



Tetra Tech EM Inc.

1815 Brownsboro Road, Suite 200 □ Louisville, KY 40206 □ (502) 568-6688 □ FAX (502) 568-6222

October 21, 2003

Mr. Tim Hubbard, PG
Supervisor State Superfund Section
Department for Environmental Protection
Division of Waste Management
14 Reilly Road
Frankfort, Kentucky 40601-1190

RECEIVED
2003 OCT 21 A 11:44
KY DIV. OF WASTE MGMT.
SUPERFUND BRANCH

**Subject: Supplemental Groundwater Sampling (Task 220)
Management Plan Implementation Report
Former Vermont American Facility
500 East Main Street
Louisville, Kentucky
NC# 34565
EPA ID# KYD 074 075 0441
Tetra Tech Project Number P2616**

COUNTY: Jefferson
FACILITY: Vermont American/500 Assoc.
I. D. #: 34565
SECTION: Main
SENT BY: JSG BRANCH SF

Dear Mr. Hubbard:

On behalf of 500 Associates, Tetra Tech EM Inc. (Tetra Tech) is pleased to provide this report documenting implementation of the supplemental groundwater sampling (Task 220) of the approved Management Plan for the former Vermont American facility located at 500 East Main Street in Louisville, Kentucky. Several documents that define or provide additional information concerning the supplemental groundwater sampling include the following:

- "Management Plan", Tetra Tech, February 7, 2003,
- Kentucky Department of Environmental Protection (KDEP) Approval Letter, February 21, 2003,
- "KDEP Approval Response Letter", Tetra Tech, March 28, 2003,
- KDEP Approval Letter of March 28, 2003 Correspondence, April 1, 2003,
- KDEP Request for Documentation Letter, May 30, 2003,
- "KDEP May 30, 2003 Letter Response" Tetra Tech, June 20, 2003,
- "Update Letter", Tetra Tech, August 11, 2003.

The February 7, 2003 Management Plan was amended per the Tetra Tech "KDEP Approval Response Letter", dated March 28, 2003. KDEP approved the Management Plan and subsequent modification in the February 21, 2003 and April 1, 2003 letters.

The supplemental groundwater sampling aspect of the Management Plan is not affected by either the proposed Kentucky Department of Transportation (KDOT) I-65 widening or the separation of the two parcels of property as discussed in the November 5, 2002 Tetra Tech letter titled "*Jackson Street Property*".

The management plan is being implemented in stages to accommodate the proposed I-65 widening, as discussed in the Tetra Tech letters of June 20, 2003 titled "*KDEP May 30, 2003 Letter Response*" and the August 11, 2003 letter titled "*Update Letter*". As such, this report documents Management Plan implementation associated with the supplemental groundwater sampling, (Task 220).

During implementation of this portion of the Management Plan, the following items have been completed:

- Task 220 – Supplemental Groundwater Sampling
- Task 410 – Institutional Controls – Jackson Street Building
- Task 510 – Land Use Deed Restriction – Jackson Street Building

Information concerning the implementation of Task 410 and Task 510 has been submitted under separate cover titled "Jackson Street Building Management Plan Implementation Report –" dated October 17, 2003. A discussion of the supplemental groundwater sampling which consists of the installation of one 70 foot monitoring well and the sampling and analyses of the existing monitoring well system is presented in the following paragraphs.

Monitoring Well Installation

The 70-foot monitoring well was installed on September 16, 2003, along the north side of Main Street at the approximate location shown in Figure 1. Hollow stem augers were utilized for well installation. No soil samples (split spoons) were collected of the material and a plug was used in the lead auger to minimize any effect of "heaving sand". Ten feet of 2-inch diameter Schedule 40 PVC 0.010 slot well screen was placed between 60 to 70 feet below ground surface (bgs). During drilling groundwater was encountered at a depth of approximately 43 feet bgs. The well was completed with a flush mount cover and locking cap. A monitoring well construction diagram is shown in Attachment 1.

Monitoring well development was performed on September 17, 2003 and consisted of pumping the well until the water was clear. Purge water was collected in 55 gallon drums and stored on site prior to disposal. A total of 55 gallons of water was removed from the well, with the first ½ gallon cloudy. The remainder of the development water was clear.

Groundwater Sampling and Analysis

Groundwater sampling of the four monitoring wells W-1 through W-4 was performed on September 23, 2003. Shallow Louisville Slugger field monitoring well MW-4 was not sampled, as permission for sampling the well was not granted by Louisville Waterfront Development.

Depth to water ranged from 41.6 feet to 42.8 feet bgs with elevations ranging from 419.0 to 419.3 ft above National Geodetic Vertical Datum of 1929. (Table 1) The direction of groundwater flow remains to the north toward the Ohio River.

Results of Groundwater Sampling

Consistent with historic groundwater chemistry data, trichloroethene (TCE) and tetrachloroethene (PERC) were detected above maximum contaminant levels (MCLs) in monitoring wells W-1 (0.0987 mg/l, 0.0064 mg/l), W-2 (0.179 mg/l, 0.0092 mg/l), and W-3 (0.088 mg/l, 0.0054 mg/l), while TCE was also detected above the MCL in the new monitoring well W-4 (0.213 mg/l /0.215mg/l). Total and hexavalent chromium were detected above MCLs in monitoring wells W-2 (1.68 mg/l, 1.41 mg/l) and W-3 (1.97 mg/l, 1.56 mg/l). A summary of the groundwater analytical results is presented in Table 1, with the laboratory report included as Attachment 2.

Conclusions

Based on historic data and the results of the resent groundwater sampling and analysis the following conclusions are drawn:

- Total and hexavalent chromium was detected above MCLs only in monitoring wells W-2 (1.68 mg/l, 1.41 mg/l) and W-3 (1.97 mg/l, 1.56 mg/l). These wells are located immediately adjacent to the former Bonded Warehouse plating operations in an area targeted for removal of soil that contains these metals. Once the soil removal is complete, the potential for impact to the groundwater by these metals should be eliminated.
- The suspected up gradient off-site source of the identified volatile organic compounds (VOC) has been confirmed, with the identification of elevated concentrations of TCE and PERC in both the shallow up-gradient monitoring well W-1 (40 to 50 foot depth bgs screened interval), along with the highest concentrations of these chemicals detected at depth as identified in monitoring well W-4 (60 to 70 foot bgs screened interval).
- Targeted soil sampling and analysis of potential source areas has failed to identify an on-site source of identified VOCs in groundwater.

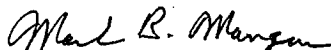
- A soil gas survey, with samples collected at 2 foot intervals from 2 to 16 feet bgs did not identify a potential on-site VOC source area.
- The suspected source of the identified volatile organics in groundwater is the former manufacturing operation located immediately south of the alley (Billy Goat Strut) up-gradient of the 500 East Main Street property.
- Soil gas readings obtained from borings SP-6, SP-7 and SP-8, located along the southern property boundary (Billy Goat Strut), identified the highest recorded soil gas readings for TCE at depths ranging from 12 to 16 feet bgs which further supports a suspected TCE source south of the site.
- No further action is required concerning groundwater at the 500 East Main Street property other than pursuit by KDEP of the up-gradient source of VOCs.

On behalf on 500 Associates, Tetra Tech requests KDEP issue a no-further action letter associated with groundwater at the 500 East Main Street property and pursue the off-site source of the identified volatile organic groundwater contamination affecting the 500 East Main Street property. The presence of this contaminated groundwater migrating onto the site has impacted 500 Associates ability to bring the property into productive use.

Tetra Tech looks forward to the continued implementation of the Management Plan. Please contact Mark Mangun at 502-357-9350 or 502-836-7964 (cell phone) should you have any questions or comments.

