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PROJECT STATUS MEMORANDUM NO. 03-02

TO: Pamela Tames, USEPA

FROM: Paul Jobmann,
Alfred N. Kovalik, P.E.

DATE: September 12, 2003

PROJECT: Rowe Industries Superfund Site
Focused Ground Water Remedial System
April through July 2003 Status Report
Sag Harbor, New York

LBG Engineering Services, P.C. (LBG) commenced operation of the focused ground-water pump and treat system at the above-referenced site on March 22, 2001. This status report presents a summary of the operation, maintenance and monitoring activities for the site from April 2003 through July, 2003. The report includes a summary of system operational parameters, analytical results for ground-water and system effluent samples, and a summary of ground-water monitoring data.

SUMMARY OF SYSTEM OPERATION

(January 2003 through March 2003)

Reporting Period:	56 days
Total Flow During Period:	1,343,221 gallons
Cumulative Total Flow:	4,202,994 gallons
System Average Flow:	16.4 gallons per minute (gpm)
Mass of VOCs Recovered:	0.84 pounds
Cumulative VOCs Recovered Since 3/22/01:	14.0 pounds
Discharge Criteria:	Effluent water quality criteria met

Table 1 summarizes the VOC loading on the carbon units. Tables 2 through 7 summarizes the laboratory analytical data for samples collected from the system. Graphs 1 through 3 present a graphical representation of carbon loading and VOC concentrations detected during the reporting period and since system start-up.

CONCLUSIONS

Volatile organic compound (VOC) concentrations in groundwater recovered from the Former Drum Storage Area (FDSA) have decreased as a result of the system operation to a concentration of approximately 100 micrograms per liter (ug/l) at the pre-carbon sample location. Following periods of down time as a result of alarms, maintenance or high water levels in the discharge pond, VOC concentrations have rebounded as high as 270 ug/l at the pre-carbon location but returned to the previous low concentration at the following sample event.

LBG proposes to operate the focused pump and treat system in a pulsed operation scenario running all three wells for a three-week period followed by a one-week shut-down period. During the initial shut down period, the water levels in the FDSA will be monitored to ensure that any observed mounding due to operation or the air sparge system would not result in lateral spreading of the contaminated groundwater towards the adjacent residence. This situation is not anticipated because the full scale pump and treat system will remain in operation. However, should the potential for spreading in the south east direction occur, the soil-vapor extraction (SVE) and air sparge (AS) systems would also be turned off to eliminate any potential for the migration of contaminated water due to mounding

Should concentrations remain stable following three months of operation in the pulsed scenario, LBG will propose using additives in the FDSA to enhance biodegradation. The addition of bioremediation additives, in conjunction with operation of the full scale pump and treat system, is likely to reduce the concentration of residual contamination.

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TABLES

Table 1

GROUND-WATER REMEDIAL ACTION
FOCUSED GROUND-WATER REMEDIATION SYSTEM
ROWE INDUSTRIES SUPERFUND SITE
SAG HARBOR, NEW YORK

Mass of VOCs Removed from the FDSA
April 2003 through July 2003

Date	Total Precarbon VOC Concentrations (ug/L)	Total Volume of System (gals)	Volume of Water Processed for Period (gallons)	Total Mass Removed (lbs.)	Cumulative Mass Removed (lbs.)
4/4/2003	38	2,999,581	139,808	0.04	0.04
5/1/2003	58	3,538,840	539,259	0.26	0.30
5/20/2003	87	3,652,375	295,192	0.21	0.52
7/11/2003	274	3,860,420	26,388	0.06	0.58
7/14/2003	77	3,978,147	117,727	0.08	0.66
7/23/2003	98	4,202,994	224,847	0.18	0.84

Table 2

GROUND-WATER REMEDIAL ACTION
FOCUSED GROUND-WATER REMEDIATION SYSTEM
ROWE INDUSTRIES SUPERFUND SITE
SAG HARBOR, NEW YORK

Recovery Well Influent VOC Concentrations, micrograms per liter
April 2003 through July 2003

