STAR EXPANSION COMPANY
MOUNTAINVILLE, NEW YORK

RCRA FACILITY ASSESSMENT
SAMPLING VISIT REPORT

PROJECT #1293-1

SEPTEMBER 1994

Office Location:
EDER ASSOCIATES
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Madison, WI
Ann Arbor, MI
Augusta, GA
Jacksonville, FL
Trenton, NJ
Tampa, FL

September 30, 1994
File #1293-2

Mr. John Middelkoop
Director, Bureau of Eastern
Hazardous Waste Programs
New York State Department of
Environmental Conservation
50 Wolf Road
Albany, New York 12233-7252

Re: Star Expansion Company
Part 373 Post Closure
Permit No. 3-3324-00024/00024-0

Dear Mr. Middelkoop:

I have enclosed for your review two copies of the RCRA Facility Assessment Sampling Visit Report for the Waste Oil/Scrap Metal storage area at the Star, Mountainville, New York property. This report was prepared in accord with Module III E. 4. (a) of Star's Part 373 permit.

Please call if you have any questions.

Very truly yours,

EDER ASSOCIATES

Nicholas A. Andrianas, P.E.
Senior Environmental Engineer

NAA/bl

cc: R. Aldrich
G. Casper w/o enc.
V. Valaitis w/o enc.

BL0807

480 FOREST AVE , P. O. BOX 707, LOCUST VALLEY, NEW YORK 11560-0707 • (516) 671-8440 • FAX (516) 671-3349

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APPENDICES

1.0 INTRODUCTION

The New York State Department of Environmental Conservation (NYSDEC) determined that hazardous substances may have been released at the Waste Oil/Scrap Metal Storage Area on the Star Expansion Company (Star) site in Mountainville, New York, based on the November 1992 RCRA Facility Assessment. A RCRA Facility Assessment - Sampling Visit (RFA-SV) was conducted in accordance with Module III Condition E.2 of the NYSDEC August 1994 Part 373 permit.

The Waste Oil/Scrap Metal Storage Area consists of a concrete pad located approximately 150 feet east of the northern plant building, as shown on Figure 1. The concrete pad was constructed over leveled bedrock and soil in 1960. Scrap metal consisting of steel stampings, off-spec steel product, scrapped empty drums, wire, and pallet strapping was segregated and stored in three metal containers on this pad prior to off-site shipment. Star began storing waste oil at this area during the mid-1970s. The waste oil was stored in sealed 55-gallon drums and portable 275-gallon tanks prior to off-site disposal by a permitted waste oil transporter. Star discontinued using the Waste Oil/Scrap Metal Storage Area in the Spring of 1989.

The RFA-SV was conducted by Sergio Smiriglio Environmental Consultants, Inc. (SSEC) on May 19, 1994 in accordance with the RFA-SV Work Plan (SSEC, January 1994) approved by NYSDEC. This report presents the results of the RFA-SV with recommendations for additional sampling.

2.0 SUMMARY OF RFA ACTIVITIES

The RFA-SV was performed by SSEC in accordance with the procedures outlined in the January 1994 work plan, which included a sampling and analysis plan, quality assurance and quality control protocols, and a health and safety plan. Two NYSDEC representatives were on-site to observe the field work at the Waste Oil/Scrap Metal Storage Area.

Soil samples were collected on May 19, 1994 at the four locations shown on Figure 1 (S-1 through S-4). The NYSDEC on-site representatives approved the sampling locations. One sample (S-1) was collected beneath the concrete pad and three samples (S-2, S-3 and S-4) were collected immediately southwest of the pad. A six-inch diamond core drill was used to remove a section of concrete at S-1 where stains were observed near the intersection of three cracks. Approximately one to two inches of soil and gravel beneath the concrete were removed to expose the underlying soil. A sample of the underlying soil was collected to about one foot below the exposed surface using a decontaminated stainless steel sampling tool. Vegetation and asphalt pavement were removed from the other three locations using a shovel, which was decontaminated after each location as specified in the work plan. A sample of underlying soil was collected from land surface to about one foot below the surface at S-2, S-3, and S-4 using a decontaminated stainless steel sampling tool. A duplicate soil sample (S-5) was collected at location S-4.

No staining, odors, or other evidence of contamination were observed during the sampling. The soil at the four locations sampled was silty gravel.

The soil samples were immediately placed in laboratory-supplied sample jars and labeled. The sample jars were placed in an ice-filled cooler and delivered with chain-of-custody documentation to Envirotest Laboratories, Inc., Newburgh, New York (a New York State

certified laboratory) on the day of sampling. The samples were analyzed using the following USEPA SW846 Methods as specified in Appendix III-E of the August 1994 permit:

- Method 8240 - Volatile Organics
- Method 8270 - Semi-volatile Organics
- Method 6010 - Priority Pollutant Metals (except mercury)

The soil samples and quality control samples (duplicate, trip blank, and matrix spike/matrix spike duplicate samples) were analyzed within the holding times specified in SW846.

3.0 ANALYTICAL RESULTS

The volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals results reported by Envirotest Laboratories are summarized in the attached Tables. The laboratory data, and the data validation report prepared by Chemworld Environmental, Inc. in accordance with USEPA-CLP data validation guidelines, is included in Appendix A.

