

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
 (Alternative Form for Single Chamber, Completely Shop-Fabricated Vessels Only)
 As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured and certified by CALGON CARBON CORPORATION, 4301 Grand Ave., Neville Island, PA 15225
(Name and address of manufacturer)

Manufactured for Armonk Sewer and Water Dept., Armonk, NY 10504
(Name and address of purchaser)

3. Location of installation Armonk Sewer and Water Dept., Armonk, NY 10504
(Name and address)

4. Type Vertical ARMONK A, B --- 91-97-3359 238 - 239 1997
(Horiz. or vert., tank) (Mfr's serial No.) (CRN) (Drawing No.) (Nat'l. Bd. No.) (Year built)

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 1995
Year

to 1996 --- ---
Addenda (Date) Code Case Nos. Special Service per UG-120(d)

6. Shell: SA-516-70 .250" 0 6' 11.5" 6' 8"
Mat'l. (Spec. No., Grade) Nom. Thk. (in.) Corr. Allow. (in.) Diam. I.D. (ft. & in.) Length (overall) (ft. & in.)

7. Seams: Type 1 Spot 85 --- --- Type 1 Spot 1
Long. (Welded, Dbl., Sngl., Lap, Butt) R.T. (Spot or Full) Eff. (%) H.T. Temp. (°F) Time (hr) Girth (Welded, Dbl., Sngl., Lap, Butt) R.T. (Spot, Partial, or Full) No. of Courses

8. Heads: (a) Mat'l. SA516-70 (b) Mat'l. SA516-70
(Spec. No., Grade) (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	Top	.191	0	64.8"	12.3"	2:1	---	---	---	Concave
(b)	Bottom	.191	0	64.8"	12.3"	2:1	---	---	---	Concave

If removable, bolts used (describe other fastenings) ---
(Mater., Spec. No., Gr., Size, No.)

9. MAWP 75 psi at max. temp. 150 °F
 Min. design metal temp. -20 °F at 75 psi. Hydro., pneu., or comb. test pressure 113 psi.

Nozzles, inspection and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Mat'l.	Nom. Thk.	Reinforcement Mat'l.	How Attached	Location
Carbon/Out	1	3"	Pad	SA516-70	1.5"	---	Welded	---
Carbon/In	1	3"	Pipe/Flg	SA106B/SA105	.216"	---	Welded	---
Influent	1	3"	Pad	SA516-70	1.5"	---	Welded	---
Effluent	1	4"	Pipe/Flg	SA106B/SA105	.237"	SA516-70	Welded	---

1. Supports: Skirt No Lugs 2 Legs 3 Other Gusset Attached Welded to head/shell
(Yes or no) (No.) (No.) (Describe) (Where and how)

12. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: ---
(Name of part, item number, Mfr's name and identifying stamp)

Manway 1 14x18" Ellip. SA516-70 .75" --- Welded Shell
 Sample 2 2" Pipe/Flg SA106B/SA105 .154" --- Welded ---

Hydro tested in vertical position, impact testing exempt per UG20 (F)

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1. "U" Certificate of Authorization No. 27471 expires 12/24, 19 99.
 Date 12-18-97 Co. name Calgon Carbon Corp Signed Dave Dugan
(Manufacturer) (Representative)

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by Calgon Carbon Corporation at 4301 Grand Ave., Neville Island PA 15225

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Pennsylvania and employed by Arkwright Mutual Insurance Co.
 have inspected the component described in this Manufacturer's Data Report on December 15, 19 97, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
 Date 12/14/97 Signed [Signature] Commissions NB 3311A P 2245
(Authorized Inspector) (Nat'l. Board Ind. endorsements), State, Prov., and No.)

Appendix F
Discharge Requirements

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning May 1, 1996and lasting until May 1, 2001

the discharges from the treatment facility to the Wampus River shall be limited and monitored by the operator as specified below:

Outfall Number & Effluent Parameter	Discharge Limitations		Units	Minimum Monitoring Requirements	
	Daily Avg.	Daily Max.		Measurement Frequency	Sample Type
<u>Outfall 001 - Treated Groundwater:</u>					
Flow	Monitor	86,400	gpd	Continuous	Recorder
Tetrachloroethylene	Monitor	2.5	µg/l	Weekly ⁶	Grab
Trichloroethylene	Monitor	10	µg/l	Weekly ⁶	Grab
1,2-cis-Dichloroethylene	Monitor	10	µg/l	Weekly ⁶	Grab
1,2-trans-Dichloroethylene	Monitor	10	µg/l	Weekly ⁶	Grab
Vinyl Chloride	Monitor	10	µg/l	Weekly ⁶	Grab
Iron, Total	Monitor	750	µg/l	Weekly ⁶	Grab
Zinc, Total	Monitor	250	µg/l	Weekly ⁶	Grab

Special Conditions:

- (1) Discharge is not authorized until such time as an engineering submission showing the method of treatment is approved by the Department. The discharge rate may not exceed the effective treatment system capacity. All monitoring data, engineering submissions and modification requests must be submitted to the following DHWR contact person: _____
- (2) Only site generated wastewater is authorized for treatment and discharge.
- (3) Authorization to discharge is valid only for the period noted above but may be renewed if appropriate. A request for renewal must be received 6 months prior to the expiration date to allow for a review of monitoring data and reassessment of monitoring requirements.
- (4) Both concentration (mg/l or µg/l) and mass loadings (lbs/day) must be reported to the Department for all parameters except Flow.
- (5) Samples and measurements, to comply with the monitoring requirements specified above, shall be taken from polishing carbon unit effluent prior to discharge to the storm sewer tributary to the Wampus River, Class C.
- (6) The minimum measurement frequency for all the parameters (except flow) shall be Monthly following a period of 24 consecutive Weekly sampling events showing no exceedances of the stated discharge limitations. If a discharge limitation for any parameter is exceeded the measurement frequency for all parameters shall again be Weekly, until a period of 8 consecutive sampling events shows no exceedances at which point Monthly monitoring may resume.

Appendix G

Water Treatment Sampling Results

**ARMONK PRIVATE WELLS SITE
EXTRACTION WELL #1
ANALYTICAL DATA**

Date Sampled	SampleID	Concentration (ug/L)						Iron, total	Zinc, total
		Tetrachloroethylene	Trichloroethylene	1,2-cis-Dichloroethylene	1,2-trans-Dichloroethylene	Vinyl Chloride			
EnviroTrac									
10-Mar	EW1031098	6,600	<500	< 500	<500	<500	3,200	60.0	
16-Mar	EW1031698	9,300	<500	<500	<500	<500	390	58.5	
17-Mar	EW1031798	8,200	<500	<500	<500	<500	257	28.1	
23-Mar	EW1032398	9,400	<500	<500	<500	<500	488	109.0	
7-Apr	EW1040798	6,900	<500	<500	1,000	<500	NA	NA	
8-Apr	EW1040898	5,900	<500	<500	<100	<500	NA	NA	
14-Apr	EW1041498	6,000	<500	<500	<500	<500	NA	NA	
15-Apr	EW1041598	5,900	<500	<500	<500	<500	NA	NA	
22-Jun	EW1062298	3,500	<500	<500	<500	<500	NA	NA	
29-Jun	EW1062998	5,800	<500	<500	<500	<500	2,030	105	
8-Oct	EW1100898	2,800	<500	<500	<500	<500	135	16	
TAMS Consultants, Inc.									
14-Dec	EW1121498	2,200	13	1.3	<0.5	<0.5	NA	NA	