FRW-1							
Date	**PCE**	**TCA**	**IPB**	**PB**	**124TMB**	**135TMB**	**MTBE**
4/4/2003	49	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
5/20/2003	120	ND<1	ND<1	ND<1	ND<1	ND<1	--
7/11/2003	44	2.9	ND<1	ND<1	ND<1	ND<1	-
7/23/2003	140	ND<1	ND<1	ND<1	ND<1	ND<1	-

PCE- TETRACHLOROETHYLENE
TCA - 1,1,1-TRICHLOROETHANE
11 2-TCA - 1,1,2-TRICHLOROETHANE
TCE - TRICHLOROETHENE
12DCE - cis1,2-DICHLOROETHENE
MTBE - METHYL TERTIARY-BUTYL ETHER
PB - n PROPYLBENZENE
124TMB - 1,2,4-TRIMETHYLBENZENE
135TMB - 1,3,5-TRIMETHYLBENZENE
IPB - ISOPROPYLBENZENE
4-IPT - 4-ISOPROPYLTOLUENE
-- - NOT ANALYZED

Table 3

GROUND-WATER REMEDIAL ACTION
FOCUSED GROUND-WATER REMEDIATION SYSTEM
ROWE INDUSTRIES SUPERFUND SITE
SAG HARBOR, NEW YORK

Recovery Well Influent VOC Concentrations, micrograms per liter
April 2003 through July 2003

FRW-2							
Date	**PCE**	**TCA**	**IPB**	**PB**	**124TMB**	**135TMB**	**MTBE**
4/4/2003	17	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
5/20/2003	42	ND<1	ND<1	ND<1	ND<1	ND<1	-
7/11/2003	370	2.6	ND<1	ND<1	ND<1	ND<1	-
7/23/2003	76	ND<1	ND<1	ND<1	ND<1	ND<1	-

PCE- TETRACHLOROETHYLENE
TCA - 1,1,1-TRICHLOROETHANE
11 2-TCA - 1,1,2-TRICHLOROETHANE
TCE - TRICHLOROETHENE
12DCE - cis1,2-DICHLOROETHENE
MTBE - METHYL TERTIARY-BUTYL ETHER
PB - n PROPYLBENZENE
124TMB - 1,2,4-TRIMETHYLBENZENE
1,3,5TMB - 1,3,5-TRIMETHYLBENZENE
IPB - ISOPROPYLBENZENE
4-IPT - 4-ISOPROPYLTOLUENE
-- - NOT ANALYZED

Table 4

GROUND-WATER REMEDIAL ACTION
FOCUSED GROUND-WATER REMEDIATION SYSTEM
ROWE INDUSTRIES SUPERFUND SITE
SAG HARBOR, NEW YORK

Recovery Well Influent VOC Concentrations, micrograms per liter
April 2003 through July 2003

FRW-3							
Date	**PCE**	**TCA**	**IPB**	**PB**	**124TMB**	**135TMB**	**MTBE**
4/4/2003	61	ND<1	1.6	1	0.7	1.2	ND<1
5/20/2003	160	ND<1	2.8	1.6	0.6	3.4	-
7/11/2003	470	7.9	1.8	ND<1	ND<1	3.5	-
7/23/2003	140	ND<1	ND<1	ND<1	ND<1	ND<1	-

PCE- TETRACHLOROETHYLENE
TCA - 1,1,1-TRICHLOROETHANE
11 2-TCA - 1,1,2-TRICHLOROETHANE
TCE - TRICHLOROETHENE
12DCE - cis1,2-DICHLOROETHENE
MTBE - METHYL TERTIARY-BUTYL ETHER
PB - n PROPYLBENZENE
124TMB - 1,2,4-TRIMETHYLBENZENE
1,3,5TMB - 1,3,5-TRIMETHYLBENZENE
IPB - ISOPROPYLBENZENE
4-IPT - 4-ISOPROPYLTOLUENE
-- - NOT ANALYZED

Table 5

GROUND-WATER REMEDIAL ACTION
FOCUSED GROUND-WATER REMEDIATION SYSTEM
ROWE INDUSTRIES SUPERFUND SITE
SAG HARBOR, NEW YORK

Pre-Carbon VOC Concentrations, micrograms per liter
April 2003 through July 2003

PRE-CARBON											
Date	PCE	TCA	DCE	IPB	CB	124TMB	135TMB	TCE	Toluene	Benzene	MTBE
4/4/2003	38	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
5/1/2003	58	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	--
5/20/2003	84	ND<1	ND<1	1	ND<1	0.9	1.5	ND<1	ND<1	ND<1	--
7/11/2003	270	4	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	-
7/14/2003	61	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	16	ND<1	-
7/23/2003	98	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	-

