				NS	NS	NS	NS						
Heptachlor Epoxide					0.005	9.2E-05 J	3.0E-04 J	4.4E-04 J									NS	NS	NS	NS						0.0021 J
Methoxychlor						0.14 J		0.011 J	0.0037 J	0.0057 J	0.0034 J	0.0012 J	0.033 J	0.016 J	0.016 J	0.0098 J	NS	NS	NS	NS	9.2E-04 J					
Total Pesticides						0.160	0.00941	0.0510	0.0165	0.0298	0.0132	0.00407	0.0526	0.0310	0.0306	0.0276	NS	NS	NS	NS	0.00424	0.00109	3.6E-04	0.0056	0.00465	0.0228

Parameter	Concentrations in mg/kg																									
	RTSLs					SS-3A Dup.	SSB-3B	SS-4	SSB-8A	SS-10	SSB-10A	SSB-10B	SSB-10C	SS-11	SS-12	SSB-12A	SS-13	SS-14	SSB-14A	SS-16	SS-16 Dup.	SSB-16A	SS-17	SSB-19	SSBPG-Sea	SSBPG-McQ
	NOAA ER-L				Ontario	5/28/1998	10/6/1999	10/8/1997	10/5/1999	10/7/1997	10/5/1999	10/5/1999	10/6/1999	10/6/1997	10/6/1997	10/6/1999	10/3/1997	10/3/1997	10/5/1999	10/3/1997	10/3/1997	10/5/1999	10/2/1997	10/6/1999	10/6/1999	10/7/1999
	1990	1995			LEL	BW418	BW420	BW403	BW420	BW403	BW420	BW420	BW420	BW403	BW403	BW420	BW403	BW403	BW420	BW403	BW403	BW420	BW403	BW420	BW420	BW420
PCB Aroclors																										
Aroclor 1242						0.10		NS		NS				NS	NS		NS	NS		NS	NS		NS			
Aroclor 1248					0.03		0.019	NS		NS				NS	NS		NS	NS		NS	NS		NS			
Aroclor 1260					0.005		0.004	NS		NS	0.013	0.0072	0.027	NS	NS	0.014	NS	NS	0.0036	NS	NS	0.0052	NS			
Total PCBs	0.05	0.023	0.4	0.18	0.07	0.10	0.023	NS		NS	0.013	0.0072	0.027	NS	NS	0.014	NS	NS	0.0036	NS	NS	0.0052	NS			
Pesticides																										
Aldrin	NA		NA		0.002		NS		NS	1.1E-04 J	NS	NS	NS			NS			NS	1.9E-04 J		NS	1.5E-04 J	NS	NS	NS
BHC (alpha-) ¥					0.006	3.9E-04 J	NS		NS	6.9E-05 J	NS	NS	NS			NS			NS			NS		NS	NS	NS
BHC (beta-) ¥					0.005		NS		NS		NS	NS	NS	4.0E-04 J		NS			NS	6.2E-04 J	0.0020 J	NS		NS	NS	NS
BHC (delta-) ¥						0.0031 J	NS		NS		NS	NS	NS			NS			NS			NS		NS	NS	NS
BHC (gamma-) (Lindane) ¥	NA		NA		0.003	8.9E-04 J	NS	0.0014 J	NS	6.9E-05 J	NS	NS	NS			NS	4.3E-04 J	1.1E-04 J	NS		2.0E-04 J	NS		NS	NS	NS
Chlordane (alpha-) †	5.0E-04		0.006		0.007		NS		NS	1.6E-04 J	NS	NS	NS		2.4E-04 J	NS	4.8E-04 J	5.6E-05 J	NS	3.3E-04 J	1.5E-04 J	NS		NS	NS	NS
Chlordane (gamma-) †	5.0E-04		0.006		0.007		NS	2.2E-04 J	NS		NS	NS	NS	8.5E-05 J		NS		4.4E-04 J	NS	4.8E-04 J		NS		NS	NS	NS
DDD (4,4'-) ‡	0.002		0.02		0.008	0.0025 J	NS	6.1E-04 J	NS	0.0013 J	NS	NS	NS	0.0012 J	7.8E-04 J	NS	5.1E-04 J	8.7E-04 J	NS	0.010 J	0.0042 J	NS	4.2E-04 J	NS	NS	NS
DDE (4,4'-) ‡	0.002	0.0022	0.015	0.027	0.005	0.0069 J	NS	0.0013 J	NS	8.6E-04 J	NS	NS	NS	9.0E-04 J	0.0013 J	NS	5.3E-04 J	0.0011 J	NS	0.0052 J	0.0039 J	NS	2.6E-04 J	NS	NS	NS
DDT (4,4'-) @	0.001	0.00158	0.007	0.0461	0.008	0.0029 J	NS	2.4E-04 J	NS	1.9E-04 J	NS	NS	NS	0.0011 J	5.0E-04 J	NS	9.6E-04 J	5.3E-04 J	NS	0.0013 J	9.4E-04 J	NS		NS	NS	NS
Dieldrin	2.0E-05		0.008		0.002	R	NS		NS	2.4E-04 J	NS	NS	NS	3.9E-04 J	3.1E-04 J	NS	3.8E-04 J	2.9E-04 J	NS	0.0015 J	0.0010 J	NS		NS	NS	NS
Endosulfan I							NS		NS		NS	NS	NS	6.2E-05 J		NS			NS	3.4E-04 J		NS		NS	NS	NS
Endosulfan II						R	NS		NS		NS	NS	NS	5.7E-04 J		NS		2.9E-04 J	NS	5.9E-04 J	5.6E-04 J	NS		NS	NS	NS
Endosulfan Sulfate							NS	2.7E-04 J	NS	1.5E-04 J	NS	NS	NS	0.0016 J	3.8E-04 J	NS		2.6E-04 J	NS	9.5E-04 J	0.0010 J	NS	3.1E-04 J	NS	NS	NS
Endrin	2.0E-05		0.045		0.003		NS	4.4E-04 J	NS	1.4E-04 J	NS	NS	NS			NS			NS		5.7E-04 J	NS	1.6E-04 J	NS	NS	NS
Endrin Aldehyde						8.8E-04 J	NS	2.9E-04 J	NS	2.0E-04 J	NS	NS	NS	4.9E-04 J		NS	2.9E-04 J	3.7E-04 J	NS	7.0E-04 J	0.0010 J	NS		NS	NS	NS
Endrin Ketone						6.4E-04 J	NS	4.9E-04 J	NS	2.6E-04 J	NS	NS	NS			NS			NS	5.0E-04 J	0.0015 J	NS		NS	NS	NS
Heptachlor	NA		NA		I	4.2E-04 J	NS	0.0012 JEB	NS		NS	NS	NS		2.5E-04 JEB	NS	2.0E-04 JEB		NS			NS		NS	NS	NS
Heptachlor Epoxide					0.005	5.1E-04 J	NS		NS		NS	NS	NS			NS			NS			NS		NS	NS	NS
Methoxychlor							NS		NS		NS	NS	NS	0.0024 J		NS	0.0015 J		NS	0.0023 J	0.0013 J	NS		NS	NS	NS
Total Pesticides						0.0191	NS	0.00646	NS	0.00375	NS	NS	NS	0.00920	0.00376	NS	0.00528	0.00432	NS	0.0250	0.0183	NS	0.00130	NS	NS	NS