ARMONK PRIVATE WELLS SITE

EXTRACTION WELL #2

ANALYTICAL DATA

Concentration (ug/L)

Date Sampled	SampleID	Tetrachloroethylene	Trichloroethylene	1,2-cis-Dichloroethylene	1,2-trans-Dichloroethylene	Vinyl Chloride	Iron, total	Zinc, total
EnviroTrac								
10-Mar	EW2031098	7,000	<500	<500	<500	<500	13,000	60
16-Mar	EW2031698	7,900	<500	<500	<500	<500	10,600	69.1
17-Mar	EW2031798	7,300	<500	<500	<500	<500	5,210	202.0
23-Mar	EW2032398	9,100	<500	<500	<500	<500	2,300	30.9
7-Apr	EW2040798	2,700	<500	<500	<500	<500	NA	NA
8-Apr	EW2040898	2,300	<500	<500	<500	<500	NA	NA
14-Apr	EW2041498	2,000	<500	<500	<500	<500	NA	NA
15-Apr	EW2041598	2,100	<500	<500	<500	<500	NA	NA
22-Jun	EW2062298	600	<20	<20	<20	<20	NA	NA
29-Jun	EW2062998	1,100	<50	<50	<50	<50	25,900	90
8-Oct	EW2100898	340	<100	<100	<100	<100	67	20
TAMS Consultants, Inc.								
14-Dec	EW2121498	220	5.0	1.5	<0.5	<0.5	NA	NA

**ARMONK PRIVATE WELLS SITE
EXTRACTION WELL #3
ANALYTICAL DATA
Concentration (ug/L)**

Date Sampled	SampleID	Tetrachloroethylene	Trichloroethylene	1,2-cis-Dichloroethylene	1,2-trans-Dichloroethylene	Vinyl Chloride	Iron, total	Zinc, total
EnviroTrac								
10-Mar	EW3031098	320	<10	<10	<10	<10	14,000	70.0
16-Mar	EW3031698	390	<20	<20	<20	<20	2,270	38.4
17-Mar	EW3031798	1,900	<100	<100	<100	<100	5,740	82.0
18-Mar	EW3031898	1,600	<100	<100	<100	<100	3,100	29.9
23-Mar	EW2032398	1,700	<100	<100	<100	<100	2,350	42.5
7-Apr	EW2040798	1,500	<100	<100	<100	<100	NA	NA
8-Apr	EW2040898	1,600	<100	<100	<100	<100	NA	NA
14-Apr	EW2041498	1,500	<100	<100	<100	<100	NA	NA
15-Apr	EW2041598	1,500	<100	<100	<100	<100	NA	NA
22-Jun	EW2062298	760	<100	<100	<100	<100	NA	NA
29-Jun	EW3062998	750	<100	<100	<100	<100	3,490	88.2
8-Oct	EW3100898	400	<100	<100	<100	<100	<60	40.2
TAMS Consultants, Inc.								
14-Dec	EW3121498	380	6.4	2.6	<0.5	<0.5	NA	NA

**ARMONK PRIVATE WELLS SITE
COMBINED INFLUENT
ANALYTICAL DATA
Concentration (ug/L)**

Date Sampled	SampleID	Tetrachloroethylene	Trichloroethylene	1,2-cis-Dichloroethylene	1,2-trans-Dichloroethylene	Vinyl Chloride	Iron, total	Zinc, total
EnviroTrac								
7-Apr	CIN040798	-	-	-	-	-	537	107.0
8-Apr	CIN040798	-	-	-	-	-	88	20.0
14-Apr	CIN041498	-	-	-	-	-	1,320	83.0
15-Apr	CIN041598	-	-	-	-	-	912	41.3
20-Apr	CIN042098	3,500	<500	<500	<500	<500	600	32.1
27-Apr	CIN042798	3,200	<500	<500	<500	<500	1,870	108.0
4-May	CIN050498	2,600	<500	<500	<500	<500	735	37.5
11-May	CIN051198	2,100	<500	<500	<500	<500	313	62.0
18-May	CIN051898	2,500	<500	<500	<500	<500	626	74.3
4-Jun	CIN060498	2,000	<500	<500	<500	<500	287	65.2
8-Jun	CIN060898	2,400	<500	<500	<500	<500	1,030	77.8
15-Jun	CIN061598	1,700	<500	<500	<500	<500	842	67.2
22-Jun	CIN062298	-	-	-	-	-	340	15.5
29-Jun	CIN062998	1,800	<200	<200	<200	<200	225	36.8
6-Jul	CIN070698	1,100	<200	<200	<200	<200	544	81.4
13-Jul	CIN071398	1,100	<200	<200	<200	<200	249	20.4
20-Jul	CIN072098	630	<200	<200	<200	<200	2,100	15.9
27-Jul	CIN072798	1,100	<200	<200	<200	<200	258	30.7
3-Aug	CIN080398	980	<200	<200	<200	<200	315	29.3
9-Aug	CIN080998	620	<20	<20	<20	<20	180	26.6
17-Aug	CIN081798	2,500	<100	<100	<100	<100	105	19.4
24-Aug	CIN082498	660	<100	<100	<100	<100	313	28.8
31-Aug	CIN083198	1,100	<100	<100	<100	<100	333	32.1
9-Sep	CIN090998	950	<100	<100	<100	<100	516	14.7
14-Sep	CIN091498	1,200	<100	<100	<100	<100	1,280	41.5
21-Sep	CIN092198	1,200	<200	<200	<200	<200	<60	13.0
28-Sep	CIN092898	1,100	<200	<200	<200	<200	<60	43.9
8-Oct	CIN100898	470	<20	<20	<20	<20	<60	73.0
TAMS Consultants, Inc.								
14-Dec	CIN121498	750	9.4	1.9	<0.5	<0.5	<75	10

ARMONK PRIVATE WELLS SITE
AFTER BAG FILTER
ANALYTICAL DATA
Concentration (ug/L)

Date Sampled	SampleID	Tetrachloroethylene	Trichloroethylene	1,2-cis-Dichloroethylene	1,2-trans-Dichloroethylene	Vinyl Chloride	Iron, total	Zinc, total
EnviroTrac								
20-Apr	ABF042098						76	17
27-Apr	ABF042798						1,170	1,080
4-May	ABF050498						2,240	703
11-May	ABF051198						391	861
18-May	ABF051898						227	238
4-Jun	ABF060498						381	2210
8-Jun	ABF060898						365	1410
15-Jun	ABF061598						1,030	708
29-Jun	ABF062998	1300	<500	<500	<500	<500	328	413
6-Jul	ABF070698						791	852
13-Jul	ABF071398						364	421
20-Jul	ABF072098						271	305
20-Jul	AB2072098	870	<100	<100	<100	<100	220	17
27-Jul	ABF072798						444	510
3-Aug	ABF080398						553	432
9-Aug	ABF080998						175	258
17-Aug	ABF081798						<60	15.2
24-Aug	ABF082498						202	490
31-Aug	ABF083198						226	302
9-Sep	ABF090998						305	691
14-Sep	ABF091498						594	1150
21-Sep	ABF092198						988	318
28-Sep	ABF092898						179	241
8-Oct	ABF100898						<60	26.8
TAMS Consultants, Inc.								
14-Dec	ABF121498						<75	124