Sincerely,

Tetra Tech EM, Inc



Mark B. Mangun, P.G.
Senior Hydrogeologist

cc: Charles G. Middleton III, Middleton & Reutlinger
Dennis P. Connair, URS

Attachments: Table 1 – Groundwater Analytical Results
Figure 1 – Groundwater Potentiometric Surface and Monitoring Well Location Map
Attachment 1 – Monitoring Well Construction Diagram
Attachment 2 – Analytical Data

Table 1

Groundwater Analytical Results

Table 1
Groundwater Analytical Results
Former Vermont American Facility (NC# 34565)
Louisville, Kentucky

Constituent Sample Date	MCL Allowable Level	Units	W-1		W-2		W3		W-4	W-4-DUP
			5/17/1999	9/23/2003	5/19/1999	9/23/2003	5/19/1999	9/23/2003	9/23/2003	9/23/2003
Volatile Organics										
trichloroethene	0.005	mg/L	0.062	0.0987	0.165	0.179	0.165	0.088	0.213	0.215
tetrachloroethene	0.005	mg/L	0.004	0.0064	0.023	0.0092	0.008	0.0054	0.0042	0.004
cis-1,2-dichloroethene	0.07	mg/L	ND	0.0012	0.021	0.0348	ND	0.0093	ND	ND
1,1,1-trichloroethene	0.2	mg/L	0.013	0.0384	0.009	0.0059	0.022	0.0084	0.0166	0.016
Metals										
Total chromium	0.1	mg/L	0.008	ND	0.119	1.68	0.978	1.97	ND	ND
Hexavalent chromium	0.1	mg/L	NA	ND	NA	1.41	NA	1.56	ND	ND
Total lead	0.015	mg/L	0.01	ND	0.004	ND	0.009	0.008	0.007	0.007
Nickel, soluble salts	0.1	mg/L	0.035	ND	0.013	ND	0.033	0.023	ND	ND
Field Parameters										
Depth to water	NE	feet	41.9	42.43	42.6	43.1	42.8	43.25	41.56	NA
Groundwater Elevation	NE	feet	419.8	419.3	419.5	419.0	419.5	419.1	NA	NA
pH	NE		6.16	6.84	6.12	6.34	6.38	5.99	6.75	NA
Conductivity	NE	mhos/cm	1.64	1.66	1.45	1.11	1.42	1.02	1.14	NA
Turbidity	NE	NTU	NA	771	NA	246	NA	151	144	NA
Dissolved Oxygen	NE	g/L	NA	10.88	NA	10.82	NA	10.5	10.44	NA
Temperature	NE	°C	NA	17.39	NA	16.96	NA	17.2	17.31	NA
Salinity	NE	Percent	NA	0.08	NA	0.05	NA	0.05	0.05	NA
Total Dissolved Solids	NE	g/L	NA	1.05	NA	0.71	NA	0.65	0.72	NA
ORP	NE	mV	NA	188	NA	268	NA	272	217	NA

Notes:

mg/L - milligrams per liter, which is equivalent to parts per million (ppm)
 NA - Not available
 NE - Not established
 NTU - Nephelometric Turbidity Units
 °C - Degrees Celsius
 g/L - grams per liter
 mV - millivolts
 ORP - Oxidation-Reduction Potential

MCL - Maximum contaminant level per Safe Drinking Water Act

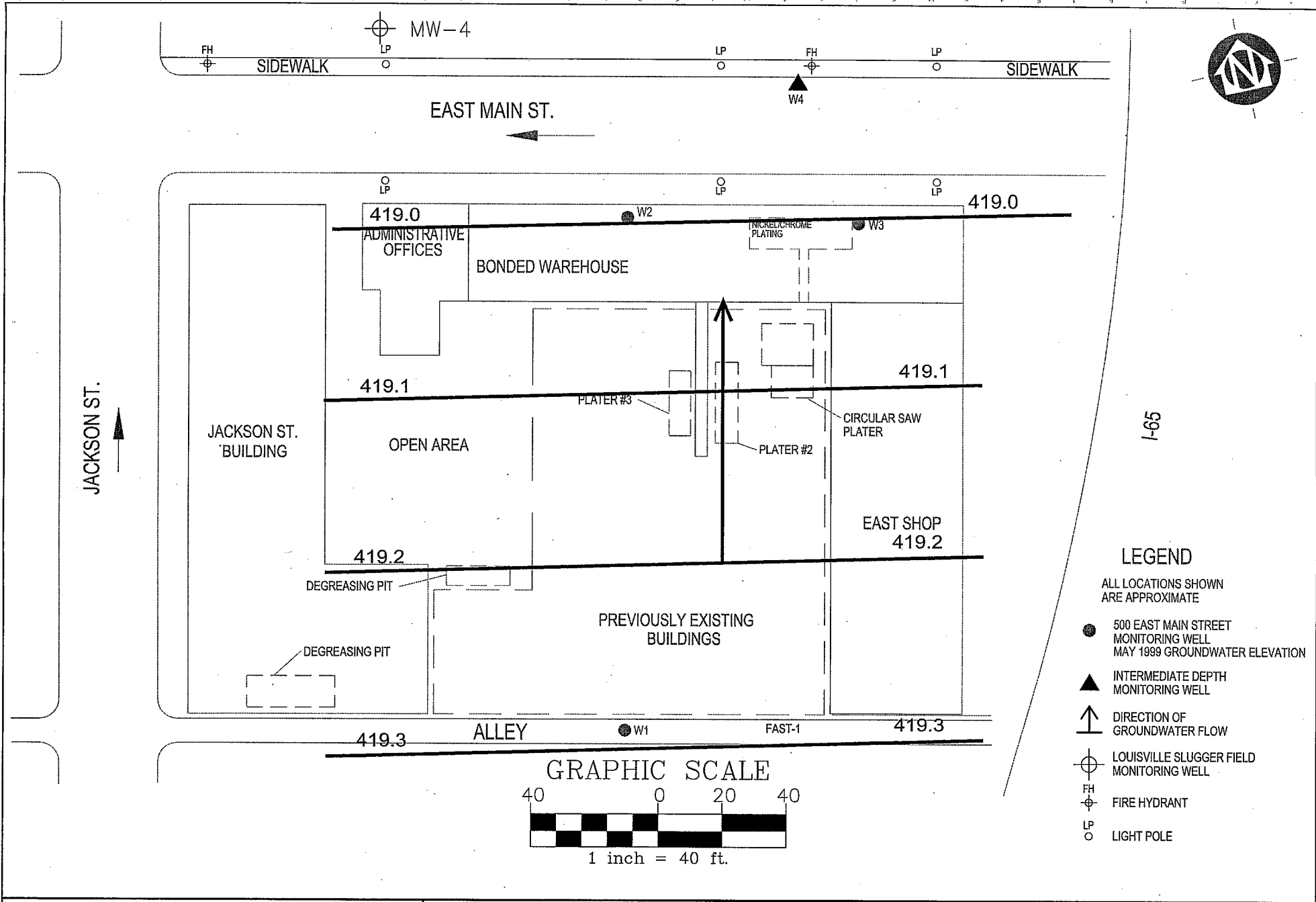
Samples were analyzed by SW846 Method 8260B

Sources:

TTEMI field notes
 Test America Laboratory Report

Figure 1

**Groundwater Potentiometric Surface and
Monitoring Well Location Map**



500 ASSOCIATES
 500 EAST MAIN STREET
 LOUISVILLE, KENTUCKY

Tt Tetra Tech EM Inc.
 1815 Brownsboro Road, Suite 200
 Louisville, Kentucky 40206

GROUNDWATER POTENTIOMETRIC SURFACE
 AND MONITORING WELL LOCATIONS

FIG. 1

**Attachment 1 – Monitoring Well
Construction Diagram**

Attachment 2 – Analytical Data



COOLER RECEIPT FORM

BC#

Client: Tetra Tech EMI

Cooler Received On: 9/24/03 And Opened On: 9/24/03 By: Shawn Gracey

[Signature]
(Signature)