TABLE 17D
Summary of Sediment Data - PCB Aroclors and Pesticides
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) personnel on the dates indicated and belong to the sample deliverable groups (SDGs) indicated (e.g., BW403). SDG BW420 was validated using a Tier I validation, and all qualifiers presented are from the laboratory. All other SDGs were validated using a Tier II validation, and qualified by the data validator as noted in the table.
2. Analyses were performed by Woods Hole Group Environmental Laboratories (WHG) of Raynham, Massachusetts, using United States Environmental Protection Agency (USEPA) Method 8080A for PCB Aroclors and USEPA Method 8080A, modified per the National Oceanic and Atmospheric Administration National Status and Trends Program (NOAA NS&T) for pesticides.
3. All concentrations are shown in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).
4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.
5. Total concentrations listed (e.g., Total PCBs) are the sum of the detected concentrations of the relevant analytes.
6. A blank indicates the parameter was not detected.
7. "Dup." indicates the sample is a field duplicate.
8. "NOAA ER-L" or "ER-M (1990)" refers to the National Oceanic and Atmospheric Administration (NOAA) effects range-low (ER-L) or effects range-median (ER-M) threshold concentrations in sediment from "The Potential for Biological Effects of Sediment-Sorbed Contaminants Tested in the National Status and Trends Program" (1990).
   "NOAA ER-L" or "ER-M (1995)" refers to NOAA ER-L or ER-M threshold concentrations in sediment from Long et al., 1995, "Incidence of Adverse Biological Effects Within Ranges of Chemical Concentrations in Marine and Estuarine Sediments," Environmental Management, 19(1):81-97.
   "Ontario LEL" refers to Ontario Ministry of the Environment and Energy Lowest Effect Levels (1993/1994).
9. "†" indicates the NOAA ER-L and ER-M 1990 and Ontario LEL values are for Chlordane (isomer unspecified).
   "‡" indicates the NOAA ER-L and ER-M 1990 and Ontario LEL values are for DDD and DDE (no isomers specified).
   "@" indicates the NOAA ER-L and ER-M 1995 values are for total DDT. NOAA ER-L and ER-M 1990 values are for DDT (no isomer specified); NOAA ER-L and ER-M 1990 values for total DDT are 0.003 and 0.35 mg/kg, respectively. Ontario LEL value is for the sum of 2,4'-DDT and 4,4'-DDT.
   "¥" indicates Ontario LEL for BHC (isomer unspecified) is 0.003 mg/kg.
   "NA" indicates source document lists as not available.
   "I" indicates source document lists as insufficient data to calculate.
10. "PCBs" are polychlorinated biphenyls.
    "J" indicates an estimated value.
    "EB" indicates the parameter was detected in the equipment blank.
    "R" indicates data (non-detects) rejected during validation.
    "NS" indicates no sample was collected for this analysis.
    "RTSLs" indicates Risk Threshold Screening Levels.
11. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 17E
Summary of Sediment Data - PCB Congeners/Homologs
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	Concentrations in mg/kg																					
	OS-5	OS-6	OS-6A	OS-7	OS-8	OS-8 Dup.	OS-9	OS-10	OS-12	OS-13	OS-14	SS-1	SS-2	SS-4	SS-10	SS-11	SS-12	SS-13	SS-14	SS-16	SS-16 Dup.	SS-17
	10/9/1997	10/9/1997	10/9/97	10/9/1997	10/9/1997	10/9/1997	10/8/1997	10/8/1997	10/8/1997	10/8/1997	10/8/1997	10/6/1997	10/7/1997	10/8/1997	10/7/1997	10/6/1997	10/6/1997	10/3/1997	10/3/1997	10/3/1997	10/3/1997	10/2/1997
	BW503	BW503	BW503	BW503	BW503	BW503	BW503	BW503	BW503	BW503	BW503	BW502	BW502	BW502	BW502	BW502	BW502	BW502	BW502	BW502	BW502	BW502
Congeners																						
PCB-1	0.0032 J	1.8E-04 J	1.7E-04 J															0.0012 J		9.4E-04 J		4.0E-04 J
PCB-3	0.0019 J																					
PCB-8	0.0011 J	1.8E-04 J						2.8E-04 J		3.9E-04 J	4.5E-04 J	1.3E-04 J	5.5E-04 J	6.0E-04 J		1.6E-04 J	1.5E-04 J	6.1E-04 J	3.0E-04 J	5.9E-04 J		
PCB-15	0.0049 J	0.0051 J	3.0E-04 J		2.3E-04 J	8.2E-04 J		0.0011 J	3.1E-04 J	0.0011 J	0.0014 J	1.3E-04 J	0.0011 J	0.0016 J	3.8E-04 J	5.8E-04 J	5.0E-04 J	0.0012 J	6.4E-04 J	0.0014 J	3.8E-04 J	4.0E-04 J
PCB-18	0.029 J	0.0058 J	3.4E-04 J		4.2E-04 J	0.0015 J		6.1E-04 J	1.5E-04 J	0.0023 J	0.0014 J	3.4E-04 J	0.0015 J	0.0019 J	3.1E-04 J	5.6E-04 J	6.9E-04 J	7.4E-04 J	5.0E-04 J	6.5E-04 J	2.6E-04 J	9.0E-04 J
PCB-28	0.029 J	0.014 J	0.0013 J	1.7E-04 J	0.0013 J	0.0048 J	1.2E-04 J	0.0020 J	4.3E-04 J	0.0054 J	0.0045 J	5.2E-04 J	0.0040 J	0.0076 J	0.0011 J	0.0017 J	0.0016 J	0.0035 J	0.0023 J	0.0033 J	9.5E-04 J	0.0019 J
PCB-44	0.016 J	0.036 J	0.0010 J	1.5E-04 J	9.9E-04 J	0.0037 J	2.0E-04 J	0.0024 J	5.3E-04 J	0.0023 J	0.0029 J	2.3E-04 J	0.0021 J	0.0038 J	6.6E-04 J	0.0013 J	6.4E-04 J	0.0018 J	0.0011 J	0.0018 J	4.1E-04 J	7.0E-04 J
PCB-52	0.041 J	0.033 J	0.0012 J	1.8E-04 J	0.0011 J	0.0042 J	4.0E-04 J	0.0041 J	0.0010 J	0.0021 J	0.0029 J	2.6E-04 J	0.0025 J	0.0034 J	7.4E-04 J	0.0013 J	0.0016 J	0.0019 J	0.0011 J	0.0020 J	5.5E-04 J	7.5E-04 J
PCB-66	0.019 J	0.033 J	0.0014 J	1.6E-04 J	0.0012 J	0.0046 J	2.6E-04 J	0.0075 J	5.4E-04 J	0.0038 J	0.0040 J	4.0E-04 J	0.0021 J	0.0055 J	0.0016 J	0.0021 J	0.0015 J	0.0022 J	0.0014 J	0.0026 J	7.0E-04 J	9.6E-04 J
PCB-77	0.0015 J	0.0062 J	3.4E-04 J		2.2E-04 J	7.7E-04 J		0.0023 J	4.4E-04 J	7.2E-04 J	9.2E-04 J		4.0E-04 J	0.0011 J	3.1E-04 J	4.5E-04 J	3.6E-04 J	5.5E-04 J	2.6E-04 J	5.3E-04 J		
PCB-87	0.023 J	0.013 J	9.8E-04 J	1.8E-04 J	9.0E-04 J	0.0027 J	4.5E-04 J	0.0063 J	0.0018 J	0.0016 J	0.0026 J	3.8E-04 J	0.0023 J	0.0026 J	8.3E-04 J	0.0012 J	0.0013 J	0.0014 J	6.4E-04 J	0.0014 J	5.5E-04 J	4.6E-04 J
PCB-90/101	0.14 J	0.020 J	0.0028 J	4.8E-04 J	0.0022 J	0.0073 J	0.0017 J	0.015 J	0.0034 J	0.0028 J	0.0047 J	6.7E-04 J	0.0043 J	0.0041 J	0.0018 J	0.0028 J	0.0028 J	0.0027 J	0.0011 J	0.0024 J	0.0010 J	8.0E-04 J
PCB-105	0.010 J	0.010 J	9.3E-04 J	1.3E-04 J	6.3E-04 J	0.0027 J	3.0E-04 J	0.0061 J	0.0014 J	0.0017 J	0.0026 J	3.0E-04 J	0.0020 J	0.0028 J	7.1E-04 J	0.0012 J	0.0010 J	0.0016 J	6.5E-04 J	0.0017 J	5.0E-04 J	4.5E-04 J
PCB-114	7.2E-04 J	9.0E-04 J				1.7E-04 J		4.6E-04 J					1.4E-04 J	2.0E-04 J			1.8E-04 J					
PCB-118	0.016 J	0.016 J	0.0015 J	2.9E-04 J	0.0013 J	0.0047 J	7.2E-04 J	0.012 J	0.0017 J	0.0018 J	0.0027 J	7.3E-04 J	0.0040 J	0.0047 J	0.0015 J	0.0024 J	0.0021 J	0.0029 J	0.0011 J	0.0030 J	0.0010 J	8.2E-04 J
PCB-123	0.0054 J	0.0022 J	5.2E-04 J	1.1E-04 J	4.3E-04 J	0.0013 J	3.9E-04 J	0.0028 J	4.7E-04 J	2.7E-04 J	4.3E-04 J	1.0E-04 J	5.1E-04 J	6.0E-04 J	2.6E-04 J	4.7E-04 J	3.8E-04 J	5.1E-04 J		3.7E-04 J		
PCB-126	1.6E-04 J	1.4E-04 J						1.2E-04 J														
PCB-128/167	0.0090 J	0.0028 J	8.0E-04 J	1.6E-04 J	4.9E-04 J	0.0024 J	5.2E-04 J	0.0044 J	0.0012 J	6.2E-04 J	0.0014 J	1.8E-04 J	0.0011 J	0.0010 J	4.7E-04 J	6.8E-04 J	6.9E-04 J	7.6E-04 J	3.4E-04 J	8.6E-04 J	3.1E-04 J	
PCB-138	0.094 J	0.016 J	0.0067 J	0.0012 J	0.0040 J	0.017 J	0.0050 J	0.028 J	0.0069 J	0.0029 J	0.0070 J	7.1E-04 J	0.0041 J	0.0043 J	0.0026 J	0.0032 J	0.0029 J	0.0052 J	0.0026 J	0.0063 J	0.0022 J	0.0015 J
PCB-153	0.25 J	0.017 J	0.010 J	0.0015 J	0.0065 J	0.027 J	0.0077 J	0.042 J	0.010 J	0.0023 J	0.0075 J	5.9E-04 J	0.0032 J	0.0038 J	0.0028 J	0.0053 J	0.0025 J	0.0040 J	0.0018 J	0.0045 J	0.0017 J	7.0E-04 J
PCB-156	0.0052 J	0.0010 J	4.0E-04 J		2.1E-04 J	0.0010 J	2.8E-04 J	0.0018 J	5.2E-04 J	3.1E-04 J	6.9E-04 J		5.0E-04 J	5.4E-04 J	1.9E-04 J	3.5E-04 J	1.2E-04 J	3.6E-04 J	1.6E-04 J	3.7E-04 J		
PCB-157	4.6E-04 J	2.9E-04 J				2.3E-04 J		4.2E-04 J	1.2E-04 J		1.8E-04 J		1.4E-04 J	1.4E-04 J								
PCB-170	0.17 J	0.0090 J	0.0080 J	0.0010 J	0.0041 J	0.021 J	0.0050 J	0.033 J	0.0070 J	0.0013 J	0.0056 J	2.9E-04 J	0.0016 J	0.0025 J	0.0018 J	0.0045 J	0.0017 J	0.0030 J	0.0013 J	0.0034 J	0.0010 J	
PCB-180	0.35 J	0.020 J	0.019 J	0.0025 J	0.010 J	0.050 J	0.012 J	0.076 J	0.015 J	0.0024 J	0.012 J	6.0E-04 J	0.0032 J	0.0047 J	0.0039 J	0.010 J	0.0036 J	0.0072 J	0.0032 J	0.0076 J	0.0021 J	6.5E-04 J
PCB-183	0.098 J	0.0054 J	0.0045 J	6.4E-04 J	0.0029 J	0.012 J	0.0033 J	0.017 J	0.0030 J	5.5E-04 J	0.0026 J	1.6E-04 J	6.9E-04 J	9.5E-04 J	0.0011 J	0.0025 J	7.7E-04 J	0.0015 J	6.5E-04 J	0.0015 J	4.8E-04 J	
PCB-187	0.19 J	0.010 J	0.0088 J	0.0013 J	0.0054 J	0.023 J	0.0064 J	0.037 J	0.0089 J	0.0011 J	0.0056 J	3.0E-04 J	0.0014 J	0.0019 J	0.0022 J	0.0051 J	0.0095 J	0.0031 J	0.0014 J	0.0032 J	0.0011 J	
PCB-189	R	2.0E-04 J	1.7E-04 J			4.1E-04 J	1.0E-04 J	6.9E-04 J	1.8E-04 J		1.4E-04 J					1.0E-04 J	1.3E-04 J					
PCB-194	0.15 J	0.0060 J	0.0071 J	6.3E-04 J	0.0025 J	0.021 J	0.0029 J	0.028 J	0.0047 J	8.8E-04 J	0.0049 J	2.1E-04 J	0.0011 J	0.0018 J	8.5E-04 J	0.0035 J	9.1E-04 J	0.0022 J	9.7E-04 J	0.0025 J	5.4E-04 J	
PCB-195	0.062 J	0.0025 J	0.0027 J	2.4E-04 J	9.1E-04 J	0.0079 J	0.0012 J	0.012 J	0.0022 J	2.8E-04 J	0.0017 J		3.4E-04 J	5.6E-04 J	3.2E-04 J	0.0013 J	5.0E-04 J	8.4E-04 J	3.8E-04 J	9.6E-04 J		
PCB-202	0.031 J	0.0016 J	0.0017 J	2.6E-04 J	9.1E-04 J	0.0045 J	0.0011 J	0.0073 J	0.0017 J	3.4E-04 J	0.0013 J	1.1E-04 J	4.2E-04 J	5.4E-04 J	4.4E-04 J	9.9E-04 J	4.8E-04 J	7.2E-04 J	2.8E-04 J	8.2E-04 J		
PCB-206	0.021 J	0.0014 J	0.0018 J	1.5E-04 J	5.6E-04 J	0.0052 J	6.9E-04 J	0.0085 J	0.0017 J	8.8E-04 J	0.0027 J	1.5E-04 J	0.0012 J	0.0025 J	4.4E-04 J	0.0024 J	7.7E-04 J	7.6E-04 J	2.9E-04 J	7.2E-04 J	2.4E-04 J	
PCB-207	0.0030 J	1.6E-04 J	2.2E-04 J			6.1E-04 J		8.6E-04 J	1.4E-04 J	1.0E-04 J	2.3E-04 J			1.8E-04 J		2.1E-04 J	1.4E-04 J					
PCB-209	5.1E-04 J	2.2E-04 J	1.8E-04 J			5.2E-04 J	1.2E-04 J	8.0E-04 J	4.3E-04 J	2.4E-04 J	5.4E-04 J		3.2E-04 J	5.4E-04 J	3.0E-04 J	3.5E-04 J	3.8E-04 J	3.4E-04 J	1.3E-04 J	3.5E-04 J		
Homologs																						
Total monoCB	0.0054 J	1.8E-04 J	1.7E-04 J															0.0012 J		9.4E-04 J		4.0E-04 J
Total diCB	0.024 J	0.0057 J	3.0E-04 J		2.3E-04 J	8.2E-04 J		0.0015 J	3.1E-04 J	0.0020 J	0.0022 J	2.6E-04 J	0.0020 J	0.0024 J	3.8E-04 J	8.4E-04 J	6.5E-04 J	0.0029 J	0.0015 J	0.0028 J	8.4E-04 J	0.0011 J
Total triCB	0.11 J	0.050 J	0.0032 J	1.7E-04 J	0.0030 J	0.013 J	2.0E-04 J	0.0065 J	0.0011 J	0.015 J	0.012 J	0.0016 J	0.011 J	0.019 J	0.0021 J	0.0045 J	0.0037 J	0.0087 J	0.0051 J	0.0074 J	0.0017 J	0.0034 J
Total tetraCB	0.37 J	0.26 J	0.0090 J	8.0E-04 J	0.0086 J	0.033 J	0.0018 J	0.045 J	0.0072 J	0.022 J	0.029 J	0.0021 J	0.020 J	0.037 J	0.0087 J	0.014 J	0.013 J	0.017 J	0.011 J	0.017 J	0.0038 J	0.0061 J
Total pentaCB	0.48 J	0.17 J	0.017 J	0.0028 J	0.014 J	0.048 J	0.0088 J	0.098 J	0.022 J	0.019 J	0.033 J	0.0045 J	0.031 J	0.033 J	0.012 J	0.019 J	0.016 J	0.020 J	0.0083 J	0.019 J	0.0061 J	0.0047 J
Total hexaCB	0.72 J	0.069 J	0.035 J	0.0054 J	0.024 J	0.093 J	0.026 J	0.15 J	0.035 J	0.0083 J	0.030 J	0.0024 J	0.016 J	0.014 J	0.012 J	0.019 J	0.011 J	0.015 J	0.0067 J	0.016 J	0.0050 J	0.0022 J
Total heptaCB	1.2 J	0.071 J	0.062 J	0.0086 J	0.036 J	0.16 J	0.043 J	0.25 J	0.054 J	0.0075 J	0.040 J	0.0019 J	0.010 J	0.015 J	0.014 J	0.035 J	0.013 J	0.022 J	0.010 J	0.024 J	0.0072 J	6.5E-04 J
Total octaCB	0.62 J	0.028 J	0.032 J	0.0035 J	0.014 J	0.088 J	0.018 J	0.12 J	0.026 J	0.0044 J	0.020 J	9.9E-04 J	0.0056 J	0.0078 J	0.0050 J	0.018 J	0.0054 J	0.010 J	0.0044 J	0.012 J	0.0016 J	
Total nonaCB	0.028 J	0.0018 J	0.0023 J	1.5E-04 J	6.8E-04 J	0.0064 J	8.4E-04 J	0.010 J	0.0022 J	0.0011 J	0.0033 J	1.5E-04 J	0.0014 J	0.0029 J	5.9E-04 J	0.0029 J	0.0011 J	7.6E-04 J	2.9E-04 J	7.2E-04 J	2.4E-04 J	
Total PCBs	3.55791	0.6559	0.16115	0.02142	0.10051	0.44274	0.09876	0.6818	0.14824	0.07954	0.17004	0.0139	0.09732	0.13164	0.05507	0.11359	0.06423	0.0979	0.04742	0.10021	0.02648	0.01855