**ARMONK PRIVATE WELLS SITE
IN CARBON BED (GAC1INBED1)
ANALYTICAL DATA**

Concentration (ug/L)

Date Sampled	SampleID	Tetrachloroethylene	Trichloroethylene	1,2-cis-Dichloroethylene	1,2-trans-Dichloroethylene	Vinyl Chloride	Iron, total	Zinc, total
EnviroTrac								
29-Jun	GAC1IB1062998	< 0.5	< 1	< 1	< 1	< 1	120	18.6
8-Oct	GAC1IB1100898	< 0.5	< 1	< 1	< 1	< 1	NA	NA
TAMS Consultants, Inc.								
14-Dec	GAC1IB1121498	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NA	NA

**ARMONK PRIVATE WELLS SITE
IN CARBON BED (GAC1INBED2)
ANALYTICAL DATA**

Concentration (ug/L)

Date Sampled	SampleID	Tetrachloroethylene	Trichloroethylene	1,2-cis-Dichloroethylene	1,2-trans-Dichloroethylene	Vinyl Chloride	Iron, total	Zinc, total
EnviroTrac								
29-Jun	GAC1IB2062998	< 0.5	< 1	< 1	< 1	< 1	81.5	13.4
8-Oct	GAC1IB2100898	< 0.5	< 1	< 1	< 1	< 1	NA	NA
TAMS Consultants, Inc.								
14-Dec	GAC1IB1121498	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NA	NA

**ARMONK PRIVATE WELLS SITE
BETWEEN GAC 1 AND 2
ANALYTICAL DATA**

Concentration (ug/L)

Date Sampled	SampleID	Tetrachloroethylene	Trichloroethylene	1,2-cis-Dichloroethylene	1,2-trans-Dichloroethylene	Vinyl Chloride	Iron, total	Zinc, total
EnviroTrac								
20-Apr	AG1042098	<0.5	< 1	< 1	< 1	< 1	NA	NA
27-Apr	AG1042798	<0.5	< 1	< 1	< 1	< 1	NA	NA
4-May	AG1050498	<0.5	< 1	< 1	< 1	< 1	NA	NA
11-May	AG1051198	<0.5	< 1	< 1	< 1	< 1	NA	NA
18-May	AG1051898	<0.5	< 1	< 1	< 1	< 1	NA	NA
4-Jun	AG1060498	0.9	< 1	< 1	< 1	< 1	NA	NA
8-Jun	AG1060898	<0.5	< 1	< 1	< 1	< 1	NA	NA
15-Jun	AG1061598	0.6	< 1	< 1	< 1	< 1	NA	NA
22-Jun	AG1062298	<0.5	< 1	< 1	< 1	< 1	NA	NA
29-Jun	AG1062998	0.8	< 1	< 1	< 1	< 1	226	619
6-Jul	AG1070698	<0.5	< 1	< 1	< 1	< 1	NA	NA
13-Jul	AG1071398	<0.5	< 1	< 1	< 1	< 1	NA	NA
20-Jul	AG1072098	<0.5	< 1	< 1	< 1	< 1	NA	NA
27-Jul	AG1072798	<0.5	< 1	< 1	< 1	< 1	NA	NA
3-Aug	AG1080398	<0.5	< 1	< 1	< 1	< 1	NA	NA
9-Aug	AG1080998	<0.5	< 1	< 1	< 1	< 1	NA	NA
17-Aug	AG1081798	<0.5	< 1	< 1	< 1	< 1	NA	NA
24-Aug	AG1082498	<0.5	< 1	< 1	< 1	< 1	NA	NA
31-Aug	AG1083198	<0.5	< 1	< 1	< 1	< 1	NA	NA
9-Sep	AG1090998	<0.5	< 1	< 1	< 1	< 1	NA	NA
14-Sep	AG1091498	<0.5	< 1	< 1	< 1	< 1	NA	NA
21-Sep	AG1092198	<0.5	< 1	< 1	< 1	< 1	NA	NA
28-Sep	AG1092898	<0.5	< 1	< 1	< 1	< 1	NA	NA
8-Oct	AG1100898	<0.5	< 1	< 1	< 1	< 1	NA	NA

TAMS Consultants, Inc.

ARMONK PRIVATE WELLS SITE
IN CARBON BED (GAC2INBED1)
ANALYTICAL DATA
Concentration (ug/L)

Date Sampled	SampleID	Tetrachloroethylene	Trichloroethylene	1,2-cis-Dichloroethylene	1,2-trans-Dichloroethylene	Vinyl Chloride	Iron, total	Zinc, total
TAMS Consultants, Inc. 14-Dec	GAC2IB1121498	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NA	NA

ARMONK PRIVATE WELLS SITE
IN CARBON BED (GAC2INBED2)
ANALYTICAL DATA
Concentration (ug/L)

Date Sampled	SampleID	Tetrachloroethylene	Trichloroethylene	1,2-cis-Dichloroethylene	1,2-trans-Dichloroethylene	Vinyl Chloride	Iron, total	Zinc, total
TAMS Consultants, Inc.								
14-Dec	GAC2IB2121498	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NA	NA