1. Temperature of Cooler when opened 0.5 Degrees Celsius
2. Were custody seals on outside of cooler?..... YES...NO...NA
 - a. If yes, how many, what kind and where: 2, Front
3. Were custody seals on containers and intact?..... NO...YES...NA
4. Were the seals intact, signed, and dated correctly?..... YES...NO...NA
5. Were custody papers inside cooler?..... YES...NO...NA
6. Were custody papers properly filled out (ink,signed,etc)?..... YES...NO...NA
7. Did you sign the custody papers in the appropriate place?..... YES...NO...NA
8. What kind of packing material used? Bubblewrap Peanuts Vermiculite Other None
9. Cooling process: Ice Ice pack Ice(direct contact) Dry ice Other None
10. Did all containers arrive in good condition(unbroken)?..... YES...NO...NA
11. Were all container labels complete (#,date,signed,pres,etc)?..... YES...NO...NA
12. Did all container labels and tags agree with custody papers?..... YES...NO...NA
13. Were correct containers used for the analysis requested?..... YES...NO...NA
14. a. Were VOA vials received?..... YES...NO...NA
 - b. Was there any observable head space present in any VOA vial?..... NO...YES...NA
15. Was sufficient amount of sample sent in each container?..... YES...NO...NA
16. Were correct preservatives used?..... YES...NO...NA
If not, record standard ID of preservative used here _____
17. Was residual chlorine present?.....NO...YES... NA
18. See attached for resolution of non-conformance:

Fed-Ex UPS Velocity Airborne Route Off-street Misc.

10/ 1/03

CASE NARRATIVE

TETRA TECH EMI 7972

1815 BROWNSBORO RD. STE. 200
LOUISVILLE, KY 40206

This report includes the analytical certificates of analysis for all samples listed below. These samples relate to your project identified below:

Project Name: 500 ASSOC.

Project Number: P2193.01.

Laboratory Project Number: 347837.

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. Any QC recoveries outside laboratory control limits are flagged individually with an #. Sample specific comments and quality control statements are included in the Laboratory notes section of the analytical report for each sample report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accreditation.

Page 1

Sample Identification	Lab Number	Collection Date
W-1	03-A148037	9/23/03
W-2	03-A148038	9/23/03
W-3	03-A148039	9/23/03
W-4	03-A148040	9/23/03
W-100	03-A148041	9/23/03

Sample Identification	Lab Number	Collection Date
-----	-----	-----

These results relate only to the items tested.
This report shall not be reproduced except in full and with
permission of the laboratory.

Report Approved By:  Report Date: 10/ 1/03

Ashley Morris, Lab Director	Gail A. Lage, Technical Serv.
Michael H. Dunn, M.S., QA/QC Director	Glenn L. Norton, Technical Serv.
Johnny A. Mitchell, Operations Manager Organics	Kelly S. Comstock, Technical Serv.
Eric S. Smith, Assistant Technical Director	Pamela A. Langford, Technical Serv.
Roxanne L. Connor, Technical Services	

Laboratory Certification Number: 90038

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ANALYTICAL REPORT

TETRA TECH EMI 7972
1815 BROWNSBORO RD. STE. 200
LOUISVILLE, KY 40206

Lab Number: 03-A148037
Sample ID: W-1
Sample Type: Ground water
Site ID:

Project: P2193.01
Project Name: 500 ASSOC.
Sampler: JAMES R.D. JOHNSON

Date Collected: 9/23/03
Time Collected: 14:45
Date Received: 9/24/03
Time Received: 8:00
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
VOLATILE ORGANICS									
Acetone	ND	mg/l	0.0250	1	9/30/03	12:24	B.Herford	8260B	6185
Benzene	ND	mg/l	0.0010	1	9/30/03	12:24	B.Herford	8260B	6185
Bromobenzene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
Bromochloromethane	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
Bromoform	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
Bromomethane	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
2-Butanone	ND	mg/l	0.0250	1	9/30/03	12:24	B.Herford	8260B	6185
n-Butylbenzene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
sec-Butylbenzene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
tert-Butylbenzene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
Carbon disulfide	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
Carbon tetrachloride	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
Chlorobenzene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
Chloroethane	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
Chloroform	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
Chloromethane	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
2-Chlorotoluene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
4-Chlorotoluene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
1,2-Dibromo-3-chloropropane	ND	mg/l	0.00500	1	9/30/03	12:24	B.Herford	8260B	6185
Dibromochloromethane	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
1,2-Dibromoethane	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
Dibromomethane	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
1,2-Dichlorobenzene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
1,3-Dichlorobenzene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
1,4-Dichlorobenzene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
Dichlorodifluoromethane	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185

Sample report continued . . .

ANALYTICAL REPORT

Laboratory Number: 03-A148037

Sample ID: W-1

Project: P2193.01

Page 2

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
1,1-Dichloroethane	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
1,2-Dichloroethane	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
1,1-Dichloroethene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
cis-1,2-Dichloroethene	0.00120	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
trans-1,2-Dichloroethene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
1,2-Dichloropropane	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
1,3-Dichloropropane	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
2,2-Dichloropropane	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
1,1-Dichloropropene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
cis-1,3-Dichloropropene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
trans-1,3-Dichloropropene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
Ethylbenzene	ND	mg/l	0.0010	1	9/30/03	12:24	B.Herford	8260B	6185
Hexachlorobutadiene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
2-Hexanone	ND	mg/l	0.00500	1	9/30/03	12:24	B.Herford	8260B	6185
Isopropylbenzene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
p-Isopropyltoluene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
4-Methyl-2-pentanone	ND	mg/l	0.00500	1	9/30/03	12:24	B.Herford	8260B	6185
Methylene chloride	ND	mg/l	0.00250	1	9/30/03	12:24	B.Herford	8260B	6185
Naphthalene	ND	mg/l	0.00500	1	9/30/03	12:24	B.Herford	8260B	6185
n-Propylbenzene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
Styrene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
1,1,1,2-Tetrachloroethane	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
1,1,2,2-Tetrachloroethane	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
Tetrachloroethene	0.00640	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
Toluene	ND	mg/l	0.0010	1	9/30/03	12:24	B.Herford	8260B	6185
1,2,3-Trichlorobenzene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
1,2,4-Trichlorobenzene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
1,1,1-Trichloroethane	0.0384	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
1,1,2-Trichloroethane	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
Trichloroethene	0.0987	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
1,2,3-Trichloropropane	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
1,2,4-Trimethylbenzene	ND	mg/l	0.0010	1	9/30/03	12:24	B.Herford	8260B	6185
1,3,5-Trimethylbenzene	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
Vinyl chloride	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
Xylenes (Total)	ND	mg/l	0.0010	1	9/30/03	12:24	B.Herford	8260B	6185
Bromodichloromethane	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185

Sample report continued . . .

ANALYTICAL REPORT

Laboratory Number: 03-A148037
 Sample ID: W-1
 Project: P2193.01
 Page 3

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
Trichlorofluoromethane	ND	mg/l	0.00100	1	9/30/03	12:24	B.Herford	8260B	6185
METALS									
Chromium	ND	mg/l	0.0050	1	9/25/03	16:51	C. Martin	6010B	478
Chromium, Hexavalent	ND	mg/l	0.0100	1	9/24/03	23:26	J. Hill	7196A	9350
Lead	ND	mg/l	0.0050	1	9/25/03	16:51	C. Martin	6010B	478
Nickel	ND	mg/l	0.0100	1	9/25/03	16:51	C. Martin	6010B	478

Surrogate	% Recovery	Target Range
VOA Surr 1,2-DCA-d4	105.	70. - 133.
VOA Surr Toluene-d8	98.	76. - 123.
VOA Surr, 4-BFB	87.	71. - 132.
VOA Surr, DBFM	105.	74. - 128.