TABLE 17E
Summary of Sediment Data - PCBs (Congeners/Homologs)
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. personnel on the dates indicated and belong to the sample deliverable groups (SDGs) indicated (e.g., BW502). PCB congeners/homologs were not analyzed for samples collected in May 1998 (SDG BW418) and October 1999 (SDG BW420).

2. Analyses were performed by Alta Analytical Laboratory Inc. of El Dorado Hills, California, by USEPA Method 1668 (Modified).

3. All concentrations are presented in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. Total PCBs were calculated by summing the detected concentrations of homologs and congener 209.

6. A blank indicates the parameter was not detected.

7. “Dup.” indicates the sample is a field duplicate.

8. “NOAA ER-L” and “ER-M (1990)” for total PCBs in sediment are 0.05 and 0.4 mg/kg, respectively (National Oceanic and Atmospheric Administration [NOAA] effects range-low [ER-L] and effects range-median [ER-M] threshold concentrations in sediment from "The Potential for Biological Effects of Sediment-Sorbed Contaminants Tested in the National Status and Trends Program", 1990).
   “NOAA ER-L” and “ER-M (1995)” for total PCBs in sediment are 0.023 and 0.18 mg/kg, respectively (NOAA ER-L and ER-M threshold concentrations in sediment from Long et al., 1995, "Incidence of Adverse Biological Effects Within Ranges of Chemical Concentrations in Marine and Estuarine Sediments," Environmental Management, 19(1):81-97).
   The Ontario LEL for total PCBs in sediment is 0.07 mg/kg (Ontario Ministry of the Environment and Energy Lowest Effect Levels, 1993/1994). The Ontario LELs for Aroclors 1016, 1248, 1254, and 1260 in sediment are 0.007, 0.03, 0.06, and 0.005 mg/kg, respectively.

9. “J” indicates an estimated value.

10. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 17F
Summary of Sediment Data - Metals and AVS/SEM
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	RTSLs					OS-5	OS-5A	OS-5B	OS-5C	OS-6	OS-6A	OS-7	OS-8	OS-8 Dup.	OS-9	OS-10	OSPG-10A	OSPG-10A Dup.	OSPG-10B	OSPG-10C	OS-12	OS-13
	NOAA ER-L		NOAA ER-M		Ontario	10/9/1997	5/28/1998	5/28/1998	5/28/1998	10/9/1997	10/9/1997	10/9/1997	10/9/1997	10/9/1997	10/8/1997	10/8/1997	10/4/1999	10/4/1999	10/4/1999	10/4/1999	10/8/1997	10/8/1997
	1990	1995	1990	1995	LEL	BW404	BW418	BW418	BW418	BW404	BW404	BW404	BW404	BW404	BW404	BW404	BW420	BW420	BW420	BW420	BW404	BW404
Metals (Concentrations in mg/kg)																						
Antimony ¶	2		25			0.29 J	NA	NA	NA	0.86 J	0.55 J	0.57 J	0.72 J	0.65 J	0.52 J	0.97 J	0.057 B	0.076 B	0.053 B	0.074 B	0.73 J	0.64 J
Arsenic ¶	33	8.2	85	70	6	3.7		15.6	11.9	115	21.0	11.7	9.5	8.7	2.6	16.6	6.5	8.4	3.2	1.5	10.0	9.8
Barium						59.4	31.9	160	36.6	274 J	70.4 J	52.2 J	94.2 J	85.5 J	56.6 J	86.1 J	41.1	48.6	34.5	19.0	65.8 J	125 J
Beryllium ¶						1.1	0.76	1.3	1.0	1.4	0.81	1.0	1.7	1.5	1.1	2.5	1.0	1.2	0.75	0.16 B	1.5	1.5
Cadmium ¶	5	1.2	9	9.6	0.6	2.2 J	0.92 J	1.9 J	1.1 J	1.4 J	0.49 J	0.37 J	1.1 J	1.1 J	0.13 J	1.3 J	0.46	0.57	0.28	0.17	0.54 J	2.2 J
Calcium						3,060 J	1,540	3,340	1,920	2,380 J	2,200 J	1,620 J	2,440 J	2,390 J	1,400 J	5,900 J	2,720	3,210	1,820	1,520	1,780 J	13,200 J
Chromium (Total) ¶	80	81	145	370	26	23.7	16.4	28.5	21.6	24.4	20.7	25.5	30.2	26.0	33.6	34.5	19.3	22.4	16.0	4.5	34.0	19.2
Copper ¶	70	34	390	270	16	10.0	NA	NA	NA	11.5	4.7	2.2	8.9	8.9	0.97	14.3	6.1	7.0	3.8	5.2	5.8	16.0
Iron †					20,000	6,150	14,400	31,600	20,300	127,000	26,100	19,500	20,800	18,800	12,700	24,200	11,800	13,900	6,860	2,110	23,500	12,300
Lead ¶	35	46.7	110	218	31	41.4	35.5 J	112 J	59.0 J	140	35.7	19.4	69.4	70.5	17.6	112	52.9	64.0	37.9	25.2	63.6	75.8
Magnesium						1,940	NA	NA	NA	2,210	1,700	2,600	2,970	2,590	3,280	3,670	1,870	2,130	1430	342	3,710	2,540
Manganese					460	406	534 J	12,400 J	240 J	441 J	609 J	227 J	640 J	568 J	328 J	268 J	225	267	148	88	832 J	896 J
Mercury ¶	0.15	0.15	1.3	0.71	0.2	0.15	0.087	0.22	0.14	1.1	0.12	0.091	0.25	0.23	0.11	0.31	0.12	0.15	0.13	0.094	0.16	0.20
Molybdenum						1.4 J	0.98 J	1.3 J	1.5 J	17 J	2.5 J	4.1 J	2.6 J	2.9 J	1.2 J	3.2 J	1.8	2.4	0.98	0.58 B	2.2 J	2.9 J
Nickel ¶	30	20.9	50	51.6	16	20.4	NA	NA	NA	16.1	13.3	20.6	22.4	20.7	22.9	27.7	13.8	16.2	10.8	3.2	25.1	26.4
Potassium						462	NA	NA	NA	773	318	272	365	374	402	626	288	325	271	104	337	723
Selenium ¶						3.1	0.50	1.2	0.77	1.8	1.8	1.4	2.1	2.0	1.6	1.9	1.2	1.6	1.4	0.52 B	1.6	2.1
Sodium						223 J	125	150	95.9	108 J	123 J	120 J	189 J	170 J	236 J	295 J	207	231	185	155	207 J	693 J
Thallium (thallium chloride) ¶						0.69	0.082 J	0.36 J	0.076 J			0.34	0.33	0.38	0.24	0.30	0.22	0.27	0.12	0.045 B	0.33	0.22 J
Tin	‡		‡			R	R	1.5 J	1.0 J	R	R	R	R	R	R	R	1 B	2.5 B	1.1	3.8 B	R	R
Vanadium						14.0	21.2 J	28.3 J	27.0 J	40.0	15.9	37.9	39.6	36.2	20.3	54.4	24.1	28.3	15.2	6.4	39.7	22.8
Zinc ¶	120	150	270	410	120	35.5	51.0 J	110 J	58.3 J	140 J	41.9 J	50.1 J	95.3 J	91.7 J	45.0 J	134 J	50.7	58.8	53.3	11.5	78.7 J	79.5 J
Unconverted AVS/SEM (Concentrations in mg/kg)																						
AVS	Not Applicable					108				65	125	106	55	33	25	621	NA	NA	NA	NA	19	728
SEM-Arsenic							5.1 J	5.6 J	4.0 J								NA	NA	NA	NA		
SEM-Cadmium						2.2	0.42 J	1.7 J	0.45 J	0.51 J		0.45 J	0.84 J	0.86 J		1.8 J	NA	NA	NA	NA	0.71 J	
SEM-Copper							2.48	4.96	0.95								NA	NA	NA	NA		
SEM-Lead						35.7	36.6	85.5	16.4	98.4	29.3	16.9	68.2	51.1	33.2	115	NA	NA	NA	NA	72.9	83.1
SEM-Mercury						R	R	R	R	R	R	R	R	R	R	R	NA	NA	NA	NA	R	R
SEM-Nickel						9.9	4.6	15.7	2.7	5.3 J	4.8 J	2.6 J	5.8 J	5.0 J	5.1 J	10.0	NA	NA	NA	NA	6.5 J	25.3
SEM-Zinc						16.7	32.4 J	63.2 J		75.4	21.4	20.6	56.1	48.9	13.9	106	NA	NA	NA	NA	37.0	102
Converted AVS/SEM (Concentrations in µmole/g)																						
AVS	Not Applicable					3.37				2.03	3.90	3.31	1.72	1.03	0.78	19.4	NA	NA	NA	NA	0.59	22.7
SEM-Arsenic							0.068 J	0.075 J	0.054 J								NA	NA	NA	NA		
SEM-Cadmium						0.0194	0.0037 J	0.015 J	0.0040 J	0.0046 J		0.0040 J	0.0075 J	0.0076 J		0.0161 J	NA	NA	NA	NA	0.0062 J	0.0354
SEM-Copper							0.040	0.080	0.010								NA	NA	NA	NA		
SEM-Lead						0.172	0.180	0.410	0.079	0.474	0.142	0.082	0.329	0.247	0.160	0.556	NA	NA	NA	NA	0.351	0.401
SEM-Mercury						R	R	R	R	R	R	R	R	R	R	R	NA	NA	NA	NA	R	R
SEM-Nickel						0.169	0.080	0.270	0.050	0.090 J	0.081 J	0.045 J	0.099 J	0.084 J	0.087 J	0.173	NA	NA	NA	NA	0.110 J	0.432
SEM-Zinc						0.256	0.500 J	0.960 J		1.15	0.329	0.315	0.859	0.749	0.212	1.63	NA	NA	NA	NA	0.564	1.56