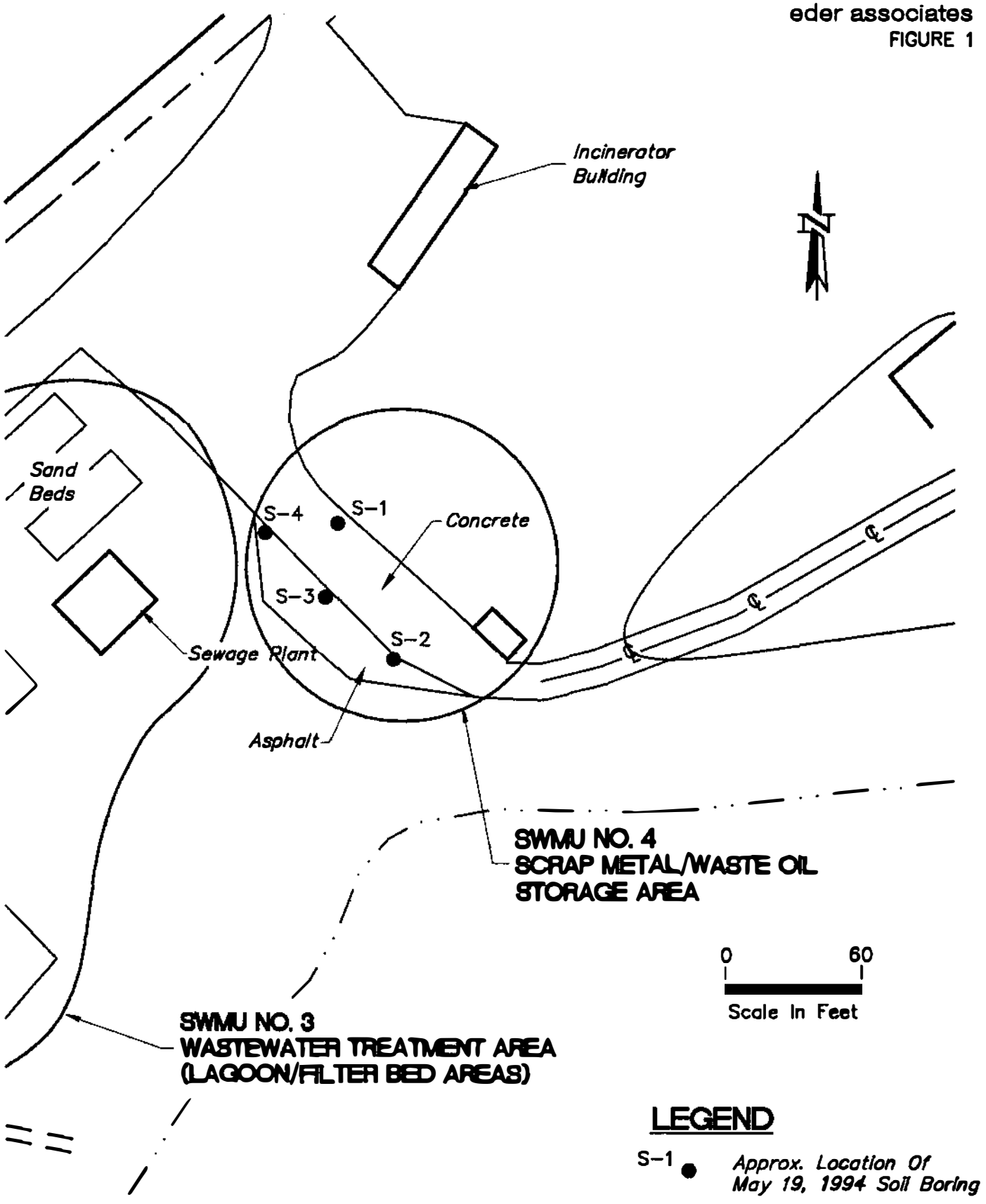
The soil sample collected beneath the concrete pad (S-1) contained the following VOCs: 1,1-dichloroethane; 1,2-dichloroethene (total); 1,1,1-trichloroethane; trichloroethene; 1,1,2-trichloroethane; tetrachloroethene; and acetone. The concentrations of the individual VOCs found in S-1 ranged from 10 to 1500 µg/kg, as shown on the attached Tables. Acetone, a common laboratory contaminant, was the only VOC detected in the soil samples collected adjacent to the concrete pad (S-2, S-3, and S-4).

The SVOC results show the presence of bis(2-ethylhexyl)phthalate and tentatively identified compounds (TICs) in all samples. Ten SVOCs (excluding TICs) were detected at concentrations ranging from about 50 to 140 µg/kg in the sample from S-3 beneath the asphalt pavement adjacent to the concrete slab (Appendix A). The polynuclear aromatic hydrocarbons (PAHs) detected at S-3 include fluoranthene, pyrene, chrysene, benzo(a)pyrene, and benzo(b)fluoranthene, which characterize asphalt. The data suggest that the metals are naturally occurring and are at background concentrations.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The VOC sampling results indicate that the soil beneath the concrete pad in the Waste Oil/Scrap Metal Storage Area was impacted by a release during past storage practices at this area. VOCs were not detected in soil samples collected beneath the asphalt immediately adjacent to the concrete pad, which indicates that the extent of contamination is limited to the pad area. The concentrations of PAHs detected in the soil samples do not appear to be significant since the area is paved. PAHs are commonly associated with asphalt pavement and tend to remain adsorbed to soil rather than leach to groundwater. The metals found in the soil samples are naturally occurring compounds at background levels. Groundwater monitoring in existing wells in the area of the Waste Oil/Scrap Metal Storage Area would confirm that the contaminants in the soil do not adversely impact downgradient groundwater quality.

Additional confirmatory sampling to define the extent of VOC contaminated soil beneath the concrete pad will be detailed in the RFI Work Plan.