LABORATORY COMMENTS:

- ND = Not detected at the report limit.
- B = Analyte was detected in the method blank.
- J = Estimated Value below Report Limit.
- E = Estimated Value above the calibration limit of the instrument.
- # = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

ANALYTICAL REPORT

TETRA TECH EMI 7972
1815 BROWNSBORO RD. STE. 200
LOUISVILLE, KY 40206

Lab Number: 03-A148038
Sample ID: W-2
Sample Type: Ground water
Site ID:

Project: P2193.01
Project Name: 500 ASSOC.
Sampler: JAMES R.D. JOHNSON

Date Collected: 9/23/03
Time Collected: 14:50
Date Received: 9/24/03
Time Received: 8:00
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
VOLATILE ORGANICS									
Acetone	ND	mg/l	0.0250	1	9/30/03	12:53	B.Herford	8260B	6185
Benzene	ND	mg/l	0.0010	1	9/30/03	12:53	B.Herford	8260B	6185
Bromobenzene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
Bromochloromethane	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
Bromoform	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
Bromomethane	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
2-Butanone	ND	mg/l	0.0250	1	9/30/03	12:53	B.Herford	8260B	6185
n-Butylbenzene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
sec-Butylbenzene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
tert-Butylbenzene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
Carbon disulfide	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
Carbon tetrachloride	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
Chlorobenzene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
Chloroethane	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
Chloroform	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
Chloromethane	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
2-Chlorotoluene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
4-Chlorotoluene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
1,2-Dibromo-3-chloropropane	ND	mg/l	0.00500	1	9/30/03	12:53	B.Herford	8260B	6185
Dibromochloromethane	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
1,2-Dibromoethane	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
Dibromomethane	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
1,2-Dichlorobenzene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
1,3-Dichlorobenzene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
1,4-Dichlorobenzene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
Dichlorodifluoromethane	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185

Sample report continued . . .

ANALYTICAL REPORT

Laboratory Number: 03-A148038
Sample ID: W-2
Project: P2193.01
Page 2

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
1,1-Dichloroethane	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
1,2-Dichloroethane	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
1,1-Dichloroethene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
cis-1,2-Dichloroethene	0.0348	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
trans-1,2-Dichloroethene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
1,2-Dichloropropane	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
1,3-Dichloropropane	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
2,2-Dichloropropane	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
1,1-Dichloropropene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
cis-1,3-Dichloropropene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
trans-1,3-Dichloropropene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
Ethylbenzene	ND	mg/l	0.0010	1	9/30/03	12:53	B.Herford	8260B	6185
Hexachlorobutadiene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
2-Hexanone	ND	mg/l	0.00500	1	9/30/03	12:53	B.Herford	8260B	6185
Isopropylbenzene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
p-Isopropyltoluene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
4-Methyl-2-pentanone	ND	mg/l	0.00500	1	9/30/03	12:53	B.Herford	8260B	6185
Methylene chloride	ND	mg/l	0.00250	1	9/30/03	12:53	B.Herford	8260B	6185
Naphthalene	ND	mg/l	0.00500	1	9/30/03	12:53	B.Herford	8260B	6185
n-Propylbenzene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
Styrene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
1,1,1,2-Tetrachloroethane	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
1,1,2,2-Tetrachloroethane	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
Tetrachloroethene	0.00920	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
Toluene	ND	mg/l	0.0010	1	9/30/03	12:53	B.Herford	8260B	6185
1,2,3-Trichlorobenzene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
1,2,4-Trichlorobenzene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
1,1,1-Trichloroethane	0.00590	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
1,1,2-Trichloroethane	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
Trichloroethene	0.179	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
1,2,3-Trichloropropane	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
1,2,4-Trimethylbenzene	ND	mg/l	0.0010	1	9/30/03	12:53	B.Herford	8260B	6185
1,3,5-Trimethylbenzene	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
Vinyl chloride	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
Xylenes (Total)	ND	mg/l	0.0010	1	9/30/03	12:53	B.Herford	8260B	6185
Bromodichloromethane	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185

Sample report continued . . .

ANALYTICAL REPORT

Laboratory Number: 03-A148038
 Sample ID: W-2
 Project: P2193.01
 Page 3

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
Trichlorofluoromethane	ND	mg/l	0.00100	1	9/30/03	12:53	B.Herford	8260B	6185
METALS									
Chromium	1.68	mg/l	0.0050	1	9/25/03	16:51	C. Martin	6010B	478
Chromium, Hexavalent	1.41	mg/l	0.0500	5	9/24/03	23:26	J. Hill	7196A	9350
Lead	ND	mg/l	0.0050	1	9/25/03	16:51	C. Martin	6010B	478
Nickel	ND	mg/l	0.0100	1	9/25/03	16:51	C. Martin	6010B	478

Surrogate	% Recovery	Target Range
VOA Surr 1,2-DCA-d4	103.	70. - 133.
VOA Surr Toluene-d8	95.	76. - 123.
VOA Surr, 4-BFB	87.	71. - 132.
VOA Surr, DBFM	107.	74. - 128.

LABORATORY COMMENTS:

- ND = Not detected at the report limit.
- B = Analyte was detected in the method blank.
- J = Estimated Value below Report Limit.
- E = Estimated Value above the calibration limit of the instrument.
- # = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

ANALYTICAL REPORT

TETRA TECH EMI 7972
 1815 BROWNSBORO RD. STE. 200
 LOUISVILLE, KY 40206

Lab Number: 03-A148039
 Sample ID: W-3
 Sample Type: Ground water
 Site ID:

Project: P2193.01
 Project Name: 500 ASSOC.
 Sampler: JAMES R.D. JOHNSON

Date Collected: 9/23/03
 Time Collected: 14:55
 Date Received: 9/24/03
 Time Received: 8:00
 Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
VOLATILE ORGANICS									
Acetone	ND	mg/l	0.0250	1	9/30/03	13:21	B.Herford	8260B	6185
Benzene	ND	mg/l	0.0010	1	9/30/03	13:21	B.Herford	8260B	6185
Bromobenzene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
Bromochloromethane	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
Bromoform	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
Bromomethane	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
2-Butanone	ND	mg/l	0.0250	1	9/30/03	13:21	B.Herford	8260B	6185
n-Butylbenzene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
sec-Butylbenzene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
tert-Butylbenzene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
Carbon disulfide	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
Carbon tetrachloride	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
Chlorobenzene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
Chloroethane	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
Chloroform	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
Chloromethane	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
2-Chlorotoluene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
4-Chlorotoluene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
1,2-Dibromo-3-chloropropane	ND	mg/l	0.00500	1	9/30/03	13:21	B.Herford	8260B	6185
Dibromochloromethane	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
1,2-Dibromoethane	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
Dibromomethane	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
1,2-Dichlorobenzene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
1,3-Dichlorobenzene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
1,4-Dichlorobenzene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
Dichlorodifluoromethane	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185

Sample report continued . . .