PCE- TETRACHLOROETHYLENE
TCA - 1,1,1-TRICHLOROETHANE
11 2-TCA - 1,1,2-TRICHLOROETHANE
TCE - TRICHLOROETHENE
EB - ETHYLBENZENE
IPB - ISOPROPYLBENZENE
CB - CHLOROBENZENE
BF - BROMOFORM
124TMB - 1,2,4-TRIMETHYLBENZENE
135TMB - 1,3,5-TRIMETHYLBENZENE
CB - CHLOROBENZENE
12DCE - cis1,2-DICHLOROETHENE
4-IPT - 4-ISOPROPYLTOLUENE
-- - NOT ANALYZED

Table 6

GROUND-WATER REMEDIAL ACTION
FOCUSED GROUND-WATER REMEDIATION SYSTEM
ROWE INDUSTRIES SUPERFUND SITE
SAG HARBOR, NEW YORK

Mid-carbon VOC Concentrations, micrograms per liter
April 2003 through July 2003

MID-CARBON											
Date	PCE	TCA	DCE	IPB	CB	124TMB	135TMB	TCE	Toluene	Benzene	MTBE
4/4/2003	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
5/1/2003	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	--
5/20/2003	16	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	--
7/11/2003	27	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	-
7/14/2003	7	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	18	ND<1	-
7/23/2003	21	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	-

PCE- TETRACHLOROETHYLENE
TCA - 1,1,1-TRICHLOROETHANE
11 2-TCA - 1,1,2-TRICHLOROETHANE
TCE - TRICHLOROETHENE
EB - ETHYLBENZENE
IPB - ISOPROPYLBENZENE
CB - CHLOROBENZENE
BF - BROMOFORM
124TMB - 1,2,4-TRIMETHYLBENZENE
135TMB - 1,3,5-TRIMETHYLBENZENE
CB - CHLOROBENZENE
12DCE - cis1,2-DICHLOROETHENE
4-IPT - 4-ISOPROPYLTOLUENE
-- - NOT ANALYZED

Table 7

GROUND-WATER REMEDIAL ACTION
FOCUSED GROUND-WATER REMEDIATION SYSTEM
ROWE INDUSTRIES SUPERFUND SITE
SAG HARBOR, NEW YORK

Post-carbon VOC Concentrations, micrograms per liter
April 2003 through July 2003