TABLE 17F
Summary of Sediment Data - Metals and AVS/SEM
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	RTSLs					OS-14	SS-1	SS-2	SS-3A	SS-3A Dup.	SSB-3B	SS-4	SSB-8A	SS-10	SSB-10A	SSB-10B	SSB-10C	SS-11	SS-12	SSB-12A	SS-13	SS-14	SSB-14A
	NOAA ER-L		NOAA ER-M		Ontario	10/8/1997	10/6/1997	10/7/1997	5/28/1998	5/28/1998	10/6/1999	10/8/1997	10/5/1999	10/7/1997	10/5/1999	10/5/1999	10/6/1999	10/6/1997	10/6/1997	10/6/1999	10/3/1997	10/3/1997	10/5/1999
	1990	1995	1990	1995	LEL	BW404	BW403	BW403	BW418	BW418	BW420	BW403	BW420	BW403	BW420	BW420	BW420	BW403	BW403	BW420	BW403	BW403	BW420
Metals (Concentrations in mg/kg)																							
Antimony ¶	2		25			0.78 J	0.46 J	0.60	NA	NA	0.027 B	0.56	0.012 B	0.40	0.033 B	0.038 B	0.049 B	0.36 J	0.28 J	0.027 B	0.26 J	0.32 J	
Arsenic ¶	33	8.2	85	70	6	14.6	35.3	9.7	7.2		5.4	12.0	6	8.4	6.8	7.8	5.5	6.5	6.9	6.4	9.8	8.2	3.3
Barium						107 J	86.1 J	66.8 J	47.5	49.9	31.5	71.3 J	40.1	39.8 J	49.2	74.6	40.4	49.0 J	170 J	55.1	52.9 J	45.2 J	23.9
Beryllium ¶						1.8	1.4	1.4	1.3	1.2	0.53	1.4	0.82	0.89	1.2	1.6	0.94	1.0	0.70	0.97	1.0	0.67	0.46
Cadmium ¶	5	1.2	9	9.6	0.6	1.3 J	1.8 J		1.4 J	1.8 J	0.47	2.1 J	0.48		0.60	0.55	0.51			0.67			0.80
Calcium						5,490 J	2,690	5,370	2,860	2,910	1,470	4,100	1,740	2,280	2,770	2,560	3,150	3,270	2,130	1,700	8,360	2,200	1,590
Chromium (Total) ¶	80	81	145	370	26	30.5	33.6	26.7	29.0	31.9	14.4	31.9	22.6	20.9	27.2	37.5	17.0	21.8	21.7	20.1	15.3	14.3	11.5
Copper ¶	70	34	390	270	16	15.1	13.6	12.1	NA	NA	9.7	14.1	5.3	6.10	5.1	6.5	5.3	6.2	5.6	5.6	6.2	5.1	3.1
Iron †					20,000	21,300	27,000	17,400	11,900	12,500	8,440	19,700	11,600	16,600	13,300	20,400	9,510	9,310	10,800	8,390	6,500	10,700	4,560
Lead ¶	35	46.7	110	218	31	83.4	39.5	63.5	67.2 J	66.3 J	30.2	66.1	27.0	39.3	28.7	73.1	46.1	44.5	27.4	26.3	20.7	27.9	17.5
Magnesium						3,650	4,770	3,250	NA	NA	1,700	3,880	2,490	2,260	2,740	3,660	1,670	2,650	2,460	2,160	1,220	1,820	1,240
Manganese					460	389 J	444 J	371 J	227 J	230 J	210	353 J	285	367 J	340	514	284	259 J	115 J	102	767 J	298 J	155
Mercury ¶	0.15	0.15	1.3	0.71	0.2	0.23	0.094	0.17	0.20	0.16	0.047	0.14	0.062	0.092	0.089	0.14	0.11	0.10	0.063	0.066	0.099	0.086	0.039
Molybdenum						2.5 J	2.5 J	2.0 J	1.0 J	0.89 J	0.87 B	2.3 J	1.5	1.6 J	1.9	1.7	1.6	1.5 J	1.4 J	1.4	3.4 J	1.4 J	0.92
Nickel ¶	30	20.9	50	51.6	16	28.6	42.3	23.4	NA	NA	16.6	28.4	15.7	18.2	19.0	26.2	12.5	20.8	16.5	15.4	13.2	15.5	20.3
Potassium						766	1,760	600	NA	NA	596	974	332	387	281	425	245	385	422	377	280	441	191
Selenium ¶						1.6	1.0 J	1.5 J	0.91	0.88	0.46 B	1.5 J	0.67 B	1.4 J	1.5	1.7	1.4	1.5 J	0.81 J	0.99	3.1 J	1.0 J	0.56 B
Sodium						700 J	179	174	315	313	137	219	141	162	196	261	210	312	170	210	467	311	186
Thallium (thallium chloride) ¶						0.30	0.31 J	0.28 J	0.092 J	0.17 J	0.14 B	0.34 J	0.20		0.25	0.30	0.20	0.29 J	0.14 J	0.28	0.23 J	0.16 J	0.17 B
Tin	‡		‡			R	R	R	1.5 J	1.0 J	4.7 B	R	1.7 B	R	2.1 B	1.7 B	1.9 B	R	R	1.6 B	R	R	3.4 B
Vanadium						37.9	32.4	28.2	31.6 J	31.2 J	13.5	31.8	21.7	20.1	25.1	36.5	21.7	23.5	17.8	20.0	9.3	15.4	10.0
Zinc ¶	120	150	270	410	120	147 J	113 J	116 J	117 J	101 J	63.2	159 J	59.8	62.2 J	58.1	84.8	43.0	85.6 J	156 J	54.7	28.7 J	63.2 J	30.0
Unconverted AVS/SEM (Concentrations in mg/kg)																							
AVS	Not Applicable					760	357	1,750	71 J	12 J	NA	604	NA	22	NA	NA	NA	419	162	NA	46	1,720	NA
SEM-Arsenic									6.1 J		NA	3.6 J	NA	4.4 J	NA	NA	NA			NA			NA
SEM-Cadmium						1.7 J	0.74 J	0.94 J	1.0	1.2	NA	1.4	NA		NA	NA	NA	0.51 J		NA		0.97 J	NA
SEM-Copper							R	R	2.97	1.38	NA	R	NA	R	NA	NA	NA	R	R	NA	R	R	NA
SEM-Lead						72.2	32.0	71.1	74.3	56.4	NA	65.2	NA	25.0	NA	NA	NA	27.5	16.5 J	NA	9.8 J	31.2	NA
SEM-Mercury						R	R	R	R	R	NA	R	NA	R	NA	NA	NA	R	R	NA	R	R	NA
SEM-Nickel						12.7	7.0	9.2	17.2	7.08	NA	7.0	NA	6.5	NA	NA	NA	5.1 J	3.9 J	NA	5.2	8.3	NA
SEM-Zinc						108	46.7	94.0	151 J	87.2 J	NA	124	NA	21.6	NA	NA	NA	48.5	26.6	NA	32.3	59.5	NA
Converted AVS/SEM (Concentrations in µmole/g)																							
AVS	Not Applicable					23.7	11.1	54.6	2.2 J	0.37 J	NA	18.8	NA	0.69	NA	NA	NA	13.1	5.05	NA	1.43	53.7	NA
SEM-Arsenic									0.082 J		NA	0.048 J	NA	0.059 J	NA	NA	NA			NA			NA
SEM-Cadmium						0.015 J	0.0066 J	0.0084 J	0.0091	0.010	NA	0.0121	NA		NA	NA	NA	0.0046 J		NA		0.0087 J	NA
SEM-Copper							R	R	0.050	0.020	NA	R	NA	R	NA	NA	NA	R	R	NA	R	R	NA
SEM-Lead						0.350	0.154	0.345	0.360	0.270	NA	0.315	NA	0.122	NA	NA	NA	0.132	0.080 J	NA	0.047 J	0.150	NA
SEM-Mercury						R	R	R	R	R	NA	R	NA	R	NA	NA	NA	R	R	NA	R	R	NA
SEM-Nickel						0.216	0.119	0.157	0.290	0.120	NA	0.119	NA	0.111	NA	NA	NA	0.086 J	0.066 J	NA	0.088	0.141	NA
SEM-Zinc						1.66	0.712	1.45	2.30 J	1.30 J	NA	1.90	NA	0.329	NA	NA	NA	0.742	0.407	NA	0.496	0.907	NA