**ARMONK PRIVATE WELLS SITE
EFFLUENT
ANALYTICAL DATA**

Date Sampled	Discharge Limits- SampledID	Concentration (ug/L)						750	250
		2.5 Tetrachloroethylene	10.0 Trichloroethylene	10.0 1,2-cis-Dichloroethylene	10.0 1,2-trans-Dichloroethylene	10.0 Vinyl Chloride	Iron, total		
EnviroTrac									
10-Mar	EFF031098	< 0.5	< 1	< 1	< 1	< 1	100	10.0	
16-Mar	EFF031698	< 0.5	< 1	< 1	< 1	< 1	71	14.7	
16-Mar	EFF031698	< 0.5*	< 1*	< 1*	< 1*	< 1*	NA	NA	
17-Mar	EFF031798	1.0	< 1	< 1	< 1	< 1	233	42.9	
17-Mar	EFF031798	< 0.5*	< 1*	< 1*	< 1*	< 1*	NA	NA	
18-Mar	EFF031898	1.0	< 1	< 1	< 1	< 1	<60	21.0	
18-Mar	EFF031898	< 0.5*	< 1*	< 1*	< 1*	< 1*	NA	NA	
23-Mar	EFF032398	< 0.5	< 1	< 1	< 1	< 1	<60	44.9	
23-Mar	EFF032398	< 0.5	< 1	< 1	< 1	< 1	NA	NA	
30-Mar	EFF033098	< 0.5	< 1	< 1	< 1	< 1	130	37.0	
7-Apr	EFF040798	< 0.5	< 1	< 1	< 1	< 1	97	<10	
8-Apr	EFF040798	< 0.5	< 1	< 1	< 1	< 1	73	<10	
14-Apr	EFF041498	< 0.5	< 1	< 1	< 1	< 1	<60	25.1	
15-Apr	EFF041598	< 0.5	< 1	< 1	< 1	< 1	<60	<10	
20-Apr	EFF042098	< 0.5	< 1	< 1	< 1	< 1	<60	67.5	
27-Apr	EFF042798	< 0.5	< 1	< 1	< 1	< 1	<60	<10	
4-May	EFF050498	< 0.5	< 1	< 1	< 1	< 1	<60	18.5	
11-May	EFF051198	< 0.5	< 1	< 1	< 1	< 1	<60	<10	
18-May	EFF051898	< 0.5	< 1	< 1	< 1	< 1	<60	17.6	
4-Jun	EFF060498	< 0.5	< 1	< 1	< 1	< 1	<60	11.1	
8-Jun	EFF060898	< 0.5	< 1	< 1	< 1	< 1	<60	14.0	
15-Jun	EFF061598	< 0.5	< 1	< 1	< 1	< 1	<60	17.8	
22-Jun	EFF062298	< 0.5	< 1	< 1	< 1	< 1	<60	99.7	
29-Jun	EFF062998	< 0.5	< 1	< 1	< 1	< 1	75.3	14.1	
6-Jul	EFF070698	< 0.5	< 1	< 1	< 1	< 1	<60	18.6	
13-Jul	EFF071398	< 0.5	< 1	< 1	< 1	< 1	<60	11.1	
20-Jul	EFF072098	< 0.5	< 1	< 1	< 1	< 1	143	20.6	
27-Jul	EFF072798	< 0.5	< 1	< 1	< 1	< 1	245	<10	
3-Aug	EFF080398	< 0.5	< 1	< 1	< 1	< 1	<60	20.2	
9-Aug	EFF080998	< 0.5	< 1	< 1	< 1	< 1	<60	22.3	
17-Aug	EFF081798	< 0.5	< 1	< 1	< 1	< 1	115	<10	
24-Aug	EFF082498	< 0.5	< 1	< 1	< 1	< 1	92.2	<10	
31-Aug	EFF083198	< 0.5	< 1	< 1	< 1	< 1	263	<10	
9-Sep	EFF090998	< 0.5	< 1	< 1	< 1	< 1	706	<10	
14-Sep	EFF091498	< 0.5	< 1	< 1	< 1	< 1	100	<10	
21-Sep	EFF092198	< 0.5	< 1	< 1	< 1	< 1	<60	<10	
28-Sep	EFF092898	< 0.5	< 1	< 1	< 1	< 1	<60	<10	
8-Oct	EFF100898	< 0.5	< 1	< 1	< 1	< 1	61.3	11.0	
TAMS Consultants, Inc.									
21-Nov	EFF112198	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	24.5	7.9	
14-Dec	EFF121498	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	75.0	10.0	

Upstate Laboratories inc.

RECEIVED
APR 02 1998

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March 30, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #07098027 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on March 11, 1998.

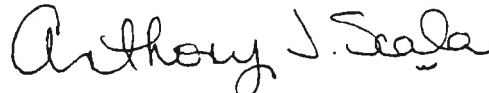
We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 3/12 and 3/19/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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New Jersey (201) 703-1324

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, New York 11729

March 27, 1998

RE: Armonk Private Wells Site, Samples Collected March 10, 1998
Case Narrative for ULI Laboratory Report No. 07098027

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3461 VOC401	Criteria were satisfied. Criteria were satisfied.

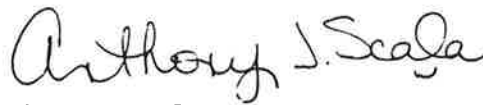
Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	MA9610 MA9626	Criteria were satisfied. Criteria were satisfied.
Zn	MA9610 MA9626	Criteria were satisfied. Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

Table 1 Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
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5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
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8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
9 QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
10 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
11 ADL(AVERAGE DETECTION LIMITS)
12 PQL(PRACTICAL QUANTITATION LIMITS)
13 SAMPLE ANALYZED OVER HOLDING TIME
14 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
15 THE FILTERING PROCEDURE
16 SAMPLED BY ULI
17 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
18 WITHIN EXPERIMENTAL ERROR
19 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
20 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
21 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
22 INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
23 CALCULATION BASED ON DRY WEIGHT
24 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
25 LIMITS
26 UG/KG AS REC.D / UG/KG DRY WT
27 MG/KG AS REC.D / MG/KG DRY WT
28 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
29 SAMPLE DILUTED/BLANK CORRECTED
30 ND(NON-DETECTED)
31 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
32 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
35 ANALYZED BY METHOD OF STANDARD ADDITIONS
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
37 FIELD MEASURED PARAMETER TAKEN BY CLIENT
38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
39 NON-POTABLE WATER SOURCE
40 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
41 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
42 LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
43 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
44 PETROLEUM DISTILLATES
45 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
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51 PER DAY LAS
52 RESULTS ARE REPORTED ON AN AS REC.D BASIS
53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
55 CREATING A THEORETICAL TCLP VALUE
56 METAL BY CONCENTRATION PROCEDURE
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

DATE: 03/30/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 07098027
Client I.D.: ENVIROTRAC

APPROVAL: ajs
QC: FE - Lab I.D.: 10170
Sampled by: Client

ID:07098027 Mat:Water ARMONK PRIVATE WELLS SITE WELL 1 1331H 03/10/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	3.2mg/l		MA9626
Total Zinc	0.06mg/l		MA9626
EPA Method 8010			
Vinyl Chloride	<500ug/l	05	VA3461
cis-1,2-Dichloroethene	<500ug/l	05	VA3461
trans-1,2-Dichloroethene	<500ug/l	05	VA3461
Trichloroethene	<500ug/l	05	VA3461
Tetrachloroethene	6600ug/l		VA3461

ID:07098028 Mat:Water ARMONK PRIVATE WELLS SITE WELL 2 1325H 03/10/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	13mg/l		MA9626
Total Zinc	0.06mg/l		MA9626
EPA Method 8010			
Vinyl Chloride	<500ug/l	05	VA3461
cis-1,2-Dichloroethene	<500ug/l	05	VA3461
trans-1,2-Dichloroethene	<500ug/l	05	VA3461
Trichloroethene	<500ug/l	05	VA3461
Tetrachloroethene	7000ug/l		VA3461

ID:07098029 Mat:Water ARMONK PRIVATE WELLS SITE WELL 3 03/10/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	14mg/l		MA9626
Total Zinc	0.07mg/l		MA9626
EPA Method 8010			
Vinyl Chloride	<10ug/l	05	VA3461
cis-1,2-Dichloroethene	<10ug/l	05	VA3461
trans-1,2-Dichloroethene	<10ug/l	05	VA3461
Trichloroethene	<10ug/l	05	VA3461
Tetrachloroethene	320ug/l		VA3461