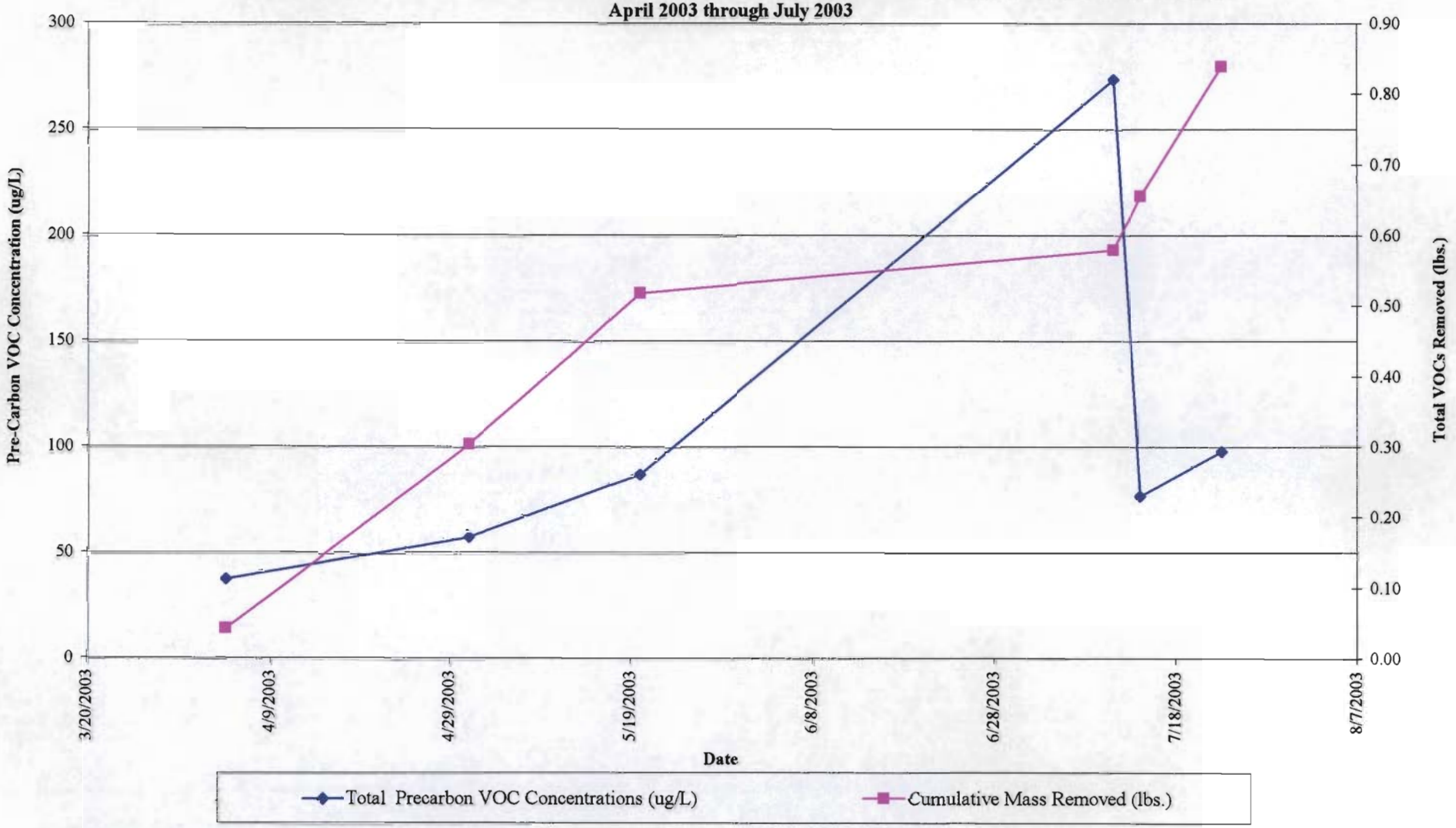
POST-CARBON											
Date	**PCE**	**TCA**	**DCE**	**IPB**	**CB**	**124TMB**	**135TMB**	**TCE**	**Toluene**	**Benzene**	**MTBE**
4/4/2003	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
5/1/2003	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	--
5/20/2003	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	--
7/11/2003	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	-
7/14/2003	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	8.9[1/]	ND<1	-
7/23/2003	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	-

Notes:
1/ Toluene detected believed to be remnants of method blank completed prior to sample analysis.

PCE- TETRACHLOROETHYLENE
TCA - 1,1,1-TRICHLOROETHANE
11 2-TCA - 1,1,2-TRICHLOROETHANE
TCE - TRICHLOROETHENE
EB - ETHYLBENZENE
IPB - ISOPROPYLBENZENE
CB - CHLOROBENZENE
BF - BROMOFORM
124TMB - 1,2,4-TRIMETHYLBENZENE
135TMB - 1,3,5-TRIMETHYLBENZENE
CB - CHLOROBENZENE
12DCE - cis1,2-DICHLOROETHENE
4-IPT - 4-ISOPROPYLTOLUENE
-- - NOT ANALYZED

GRAPHS

GRAPH 1
GROUND WATER REMEDIAL ACTION
FOCUSED GROUND WATER REMEDIATION SYSTEM
ROWE INDUSTRIES SUPERFUND SITE
SAG HARBOR, NEW YORK
INFLUENT VOC CONCENTRATIONS AND CUMULATIVE MASS REMOVED FROM FDSA
April 2003 through July 2003