TABLE 17F
Summary of Sediment Data - Metals and AVS/SEM
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Parameter	RTSLs					SS-16	SSB-16A	SS-16 Dup.	SS-17	SSB-19	SSBPG-Sea	SSBPG-McQ
	NOAA ER-L		NOAA ER-M		Ontario	10/3/1997	10/5/1999	10/3/1997	10/2/1997	10/6/1999	10/6/1999	10/7/1999
	1990	1995	1990	1995	LEL	BW403	BW420	BW403	BW403	BW420	BW420	BW420
Metals (Concentrations in mg/kg)												
Antimony ¶	2		25			R		0.33 J	0.20 J		0.056 B	0.021 B
Arsenic ¶	33	8.2	85	70	6	11.3	2.0	10.0	4.8	1.7	19.6	1.9
Barium						43.3 J	20.9	57.5 J	54.0 J	24.2	39.1	26.4
Beryllium ¶						0.90	0.39	0.99	1.1	0.28	0.65	0.40
Cadmium ¶	5	1.2	9	9.6	0.6	1.8 J	0.32	1.9 J		0.19	0.50	0.20
Calcium						3,650	1,490	3,620	4,070	1,210	5,510	1,220
Chromium (Total) ¶	80	81	145	370	26	17.9	10.0	16.8	28.1	11.5	16.3	2.1
Copper ¶	70	34	390	270	16	12.0	2.4	7.3	4.2	1.8	11.1	1.1
Iron †					20,000	7,740	3,760	9,820	9,780	3,970	9,260	1,880
Lead ¶	35	46.7	110	218	31	46.4	13.4	43.7	21.8	6.3	34.6	11.5
Magnesium						2,090	1,190	1,950	2,590	1,260	1,590	411
Manganese					460	284 J	77	623 J	478 J	117	225	106
Mercury ¶	0.15	0.15	1.3	0.71	0.2	0.12	0.035	0.12	0.091	0.024	0.10	0.061
Molybdenum						2.9 J	0.63 B	3.1 J	2.1 J	0.68 B	1.2	0.34 B
Nickel ¶	30	20.9	50	51.6	16	21.7	8.3	35.0	18.8	7.8	10.9	2.3
Potassium						290	179	345	271	187	396	117
Selenium ¶						1.6 J	0.68 B	1.4 J	2.1 J	0.48 B	1.4	0.87
Sodium						232	169	186	415	99.9	184	173
Thallium (thallium chloride) ¶						0.32 J	0.091 B	0.28 J	0.23 J	0.097 B	0.15 B	0.049 B
Tin	‡		‡			R	1.4 B	R	R	2.2 B	2.2 B	3.4 B
Vanadium						22.5	9.5	19.5	21.0	8.0	14.4	3.1
Zinc ¶	120	150	270	410	120	98.4 J	22.3	102 J	48.4 J	19.9	75.6	11.1
Unconverted AVS/SEM (Concentrations in mg/kg)												
AVS	Not Applicable					450	NA	455	283	NA	NA	NA
SEM-Arsenic						3.4 J	NA			NA	NA	NA
SEM-Cadmium						0.52 J	NA	0.64 J	0.44 J	NA	NA	NA
SEM-Copper						R	NA	R	R	NA	NA	NA
SEM-Lead						31.6	NA	26.3 J	17.4 J	NA	NA	NA
SEM-Mercury						R	NA	R	R	NA	NA	NA
SEM-Nickel							NA	10.9		NA	NA	NA
SEM-Zinc						62.6 J	NA	66.1	21.8 J	NA	NA	NA
Converted AVS/SEM (Concentrations in µmole/g)												
AVS	Not Applicable					14.0	NA	14.2	8.83	NA	NA	NA
SEM-Arsenic						0.045 J	NA			NA	NA	NA
SEM-Cadmium						0.0046 J	NA	0.0051 J	0.0034 J	NA	NA	NA
SEM-Copper						R	NA	R	R	NA	NA	NA
SEM-Lead						0.153	NA	0.128 J	0.084 J	NA	NA	NA
SEM-Mercury						R	NA	R	R	NA	NA	NA
SEM-Nickel							NA	0.187		NA	NA	NA
SEM-Zinc						0.959 J	NA	1.02	0.334 J	NA	NA	NA

Notes:

1. Samples were collected by Sanborn, Head & Associates, Inc. (SHA) personnel on the dates indicated and belong to the sample deliverable groups (SDGs) indicated (e.g., BW403). SDG BW420 was validated using a Tier I validation, and all qualifiers presented are from the laboratory. All other SDGs were validated using a Tier II validation, and are qualified by the data validator as noted in the table.

2. Analyses were performed by Woods Hole Group Environmental Laboratories (WHG) of Raynham, Massachusetts, using United States Environmental Protection Agency (USEPA) Methods 6010A and 7000 Series; "Determination of acid-volatile sulfide and simultaneously-extracted metals in sediments using sulfide-specific electrode detection," Warren S. Boothman, USEPA Environmental Research Laboratory, Narragansett, RI, and Andrea Helmstetter, Science International Corp., Narragansett, RI, September 4, 1992, AVSSEM SOP v2.0; and ultra-trace mercury determination by gold amalgamation after Perkin-Elmer Corporation Technical Summaries TSAA-36 and TSAA-49E.

3. Concentrations for metals and unconverted AVS/SEM are shown in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm). Concentrations for converted AVS/SEM are shown in micromoles per gram (µmole/g).

4. Only those parameters detected or rejected in one or more of the samples presented herein are listed.

5. A blank indicates the parameter was not detected.

6. "Dup." indicates the sample is a field duplicate.

7. "NOAA ER-L" or "ER-M (1990)" refers to the National Oceanic and Atmospheric Administration (NOAA) effects range-low (ER-L) or effects range-median (ER-M) threshold concentrations in sediment from "The Potential for Biological Effects of Sediment-Sorbed Contaminants Tested in the National Status and Trends Program" (1990).
"NOAA ER-L" or "ER-M (1995)" refers to NOAA ER-L or ER-M threshold concentrations in sediment from Long et al., 1995, "Incidence of Adverse Biological Effects Within Ranges of Chemical Concentrations in Marine and Estuarine Sediments," Environmental Management, 19(1):81-97.
"Ontario LEL" refers to Ontario Ministry of the Environment and Energy Lowest Effect Levels (1993/1994).
The above criteria are not considered applicable to AVS/SEM metals concentrations.

8. "¶" indicates priority pollutant metal.
"†" indicates the Ontario LEL is given as 2%, which is equivalent to 20,000 mg/kg.
"‡" indicates source document lists as not available.

9. "J" indicates an estimated value.
"NA" indicates not analyzed for this parameter.
"B" indicates the concentration was less than the Project Quantitation Limit but greater than or equal to the instrument detection limit.
"AVS" indicates acid volatile sulfide.
"SEM" indicates simultaneously extracted metal.
"RTSLs" indicates Risk Threshold Screening Levels.

10. See appendices for field forms, validated analytical data reports, and Risk Threshold Screening Levels for the full list of parameters analyzed.

TABLE 18
Retardation Factor (R) Values and Contaminant Transport Velocities (V_c)
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Compound	log (K_{oc})	R Value			V_c (ft/day)		
		f_{oc} = 6E-06	f_{oc} = 5E-05	foc = 1.7E-04	f_{oc} = 6E-06	f_{oc} = 5E-05	f_{oc} = 1.7E-04
AVOCs[2]							
Benzene	1.94	1.0	1.0	1.1	0.17 - 0.33	0.17 - 0.33	0.15 - 0.30
Toluene	2.18	1.0	1.0	1.2	0.17 - 0.33	0.17 - 0.33	0.14 - 0.28
o-Xylene	2.11	1.0	1.0	1.1	0.17 - 0.33	0.17 - 0.33	0.15 - 0.30
Ethylbenzene	2.20	1.0	1.0	1.2	0.17 - 0.33	0.17 - 0.33	0.14 - 0.28
p-Xylene	2.31	1.0	1.1	1.2	0.17 - 0.33	0.15 - 0.30	0.14 - 0.28
1,3,5-Trimethylbenzene[3]	2.82	1.0	1.2	1.7	0.17 - 0.33	0.14 - 0.28	0.10 - 0.19
n-Propylbenzene[3]	2.87	1.0	1.2	1.8	0.17 - 0.33	0.14 - 0.28	0.09 - 0.18
sec-Butylbenzene[3]	2.95	1.0	1.3	1.9	0.17 - 0.33	0.13 - 0.25	0.089 - 0.17
Naphthalene	3.11	1.0	1.4	2.3	0.17 - 0.33	0.12 - 0.24	0.074 - 0.14
m-Xylene	3.20	1.1	1.5	2.6	0.15 - 0.30	0.11 - 0.22	0.065 - 0.13
n-Butylbenzene[3]	3.39	1.1	1.7	3.5	0.15 - 0.30	0.10 - 0.19	0.049 - 0.09
Isopropylbenzene[3]	3.45	1.1	1.8	3.9	0.15 - 0.30	0.094 - 0.18	0.044 - 0.085
1,2,4-Trimethylbenzene[3]	3.57	1.1	2.1	4.8	0.15 - 0.30	0.081 - 0.16	0.035 - 0.069
p-Isopropyltoluene	no K_{oc} data						
CVOCs[2]							
Vinyl Chloride	0.39	1.0	1.0	1.0	0.17 - 0.33	0.17 - 0.33	0.17 - 0.33
Chloroethane	0.54	1.0	1.0	1.0	0.17 - 0.33	0.17 - 0.33	0.17 - 0.33
Methylene Chloride	0.94	1.0	1.0	1.0	0.17 - 0.33	0.17 - 0.33	0.17 - 0.33
1,2-Dichloroethane	1.15	1.0	1.0	1.0	0.17 - 0.33	0.17 - 0.33	0.17 - 0.33
1,1-Dichloroethane	1.48	1.0	1.0	1.0	0.17 - 0.33	0.17 - 0.33	0.17 - 0.33
1,1-Dichloroethene	1.81	1.0	1.0	1.1	0.17 - 0.33	0.17 - 0.33	0.15 - 0.30
trans-1,2-Dichloroethene	1.77	1.0	1.0	1.1	0.17 - 0.33	0.17 - 0.33	0.15 - 0.30
Trichloroethene	2.03	1.0	1.0	1.1	0.17 - 0.33	0.17 - 0.33	0.15 - 0.30
1,1,1-Trichloroethane	2.18	1.0	1.0	1.2	0.17 - 0.33	0.17 - 0.33	0.14 - 0.28
Tetrachloroethene	2.42	1.0	1.1	1.3	0.17 - 0.33	0.15 - 0.30	0.13 - 0.25
1,4-Dichlorobenzene	2.60	1.0	1.1	1.4	0.17 - 0.33	0.15 - 0.30	0.12 - 0.24
1,2-Dichlorobenzene[3]	2.80	1.0	1.2	1.6	0.17 - 0.33	0.14 - 0.28	0.11 - 0.21
1,2,3-Trichlorobenzene[1]	3.56	1.1	2.1	4.7	0.15 - 0.30	0.081 - 0.16	0.036 - 0.070
PAHs[2]							
Acenaphthene	3.30	1.1	1.6	3.0	0.15 - 0.30	0.11 - 0.21	0.057 - 0.11
Naphthalene	3.11	1.0	1.4	2.3	0.17 - 0.33	0.12 - 0.24	0.074 - 0.14
Acenaphthylene	3.68	1.2	2.4	5.9	0.14 - 0.28	0.071 - 0.14	0.029 - 0.056
Fluorene	3.70	1.2	2.5	6.1	0.14 - 0.28	0.068 - 0.13	0.028 - 0.054
2-Methylnaphthalene	3.93	1.3	3.6	9.7	0.13 - 0.25	0.047 - 0.092	0.018 - 0.034
Anthracene	4.27	1.7	6.6	20	0.10 - 0.19	0.026 - 0.050	0.0085 - 0.017
Phenanthrene	4.36	1.8	7.9	24	0.094 - 0.18	0.022 - 0.042	0.0071 - 0.014
Benzo[k]fluoranthene	6.64	160	1300	4,500	0.0011 - 0.0021	1.3E-04 - 2.5E-04	3.8E-05 - 7.3E-05