ANALYTICAL REPORT

Laboratory Number: 03-A148039
Sample ID: W-3
Project: P2193.01
Page 2

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
1,1-Dichloroethane	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
1,2-Dichloroethane	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
1,1-Dichloroethene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
cis-1,2-Dichloroethene	0.00930	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
trans-1,2-Dichloroethene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
1,2-Dichloropropane	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
1,3-Dichloropropane	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
2,2-Dichloropropane	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
1,1-Dichloropropene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
cis-1,3-Dichloropropene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
trans-1,3-Dichloropropene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
Ethylbenzene	ND	mg/l	0.0010	1	9/30/03	13:21	B.Herford	8260B	6185
Hexachlorobutadiene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
2-Hexanone	ND	mg/l	0.00500	1	9/30/03	13:21	B.Herford	8260B	6185
Isopropylbenzene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
p-Isopropyltoluene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
4-Methyl-2-pentanone	ND	mg/l	0.00500	1	9/30/03	13:21	B.Herford	8260B	6185
Methylene chloride	ND	mg/l	0.00250	1	9/30/03	13:21	B.Herford	8260B	6185
Naphthalene	ND	mg/l	0.00500	1	9/30/03	13:21	B.Herford	8260B	6185
n-Propylbenzene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
Styrene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
1,1,1,2-Tetrachloroethane	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
1,1,2,2-Tetrachloroethane	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
Tetrachloroethene	0.00540	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
Toluene	ND	mg/l	0.0010	1	9/30/03	13:21	B.Herford	8260B	6185
1,2,3-Trichlorobenzene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
1,2,4-Trichlorobenzene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
1,1,1-Trichloroethane	0.00840	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
1,1,2-Trichloroethane	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
Trichloroethene	0.0880	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
1,2,3-Trichloropropane	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
1,2,4-Trimethylbenzene	ND	mg/l	0.0010	1	9/30/03	13:21	B.Herford	8260B	6185
1,3,5-Trimethylbenzene	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
Vinyl chloride	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185
Xylenes (Total)	ND	mg/l	0.0010	1	9/30/03	13:21	B.Herford	8260B	6185
Bromodichloromethane	ND	mg/l	0.00100	1	9/30/03	13:21	B.Herford	8260B	6185

Sample report continued . . .

ANALYTICAL REPORT

Laboratory Number: 03-A148039
 Sample ID: W-3
 Project: P2193.01
 Page 3

Analyte	Result	Units	Report	Dil	Analysis		Analyst	Method	Batch	
			Limit		Factor	Date				Time
Trichlorofluoromethane	ND	mg/l	0.00100	1		9/30/03	13:21	B.Herford	8260B	6185
METALS										
Chromium	1.97	mg/l	0.0050	1		9/25/03	16:51	C. Martin	6010B	478
Chromium, Hexavalent	1.56	mg/l	0.0500	5		9/24/03	23:26	J. Hill	7196A	9350
Lead	0.0080	mg/l	0.0050	1		9/25/03	16:51	C. Martin	6010B	478
Nickel	0.0230	mg/l	0.0100	1		9/25/03	16:51	C. Martin	6010B	478

Surrogate	% Recovery	Target Range
VOA Surr 1,2-DCA-d4	99.	70. - 133.
VOA Surr Toluene-d8	94.	76. - 123.
VOA Surr, 4-BFB	85.	71. - 132.
VOA Surr, DBFM	99.	74. - 128.

LABORATORY COMMENTS:

- ND = Not detected at the report limit.
- B = Analyte was detected in the method blank.
- J = Estimated Value below Report Limit.
- E = Estimated Value above the calibration limit of the instrument.
- # = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

ANALYTICAL REPORT

TETRA TECH EMI 7972
1815 BROWNSBORO RD. STE. 200
LOUISVILLE, KY 40206

Lab Number: 03-A148040
Sample ID: W-4
Sample Type: Ground water
Site ID:

Project: P2193.01
Project Name: 500 ASSOC.
Sampler: JAMES R.D. JOHNSON

Date Collected: 9/23/03
Time Collected: 15:00
Date Received: 9/24/03
Time Received: 8:00
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
VOLATILE ORGANICS									
Acetone	ND	mg/l	0.0250	1	9/30/03	15:19	B.Herford	8260B	6185
Benzene	ND	mg/l	0.0010	1	9/30/03	15:19	B.Herford	8260B	6185
Bromobenzene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
Bromochloromethane	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
Bromoform	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
Bromomethane	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
2-Butanone	ND	mg/l	0.0250	1	9/30/03	15:19	B.Herford	8260B	6185
n-Butylbenzene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
sec-Butylbenzene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
tert-Butylbenzene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
Carbon disulfide	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
Carbon tetrachloride	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
Chlorobenzene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
Chloroethane	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
Chloroform	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
Chloromethane	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
2-Chlorotoluene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
4-Chlorotoluene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
1,2-Dibromo-3-chloropropane	ND	mg/l	0.00500	1	9/30/03	15:19	B.Herford	8260B	6185
Dibromochloromethane	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
1,2-Dibromoethane	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
Dibromomethane	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
1,2-Dichlorobenzene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
1,3-Dichlorobenzene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
1,4-Dichlorobenzene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
Dichlorodifluoromethane	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185

Sample report continued . . .

ANALYTICAL REPORT

Laboratory Number: 03-A148040
Sample ID: W-4
Project: P2193.01
Page 2

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
1,1-Dichloroethane	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
1,2-Dichloroethane	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
1,1-Dichloroethene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
cis-1,2-Dichloroethene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
trans-1,2-Dichloroethene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
1,2-Dichloropropane	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
1,3-Dichloropropane	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
2,2-Dichloropropane	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
1,1-Dichloropropene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
cis-1,3-Dichloropropene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
trans-1,3-Dichloropropene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
Ethylbenzene	ND	mg/l	0.0010	1	9/30/03	15:19	B.Herford	8260B	6185
Hexachlorobutadiene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
2-Hexanone	ND	mg/l	0.00500	1	9/30/03	15:19	B.Herford	8260B	6185
Isopropylbenzene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
p-Isopropyltoluene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
4-Methyl-2-pentanone	ND	mg/l	0.00500	1	9/30/03	15:19	B.Herford	8260B	6185
Methylene chloride	ND	mg/l	0.00250	1	9/30/03	15:19	B.Herford	8260B	6185
Naphthalene	ND	mg/l	0.00500	1	9/30/03	15:19	B.Herford	8260B	6185
n-Propylbenzene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
Styrene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
1,1,1,2-Tetrachloroethane	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
1,1,2,2-Tetrachloroethane	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
Tetrachloroethene	0.00420	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
Toluene	ND	mg/l	0.0010	1	9/30/03	15:19	B.Herford	8260B	6185
1,2,3-Trichlorobenzene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
1,2,4-Trichlorobenzene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
1,1,1-Trichloroethane	0.0166	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
1,1,2-Trichloroethane	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
Trichloroethene	0.213	mg/l	0.00500	5	9/30/03	15:48	B.Herford	8260B	6189
1,2,3-Trichloropropane	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
1,2,4-Trimethylbenzene	ND	mg/l	0.0010	1	9/30/03	15:19	B.Herford	8260B	6185
1,3,5-Trimethylbenzene	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
Vinyl chloride	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
Xylenes (Total)	ND	mg/l	0.0010	1	9/30/03	15:19	B.Herford	8260B	6185
Bromodichloromethane	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185

Sample report continued . . .

ANALYTICAL REPORT

Laboratory Number: 03-A148040
 Sample ID: W-4
 Project: P2193.01
 Page 3

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
Trichlorofluoromethane	ND	mg/l	0.00100	1	9/30/03	15:19	B.Herford	8260B	6185
METALS									
Chromium	ND	mg/l	0.0050	1	9/25/03	16:51	C. Martin	6010B	478
Chromium, Hexavalent	ND	mg/l	0.0100	1	9/24/03	23:27	J. Hill	7196A	9350
Lead	0.0070	mg/l	0.0050	1	9/25/03	16:51	C. Martin	6010B	478
Nickel	ND	mg/l	0.0100	1	9/25/03	16:51	C. Martin	6010B	478

Surrogate	% Recovery	Target Range
VOA Surr 1,2-DCA-d4	104.	70. - 133.
VOA Surr Toluene-d8	97.	76. - 123.
VOA Surr, 4-BFB	86.	71. - 132.
VOA Surr, DBFM	103.	74. - 128.