9/12/2003
Mass Removal Graph
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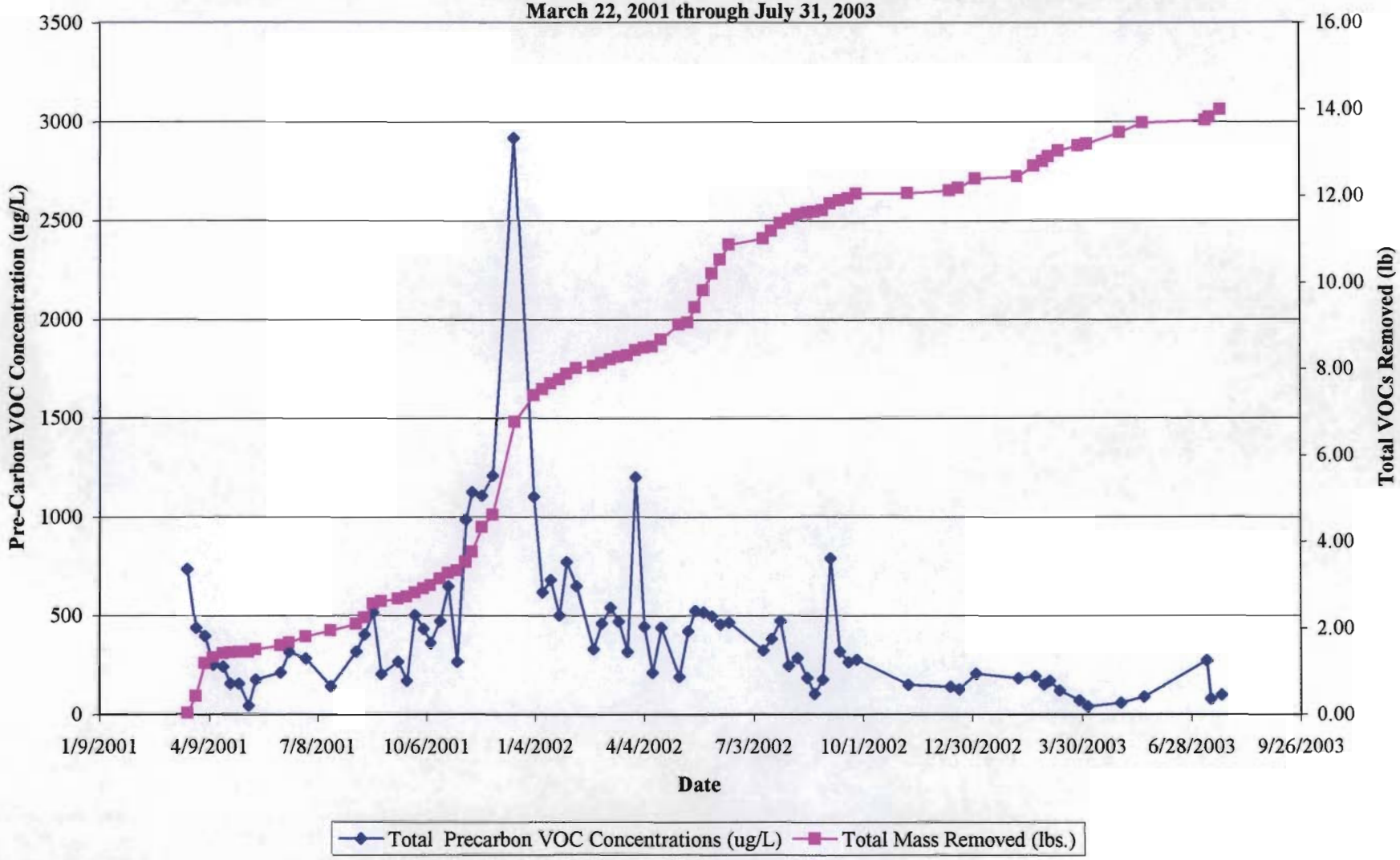
GRAPH 2
GROUND WATER REMEDIAL ACTION
FOCUSED GROUND WATER REMEDIATION SYSTEM
ROWE INDUSTRIES SUPERFUND SITE
SAG HARBOR, NEW YORK
INFLUENT VOC CONCENTRATION AND CUMULATIVE MASS REMOVED FROM FDSA
March 22, 2001 through July 31, 2003