TABLE 18
Retardation Factor (R) Values and Contaminant Transport Velocities (V_c)
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Compound	log (K_{oc})	R Value			V_c (ft/day)		
		f_{oc} = 6E-06	f_{oc} = 5E-05	foc = 1.7E-04	f_{oc} = 6E-06	f_{oc} = 5E-05	f_{oc} = 1.7E-04
PCB Congener[1]							
PCB-1	3.91	1.3	3.4	9.3	0.13 - 0.25	0.050 - 0.10	0.018 - 0.035
PCB-3	3.71	1.2	2.5	6.2	0.14 - 0.28	0.068 - 0.13	0.027 - 0.053
PCB-8	4.62	2.5	14	44	0.068 - 0.13	0.012 - 0.024	0.0039 - 0.0075
PCB-15	4.61	2.5	13	43	0.068 - 0.13	0.013 - 0.025	0.0040 - 0.0077
PCB-18	4.98	4.5	30	98	0.038 - 0.073	0.0057 - 0.011	0.0017 - 0.0034
PCB-44	5.10	5.6	39	130	0.030 - 0.059	0.0044 - 0.0085	0.0013 - 0.0025
PCB-52	5.34	8.9	67	220	0.019 - 0.037	0.0025 - 0.0049	7.7E-04 - 0.0015
PCB-66	5.15	6.1	43	150	0.028 - 0.054	0.0040 - 0.0077	0.0011 - 0.0022
PCB-87	5.35	9.1	68	230	0.019 - 0.036	0.0025 - 0.0049	7.4E-04 - 0.0014
PCB-90/101	5.35	9.1	68	230	0.019 - 0.036	0.0025 - 0.0049	7.4E-04 - 0.0014
PCB-118	no K_{oc} data						
PCB-138	6.21	60	490	1,700	0.0028 - 0.0055	3.5E-04 - 6.7E-04	1.0E-04 - 1.9E-04
PCB-149	no K_{oc} data						
PCB-206	7.72	1,900	16,000	54,000	8.9E-05 - 1.7E-04	1.1E-05 - 2.1E-05	3.1E-06 - 6.1E-06
PCB-209	8.09	4,400	37,000	130,000	3.9E-05 - 7.5E-05	4.6E-06 - 8.9E-06	1.3E-06 - 2.5E-06
Pesticides[2]							
Aldrin	2.61	1.0	1.1	1.4	0.17 - 0.33	0.15 - 0.30	0.12 - 0.24
Alpha-BHC	3.28	1.1	1.6	2.9	0.15 - 0.30	0.11 - 0.21	0.059 - 0.11
Beta-BHC	3.46	1.1	1.9	3.9	0.15 - 0.30	0.089 - 0.17	0.044 - 0.085
Delta-BHC	3.28	1.1	1.6	2.9	0.15 - 0.30	0.11 - 0.21	0.059 - 0.11
Gamma-BHC[3]	no K_{oc} data						
Endosulfan I	3.31	1.1	1.6	3.1	0.15 - 0.30	0.11 - 0.21	0.055 - 0.11
Endosulfan II	3.37	1.1	1.7	3.4	0.15 - 0.30	0.10 - 0.19	0.050 - 0.10
Endosulfan sulfate	3.37	1.1	1.7	3.4	0.15 - 0.30	0.10 - 0.19	0.050 - 0.10
Endrin	3.92	1.3	3.5	9.5	0.13 - 0.25	0.049 - 0.094	0.018 - 0.035
Dieldrin	4.08	1.4	4.6	13	0.12 - 0.24	0.037 - 0.072	0.013 - 0.025
Heptachlor	4.34	1.8	7.6	23	0.094 - 0.18	0.022 - 0.043	0.0074 - 0.014
Heptachlor epoxide	4.32	1.8	7.3	22	0.09 - 0.18	0.023 - 0.045	0.0077 - 0.015
Endrin aldehyde	4.43	2.0	9.1	28	0.085 - 0.17	0.019 - 0.036	0.0061 - 0.012
Methoxychlor	4.95	4.3	28	92	0.040 - 0.077	0.0061 - 0.012	0.0018 - 0.004
4,4'-DDT	5.38	9.8	73	250	0.017 - 0.034	0.0023 - 0.0045	6.8E-04 - 0.0013
Chloradane	5.36	9.4	70	240	0.018 - 0.035	0.0024 - 0.0047	7.1E-04 - 0.0014
Alpha chlordane[3]	5.20	6.8	49	160	0.025 - 0.049	0.0035 - 0.0067	1.1E-03 - 0.0021
Gamma chlordane[3]	5.90	30	240	810	0.0057 - 0.011	7.1E-04 - 0.0014	2.1E-04 - 4.1E-04
Endrin ketone	no K_{oc} data						

TABLE 18
Retardation Factor (R) Values and Contaminant Transport Velocities (V_c)
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Notes:

1. The governing equation (Fetter, 1988) is:

$$R = \frac{V}{V_c} = 1 + \frac{\rho_b \, K_{oc} \, f_{oc}}{n_w}$$

where:
- R = retardation factor (unitless);
- V = average horizontal seepage velocity (feet per day [ft/day]);
- V_c = contaminant transport velocity (ft/day);
- ρ_b = bulk density of soil (grams per cubic centimeter [g/cm^3]);
- K_{oc} = organic carbon/water partition coefficient (milliliters per gram [mL/g]);
- f_{oc} = fraction of organic carbon in soil (unitless); and
- n_w = fraction of water-filled porosity (unitless).

Assumed values are:
- V = 0.17 - 0.33 ft/day;
- ρ_b = 1.8 g/cm^3; and
- n_w = 0.3.

Values of other parameters are as indicated on the above table.

2. Sources for K_{oc} include:

[1] - from MacKay, et al., 1992;
[2] - from Knox, et al., 1993; and
[3] - from Montgomery, 1996.

Where more than one K_{oc} value is given by the source, those values considered most applicable were averaged to calculate the K_{oc} given above.

3. R values shown have been rounded to two significant figures, and V_c values have been calculated from these rounded R values.

TABLE 19A
Summary of Performance Evaluation Scores
Eastern Analytical, Inc. Screening Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Analyte	Number of Occurrences							Total No. Times In PES
	Within Range	Warning Low	Warning High	Action Low	Action High	Missed	Present as Contaminant	
VOCs								
1,1,1-Trichloroethane	5	0	0	0	2	0	0	7
1,1,2-Trichloroethane	4	0	0	0	2	0	0	6
1,1-Dichloroethane	4	0	1	1	1	0	0	7
1,1-Dichloroethene	3	1	1	1	0	0	0	6
1,2-Dichloroethane	4	1	0	1	0	0	0	6
1,2-Dichloroethenes (total)	0	0	0	0	2	0	0	2
1,2-Dichloropropane	4	0	0	0	3	0	0	7
Benzene	9	0	1	0	1	0	0	11
Bromodichloromethane	4	0	0	0	2	0	0	6
Bromoform	3	0	1	0	1	0	0	5
Carbon tetrachloride	3	0	1	0	2	0	0	6
Chlorobenzene	1	0	0	1	3	0	0	5
Chloroform	4	1	1	0	0	0	0	6
cis-1,3-Dichloropropene	2	0	0	0	1	0	0	3
trans-1,3-Dichloropropene	2	0	0	0	1	0	0	3
Dibromochloromethane	1	0	1	0	1	0	0	3
Ethylbenzene	1	0	0	1	2	0	0	4
Methylene chloride	4	0	1	0	1	0	0	6
Tetrachloroethene	4	0	0	0	3	0	0	7
Toluene	2	0	1	0	2	0	0	5
trans-1,2-Dichloroethene	2	0	0	0	0	0	0	2
Trichloroethene	6	0	2	0	2	0	0	10
Vinyl chloride	3	0	0	0	1	0	0	4
Xylenes	4	1	1	0	2	0	0	8
PAHs								
Acenaphthene	6	0	0	0	0	0	0	6
Acenaphthylene	5	0	0	0	0	0	0	5
Anthracene	8	0	0	0	0	0	0	8
Benzo(a)anthracene	5	0	0	0	1	0	0	6
Benzo(a)pyrene	5	1	0	0	0	0	0	6
Benzo(b)fluoranthene	4	1	0	1	0	0	0	6
Benzo(k)fluoranthene	7	0	0	0	0	0	0	7
Benzo(g,h,i)perylene	2	2	0	0	0	0	0	4
Chrysene	5	0	0	1	1	0	0	7
Dibenzo(a,h)anthracene	7	1	0	0	0	0	0	8
Fluoranthene	6	1	0	0	0	0	0	7
Fluorene	6	0	0	0	0	0	0	6
Indeno(1,2,3-cd)pyrene	5	0	0	0	0	0	0	5
2-Methylnaphthalene	2	0	0	0	0	0	0	2
Naphthalene	5	0	3	1	0	0	0	9
Phenanthrene	6	1	0	0	0	0	0	7
Pyrene	7	0	0	0	1	0	0	8
PCBs								
Aroclor 1260	18	0	0	0	0	0	0	18
Metals								
Arsenic	14	0	0	0	0	0	0	14
Cadmium	3	0	1	0	10	0	0	14
Chromium	11	0	1	0	2	0	0	14
Lead	10	0	3	1	0	0	0	14

OVERALL SUMMARY:

Analyte	No. of PES	In Range	W. Low	W. High	A. Low	A. High	Miss	Contaminant	Total No.
VOCs	14	79	4	12	5	35	0	0	135
PAHs	14	91	7	3	3	3	0	0	107
PCBs	18	18	0	0	0	0	0	0	18
Metals	14	38	0	5	1	12	0	0	56
All analytes	**60**	**226**	**11**	**20**	**9**	**50**	**0**	**0**	**316**