DATE: 03/30/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 07098027
Client I.D.: ENVIROTRAC

APPROVAL: CSS
QC: PF -- Lab I.D.: 10170
Sampled by: Client

ID:07098030 Mat:Water ARMONK PRIVATE WELLS SITE EFF 1340H 03/10/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	0.10mg/l		MA9610
Total Zinc	0.01mg/l		MA9610
EPA Method 8010			
Vinyl Chloride	<1ug/l		VOC901
cis-1,2-Dichloroethene	<1ug/l		VOC901
trans-1,2-Dichloroethene	<1ug/l		VOC901
Trichloroethene	<1ug/l		VOC901
Tetrachloroethene	<0.5ug/l		VOC901

ID:07098031 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 03/10/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<1ug/l		VOC901
cis-1,2-Dichloroethene	<1ug/l		VOC901
trans-1,2-Dichloroethene	<1ug/l		VOC901
Trichloroethene	<1ug/l		VOC901
Tetrachloroethene	<0.5ug/l		VOC901

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., New York

Site No. 3-60-005
Contract No. D003635

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovato (201) 703-1324

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
27	3/10/98	1:31	T.B.	G.W.	2	HCL	WELL # 1	VOC (8010)	2 weeks.
		1:31			1	HNO ₃	WELL # 1	Zn, Fe (6010)	
28		1:25			2	HCL	WELL # 2	VOC (8010)	
		1:25			1	HNO ₃	WELL # 2	Zn, Fe (6010)	
29					2	HCL	WELL # 3	VOC (8010)	
						1	HNO ₃	WELL # 3	
30		1:40			1	HCL	Effluent	VOC (8010)	24hrs
		1:40			1	HNO ₃	Effluent	Zn, Fe (6010)	
31		1:40			1	HCL	(ui) Trip Blank	VOC (8010)	2 weeks.
Relinquished by: <i>T.M.</i> Time/Date: 2:40 3/10/98			Received By: <i>Serp/Carlen</i> Time/Date: 3/11/98 0824			Comments: G.W. = ground water.			
Relinquished by: <i>T.M.</i> Time/Date: 3/10/98			Received By: <i>C. Kenney</i> Time/Date: 3/11/98 0824			VOC - Tetrachloro ethane, Trichloro ethane, PCE, DCE, DVC, VC, Chloroform			

3/25 HDD

3/14 HDD

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April 10, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

RECEIVED
APR 13 1998

Re: Analysis Report #07798079 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on March 18 and 19, 1998.

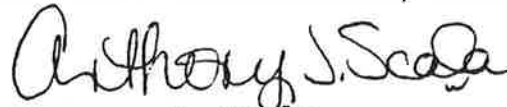
We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

AJS/jd

Enclosures: report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 3/18, 3/19 and 3/30/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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New Jersey (201) 703-1324

April 9, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, New York 11729

RE: Armonk Private Wells Site, Samples Collected March 16, 17 and 18, 1998
Case Narrative for ULI Laboratory Report No. 07798079

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3480	Criteria were satisfied.

Mr. Ted Masters
April 9, 1998
Page 2

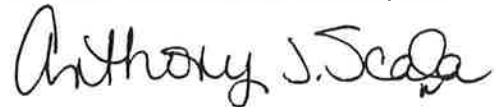
Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	MA1246	Criteria were satisfied.
	MA1250	Criteria were satisfied.
Zn	MA1246	Criteria were satisfied.
	MA1250	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

File: JHENV-01.doc

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8260	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

KEY PAGE

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16 SAMPLED BY ULI
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27 MG/KG AS REC.D / MG/KG DRY WT
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32 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
35 ANALYZED BY METHOD OF STANDARD ADDITIONS
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
37 FIELD MEASURED PARAMETER TAKEN BY CLIENT
38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
39 NON-POTABLE WATER SOURCE
40 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
41 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
42 LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
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46 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
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49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
51 PER DAY LAS
52 RESULTS ARE REPORTED ON AN AS REC.D BASIS
53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
55 CREATING A THEORETICAL TCLP VALUE
56 METAL BY CONCENTRATION PROCEDURE
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

DATE: 04/10/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 07798079
Client I.D.: ENVIROTRAC

APPROVAL: *AS*
QC: *PP* Lab I.D.: 10170
Sampled by: Client

ID:07798079 Mat:Water ARMONK PRIVATE WELLS SITE EW2031698 1550H 03/16/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	10,600ug/l		ME1246
Total Zinc	69.1ug/l		ME1246
EPA Method 8010			
Vinyl Chloride	<500ug/l	05	VA3480
cis-1,2-Dichloroethene	<500ug/l	05	VA3480
trans-1,2-Dichloroethene	<500ug/l	05	VA3480
Trichloroethene	<500ug/l	05	VA3480
Tetrachloroethene	7900ug/l		VA3480

ID:07798080 Mat:Water ARMONK PRIVATE WELLS SITE EW1031698 1559H 03/16/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	390ug/l		ME1246
Total Zinc	58.5ug/l		ME1246
EPA Method 8010			
Vinyl Chloride	<500ug/l	05	VA3480
cis-1,2-Dichloroethene	<500ug/l	05	VA3480
trans-1,2-Dichloroethene	<500ug/l	05	VA3480
Trichloroethene	<500ug/l	05	VA3480
Tetrachloroethene	9300ug/l		VA3480

ID:07798081 Mat:Water ARMONK PRIVATE WELLS SITE EW3031698 1630H 03/16/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	2270ug/l		ME1246
Total Zinc	38.4ug/l		ME1246
EPA Method 8010			
Vinyl Chloride	<20ug/l	05	VA3480
cis-1,2-Dichloroethene	<20ug/l	05	VA3480
trans-1,2-Dichloroethene	<20ug/l	05	VA3480
Trichloroethene	<20ug/l	05	VA3480
Tetrachloroethene	390ug/l		VA3480

ATE: 04/10/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 07798079
Client I.D.: ENVIROTRAC

APPROVAL: QJS
QC: PF Lab I.D.: 10170
Sampled by: Client

ID:07798082 Mat:Water ARMONK PRIVATE WELLS SITE EFF031698 1635H 03/16/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	71.3ug/l		ME1246
Total Zinc	14.7ug/l		ME1246
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3480
cis-1,2-Dichloroethene	<1ug/l		VA3480
trans-1,2-Dichloroethene	<1ug/l		VA3480
Trichloroethene	<1ug/l		VA3480
Tetrachloroethene	<0.5ug/l		VA3480

ID:07798083 Mat:Water ARMONK PRIVATE WELLS SITE ULL TRIP BLANK 03/16/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3480
cis-1,2-Dichloroethene	<1ug/l		VA3480
trans-1,2-Dichloroethene	<1ug/l		VA3480
Trichloroethene	<1ug/l		VA3480
Tetrachloroethene	<0.5ug/l		VA3480

ID:07798084 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 0945H 03/18/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3480
cis-1,2-Dichloroethene	<1ug/l		VA3480
trans-1,2-Dichloroethene	<1ug/l		VA3480
Trichloroethene	<1ug/l		VA3480
Tetrachloroethene	<0.5ug/l		VA3480