WASTE OIL/SCRAP METAL STORAGE AREA SOIL SAMPLING LOCATIONS

STAR EXPANSION COMPANY
MOUNTAINVILLE, NEW YORK

SK12931B
092394

STAR EXPANSION PROJECT
VOLATILES/SOIL - DATA SUMMARY

CASE NO. 136578

All results reported in ug/Kg

Parameters - Volatiles	SOIL-1	Q	SOIL-1-DL	Q	SOIL-2	Q	SOIL-3	Q	SOIL-4	Q	SOIL-5	Q	VBLKA1	Q	VBLKA2	Q	VBLKB1	Q
Chloromethane				UJ														UJ
Bromomethane																		
Vinyl Chloride																		
Chloroethane								UJ		UJ		UJ				UJ		
Methylene Chloride			1300	U														
Acetone	100	J			11	U	11	U	11	U			4	J	6	J	5	J
Carbon Disulfide																		
1,1-Dichloroethylene																		
1,1-Dichloroethane	180	J																
Total 1,2-Dichloroethylene	530	J																
Chloroform																		
1,2-Dichloroethane																		
2-Butanone																		
1,1,1-Trichloroethane	1500	E	460	JD														
Carbon Tetrachloride								UJ		UJ		UJ				UJ		
Bromodichloromethane																		
1,2-Dichloropropane																		
Cis-1,3-Dichloropropene																		
Trichloroethene	42	J																
Dibromochloromethane																		
1,1,2-Trichlorethane	10	J																
Benzene																		
Trans-1,3-Dichloropropene																		
Bromoform																		
4-Methyl-2-pentanone		UJ																
2-Hexanone		UJ																
Tetrachloroethene	110	J	230	JD														
Toluene		UJ																
1,1,2,2-Tetrachloroethane		UJ																
Chlorobenzene		UJ																
Ethylbenzene		UJ																
Styrene		UJ																
Total Xylenes		UJ																

STAR EXPANSION PROJECT

VOLATILES/WATER - DATA SUMMARY

CASE NO. 136578 **All results reported in ug/L**

Parameters - Volatiles	TRIP BLANK	Q	MeOH BLANK	Q
Chloromethane				UJ
Bromomethane				
Vinyl Chloride				
Chloroethane				
Methylene Chloride			390	J
Acetone	10	U		
Carbon Disulfide				
1,1-Dichloroethylene				
1,1-Dichloroethane				
Total 1,2-Dichloroethylene				
Chloroform				
1,2-Dichloroethane				
2-Butanone				
1,1,1-Trichloroethane				
Carbon Tetrachloride				
Bromodichloromethane				
1,2-Dichloropropane				
Cis-1,3-Dichloropropene				
Trichloroethene				
Dibromochloromethane				
1,1,2-Trichlorethane				
Benzene				
Trans-1,3-Dichloropropene				
Bromoform				
4-Methyl-2-pentanone				
2-Hexanone				
Tetrachloroethene				
Toluene				
1,1,2,2-Tetrachloroethane				
Chlorobenzene				
Ethylbenzene				
Styrene				
Total Xylenes				

STAR EXPANSION PROJECT

SEMI-VOLATILES/SOIL - DATA SUMMARY

SDG NO. ST578 **All results reported in ug/Kg**

Parameters - SemiVolatiles	SOIL-1	Q	SOIL-1-DL	Q	SOIL-2	Q	SOIL-3	Q	SOIL-4	Q	SOIL-5	Q	SBLK01	Q
bis (2-chloroethyl) ether														
Phenol														
2-Chlorophenol														
1,3-Dichlorobenzene														
1,4-Dichlorobenzene														
1,2-Dichlorobenzene														
2,2'-oxybis(1-Chloropropane)														
2-Methylphenol														
Hexachloroethane														
N-Nitroso-di-n-propylamine														
4-methylphenol														
Nitrobenzene														
Isophorone														
2-Nitrophenol														
2,4-Dimethylphenol														
bis(2-chloroethoxy)methane														
2,4-Dichlorophenol														
1,2,4-Trichlorobenzene														
Naphthalene														
4-chloroaniline														
Hexachlorobutadiene														
4-chloro-3-methylphenol														
2-methylnaphthalene														
Hexachlorocyclopentadiene														
2,4,6-Trichlorophenol														
2,4,5-Trichlorophenol														
2-Chloronaphthalene														
2-Nitroaniline														
Acenaphthylene														
Dimethylphthalate														
2,6-Dinitrotoluene														
Acenaphthene														

STAR EXPANSION PROJECT

SEMI-VOLATILES/SOIL - DATA SUMMARY (cont.)

SDG NO. ST578

All results reported in ug/Kg

Parameters - SemiVolatiles	SOIL-1	Q	SOIL-1-DL	Q	SOIL-2	Q	SOIL-3	Q	SOIL-4	Q	SOIL-5	Q	SBLK01	Q
3-Nitroaniline														
2,4-Dinitrophenol		UJ		UJ		UJ		UJ		UJ		UJ		UJ
Dibenzofuran														
2,4-Dinitrotoluene														
4-Nitrophenol		UJ		UJ		UJ		UJ		UJ		UJ		UJ
Fluorene														
4-chlorophenyl-phenylether														
Diethylphthalate														
4-Nitroaniline														
4,6-Dinitro-2-methylphenol														
N-Nitrosodiphenylamine														
4-Bromophenyl-phenylether														
Hexachlorobenzene														
Pentachlorophenol														
Phenanthrene														
Anthracene														
Carbazole														
Di-n-butylphthalate														
Fluoranthene							80	J						
Pyrene							110	J						
Butylbenzylphthalate														
3,3'-Dichlorobenzidine		UJ		UJ		UJ		UJ		UJ		UJ		UJ
Benzo(a)anthracene							96	J						
Chrysene							100	J						
bis(2-ethylhexyl)phthalate	280	J	540	DJ	92	J	58	J	59	J	39	J		
Di-n-octyl phthalate		UJ		UJ	45	J		UJ		UJ		UJ		UJ
Benzo(b)flouranthene		UJ					140	J	43	J				
Benzo(k)flouranthene		UJ					47	J						
Benzo(a)pyrene		UJ					110	J						
Indeno(1,2,3-cd)pyrene		UJ					63	J						
Dibenz(a,h)anthracene		UJ												
Benzo(g,h,i)perylene		UJ					71	J						

STAR EXPANSION PROJECT

INORGANICS/SOIL - DATA SUMMARY

SDG NO. SE-578

All results reported in mg/Kg

Parameters - Inorganics	SOIL 1	Q	SOIL 2	Q	SOIL 3	Q	SOIL 4	Q	SOIL 5	Q
Antimony		UJ		UJ		UJ		UJ		UJ
Arsenic	3.5		4.1		4.9		4.9		4.2	
Beryllium					0.48	B				
Cadmium										
Chromium	9.3		13.6		10.9		11.1		11.5	
Copper	21.2		22.0		19.8		27.0		20.5	
Lead	9.4	J	18.9	J	12.6	J	11.9	J	11.9	J
Nickel	22.9		25.4		19.4		23.9		21.4	
Selenium										
Silver										
Thallium										
Zinc	60.3		95.5		61.6		80.0		60.9	

ORGANIC DATA QUALIFIERS

U - Indicates that the compound was analyzed for but not detected at or above the Contract Required Quantitation Limit (CRQL), or the compound is not detected due to qualification through the method or field blank.