LABORATORY COMMENTS:

- ND = Not detected at the report limit.
- B = Analyte was detected in the method blank.
- J = Estimated Value below Report Limit.
- E = Estimated Value above the calibration limit of the instrument.
- # = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

ANALYTICAL REPORT

TETRA TECH EMI 7972
 1815 BROWNSBORO RD. STE. 200
 LOUISVILLE, KY 40206

Lab Number: 03-A148041
 Sample ID: W-100
 Sample Type: Ground water
 Site ID:

Project: P2193.01
 Project Name: 500 ASSOC.
 Sampler: JAMES R.D. JOHNSON

Date Collected: 9/23/03
 Time Collected: 15:00
 Date Received: 9/24/03
 Time Received: 8:00
 Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
VOLATILE ORGANICS									
Acetone	ND	mg/l	0.0250	1	9/30/03	16:17	B.Herford	8260B	6185
Benzene	ND	mg/l	0.0010	1	9/30/03	16:17	B.Herford	8260B	6185
Bromobenzene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
Bromochloromethane	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
Bromoform	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
Bromomethane	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
2-Butanone	ND	mg/l	0.0250	1	9/30/03	16:17	B.Herford	8260B	6185
n-Butylbenzene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
sec-Butylbenzene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
tert-Butylbenzene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
Carbon disulfide	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
Carbon tetrachloride	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
Chlorobenzene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
Chloroethane	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
Chloroform	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
Chloromethane	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
2-Chlorotoluene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
4-Chlorotoluene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
1,2-Dibromo-3-chloropropane	ND	mg/l	0.00500	1	9/30/03	16:17	B.Herford	8260B	6185
Dibromochloromethane	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
1,2-Dibromoethane	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
Dibromomethane	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
1,2-Dichlorobenzene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
1,3-Dichlorobenzene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
1,4-Dichlorobenzene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
Dichlorodifluoromethane	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185

Sample report continued . . .

ANALYTICAL REPORT

Laboratory Number: 03-A148041
Sample ID: W-100
Project: P2193.01
Page 2

Analyte	Result	Units	Report Limit	Dil Factor	Analysis		Analyst	Method	Batch
					Date	Time			
1,1-Dichloroethane	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
1,2-Dichloroethane	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
1,1-Dichloroethene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
cis-1,2-Dichloroethene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
trans-1,2-Dichloroethene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
1,2-Dichloropropane	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
1,3-Dichloropropane	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
2,2-Dichloropropane	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
1,1-Dichloropropene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
cis-1,3-Dichloropropene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
trans-1,3-Dichloropropene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
Ethylbenzene	ND	mg/l	0.0010	1	9/30/03	16:17	B.Herford	8260B	6185
Hexachlorobutadiene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
2-Hexanone	ND	mg/l	0.00500	1	9/30/03	16:17	B.Herford	8260B	6185
Isopropylbenzene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
p-Isopropyltoluene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
4-Methyl-2-pentanone	ND	mg/l	0.00500	1	9/30/03	16:17	B.Herford	8260B	6185
Methylene chloride	ND	mg/l	0.00250	1	9/30/03	16:17	B.Herford	8260B	6185
Naphthalene	ND	mg/l	0.00500	1	9/30/03	16:17	B.Herford	8260B	6185
n-Propylbenzene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
Styrene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
1,1,1,2-Tetrachloroethane	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
1,1,2,2-Tetrachloroethane	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
Tetrachloroethene	0.00400	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
Toluene	ND	mg/l	0.0010	1	9/30/03	16:17	B.Herford	8260B	6185
1,2,3-Trichlorobenzene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
1,2,4-Trichlorobenzene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
1,1,1-Trichloroethane	0.0160	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
1,1,2-Trichloroethane	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
Trichloroethene	0.215	mg/l	0.00500	5	9/30/03	16:45	B.Herford	8260B	6189
1,2,3-Trichloropropane	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
1,2,4-Trimethylbenzene	ND	mg/l	0.0010	1	9/30/03	16:17	B.Herford	8260B	6185
1,3,5-Trimethylbenzene	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
Vinyl chloride	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
Xylenes (Total)	ND	mg/l	0.0010	1	9/30/03	16:17	B.Herford	8260B	6185
Bromodichloromethane	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185

Sample report continued . . .

ANALYTICAL REPORT

Laboratory Number: 03-A148041
Sample ID: W-100
Project: P2193.01
Page 3

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
Trichlorofluoromethane	ND	mg/l	0.00100	1	9/30/03	16:17	B.Herford	8260B	6185
METALS									
Chromium	ND	mg/l	0.0050	1	9/25/03	16:51	C. Martin	6010B	478
Chromium, Hexavalent	ND	mg/l	0.0100	1	9/24/03	23:27	J. Hill	7196A	9350
Lead	0.0090	mg/l	0.0050	1	9/25/03	16:51	C. Martin	6010B	478
Nickel	ND	mg/l	0.0100	1	9/25/03	16:51	C. Martin	6010B	478

Surrogate	% Recovery	Target Range
VOA Surr 1,2-DCA-d4	103.	70. - 133.
VOA Surr Toluene-d8	95.	76. - 123.
VOA Surr, 4-BFB	90.	71. - 132.
VOA Surr, DBFM	106.	74. - 128.

LABORATORY COMMENTS:

- ND = Not detected at the report limit.
- B = Analyte was detected in the method blank.
- J = Estimated Value below Report Limit.
- E = Estimated Value above the calibration limit of the instrument.
- # = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

PROJECT QUALITY CONTROL DATA

Project Number: P2193.01

Project Name: 500 ASSOC.

Page: 1

Laboratory Receipt Date: 9/24/03

Matrix Spike Recovery

Note: If Blank is referenced as the sample spiked, insufficient volume was received for the defined analytical batch for MS/MSD analysis on an true sample matrix. Laboratory reagent water was used for QC purposes.

Analyte	units	Orig. Val.	MS Val	Spike Conc	Recovery	Target Range	Q.C. Batch	Spike Sample
VOA PARAMETERS								
Benzene	mg/l	< 0.0005	0.0543	0.0500	109	68 - 136	6185	BLANK
Chlorobenzene	mg/l	< 0.00020	0.0546	0.0500	109	78 - 125	6185	BLANK
1,1-Dichloroethene	mg/l	< 0.00060	0.0554	0.0500	111	67 - 141	6185	BLANK
Toluene	mg/l	< 0.0006	0.0546	0.0500	109	73 - 133	6185	BLANK
Trichloroethene	mg/l	< 0.00040	0.0615	0.0500	123	69 - 141	6185	BLANK
Tetrachloroethene	mg/l	< 0.00040	0.0576	0.0500	115	71 - 134	6185	BLANK
VOA Surr 1,2-DCA-d4	% Rec				101	70 - 133	6185	
VOA Surr Toluene-d8	% Rec				99	76 - 123	6185	
VOA Surr, 4-BFB	% Rec				83	71 - 132	6185	
VOA Surr, DBFM	% Rec				106	74 - 128	6185	
METALS								
Chromium	mg/l	< 0.0050	0.186	0.200	93	80 - 120	478	Duplicate
Chromium, Hexavalent	mg/l	0.0220	0.121	0.100	99	80 - 120	9350	03-A148017
Lead	mg/l	< 0.0050	0.0470	0.0500	94	80 - 120	478	Duplicate
Nickel	mg/l	< 0.0100	0.477	0.500	95	80 - 120	478	Duplicate

Matrix Spike Duplicate

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch
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Project QC continued . . .

PROJECT QUALITY CONTROL DATA

Project Number: P2193.01

Project Name: 500 ASSOC.