TABLE 19B
Summary of Performance Evaluation Scores
NHDES Laboratory Full Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Analyte	Number of Occurrences							Total No. Times In PES
	Within Range	Warning Low	Warning High	Action Low	Action High	Missed	Present as Contaminant	
VOCs								
1,1,1-Trichloroethane	9	0	1	0	0	0	0	10
1,1,2-Trichloroethane	5	1	2	0	1	0	0	9
1,1,2,2-Tetrachloroethane	21	0	1	0	0	0	0	22
1,2-Dibromo-3-chloropropane	2	0	0	0	0	0	0	2
1,2-Dibromoethane	3	0	0	0	0	0	0	3
1,1-Dichloroethane	3	0	1	0	1	0	0	5
1,2-Dichloroethane	4	0	0	0	0	0	0	4
1,1-Dichloroethene	9	0	0	0	0	0	0	9
1,2-Dichloroethene (total)	2	1	0	1	0	0	0	4
1,2-Dichloropropane	2	0	1	0	2	0	0	5
cis-1,3-Dichloropropene	3	0	0	0	0	0	1	3
trans-1,3-Dichloropropene	5	0	0	0	0	0	0	5
1,3-Dichlorobenzene	1	0	0	0	0	0	0	1
1,3-Dichlorobenzene	4	0	0	0	0	0	0	4
1,4-Dichlorobenzene	4	0	0	0	0	0	0	4
2-Butanone	5	0	0	0	0	0	0	5
2-Hexanone	7	0	0	0	0	1	0	8
4-Methyl-2-pentanone	8	0	0	0	0	0	0	8
2-Propanol	0	0	0	0	0	0	3	0
2-Propenenitrile	0	0	0	0	0	0	2	0
Acetone	13	1	0	1	0	0	3	15
Benzene	9	0	2	0	0	0	0	11
Bromochloromethane	3	0	0	0	0	0	0	3
Bromodichloromethane	9	0	1	0	0	0	0	10
Bromoform	7	0	0	0	0	0	0	7
Bromomethane	5	2	0	0	0	0	2	7
Carbon disulfide	2	0	0	0	0	0	0	2
Carbon tetrachloride	3	0	1	0	2	0	0	6
Chlorobenzene	8	0	1	0	0	0	0	9
Chloroethane	5	0	0	1	0	0	0	6
Chloroform	4	1	0	0	0	0	0	5
Chloromethane	7	0	0	0	0	0	0	7
Dibromochloromethane	8	0	0	0	0	0	0	8
Ethylbenzene	10	0	3	0	1	0	0	14
Methylene chloride	5	0	0	0	0	0	2	5
Styrene	16	0	2	0	2	0	0	20
Tetrachloroethene	8	1	0	0	0	0	0	9
Toluene	4	2	0	0	0	0	0	6
Trichloroethene	2	0	1	1	1	0	4	5
Vinyl chloride	9	1	0	0	0	0	0	10
Xylenes	7	1	0	0	3	0	0	11
VOC TICs	21	-	-	-	-	-	-	21
Method 504.1 Low VOCs								
1,2-Dibromo-3-chloropropane	11	0	0	0	0	0	0	11
Metals								
Arsenic	3	0	0	0	0	0	0	3

TABLE 19B
Summary of Performance Evaluation Scores
NHDES Laboratory Full Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Analyte	Number of Occurrences							Total No. Times In PES
	Within Range	Warning Low	Warning High	Action Low	Action High	Missed	Present as Contaminant	
Antimony	1	0	0	0	0	0	0	1
Barium	2	1	0	0	0	0	0	3
Beryllium	4	0	1	0	0	0	0	5
Cadmium	4	0	0	0	0	0	1	4
Calcium	1	0	0	0	0	0	0	1
Chromium	7	0	0	0	0	0	0	7
Copper	5	0	0	0	0	0	0	5
Iron	2	0	0	0	0	0	0	2
Lead	3	0	1	1	0	0	0	5
Magnesium	1	0	0	0	0	0	0	1
Manganese	1	0	0	0	0	0	0	1
Mercury	6	0	0	0	0	0	0	6
Nickel	6	0	0	0	0	0	0	6
Potassium	1	0	0	0	0	0	1	1
Selenium	3	0	2	0	1	0	0	6
Sodium	1	0	0	0	0	0	0	1
Thallium	4	0	1	1	0	0	0	6
Vanadium	1	0	0	0	0	0	0	1
Zinc	1	0	0	0	0	0	0	1
Nitrogen (as Nitrate)	3	2	0	0	0	0	1	5

OVERALL SUMMARY:

Analyte	No. of PES	In Range	W. Low	W. High	A. Low	A. High	Miss	Contaminant	Total No.
VOCs	28	241	11	17	4	13	1	17	287
VOC TICs	28	21	-	-	-	-	-	-	21
M. 504.1 VOCs	14	11	0	0	0	0	0	0	11
Metals	14	57	1	5	2	1	0	2	66
Nitrogen	7	3	2	0	0	0	0	1	5
All analytes	**63**	**333**	**14**	**22**	**6**	**14**	**1**	**20**	**390**

NOTES:

1. "TICs" = Tentatively Identified Compounds. Scored as hit or miss only; estimated concentration.
2. "Total No. Times in PES" is the number of times the analyte was present in the PES submitted; does not include the PES in which the analyte was reported as a contaminant.

TABLE 19C
Summary of Performance Evaluation Scores
Woods Hole Group Environmental Laboratories Full Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Analyte	Number of Occurrences							Total No. Times In PES
	Within Range	Warning Low	Warning High	Action Low	Action High	Missed	Present as Contaminant	
VOCs								
1,1,1-Trichloroethane	0	0	1	0	0	0	1	1
1,1,2-Trichloroethane	1	0	0	0	0	0	1	1
1,1,2,2-Tetrachloroethane	1	0	0	0	0	0	0	1
1,1-Dichloroethane	0	0	0	0	1	0	0	1
1,2-Dichloroethene (total)	0	0	0	0	2	0	0	2
1,2-Dichloropropane	0	0	0	0	1	0	0	1
cis-1,3-Dichloropropene	0	0	0	0	0	0	1	0
trans-1,3-Dichloropropene	0	0	1	0	0	0	0	1
4-Methyl-2-pentanone	1	0	0	0	0	0	0	1
Acetone	1	0	0	0	0	0	1	1
Benzene	0	0	1	0	0	0	0	1
Bromodichloromethane	0	0	1	0	0	0	0	1
Bromoform	1	0	0	0	0	0	0	1
Bromomethane	1	0	0	0	0	0	0	1
Carbon disulfide	2	0	0	0	0	0	0	2
Chlorobenzene	0	0	0	0	1	0	0	1
Chloroethane	1	0	0	0	0	0	0	1
Chloroform	0	0	0	0	0	0	1	0
Chloromethane	0	0	0	0	0	0	1	0
Dibromochloromethane	1	0	0	0	0	0	0	1
Methylene chloride	0	0	0	0	0	0	2	0
Styrene	1	0	0	0	0	0	0	1
Tetrachloroethene	2	0	0	0	0	0	0	2
Toluene	1	0	0	0	0	0	0	1
Trichloroethene	1	0	1	0	0	0	0	2
Xylenes	1	0	0	0	0	0	0	1
PAHs by SIM								
Naphthalene	6	2	0	1	0	0	1	9
2-Methylnaphthalene	1	0	0	0	0	0	1	1
Acenaphthylene	5	0	0	0	0	0	1	5
Acenaphthene	5	0	0	1	0	0	0	6
Fluorene	3	2	0	0	0	0	0	5
Phenanthrene	4	0	0	2	0	0	0	6
Anthracene	3	2	0	0	0	0	0	5
Fluoranthene	1	1	0	1	0	0	0	3
Pyrene	6	0	0	2	0	0	0	8
Benzo(a)anthracene	2	1	0	1	0	0	0	4
Chrysene	1	1	0	2	0	0	1	4
Benzo(b)fluoranthene	4	1	0	2	0	0	0	7
Benzo(k)fluoranthene	2	0	0	2	0	0	0	4
Benzo(a)pyrene	3	1	0	3	0	0	0	7
Indeno(1,2,3-cd)pyrene	3	0	0	1	0	0	0	4
Dibenzo(a,h)anthracene	1	2	0	1	0	0	0	4
Benzo(g,h,i)perylene	2	0	0	1	0	0	0	3
SVOCs by 8270								
1,2,4-Trichlorobenzene	3	0	0	0	0	0	0	3
1,2-Dichlorobenzene	1	0	0	0	0	0	0	1
1,3-Dichlorobenzene	1	0	0	0	0	0	0	1

TABLE 19C
Summary of Performance Evaluation Scores
Woods Hole Group Environmental Laboratories Full Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Analyte	Number of Occurrences							Total No. Times In PES
	Within Range	Warning Low	Warning High	Action Low	Action High	Missed	Present as Contaminant	
1,4-Dichlorobenzene	3	0	0	0	0	0	0	3
2,2'-Oxybis(1-chloropropane)	1	0	0	0	0	0	0	1
2,4,5-Trichlorophenol	2	1	0	0	0	0	0	3
2,4,6-Trichlorophenol	2	0	0	0	0	0	0	2
2,4-Dichlorophenol	2	1	0	0	0	0	0	3
2,4-Dimethylphenol	2	0	0	0	0	0	0	2
2,4-Dinitrotoluene	2	0	1	0	0	0	0	3
2,6-Dinitrotoluene	4	1	0	0	0	0	0	5
2-Chloronaphthalene	3	0	0	0	0	0	0	3
2-Chlorophenol	2	0	0	0	1	0	0	3
2-Methylnaphthalene	1	0	0	0	0	0	0	1
2-Methylphenol	2	0	0	0	0	0	0	2
2-Nitroaniline	2	0	0	0	0	0	0	2
4,6-Dinitro-2-methylphenol	0	0	0	1	0	0	0	1
4-Chloro-3-methylphenol	1	0	1	0	0	0	0	2
4-Chloroaniline	2	0	0	0	0	0	0	2
4-Chlorophenyl-phenylether	1	0	0	0	1	0	0	2
4-Methylphenol	1	1	0	0	0	0	0	2
Acenaphthene	0	0	0	1	0	0	0	1
Acenaphthylene	4	1	0	0	0	0	0	5
Anthracene	2	0	0	0	0	0	0	2
Benzo(a)anthracene	1	1	0	1	1	0	0	4
Benzo(a)pyrene	1	0	1	0	0	0	0	2
Benzo(b)fluoranthene	2	0	0	1	0	0	0	3
Benzo(g,h,i)perylene	1	0	0	0	0	0	0	1
Benzo(k)fluoranthene	0	0	1	0	0	0	0	1
Bis(2-chloroethyl)ether	1	0	0	0	0	1	0	2
Bis(2-ethylhexyl)phthalate	3	0	0	0	1	0	0	4
Butylbenzylphthalate	2	0	0	0	0	0	0	2
Chrysene	3	0	0	0	1	0	0	4
Dibenzo(a,h)anthracene	2	0	0	0	0	0	0	2
Dibenzofuran	7	0	0	0	0	0	0	7
Di-n-butylphthalate	2	0	0	0	0	0	0	2
Diethylphthalate	4	1	0	0	0	0	0	5
Di-n-octylphthalate	2	0	0	0	0	0	0	2
Fluoranthene	2	1	0	0	1	0	0	4
Fluorene	3	0	0	1	0	0	0	4
Hexachlorobenzene	3	0	0	0	0	0	0	3
Hexachlorobutadiene	2	0	0	0	0	0	0	2
Hexachlorocyclopentadiene	0	1	0	0	0	0	0	1
Hexachloroethane	0	0	0	1	0	0	0	1
Indeno(1,2,3-cd)pyrene	1	0	0	0	0	0	0	1
Isophorone	0	1	1	0	0	0	0	2
Naphthalene	5	0	0	0	0	0	0	5
Nitrobenzene	2	0	0	0	0	0	0	2
N-Nitroso-di-n-proplyamine	2	0	0	0	1	0	0	3
N-Nitrosodiphenylamine	5	0	0	0	0	0	0	5
Pentachlorophenol	2	0	0	1	0	0	0	3
Phenanthrene	4	2	0	0	0	0	0	6