J - The associated numerical value is an estimated quantity.

JN - Tentatively identified with approximated concentrations.

UJ - The compound was analyzed for, but not detected. The sample quantitation limit is an estimated quantity due to variance in quality control limits.

C - Applies to pesticide results where the identification has been confirmed by GC/MS.

X - The mass spectrum does not meet USEPA CLP criteria for confirmation, however, compound presence is strongly suspected.

E - Reported value is estimated due to quantitation above the calibration range.

D - Reported result taken from diluted sample analysis.

A - Aldol condensation product.

R - Reported value is unusable and rejected due to variance from quality control limits.

NA - Not Analyzed.

INORGANIC DATA QUALIFIERS

U - Indicates analyte was not detected at or below the Contract Required Detection Limit (CRDL), or the compound is not detected due to qualification through the method or field blank.

B - Indicates analyte result is between Instrument Detection Limit (IDL) and CRDL.

J - Reported value is estimated due to variance from quality control limits.

UJ - The element was analyzed for, but not detected. The sample quantitation limit is an estimate due to variance in quality control limits.

E - Reported value is estimated because of the presence of interference.

R - Reported value is unusable and rejected due to variance from quality control limits.

N.A. Not Analyzed.

The following areas were found to be out of specification for Case No. 136578 and required qualification as detailed below.

VOLATILE ORGANICS

Continuing Calibration:

Various samples were qualified as 'UJ', estimated, for the non-detectable results, due to continuing calibrations of greater than 25% Difference. The compounds affected were chloroethane, carbon tetrachloride and chloromethane. Positive results were not detected for the compounds affected.

Method Blanks:

Acetone was detected in the method blanks at various trace levels. A limit of ten times the highest acetone blank result was used for review and qualification of the soil samples. The SOIL-1 acetone result exceeded the blank limit and did not require qualification. All the remaining sample results were found to be less than the blank limit and were reported at less than the CRQL. These results were qualified as 'U', not detected, at the CRQL.

A methanol blank was associated with the dilution for sample SOIL-1-DL. Methylene chloride in the diluted sample was found to be less than ten times the associated blank and was qualified as 'U', not detected, at the CRQL, for methylene chloride.

Surrogate Recovery:

Sample SOIL-1 was qualified as 'J', estimated, for the positive results, only, due to high surrogate recovery for 1,2-Dichloroethane-d4.

Internal Standards:

Sample SOIL-1 was qualified as 'J', estimated, for the positive results and 'UJ', estimated, for the non-detectable results for the compounds associated with the chlorobenzene-dS internal standard. This internal standard for the sample was reported with a low area count.

SEMI-VOLATILE ORGANICS

Continuing Calibration:

The samples were qualified as 'J', estimated, for the positive results and 'UJ', estimated, for the non-detectable results, due to continuing calibrations of greater than 25% Difference. The compounds affected were 2,4-Dinitrophenol, 4-Nitrophenol, 3,3'-Dichlorobenzidine and Di-n-octyl phthalate.

Blanks:

Various TICs were detected in the method blank (SBLK01). Sample results which were found to be less than five times the respective method blank result were qualified as 'R', unusable.

Internal Standards:

Sample SOIL-1 was qualified as 'UJ', estimated, for the non-detectable results for the compounds associated with the Perylene-d12 internal standard. This internal standard for the sample was reported with a low area count.

MS/MSD:

Overall precision was found to be poor for the MS/MSD sample set for SOIL-5. The Relative Percent Difference for all 11 spiked compounds was found to exceed acceptable limits. Accuracy was found to be acceptable for the MSD sample for all 11 compounds. However, low spike recovery was generated for 6 of the 11 matrix spike compounds for the MS sample. Qualification of the data set was not required in relation to the MS/MSD.

INORGANICS

Matrix Spike Recovery:

Matrix Spike Recovery was found to be out of specification for both antimony (13.9% recovery) and lead (126.2% recovery). The lead results for the soil samples were qualified as 'J', estimated. Antimony non-detectable results were qualified as 'UJ', estimated.

Attachment A includes the Analytical Data Summary Tables with the appropriate data validation qualifiers. The tables include the positive results detected for the sampling event. Copies of the sample TIC Sheets with the data validation qualifiers are found in Attachment B. The Data Validation Qualifier Key is included as Attachment C.

Please contact me by telephone at 301-294-6144, should you require additional information or clarification regarding this Letter Report.