Page: 2

Laboratory Receipt Date: 9/24/03

****VOA PARAMETERS****

Parameter	Unit	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Batch
Benzene	mg/l	0.0543	0.0517	4.91	22.		6185
Chlorobenzene	mg/l	0.0546	0.0537	1.66	17.		6185
1,1-Dichloroethene	mg/l	0.0554	0.0573	3.37	21.		6185
Toluene	mg/l	0.0546	0.0511	6.62	22.		6185
Trichloroethene	mg/l	0.0615	0.0576	6.55	22.		6185
Tetrachloroethene	mg/l	0.0576	0.0539	6.64	19.		6185
VOA Surr 1,2-DCA-d4	% Rec		99.				6185
VOA Surr Toluene-d8	% Rec		96.				6185
VOA Surr, 4-BFB	% Rec		82.				6185
VOA Surr, DBFM	% Rec		103.				6185

****METALS****

Parameter	Unit	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Batch
Chromium	mg/l	0.186	0.188	1.07	20		478
Chromium, Hexavalent	mg/l	0.121	0.123	1.64	20		9350
Lead	mg/l	0.0470	0.0480	2.11	20		478
Nickel	mg/l	0.477	0.484	1.46	20		478

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
VOA PARAMETERS						
Acetone	mg/l	0.250	0.298	119	52 - 151	6185
Benzene	mg/l	0.0500	0.0533	107	78 - 125	6185
Bromobenzene	mg/l	0.0500	0.0500	100	75 - 127	6185
Bromochloromethane	mg/l	0.0500	0.0546	109	72 - 136	6185
Bromoform	mg/l	0.0500	0.0484	97	63 - 130	6185
Bromomethane	mg/l	0.0500	0.0486	97	46 - 156	6185
2-Butanone	mg/l	0.250	0.269	108	67 - 143	6185
n-Butylbenzene	mg/l	0.0500	0.0536	107	65 - 132	6185
sec-Butylbenzene	mg/l	0.0500	0.0522	104	72 - 129	6185
tert-Butylbenzene	mg/l	0.0500	0.0508	102	43 - 128	6185
Carbon disulfide	mg/l	0.0500	0.0578	116	68 - 139	6185

Project QC continued . . .

PROJECT QUALITY CONTROL DATA

Project Number: P2193.01

Project Name: 500 ASSOC.

Page: 3

Laboratory Receipt Date: 9/24/03

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
Carbon tetrachloride	mg/l	0.0500	0.0528	106	62 - 140	6185
Chlorobenzene	mg/l	0.0500	0.0556	111	82 - 120	6185
Chloroethane	mg/l	0.0500	0.0544	109	61 - 142	6185
Chloroform	mg/l	0.0500	0.0557	111	75 - 129	6185
Chloromethane	mg/l	0.0500	0.0615	123	46 - 147	6185
2-Chlorotoluene	mg/l	0.0500	0.0532	106	76 - 126	6185
4-Chlorotoluene	mg/l	0.0500	0.0516	103	77 - 125	6185
1,2-Dibromo-3-chloropropane	mg/l	0.0500	0.0475	95	64 - 132	6185
Dibromochloromethane	mg/l	0.0500	0.0504	101	74 - 132	6185
1,2-Dibromoethane	mg/l	0.0500	0.0508	102	77 - 128	6185
Dibromomethane	mg/l	0.0500	0.0555	111	74 - 133	6185
1,2-Dichlorobenzene	mg/l	0.0500	0.0521	104	77 - 129	6185
1,3-Dichlorobenzene	mg/l	0.0500	0.0530	106	79 - 125	6185
1,4-Dichlorobenzene	mg/l	0.0500	0.0496	99	78 - 121	6185
Dichlorodifluoromethane	mg/l	0.0500	0.0720	144	45 - 149	6185
1,1-Dichloroethane	mg/l	0.0500	0.0573	115	75 - 129	6185
1,2-Dichloroethane	mg/l	0.0500	0.0546	109	69 - 135	6185
1,1-Dichloroethene	mg/l	0.0500	0.0559	112	73 - 132	6185
cis-1,2-Dichloroethene	mg/l	0.0500	0.0549	110	72 - 132	6185
trans-1,2-Dichloroethene	mg/l	0.0500	0.0559	112	71 - 134	6185
1,2-Dichloropropane	mg/l	0.0500	0.0596	119	81 - 126	6185
1,3-Dichloropropane	mg/l	0.0500	0.0560	112	83 - 127	6185
2,2-Dichloropropane	mg/l	0.0500	0.0557	111	39 - 151	6185
1,1-Dichloropropene	mg/l	0.0500	0.0525	105	77 - 128	6185
cis-1,3-Dichloropropene	mg/l	0.0500	0.0528	106	71 - 133	6185
trans-1,3-Dichloropropene	mg/l	0.0500	0.0521	104	69 - 131	6185
Ethylbenzene	mg/l	0.0500	0.0555	111	79 - 125	6185
Hexachlorobutadiene	mg/l	0.0500	0.0490	98	60 - 134	6185
2-Hexanone	mg/l	0.250	0.259	104	68 - 145	6185
Isopropylbenzene	mg/l	0.0500	0.0577	115	75 - 128	6185
p-Isopropyltoluene	mg/l	0.0500	0.0524	105	73 - 128	6185

Project QC continued . . .

PROJECT QUALITY CONTROL DATA

Project Number: P2193.01

Project Name: 500 ASSOC.

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Laboratory Receipt Date: 9/24/03

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
4-Methyl-2-pentanone	mg/l	0.250	0.259	104	71 - 143	6185
Methylene chloride	mg/l	0.0500	0.0574	115	74 - 131	6185
Naphthalene	mg/l	0.0500	0.0491	98	62 - 142	6185
n-Propylbenzene	mg/l	0.0500	0.0521	104	73 - 128	6185
Styrene	mg/l	0.0500	0.0597	119	80 - 126	6185
1,1,1,2-Tetrachloroethane	mg/l	0.0500	0.0561	112	78 - 132	6185
1,1,2,2-Tetrachloroethane	mg/l	0.0500	0.0499	100	70 - 135	6185
Tetrachloroethene	mg/l	0.0500	0.0556	111	74 - 128	6185
Toluene	mg/l	0.0500	0.0540	108	79 - 125	6185
1,2,3-Trichlorobenzene	mg/l	0.0500	0.0517	103	69 - 136	6185
1,2,4-Trichlorobenzene	mg/l	0.0500	0.0502	100	69 - 131	6185
1,1,1-Trichloroethane	mg/l	0.0500	0.0547	109	72 - 132	6185
1,1,2-Trichloroethane	mg/l	0.0500	0.0592	118	80 - 133	6185
Trichloroethene	mg/l	0.0500	0.0579	116	74 - 133	6185
Trichloroethene	mg/l	0.0500	0.0579	116	74 - 133	6189
1,2,3-Trichloropropane	mg/l	0.0500	0.0489	98	69 - 136	6185
1,2,4-Trimethylbenzene	mg/l	0.0500	0.0534	107	73 - 130	6185
1,3,5-Trimethylbenzene	mg/l	0.0500	0.0522	104	73 - 130	6185
Vinyl chloride	mg/l	0.0500	0.0646	129	63 - 140	6185
Xylenes (Total)	mg/l	0.150	0.169	113	78 - 127	6185
Bromodichloromethane	mg/l	0.0500	0.0599	120	77 - 132	6185
Trichlorofluoromethane	mg/l	0.0500	0.0575	115	59 - 142	6185
VOA Surr 1,2-DCA-d4	% Rec			95	70 - 133	6185
VOA Surr 1,2-DCA-d4	% Rec			95	70 - 133	6189
VOA Surr Toluene-d8	% Rec			99	76 - 123	6185
VOA Surr Toluene-d8	% Rec			99	76 - 123	6189
VOA Surr, 4-BFB	% Rec			81	71 - 132	6185
VOA Surr, 4-BFB	% Rec			81	71 - 132	6189
VOA Surr, DBFM	% Rec			101	74 - 128	6185
VOA Surr, DBFM	% Rec			101	74 - 128	6189

Project QC continued . . .

PROJECT QUALITY CONTROL DATA

Project Number: P2193.01

Project Name: 500 ASSOC.