DATE: 04/10/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 07798079
Client I.D.: ENVIROTRAC

APPROVAL: *AJS*
QC: *PF* Lab I.D.: 10170
Sampled by: Client

ID:07898019 Mat:Water ARMONK PRIVATE WELLS SITE EW1031798 1600H 03/17/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	257ug/l		ME1250
Total Zinc	28.1ug/l		ME1250
EPA Method 8010			
Vinyl Chloride	<500ug/l	05	VA3480
cis-1,2-Dichloroethene	<500ug/l	05	VA3480
trans-1,2-Dichloroethene	<500ug/l	05	VA3480
Trichloroethene	<500ug/l	05	VA3480
Tetrachloroethene	8200ug/l		VA3480

ID:07898020 Mat:Water ARMONK PRIVATE WELLS SITE EW2031798 1610H 03/17/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	5210ug/l		ME1250
Total Zinc	202ug/l		ME1250
EPA Method 8010			
Vinyl Chloride	<500ug/l	05	VA3480
cis-1,2-Dichloroethene	<500ug/l	05	VA3480
trans-1,2-Dichloroethene	<500ug/l	05	VA3480
Trichloroethene	<500ug/l	05	VA3480
Tetrachloroethene	7300ug/l		VA3480

ID:07898021 Mat:Water ARMONK PRIVATE WELLS SITE EW3031798 1635H 03/17/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	5740ug/l		ME1250
Total Zinc	82.0ug/l		ME1250
EPA Method 8010			
Vinyl Chloride	<100ug/l	05	VA3483
cis-1,2-Dichloroethene	<100ug/l	05	VA3483
trans-1,2-Dichloroethene	<100ug/l	05	VA3483
Trichloroethene	<100ug/l	05	VA3483
Tetrachloroethene	1900ug/l		VA3483

DATE: 04/10/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 07798079
Client I.D.: ENVIROTRAC

APPROVAL: *AS*
QC: *PF* Lab I.D.: 10170
Sampled by: Client

ID:07898022 Mat:Water ARMONK PRIVATE WELLS SITE EFF031798 1612H 03/17/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	233ug/l		ME1250
Total Zinc	42.9ug/l		ME1250
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3480
cis-1,2-Dichloroethene	<1ug/l		VA3480
trans-1,2-Dichloroethene	<1ug/l		VA3480
Trichloroethene	<1ug/l		VA3480
Tetrachloroethene	<0.5ug/l		VA3480

ID:07898023 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 03/17/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3480
cis-1,2-Dichloroethene	<1ug/l		VA3480
trans-1,2-Dichloroethene	<1ug/l		VA3480
Trichloroethene	<1ug/l		VA3480
Tetrachloroethene	<0.5ug/l		VA3480

ID:07898024 Mat:Water ARMONK PRIVATE WELLS SITE EW3031898 1215H 03/18/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	3100ug/l		ME1250
Total Zinc	29.9ug/l		ME1250
EPA Method 8010			
Vinyl Chloride	<100ug/l	05	VA3483
cis-1,2-Dichloroethene	<100ug/l	05	VA3483
trans-1,2-Dichloroethene	<100ug/l	05	VA3483
Trichloroethene	<100ug/l	05	VA3483
Tetrachloroethene	1600ug/l		VA3483

DATE: 04/10/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 07798079
Client I.D.: ENVIROTRAC

APPROVAL: AS
QC: PE - Lab I.D.: 10170
Sampled by: Client

ID:07898025 Mat:Water ARMONK PRIVATE WELLS SITE EFF031898 1205H 03/18/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	<60ug/l		ME1250
Total Zinc	21.0ug/l		ME1250
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3480
cis-1,2-Dichloroethene	<1ug/l		VA3480
trans-1,2-Dichloroethene	<1ug/l		VA3480
Trichloroethene	<1ug/l		VA3480
Tetrachloroethene	<0.5ug/l		VA3480

07, 10, 07, 34

3/18

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., New York

Site No. 3-60-005
Contract No. D003635

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovato (201) 703-1324

ASP!

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround	
79	3/16/98	1550	TM	GW	2	HCl	EW2031698	VOCs 8010	14 DAY	
80		1659 TM	↓	↓	2	↓	EW1031698	↓	↓	
81		1630	↓	↓	2	↓	FW3031698	↓	↓	
82		1635	↓	↓	2	↓	EFF 031698	↓	24 hrs	
		1640 ^{MS/MSD}	↓	↓	2	↓	MS/MSD	↓	14 DAY	
		1550	TM	↓	1	HNO ₃	FW2031698	Zn, Fe 6000	14 DAY	
		1554	↓	↓	1	↓	FW1031698	↓	↓	
		1630	↓	↓	2	↓	FW3031698	↓	↓	
		1635	↓	↓	2	↓	EFF 031698	↓	24 hrs	
83	(3/16/98) ^{MS/MSD}				1	(HCl)	TRIP BLANK	VOCs 8010	14 DAY	
84	(3/17/98)	(0945)		(H ₂ O)	1		(HOLDING BLANK)	(VOCs 8010)	(14 Day)	
Relinquished by: <i>[Signature]</i> Time/Date: 1500/3/17/98			Received By: <i>[Signature]</i> Time/Date: 3/17/98			Comments: VOCs = TCE, PCB, Cis & Trans 1,2 DCE, VINYL CHLORIDE				
Relinquished by: H. Doran Time/Date:			Received By: H. Doran Time/Date: 3/18/98 0835							

} 3/11 Hood!
3/18 Hood!
MS/MSD!
} 4/11 Hood
2/12 Hood
MS/MSD!

07898019-23

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

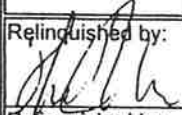
Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., New York

Site No. 3-60-005
Contract No. D003635

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057

Contact: Russ Trovato (201) 703-1324

381 2663

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
19	3/17/98	1600	TM	GW	(2)	HCl	EW1031798	VOCs 8010	2 weeks
		↓			(1)	HNO ₃	↓	Zn, Fe 6010	
20		1610			(2)	HCl	EW2031798	VOCs 8010	
		↓			(1)	HNO ₃	↓	Zn, Fe 6010	
21		1635 Hot Zm			(2)	HCl	EW3031798	VOCs 8010	
		↓			(1)	HNO ₃	↓	Zn, Fe 6010	↓
22		1612			(2)	HCl	EFF031798	VOCs 8010	24 hrs
		↓			(1)	HNO ₃	↓	Zn, Fe 6010	↓
		↓			(2)	HCl	MS/MSD	VOCs 8010	2 weeks
23	(3/17/98) ^{HO}			(w) ^{HO}	(1)		(w) TRIP BLANK	VOCs 8010	↓
Relinquished by:  Time/Date: 1300/3/18/98			Received By: Time/Date			Comments:			
Relinquished by: Time/Date:			Received By: Neil Tk6 3/18/98						

4/2 HO!

MS/MSD
3/20 HO!