Sincerely,

Andrea P. Schuessler

Andrea P. Schuessler, CHMM

c: SE-9401 file

Attachments

ATTACHMENT A

STAR EXPANSION PROJECT
VOLATILES/SOIL - DATA SUMMARY

CASE NO. 136578

All results reported in ug/Kg

Parameters - Volatiles	SOIL-1	Q	SOIL-1-DL	Q	SOIL-2	Q	SOIL-3	Q	SOIL-4	Q	SOIL-5	Q	VBLKA1	Q	VBLKA2	Q	VBLKB1	Q
Chloromethane				UJ														UJ
Bromomethane																		
Vinyl Chloride																		
Chloroethane								UJ		UJ		UJ				UJ		
Methylene Chloride			1300	U														
Acetone	100	J			11	U	11	U	11	U			4	J	6	J	5	J
Carbon Disulfide																		
1,1-Dichloroethylene																		
1,1-Dichloroethane	180	J																
Total 1,2-Dichloroethylene	530	J																
Chloroform																		
1,2-Dichloroethane																		
2-Butanone																		
1,1,1-Trichloroethane	1500	E	460	JD														
Carbon Tetrachloride								UJ		UJ		UJ				UJ		
Bromodichloromethane																		
1,2-Dichloropropane																		
Cis-1,3-Dichloropropene																		
Trichloroethene	42	J																
Dibromochloromethane																		
1,1,2-Trichlorethane	10	J																
Benzene																		
Trans-1,3-Dichloropropene																		
Bromoform																		
4-Methyl-2-pentanone		UJ																
2-Hexanone		UJ																
Tetrachloroethene	110	J	230	JD														
Toluene		UJ																
1,1,2,2-Tetrachloroethane		UJ																
Chlorobenzene		UJ																
Ethylbenzene		UJ																
Styrene		UJ																
Total Xylenes		UJ																

STAR EXPANSION PROJECT

VOLATILES/WATER - DATA SUMMARY

CASE NO. 136578 All results reported in ug/L

Parameters - Volatiles	TRIP BLANK	Q	MeOH BLANK	Q
Chloromethane				UJ
Bromomethane				
Vinyl Chloride				
Chloroethane				
Methylene Chloride			390	J
Acetone	10	U		
Carbon Disulfide				
1,1-Dichloroethylene				
1,1-Dichloroethane				
Total 1,2-Dichloroethylene				
Chloroform				
1,2-Dichloroethane				
2-Butanone				
1,1,1-Trichloroethane				
Carbon Tetrachloride				
Bromodichloromethane				
1,2-Dichloropropane				
Cis-1,3-Dichloropropene				
Trichloroethene				
Dibromochloromethane				
1,1,2-Trichlorethane				
Benzene				
Trans-1,3-Dichloropropene				
Bromoform				
4-Methyl-2-pentanone				
2-Hexanone				
Tetrachloroethene				
Toluene				
1,1,2,2-Tetrachloroethane				
Chlorobenzene				
Ethylbenzene				
Styrene				
Total Xylenes				

STAR EXPANSION PROJECT

SEMI-VOLATILES/SOIL - DATA SUMMARY

SDG NO. ST578

All results reported in ug/Kg

Parameters - SemiVolatiles	SOIL-1	Q	SOIL-1-DL	Q	SOIL-2	Q	SOIL-3	Q	SOIL-4	Q	SOIL-5	Q	SBLK01	Q
bis (2-chloroethyl) ether														
Phenol														
2-Chlorophenol														
1,3-Dichlorobenzene														
1,4-Dichlorobenzene														
1,2-Dichlorobenzene														
2,2'-oxybis(1-Chloropropane)														
2-Methylphenol														
Hexachloroethane														
N-Nitroso-di-n-propylamine														
4-methylphenol														
Nitrobenzene														
Isophorone														
2-Nitrophenol														
2,4-Dimethylphenol														
bis(2-chloroethoxy)methane														
2,4-Dichlorophenol														
1,2,4-Trichlorobenzene														
Naphthalene														
4-chloroaniline														
Hexachlorobutadiene														
4-chloro-3-methylphenol														
2-methylnaphthalene														
Hexachlorocyclopentadiene														
2,4,6-Trichlorophenol														
2,4,5-Trichlorophenol														
2-Chloronaphthalene														
2-Nitroaniline														
Acenaphthylene														
Dimethylphthalate														
2,6-Dinitrotoluene														
Acenaphthene														

STAR EXPANSION PROJECT

SEMI-VOLATILES/SOIL - DATA SUMMARY (cont.)

SDG NO. ST578

All results reported in ug/Kg

Parameters - SemiVolatiles	SOIL-1	Q	SOIL-1-DL	Q	SOIL-2	Q	SOIL-3	Q	SOIL-4	Q	SOIL-5	Q	SBLK01	Q
3-Nitroaniline														
2,4-Dinitrophenol		UJ		UJ		UJ		UJ		UJ		UJ		UJ
Dibenzofuran														
2,4-Dinitrotoluene														
4-Nitrophenol		UJ		UJ		UJ		UJ		UJ		UJ		UJ
Fluorene														
4-chlorophenyl-phenylether														
Diethylphthalate														
4-Nitroaniline														
4,6-Dinitro-2-methylphenol														
N-Nitrosodiphenylamine														
4-Bromophenyl-phenylether														
Hexachlorobenzene														
Pentachlorophenol														
Phenanthrene														
Anthracene														
Carbazole														
Di-n-butylphthalate														
Fluoranthene							80	J						
Pyrene							110	J						
Butylbenzylphthalate														
3,3'-Dichlorobenzidine		UJ		UJ		UJ		UJ		UJ		UJ		UJ
Benzo(a)anthracene							96	J						
Chrysene							100	J						
bis(2-ethylhexyl)phthalate	280	J	540	DJ	92	J	58	J	59	J	39	J		
Di-n-octyl phthalate		UJ		UJ	45	J		UJ		UJ		UJ		UJ
Benzo(b)flouranthene		UJ					140	J	43	J				
Benzo(k)flouranthene		UJ					47	J						
Benzo(a)pyrene		UJ					110	J						
Indeno(1,2,3-cd)pyrene		UJ					63	J						
Dibenz(a,h)anthracene		UJ												
Benzo(g,h,i)perylene		UJ					71	J						