9/12/2003
Graph Cum. Mass Removed
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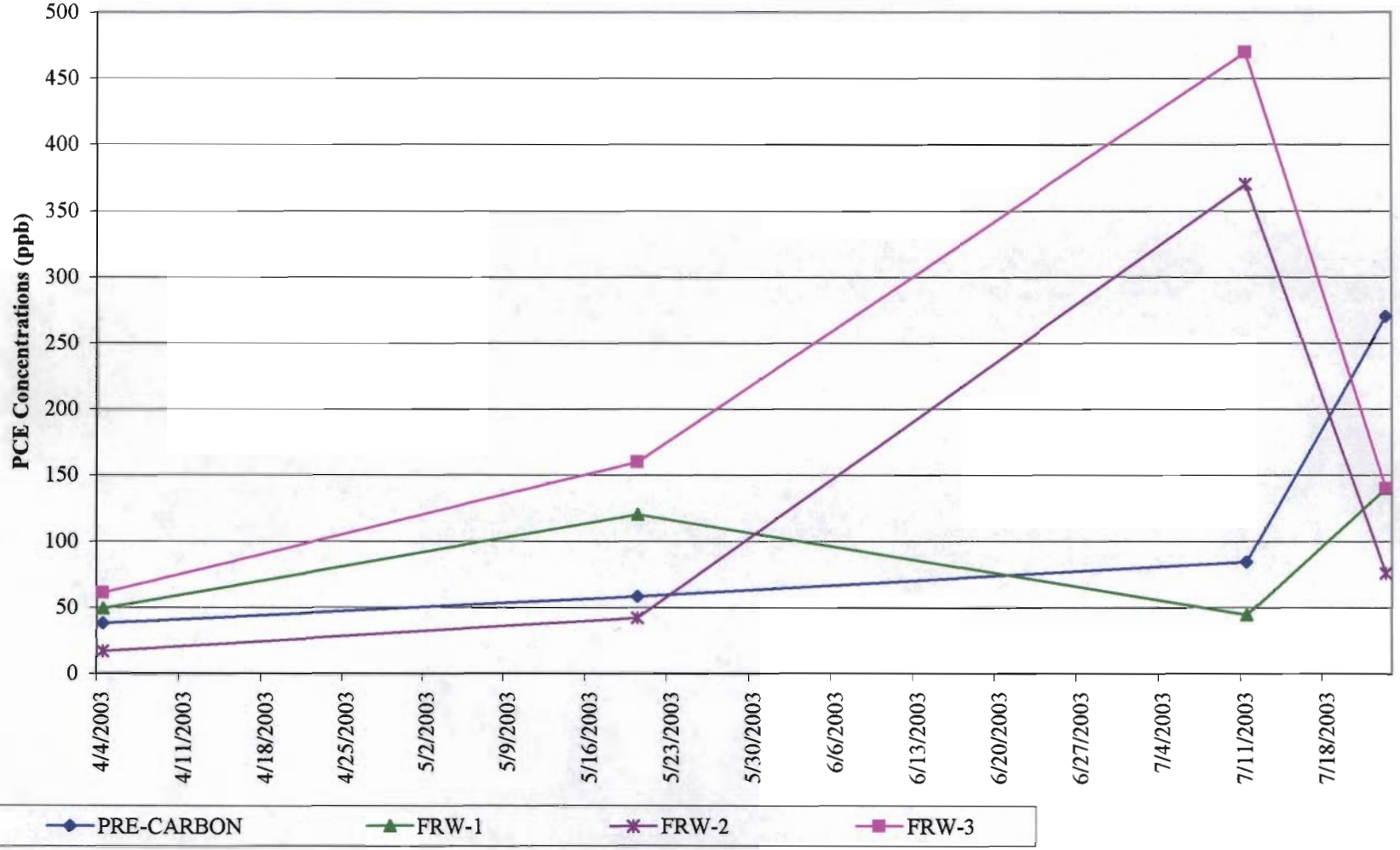
Graph 3
Ground Water Remedial Action
Focused Ground Water Remediation System
Rowe Industries Superfund Site
Sag Harbor, New York
Tetrachloroethene Concentrations in Recovered Ground Water



9/12/2003
PCE [C] Graph
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