Rec'd at Lab by: H. Dora 3/18/98 0950

07898024-25

EnviroTrac

581 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., New York

Site No. 3-60-005
Contract No. D003635

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovalo (201) 703-1324

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
24	3/18/98	1215	MS	GW	2	HCl	EW3031898	VOCs 8010	14 day
25	↓	1205	↓	↓	2	↓	EFF031898	↓	24 hrs
	↓	1215	↓	↓	1	HNO ₃	EW3031898	Zn, Fe 6010	14 day
	↓	1205	↓	↓	1	↓	EFF031898	↓	24 hrs
	↓	1250	↓	↓	2	HCl	MS/MSD	VOCs 8010	14 day
							Trip Blank	↓	↓

2/2 WOI
3/20 WOI

Relinquished by: *Matt Schneck*
Time/Date: *1600 3/18/98*

Received By: *Neil*
Time/Date: *3/18/98*

Comments: *GW = Ground water
VOCs = TCE, PCE, Cis + Trans-1,2 DCE,
Vinyl chloride.*

Rec'd at Lab by: *H. Dora* 3/19/98 0950

Upstate Laboratories inc.

Shipping: 6034 Corporate Dr. • E. Syracuse, NY 13057-1017 • (315) 437-0255 • Fax (315) 437-1209
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April 10, 1998

RECEIVED
APR 13 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #08498067 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on March 25, 1998.

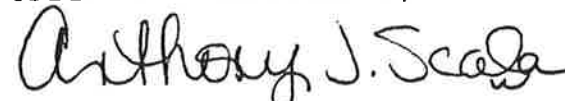
We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

AJS/jk

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 3/26 and 3/31 and 4/9/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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New Jersey (201) 703-1324

April 9, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, New York 11729

RE: Armonk Private Wells Site, Samples Collected March 23, 1998
Case Narrative for ULI Laboratory Report No. 08498067

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3504	Criteria were satisfied.

Upstate Laboratories inc.

RECEIVED
APR 06 1998

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Rochester (716) 436-9070

New Jersey (201) 703-1324

April 2, 1998

Mr. Ted Masters
Project Manager
EnviroTrac
561 P Acorn Street
Deer Park, New York 11729

Re: Armonk Private Wells Site
Discussion Regarding Tetrachloroethene Contamination

Dear Mr. Masters:

In reference to our previous discussion regarding the above, this letter is written as an explanation of the positive Tetrachloroethene value ($3\mu\text{g}/\text{l}$) which was originally reported on March 26th for the Effluent sample (collected on March 23, 1998).

Our quality control department has ascertained that this positive value was the result of contamination which occurred during storage at the lab. This conclusion is based upon test data collected from the Method Blank sample ($\text{PERC} < 0.5\mu\text{g}/\text{l}$), which was analyzed on a March 25th run and the Holding Blank sample ($\text{PERC} = 1.3\mu\text{g}/\text{l}$), which was analyzed on March 27th.

Also, re-analysis was conducted on the sample on March 30, 1998, which yielded a Tetrachloroethene result of $< 0.5\mu\text{g}/\text{l}$. This re-analysis was performed on one of the duplicate vials which was stored in a separate refrigerator (ASP storage).

Should you have any questions regarding this matter, or if I can be of any further service to you, please do not hesitate to give me a call.

Sincerely,

UPSTATE LABORATORIES, INC.

Peter F. Fricano

Peter F. Fricano
Manager, EPC Division

cc: Allen Burton, TAMS Consultants
Joseph Houser, ULI
File

Mr. Ted Masters
April 9, 1998
Page 2

Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	MA1266	Criteria were satisfied.
Zn	MA1266	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

File: JHENV-02.doc

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8260	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 04/10/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 08498067
Client I.D.: ENVIROTRAC

APPROVAL: *AS*
QC: *PF* - Lab I.D.: 10170
Sampled by: Client

ID:08498067 Mat:Water ARMONK PRIVATE WELLS SITE EW1032398 1415H 03/23/98 G

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	488ug/l		ME1266
Total Zinc	109ug/l		ME1266
EPA Method 8010			
Vinyl Chloride	<500ug/l	05	VA3504
cis-1,2-Dichloroethene	<500ug/l	05	VA3504
trans-1,2-Dichloroethene	<500ug/l	05	VA3504
Trichloroethene	<500ug/l	05	VA3504
Tetrachloroethene	9400ug/l		VA3504

ID:08498068 Mat:Water ARMONK PRIVATE WELLS SITE EW2032398 1420H 03/23/98 G

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	2300ug/l		ME1266
Total Zinc	30.9ug/l		ME1266
EPA Method 8010			
Vinyl Chloride	<500ug/l	05	Va3504
cis-1,2-Dichloroethene	<500ug/l	05	VA3504
trans-1,2-Dichloroethene	<500ug/l	05	VA3504
Trichloroethene	<500ug/l	05	VA3504
Tetrachloroethene	9100ug/l		VA3504

ID:08498069 Mat:Water ARMONK PRIVATE WELLS SITE EW3032398 1425H 03/23/98 G

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	2350ug/l		ME1266
Total Zinc	42.5ug/l		ME1266
EPA Method 8010			
Vinyl Chloride	<100ug/l	05	VA3504
cis-1,2-Dichloroethene	<100ug/l	05	VA3504
trans-1,2-Dichloroethene	<100ug/l	05	VA3504
Trichloroethene	<100ug/l	05	VA3504
Tetrachloroethene	1700ug/l		VA3504

DATE: 04/10/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 08498067
Client I.D.: ENVIROTRAC

APPROVAL: *AS*
QC: *PE* - Lab I.D.: 10170
Sampled by: Client

ID:08498070 Mat:Water ARMONK PRIVATE WELLS SITE EFF032398 1410H 03/23/98 G

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	<60ug/l		ME1266
Total Zinc	44.9ug/l		ME1266
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3504
cis-1,2-Dichloroethene	<1ug/l		VA3504
trans-1,2-Dichloroethene	<1ug/l		VA3504
Trichloroethene	<1ug/l		VA3504
Tetrachloroethene	<0.5ug/l		VA3504

ID:08498071 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 03/23/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3504
cis-1,2-Dichloroethene	<1ug/l		VA3504
trans-1,2-Dichloroethene	<1ug/l		VA3504
Trichloroethene	<1ug/l		VA3504
Tetrachloroethene	<0.5ug/l		VA3507

ID:08498072 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 1110H 03/25/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3504
cis-1,2-Dichloroethene	<1ug/l		VA3504
trans-1,2-Dichloroethene	<1ug/l		VA3504
Trichloroethene	<1ug/l		VA3504
Tetrachloroethene	<0.5ug/l		VA3504