STAR EXPANSION PROJECT

INORGANICS/SOIL - DATA SUMMARY

SDG NO. SE-578

All results reported in mg/Kg

Parameters - Inorganics	SOIL 1	Q	SOIL 2	Q	SOIL 3	Q	SOIL 4	Q	SOIL 5	Q
Antimony		UJ		UJ		UJ		UJ		UJ
Arsenic	3.5		4.1		4.9		4.9		4.2	
Beryllium					0.48	B				
Cadmium										
Chromium	9.3		13.6		10.9		11.1		11.5	
Copper	21.2		22.0		19.8		27.0		20.5	
Lead	9.4	J	18.9	J	12.6	J	11.9	J	11.9	J
Nickel	22.9		25.4		19.4		23.9		21.4	
Selenium										
Silver										
Thallium										
Zinc	60.3		95.5		61.6		80.0		60.9	

ATTACHMENT B

ORGANICS DATA RESULT FORM

TENTATIVELY IDENTIFIED COMPOUNDS

Client ID: 1
EnviroTest Lab No: 136578-01
Client Name: Star Expansion
Project Name: Mountainville
% Solid: 94
Matrix: Water
Sample Wt/Vol: 1g
Level: Low
Fraction: VOA

Date Collected: 5/19/94
Date Received: 5/19/94
Date Extracted:
Date Analyzed: 5/24/94
Report Date: 6/10/94
Column: 1%SP-1000 CarbopackB
Lab File ID: V6590
Dilution Factor: 5

CAS NO.	COMPOUND	RT or SCAN NUMBER	ESTIMATED CONCENTRATION (ug/kg)
	Unknown	1.15	31000JN
	Unknown	2.29	4000JN
	Unknown	33.28	140JN

FORM I TIC - (VOA)

EnviroTest Laboratories Inc.
315 Fullerton Avenue
Newburgh, NY 12550
(914) 562-0890
FAX (914) 562-0841

ORGANICS DATA RESULT FORM

TENTATIVELY IDENTIFIED COMPOUNDS

Client ID: 2
EnviroTest Lab No: 136578-02
Client Name: Star Expansion
Project Name: Mountainville
% Solid: 95
Matrix: Water
Sample Wt/Vol: 5g
Level: Low
Fraction: VOA

Date Collected: 5/19/94
Date Received: 5/19/94
Date Extracted:
Date Analyzed: 5/24/94
Report Date: 6/10/94
Column: 1%SP-1000 CarbopackB
Lab File ID: V6582
Dilution Factor: 1

CAS NO.	COMPOUND	RT or SCAN NUMBER	ESTIMATED CONCENTRATION (ug/kg)
	Unknown	1.11	4600JN
	Unknown	7.67	11JN
	Unknown	9.26	39JN

FORM I TIC - (VOA)

000051

315 Fullerton Avenue
Newburgh, NY 12550
(914) 562-0890
FAX (914) 562-0841

ORGANICS DATA RESULT FORM

TENTATIVELY IDENTIFIED COMPOUNDS

Client ID: 3
EnviroTest Lab No: 136578-03
Client Name: Star Expansion
Project Name: Mountainville
% Solid: 91
Matrix: Soil
Sample Wt/Vol: 5g
Level: Low
Fraction: VOA

Date Collected: 5/19/94
Date Received: 5/19/94
Date Extracted:
Date Analyzed: 5/25/94
Report Date: 6/10/94
Column: 1%SP-1000 CarbopackB
Lab File ID: V6592
Dilution Factor: 1

CAS NO.	COMPOUND	RT or SCAN NUMBER	ESTIMATED CONCENTRATION (ug/kg)
	Unknown	1.15	6500JN
	Unknown	7.90	13JN
	Unknown	9.72	6JN

FORM I TIC - (VOA)

EnviroTest Laboratories Inc.
315 Fullerton Avenue
Newburgh, NY 12550
(914) 562-0890
FAX (914) 562-0841

ORGANICS DATA RESULT FORM

TENTATIVELY IDENTIFIED COMPOUNDS

Client ID: 4
EnviroTest Lab No: 136578-04
Client Name: Star Expansion
Project Name: Mountainville
% Solid: 92
Matrix: Soil
Sample Wt/Vol: 5g
Level: Low
Fraction: VOA

Date Collected: 5/19/94
Date Received: 5/19/94
Date Extracted:
Date Analyzed: 5/25/94
Report Date: 6/10/94
Column: 1%SP-1000 CarbopackB
Lab File ID: V6593
Dilution Factor: 1

CAS NO.	COMPOUND	RT or SCAN NUMBER	ESTIMATED CONCENTRATION (ug/kg)
	Unknown	1.15	7100JN
	Unknown	7.90	13JN
	Unknown	9.58	15JN

FORM I TIC - (VOA)

EnviroTest Laboratories Inc.
315 Fullerton Avenue
Newburgh, NY 12550
(914) 562 0890
FAX (914) 562-0841

ORGANICS DATA RESULT FORM

TENTATIVELY IDENTIFIED COMPOUNDS

Client ID: 5
EnviroTest Lab No: 136578-05
Client Name: Star Expansion
Project Name: Mountainville
% Solid: 95
Matrix: Soil
Sample Wt/Vol: 5g
Level: Low
Fraction: VOA

Date Collected: 5/19/94
Date Received: 5/19/94
Date Extracted:
Date Analyzed: 5/25/94
Report Date: 6/10/94
Column: 1%SP-1000 CarbopackB
Lab File ID: V6594
Dilution Factor: 1

CAS NO.	COMPOUND	RT or SCAN NUMBER	ESTIMATED CONCENTRATION (ug/kg)
	Unknown	1.15	6000JN

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Newburgh, NY 12550
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ORGANICS DATA RESULT FORM

TENTATIVELY IDENTIFIED COMPOUNDS

Client ID: Trip Blank
EnviroTest Lab No: 136578-06
Client Name: Star Expansion
Project Name: Mountainville
% Solid:
Matrix: Water
Sample Wt/Vol: 5ml
Level: Low
Fraction: VOA

Date Collected: 5/19/94
Date Received: 5/19/94
Date Extracted:
Date Analyzed: 5/24/94
Report Date: 6/10/94
Column: 1%SP-1000 CarbopackB
Lab File ID: V6581
Dilution Factor: 1