TABLE 19C
Summary of Performance Evaluation Scores
Woods Hole Group Environmental Laboratories Full Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Analyte	Number of Occurrences							Total No. Times In PES
	Within Range	Warning Low	Warning High	Action Low	Action High	Missed	Present as Contaminant	
Phenol	4	0	0	0	0	0	0	4
Pyrene	4	0	0	0	1	0	0	5
SVOC TICs	38	-	-	-	-	12	1	50
Pesticides (NOAA Level)								
Alpha-BHC	4	0	0	0	0	0	0	4
Beta-BHC	1	0	0	0	0	0	0	1
Gamma-BHC (Lindane)	2	0	0	0	0	0	0	2
Delta-BHC	1	1	0	1	0	0	0	3
4,4'-DDD	1	0	0	0	0	0	1	1
4,4'-DDE	4	0	0	0	0	0	1	4
4,4'-DDT	2	1	0	1	0	0	1	4
Aldrin	4	0	0	0	0	0	0	4
Alpha-Chlordane	2	1	0	0	0	0	0	3
Dieldrin	2	0	0	1	0	0	0	3
Endosulfan I	2	0	0	0	0	0	0	2
Endosulfan II	2	0	0	2	0	0	1	4
Endosulfan sulfate	1	0	0	0	0	0	0	1
Endrin	3	0	0	0	0	0	0	3
Endrin aldehyde	2	0	0	0	0	0	0	2
Endrin ketone	3	0	0	0	0	0	1	3
Heptachlor	2	0	0	0	0	0	0	2
Heptachlor epoxide	1	0	0	0	0	0	0	1
Methoxychlor	3	0	0	0	0	0	0	3
Pesticides (Method 8080)								
Alpha-BHC	1	2	0	2	0	0	0	5
Beta-BHC	0	2	0	1	1	0	0	4
Gamma-BHC (Lindane)	1	0	0	1	1	0	0	3
Delta-BHC	2	0	0	2	0	0	0	4
4,4'-DDD	1	0	0	0	1	0	0	2
4,4'-DDE	1	0	0	0	0	1	0	2
4,4'-DDT	2	1	0	2	0	1	0	6
Aldrin	4	0	0	1	0	0	0	5
Alpha-Chlordane	2	0	0	0	0	0	0	2
Gamma-Chlordane	3	1	0	0	0	0	1	4
Dieldrin	0	0	1	0	0	0	0	1
Endosulfan I	0	0	0	2	0	0	0	2
Endosulfan sulfate	3	0	0	1	0	0	0	4
Endrin	2	0	0	0	0	0	1	2
Endrin aldehyde	3	0	0	0	0	0	0	3
Endrin ketone	2	0	0	1	0	0	0	3
Heptachlor	1	0	1	0	0	1	0	3
Heptachlor epoxide	1	0	0	2	0	1	0	4
Methoxychlor	0	1	0	0	0	2	1	3
PCBs (Method 8080)								
Aroclor 1260	8	0	0	0	0	0	0	8
Metals								
Antimony	6	0	0	0	0	0	4	6
Arsenic	12	3	0	0	0	0	0	15
Barium	3	0	0	2	0	0	4	5

TABLE 19C
Summary of Performance Evaluation Scores
Woods Hole Group Environmental Laboratories Full Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Analyte	Number of Occurrences							Total No. Times In PES
	Within Range	Warning Low	Warning High	Action Low	Action High	Missed	Present as Contaminant	
Beryllium	4	0	0	0	1	0	5	5
Cadmium	9	1	2	1	0	0	1	13
Calcium	8	0	0	0	0	0	0	8
Chromium	12	1	1	0	0	0	0	14
Copper	10	0	0	1	0	0	0	11
Iron	11	1	0	1	1	0	0	14
Lead	14	0	1	2	1	0	0	18
Magnesium	10	0	0	0	0	0	0	10
Manganese	13	0	0	1	0	0	0	14
Mercury	12	0	0	0	0	0	0	12
Nickel	3	0	0	0	0	0	3	3
Potassium	10	0	0	0	0	0	0	10
Selenium	1	2	0	0	0	0	7	3
Silver	1	0	0	0	0	0	0	1
Sodium	5	0	0	0	0	0	4	5
Thallium	4	0	0	1	0	0	3	5
Vanadium	3	1	0	1	0	0	0	5
Zinc	11	0	0	2	0	0	0	13

OVERALL SUMMARY:

Analyte	No. of PES	In Range	W. Low	W. High	A. Low	A. High	Miss	Contaminant	Total No.
VOCs	2	16	0	5	0	5	0	8	26
PAHs by SIM	13	52	13	0	20	0	0	4	85
SVOCs by 8270	14	114	12	5	7	8	1	0	147
SVOC TICs	14	38	-	-	-	-	12	1	50
Pesticides (NOAA)	6	42	3	0	5	0	0	5	50
Pesticides (8080)	7	29	7	2	15	3	6	3	62
PCBs (Method 8080)	8	8	0	0	0	0	0	0	8
Metals	30	158	9	4	12	3	0	31	186
All analytes	**94**	**457**	**44**	**16**	**59**	**19**	**19**	**52**	**614**

NOTES:

1. "TICs" = Tentatively Identified Compounds. Scored as hit or miss only; estimated concentration.
2. Total number of PES analyzed is not the sum of the numbers run for each analysis because PAHs and SVOCs were often run on the same PES.
3. "Total No. Times in PES" is the number of times the analyte was present in the PES submitted; does not include the PES in which the analyte was reported as a contaminant.

TABLE 19D
Summary of Performance Evaluation Scores
Alta Analytical Laboratory, Inc. Full Level Analyses
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Analyte	Number of Occurrences							Total No. Times In PES
	Within Range	Warning Low	Warning High	Action Low	Action High	Missed	Present as Contaminant	
Dioxins								
2,3,7,8-TCDD	1	0	0	0	0	0	0	1
Total TCDD	1	0	0	0	0	0	0	1
1,2,3,7,8-PeCDD	1	0	0	0	0	0	0	1
Total PeCDD	1	0	0	0	0	0	0	1
1,2,3,4,7,8-HxCDD	1	0	0	0	0	0	0	1
1,2,3,6,7,8-HxCDD	1	0	0	0	0	0	0	1
1,2,3,7,8,9-HxCDD	1	0	0	0	0	0	0	1
Total HxCDD	1	0	0	0	0	0	0	1
1,2,3,4,6,7,8-HpCDD	1	0	0	0	0	0	0	1
Total Hp-CDD	1	0	0	0	0	0	0	1
OCDD	1	0	0	0	0	0	0	1
Furans								
2,3,7,8-TDCF	1	0	0	0	0	0	0	1
Total TCDF	1	0	0	0	0	0	0	1
2,3,4,7,8,-PeCDF	1	0	0	0	0	0	0	1
Total PeCDF	1	0	0	0	0	0	0	1
2,3,4,6,7,8-HxCDF	1	0	0	0	0	0	0	1
1,2,3,7,8,9-HxCDF	1	0	0	0	0	0	0	1
Total HxCDF	1	0	0	0	0	0	0	1
1,2,3,4,6,7,8-HpCDF	1	0	0	0	0	0	0	1
Total HpCDF	1	0	0	0	0	0	0	1
OCDF	1	0	0	0	0	0	0	1

OVERALL SUMMARY:

Analyte	No. of PES	In Range	W. Low	W. High	A. Low	A. High	Miss	Contaminant	Total No.
Dioxins	1	11	0	0	0	0	0	0	11
Furans	1	10	0	0	0	0	0	0	10
All analytes	**1**	**21**	**0**	**0**	**0**	**0**	**0**	**0**	**21**

TABLE 20
Summary of Split Sample Evaluation of Soil Screening Methods
Remedial Investigation
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Analysis	Percentage of Acceptable Split Sample Results	Acceptable Options			No. Detects with Unacceptable %D	No. Detects in Comparison
		No. Samples ND by Both Methods	No. Detects OK at/near QL	No. Detects with Acceptable %D		
VOCs						
cis-1,2-Dichloroethylene	100%	21	2	1	0	3
1,1,1-Trichloroethane	100%	19	4	1	0	5
Trichloroethene	100%	21	2	1	0	3
Tetrachloroethene	96%	17	5	1	1	7
Toluene	100%	18	1	5	0	6
Ethylbenzene	92%	17	1	4	2	7
Xylene (m,p)	92%	18	0	5	2	7
Xylene (o)	92%	18	0	5	2	7
GRO C6-C9 vs VPH (2)	79%	12	4	3	5	12
GRO C10-C12 vs VPH (2)	54%	3	5	5	11	21
TPH vs EPH	88%	1	7	13	3	23
PCBs	96%	8	5	10	1	16
PAHs	88%	8	10	3	3	16
Metals						
Arsenic	96%	0	0	23	1	24
Cadmium (3)	25%	0	5	1	18	24
Chromium	100%	0	0	24	0	24
Lead	88%	0	0	21	3	24

NOTES:

1. Samples analyzed for screening parameters by EAI laboratory; split samples analyzed using full analytical methods by NHDES (VOCs) and Woods Hole Group (other parameters). A total of 24 soils were split for confirmatory duplicate analysis during Phase 1,2 and 3 soil sampling.
2. The GRO and VPH methods are not exactly comparable, as different carbon ranges were measured. GRO C6-9 was compared to VPH C5-8 aliphatic data; GRO C10-12 was compared to VPH C9-10 aromatic plus C9-12 aliphatic.
3. Only detected VOCs are included in this summary. Other target VOCs were nondetect by both methods. PAHs are reported on a per-sample rather than per-analyte basis.
4. The cadmium screening result was higher than the full analytical result in each case. PES scores indicate cadmium screening results are biased high.