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Laboratory Receipt Date: 9/24/03

****METALS****

Analyte	Units	Value 1	Value 2	RPD	Limit	Q.C. Batch	Sample Dup'd
Chromium	mg/l	0.200	0.196	98		80 - 120	478
Lead	mg/l	0.0500	0.0510	102		80 - 120	478
Nickel	mg/l	0.500	0.502	100		80 - 120	478

Duplicates

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch	Sample Dup'd
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Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Date Analyzed	Time Analyzed
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****VOA PARAMETERS****

Analyte	Value	Units	Q.C. Batch	Date Analyzed	Time Analyzed
Acetone	< 0.00470	mg/l	6185	9/30/03	10:49
Benzene	< 0.0005	mg/l	6185	9/30/03	10:49
Bromobenzene	< 0.00030	mg/l	6185	9/30/03	10:49
Bromochloromethane	< 0.00030	mg/l	6185	9/30/03	10:49
Bromoform	< 0.00060	mg/l	6185	9/30/03	10:49
Bromomethane	< 0.00060	mg/l	6185	9/30/03	10:49
2-Butanone	< 0.00310	mg/l	6185	9/30/03	10:49
n-Butylbenzene	< 0.00010	mg/l	6185	9/30/03	10:49
sec-Butylbenzene	< 0.00030	mg/l	6185	9/30/03	10:49
tert-Butylbenzene	< 0.00030	mg/l	6185	9/30/03	10:49
Carbon disulfide	< 0.00020	mg/l	6185	9/30/03	10:49
Carbon tetrachloride	< 0.00040	mg/l	6185	9/30/03	10:49
Chlorobenzene	< 0.00020	mg/l	6185	9/30/03	10:49
Chloroethane	< 0.00100	mg/l	6185	9/30/03	10:49
Chloroform	< 0.00080	mg/l	6185	9/30/03	10:49

Project QC continued . . .

PROJECT QUALITY CONTROL DATA

Project Number: P2193.01

Project Name: 500 ASSOC.

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Laboratory Receipt Date: 9/24/03

Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Analysis Date	Analysis Time
Chloromethane	< 0.00070	mg/l	6185	9/30/03	10:49
2-Chlorotoluene	< 0.00040	mg/l	6185	9/30/03	10:49
4-Chlorotoluene	< 0.00050	mg/l	6185	9/30/03	10:49
1,2-Dibromo-3-chloropropane	< 0.00070	mg/l	6185	9/30/03	10:49
Dibromochloromethane	< 0.00050	mg/l	6185	9/30/03	10:49
1,2-Dibromoethane	< 0.00040	mg/l	6185	9/30/03	10:49
Dibromomethane	< 0.00090	mg/l	6185	9/30/03	10:49
1,2-Dichlorobenzene	< 0.00020	mg/l	6185	9/30/03	10:49
1,3-Dichlorobenzene	< 0.00030	mg/l	6185	9/30/03	10:49
1,4-Dichlorobenzene	< 0.00040	mg/l	6185	9/30/03	10:49
Dichlorodifluoromethane	< 0.00050	mg/l	6185	9/30/03	10:49
1,1-Dichloroethane	< 0.00020	mg/l	6185	9/30/03	10:49
1,2-Dichloroethane	< 0.00060	mg/l	6185	9/30/03	10:49
1,1-Dichloroethene	< 0.00060	mg/l	6185	9/30/03	10:49
cis-1,2-Dichloroethene	< 0.00060	mg/l	6185	9/30/03	10:49
trans-1,2-Dichloroethene	< 0.00050	mg/l	6185	9/30/03	10:49
1,2-Dichloropropane	< 0.00040	mg/l	6185	9/30/03	10:49
1,3-Dichloropropane	< 0.00040	mg/l	6185	9/30/03	10:49
2,2-Dichloropropane	< 0.00040	mg/l	6185	9/30/03	10:49
1,1-Dichloropropene	< 0.00050	mg/l	6185	9/30/03	10:49
cis-1,3-Dichloropropene	< 0.00030	mg/l	6185	9/30/03	10:49
trans-1,3-Dichloropropene	< 0.00050	mg/l	6185	9/30/03	10:49
Ethylbenzene	< 0.0003	mg/l	6185	9/30/03	10:49
Hexachlorobutadiene	< 0.00080	mg/l	6185	9/30/03	10:49
2-Hexanone	< 0.00420	mg/l	6185	9/30/03	10:49
Isopropylbenzene	< 0.00040	mg/l	6185	9/30/03	10:49
p-Isopropyltoluene	< 0.00060	mg/l	6185	9/30/03	10:49
4-Methyl-2-pentanone	< 0.00490	mg/l	6185	9/30/03	10:49
Methylene chloride	< 0.00240	mg/l	6185	9/30/03	10:49
Naphthalene	< 0.00120	mg/l	6185	9/30/03	10:49
n-Propylbenzene	< 0.00030	mg/l	6185	9/30/03	10:49

Project QC continued . . .

PROJECT QUALITY CONTROL DATA

Project Number: P2193.01

Project Name: 500 ASSOC.

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Laboratory Receipt Date: 9/24/03

METALS

Chromium	< 0.0013	mg/l	478	9/25/03	16:51
Chromium, Hexavalent	< 0.0100	mg/l	9350	9/24/03	23:24
Lead	< 0.0029	mg/l	478	9/25/03	16:51
Nickel	< 0.0032	mg/l	478	9/25/03	16:51

= Value outside Laboratory historical or method prescribed QC limits.

End of Report for Project 347837

PROJECT QUALITY CONTROL DATA

Project Number: P2193.01

Project Name: 500 ASSOC.

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Laboratory Receipt Date: 9/24/03

Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Analysis Date	Analysis Time
Styrene	< 0.00040	mg/l	6185	9/30/03	10:49
1,1,1,2-Tetrachloroethane	< 0.00060	mg/l	6185	9/30/03	10:49
1,1,2,2-Tetrachloroethane	< 0.00040	mg/l	6185	9/30/03	10:49
Tetrachloroethene	< 0.00040	mg/l	6185	9/30/03	10:49
Toluene	< 0.0006	mg/l	6185	9/30/03	10:49
1,2,3-Trichlorobenzene	< 0.00100	mg/l	6185	9/30/03	10:49
1,2,4-Trichlorobenzene	< 0.00060	mg/l	6185	9/30/03	10:49
1,1,1-Trichloroethane	< 0.00070	mg/l	6185	9/30/03	10:49
1,1,2-Trichloroethane	< 0.00040	mg/l	6185	9/30/03	10:49
Trichloroethene	< 0.00040	mg/l	6185	9/30/03	10:49
Trichloroethene	< 0.00040	mg/l	6189	9/30/03	10:49
1,2,3-Trichloropropane	< 0.00060	mg/l	6185	9/30/03	10:49
1,2,4-Trimethylbenzene	< 0.0003	mg/l	6185	9/30/03	10:49
1,3,5-Trimethylbenzene	< 0.00100	mg/l	6185	9/30/03	10:49
Vinyl chloride	< 0.00050	mg/l	6185	9/30/03	10:49
Xylenes (Total)	< 0.0009	mg/l	6185	9/30/03	10:49
Bromodichloromethane	< 0.00030	mg/l	6185	9/30/03	10:49
Trichlorofluoromethane	< 0.00040	mg/l	6185	9/30/03	10:49
VOA Surr 1,2-DCA-d4	103.	% Rec	6185	9/30/03	10:49
VOA Surr 1,2-DCA-d4	103.	% Rec	6189	9/30/03	10:49
VOA Surr Toluene-d8	95.	% Rec	6185	9/30/03	10:49
VOA Surr Toluene-d8	95.	% Rec	6189	9/30/03	10:49
VOA Surr, 4-BFB	86.	% Rec	6185	9/30/03	10:49
VOA Surr, 4-BFB	86.	% Rec	6189	9/30/03	10:49
VOA Surr, DBFM	100.	% Rec	6185	9/30/03	10:49
VOA Surr, DBFM	100.	% Rec	6189	9/30/03	10:49

Project QC continued . . .