CAS NO.	COMPOUND	RT or SCAN NUMBER	ESTIMATED CONCENTRATION (ug/l)
	Unknown	1.14	4400JN
	Unknown	7.79	7JN
	Unknown	9.52	10JN

FORM I TIC - (VOA)

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Newburgh, NY 12550
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FAX (914) 562-0841

ORGANICS DATA RESULT FORM

TENTATIVELY IDENTIFIED COMPOUNDS

Client ID: VBLKA1
EnviroTest Lab No: VBLKA1
Client Name: Star Expansion
Project Name: Mountainville
% Solid:
Matrix: Soil
Sample Wt/Vol: 5g
Level: Low
Fraction: VOA

Date Collected:
Date Received:
Date Extracted:
Date Analyzed: 5/24/94
Report Date: 6/10/94
Column: 1%SP-1000 CarbopackB
Lab File ID: V6579
Dilution Factor: 1

CAS NO.	COMPOUND	RT or SCAN NUMBER	ESTIMATED CONCENTRATION (ug/kg)
	Unknown	1.11	5100J N
	Unknown	7.76	8J N

FORM I TIC - (VOA)

EnviroTest Laboratories Inc.
315 Fullerton Avenue
Newburgh, NY 12550
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FAX (914) 562-0841

ORGANICS DATA RESULT FORM

TENTATIVELY IDENTIFIED COMPOUNDS

Client ID: VBLKA2
EnviroTest Lab No: VBLKA2
Client Name: Star Expansion
Project Name: Mountainville
% Solid:
Matrix: Soil
Sample Wt/Vol: 5g
Level: Low
Fraction: VOA

Date Collected:
Date Received:
Date Extracted:
Date Analyzed: 5/25/94
Report Date: 6/10/94
Column: 1%SP-1000 CarbopackB
Lab File ID: V6591
Dilution Factor: 1

CAS NO.	COMPOUND	RT or SCAN NUMBER	ESTIMATED CONCENTRATION (ug/kg)
	Unknown	1.15	5400J N
	Unknown	7.94	9J N
	Unknown	9.72	6J N

FORM I TIC - (VOA)

000172

EnviroTest Laboratories Inc.
315 Fullerton Avenue
Newburgh, NY 12550
(914) 562-0890
FAX (914) 562-0841

ORGANICS DATA RESULT FORM

TENTATIVELY IDENTIFIED COMPOUNDS

Client ID: MeOH Blank
EnviroTest Lab No: MeOH Blank
Client Name: Star Expansion
Project Name: Mountainville
% Solid:
Matrix: Water
Sample Wt/Vol: 10000ul
Level: Med
Fraction: VOA

Date Collected:
Date Received:
Date Extracted:
Date Analyzed: 5/25/94
Report Date: 6/10/94
Column: DB-624
Lab File ID: W8933
Dilution Factor: 1

CAS NO.	COMPOUND	RT or SCAN NUMBER	ESTIMATED CONCENTRATION (ug/l)
	Unknown	3.65	2200J N
	Unknown	3.83	3000J N

FORM I TIC - (VOA)

000183

EnviroTest Laboratories Inc.
315 Fullerton Avenue
Newburgh, NY 12550
(914) 562-0890
FAX (914) 562-0841

ORGANICS DATA RESULT FORM

TENTATIVELY IDENTIFIED COMPOUNDS

Client ID: VBLKB1
EnviroTest Lab No: VBLKB1
Client Name: Star Expansion
Project Name: Mountainville
% Solid:
Matrix: Soil
Sample Wt/Vol: 5g
Level: Low
Fraction: VOA

Date Collected:
Date Received:
Date Extracted:
Date Analyzed: 5/25/94
Report Date: 6/10/94
Column: DB-624
Lab File ID: W8929
Dilution Factor: 1

CAS NO.	COMPOUND	RT or SCAN NUMBER	ESTIMATED CONCENTRATION (ug/kg)
	Unknown	3.65	23JN
	Unknown	3.83	38JN

FORM I TIC - (VOA)

03019

EnviroTest Laboratories Inc.
315 Fullerton Avenue
Newburgh, NY 12550
(914) 562-0890
FAX (914) 562-0841

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

#1

Lab Name: ENVIROTEST LABS INC. Contract: STAR EXP.

Lab Code: 10142 Case No.: ##### SAS No.: ##### SDG No.: ST578

Matrix: (soil/water) SOIL Lab Sample ID: 136578-01

Sample wt/vol: 30.0 (g/ml) G Lab File ID: E2475

Level: (low/med) LOW Date Received: 5/19/94

% Moisture: 6 decanted: (Y/N) N Date Extracted: 5/23/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 5/26/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 0.0

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	111-76-2	Ethanol, 2-butoxy-	5.24	~~520.~~	~~J~~ R
2.		unknown	9.05	990.	JN
3.		unknown	11.20	1900.	JN
4.		unknown	12.14	3200.	JN
5.		unknown	12.48	3200.	JN
6.		unknown	12.56	1800.	JN
7.	2755-07-9	Undecane, 5-ethyl-5-propyl-	22.15	700.	JN
8.		unknown	22.37	740.	JN
9.		unknown	23.05	880.	JN
10.		unknown	23.28	480.	JN
11.		unknown	23.48	1220.	JN
12.		unknown	23.99	940.	JN
13.		unknown	24.29	560.	JN
14.		unknown	24.42	1260.	JN
15.	53584-60-4	28-Nor-17.alpha.(H)-hopane	24.66	2200.	JN
16.		unknown	24.82	440.	JN
17.		unknown	25.09	1180.	JN
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EPA SAMPLE NO.

#2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name:ENVIROTEST LABS INC. Contract:STAR EXP.

Lab Code:10142 Case No.:##### SAS No.:##### SDG No.:ST578

Matrix: (soil/water) SOIL Lab Sample ID:136578-02

Sample wt/vol: 30.0 (g/ml) G Lab File ID: E2476

Level: (low/med) LOW Date Received: 5/19/94

% Moisture: 5 decanted: (Y/N) N Date Extracted: 5/23/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 5/26/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 0.0

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		unknown	3.91	100.	J N
2.	123-42-2	2-Pentanone, 4-hydroxy-4-met	4.37	~~108.~~	~~J~~ R
3.	111-76-2	Ethanol, 2-butoxy-	5.25	~~320.~~	~~J~~ R
4.	103-23-1	Hexanedioic acid, bis(2-ethy	20.22	720.	J N
5.	28553-12-0	1,2-Benzenedicarboxylic acid	22.52	260.	J N
6.		unknown	22.74	680.	J N
7.		unknown	22.82	300.	J N
8.		unknown	22.94	186.	J N
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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

#3

Lab Name: ENVIROTEST LABS INC. Contract: STAR EXP.

Lab Code: 10142 Case No.: ##### SAS No.: ##### SDG No.: ST578

Matrix: (soil/water) SOIL Lab Sample ID: 136578-03

Sample wt/vol: 30.0 (g/ml) G Lab File ID: E2477

Level: (low/med) LOW Date Received: 5/19/94

% Moisture: 9 decanted: (Y/N) N Date Extracted: 5/23/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 5/26/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 0.0

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		unknown	3.91	110.	JN
2.		unknown	4.04	200.	JN
3.	111-76-2	Ethanol, 2-butoxy-	5.25	~~760.~~	~~J~~ R
4.	111-90-0	Ethanol, 2-(2-ethoxyethoxy)-	6.66	~~158.~~	~~J~~ R
5.	103-23-1	Hexanedioic acid, bis(2-ethy	20.22	200.	JN
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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

#4

Lab Name: ENVIROTEST LABS INC. Contract: STAR EXP.

Lab Code: 10142 Case No.: ##### SAS No.: ##### SDG No.: ST578

Matrix: (soil/water) SOIL Lab Sample ID: 136578-04

Sample wt/vol: 30.0 (g/ml) G Lab File ID: E2478

Level: (low/med) LOW Date Received: 5/19/94

% Moisture: 8 decanted: (Y/N) N Date Extracted: 5/23/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 5/26/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 0.0

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		unknown	3.98	280.	JN
2.	111-76-2	Ethanol, 2-butoxy-	5.21	~~360.~~	~~J~~ R
3.	556-67-2	Cyclotetrasiloxane, octameth	6.32	1060.	JN
4.	111-90-0	Ethanol, 2-(2-ethoxyethoxy)-	6.64	~~96.~~	~~J~~ R
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

#5

Lab Name: ENVIROTEST LABS INC. Contract: STAR EXP.

Lab Code: 10142 Case No.: ##### SAS No.: ##### SDG No.: ST578

Matrix: (soil/water) SOIL Lab Sample ID: 136578-05

Sample wt/vol: 30.0 (g/ml) G Lab File ID: E2479

Level: (low/med) LOW Date Received: 5/19/94

% Moisture: 5 decanted: (Y/N) N Date Extracted: 5/23/94

Concentrated Extract Volume: 500.0 (uL) Date A alyzed: 5/26/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 0.0

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		unknown	3.84	90.	JN
2.		unknown	3.96	300.	J
3.	111-76-2	Ethanol, 2-butoxy-	5.21	~~520.~~	~~J~~ R
4.	556-67-2	Cyclotetrasiloxane, octameth	6.31	540.	JN
5.	111-90-0	Ethanol, 2-(2-ethoxyethoxy)-	6.63	~~130~~	~~J~~ R
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EPA SAMPLE NO.

SBLK01

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: ENVIROTEST LABS INC. Contract: STAR EXP.

Lab Code: 10142 Case No.: ##### SAS No.: ##### SDG No.: ST578

Matrix: (soil/water) SOIL Lab Sample ID: SBLK01

Sample wt/vol: 30.0 (g/ml) G Lab File ID: E2474

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 5/23/94

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 5/26/94

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 0.0

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.		unknown	3.90	140.	JN	Chunk LLT
2.		unknown	4.05	480.	JN	
3.	123-42-2	2-Pentanone, 4-hydroxy-4-met	4.36	92.	JN	
4.	111-76-2	Ethanol, 2-butoxy-	5.25	980.	JN	Chunk LLT
5.	111-90-0	Ethanol, 2-(2-ethoxyethoxy)-	6.65	190	JN	
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ATTACHMENT C

ORGANIC DATA QUALIFIERS

U - Indicates that the compound was analyzed for but not detected at or above the Contract Required Quantitation Limit (CRQL), or the compound is not detected due to qualification through the method or field blank.

J - The associated numerical value is an estimated quantity.

JN - Tentatively identified with approximated concentrations.

UJ - The compound was analyzed for, but not detected. The sample quantitation limit is an estimated quantity due to variance in quality control limits.

C - Applies to pesticide results where the identification has been confirmed by GC/MS.

X - The mass spectrum does not meet USEPA CLP criteria for confirmation, however, compound presence is strongly suspected.

E - Reported value is estimated due to quantitation above the calibration range.

D - Reported result taken from diluted sample analysis.

A - Aldol condensation product.

R - Reported value is unusable and rejected due to variance from quality control limits.

NA - Not Analyzed.

INORGANIC DATA QUALIFIERS

U - Indicates analyte was not detected at or below the Contract Required Detection Limit (CRDL), or the compound is not detected due to qualification through the method or field blank.

B - Indicates analyte result is between Instrument Detection Limit (IDL) and CRDL.

J - Reported value is estimated due to variance from quality control limits.

UJ - The element was analyzed for, but not detected. The sample quantitation limit is an estimate due to variance in quality control limits.

E - Reported value is estimated because of the presence of interference.

R - Reported value is unusable and rejected due to variance from quality control limits.

N.A. Not Analyzed.