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
9 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
10 ADL(AVERAGE DETECTION LIMITS)
11 PQL(PRACTICAL QUANTITATION LIMITS)
12 SAMPLE ANALYZED OVER HOLDING TIME
13 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
THE FILTERING PROCEDURE
14 SAMPLED BY ULI
15 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
WITHIN EXPERIMENTAL ERROR
16 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
17 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
18 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
19 CALCULATION BASED ON DRY WEIGHT
20 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
LIMITS
21 UG/KG AS REC.D / UG/KG DRY WT
22 MG/KG AS REC.D / MG/KG DRY WT
23 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
24 SAMPLE DILUTED/BLANK CORRECTED
25 ND(NON-DETECTED)
26 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
27 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
28 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
29 ANALYZED BY METHOD OF STANDARD ADDITIONS
30 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
31 FIELD MEASURED PARAMETER TAKEN BY CLIENT
32 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
33 NON-POTABLE WATER SOURCE
34 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
35 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
PETROLEUM DISTILLATES
36 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
37 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
38 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL₂) / POUNDS (LBS)
PER DAY OF CL₂
39 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
40 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
PER DAY LAS
41 RESULTS ARE REPORTED ON AN AS REC.D BASIS
42 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
CREATING A THEORETICAL TCLP VALUE
43 METAL BY CONCENTRATION PROCEDURE
44 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

ULI Computer Input Form

EnviroTrac

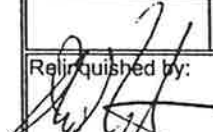
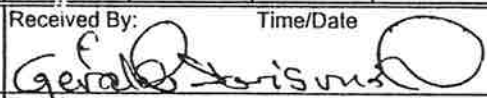
UPSTATE LABORATORIES CHAIN OF CUSTODY

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Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., New York

Site No. 3-60-005
Contract No. D003635
Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovato (201) 703-1324

4/8 HOD

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround		
67	3/23/98	1415	MS	GW	2	HCl	EW1032398	VOCS 8010*	14 days		
68		1420			2		EW2032398				
69		1425			2		EW3032398				
70		1410			2		EFF032398		2 days		
		1410			2		MS/MSD EFF		14 days		
		1415			1	HNO ₃	EW1032398	Zn, Fe 6010			
		1420			1		EW2032398				
		1425			1		EW3032398				
		1410			1		EFF032398		2 days		
71	(3/23/98) ^{HP}			(H ₂ O) ^{HP}	1		(MS) Trip Blank	VOCS 8010	14 days		
72	(3/25/98) ^{HP}	(1110) ^{HP}		(H ₂ O) ^{HP}	1		(HOLDING BLANK) ^{HP}	(VOCS 8010) ^{HP}			
Relinquished by: 			Time/Date: 2:30/3/24/98			Received By: 			Time/Date: 3/25/98 0856		
Relinquished by:			Time/Date:			Received By:			Time/Date:		
Comments: GW = Ground water.											
*(PERC, TCE, Cis + trans-1,2-DCE, Vinyl Chloride)** (by EPA 800)**											

ASP!
add = 3/24/98
not correct!

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New Jersey (201) 703-1324

April 10, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

RECEIVED
APR 13 1998

Re: Analysis Report #09098015 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on March 31, 1998.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala

Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 4/1 and 4/9/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

Upstate Laboratories inc.

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Rochester (716) 436-9070
New Jersey (201) 703-1324

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, New York 11729

April 9, 1998

RE: Armonk Private Wells Site, Samples Collected March 30, 1998
Case Narrative for ULI Laboratory Report No. 09098015

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3504	Criteria were satisfied.

Mr. Ted Masters
April 9, 1998
Page 2

Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	MA1285	Criteria were satisfied.
Zn	MA1286	The QC Data was referenced to MA1285.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

File: JHENV-03.doc

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8260	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 04/10/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 09098015
Client I.D.: ENVIROTRAC

APPROVAL: *AS*
QC: *FE* - - -
Lab I.D.: 10170
Sampled by: Client

ID:09098015 Mat:Water ARMONK PRIVATE WELLS SITE COMBINED INF 033098 1135H 03/30/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	168ug/l		ME1285
Total Zinc	26.0ug/l		ME1286
EPA Method 8010			
Vinyl Chloride	<500ug/l	05	VA3504
cis-1,2-Dichloroethene	<500ug/l	05	VA3504
trans-1,2-Dichloroethene	<500ug/l	05	VA3504
Trichloroethene	<500ug/l	05	VA3504
Tetrachloroethene	5700ug/l		VA3504

ID:09098016 Mat:Water ARMONK PRIVATE WELLS SITE MIDPOINT 033098 1140H 03/30/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	2280ug/l		ME1285
Total Zinc	42,000ug/l		ME1286
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3504
cis-1,2-Dichloroethene	<1ug/l		VA3504
trans-1,2-Dichloroethene	<1ug/l		VA3504
Trichloroethene	<1ug/l		VA3504
Tetrachloroethene	<0.5ug/l		VA3504

ID:09098017 Mat:Water ARMONK PRIVATE WELLS SITE EFF 033098 1150H 03/30/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	130ug/l		ME1285
Total Zinc	37.0ug/l		ME1286
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3504
cis-1,2-Dichloroethene	<1ug/l		VA3504
trans-1,2-Dichloroethene	<1ug/l		VA3504
Trichloroethene	<1ug/l		VA3504
Tetrachloroethene	<0.5ug/l		VA3504

DATE: 04/10/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 09098015
Client I.D.: ENVIROTRAC

APPROVAL: *AS*
QC: *PF* - Lab I.D.: 10170
Sampled by: Client

ID:09098018 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 03/30/98

PARAMETERS -----	RESULTS -----	KEY ---	FILE# -----
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3504
cis-1,2-Dichloroethene	<1ug/l		VA3504
trans-1,2-Dichloroethene	<1ug/l		VA3504
Trichloroethene	<1ug/l		VA3504
Tetrachloroethene	<0.5ug/l		VA3504

ID:09098019 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 0915H 03/31/98

PARAMETERS -----	RESULTS -----	KEY ---	FILE# -----
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3504
cis-1,2-Dichloroethene	<1ug/l		VA3504
trans-1,2-Dichloroethene	<1ug/l		VA3507
Trichloroethene	<1ug/l		VA3504
Tetrachloroethene	<0.5ug/l		VA3504

KEY PAGE

- 1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
- 2 MATRIX INTERFERENCE
- 3 PRESENT IN BLANK
- 4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
- 5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
- 6 BLANK CORRECTED
- 7 HEAD SPACE PRESENT IN SAMPLE
- 8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
- 9 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
- 10 ADL(AVERAGE DETECTION LIMITS)
- 11 PQL(PRACTICAL QUANTITATION LIMITS)
- 12 SAMPLE ANALYZED OVER HOLDING TIME
- 13 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
THE FILTERING PROCEDURE
- 14 SAMPLED BY ULI
- 15 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
WITHIN EXPERIMENTAL ERROR
- 16 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
- 17 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
- 18 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
- 19 CALCULATION BASED ON DRY WEIGHT
- 20 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
LIMITS
- 21 UG/KG AS REC.D / UG/KG DRY WT
- 22 MG/KG AS REC.D / MG/KG DRY WT
- 23 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
- 24 SAMPLE DILUTED/BLANK CORRECTED
- 25 ND(NON-DETECTED)
- 26 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
- 27 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
- 28 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
- 29 ANALYZED BY METHOD OF STANDARD ADDITIONS
- 30 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
- 31 FIELD MEASURED PARAMETER TAKEN BY CLIENT
- 32 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
- 33 NON-POTABLE WATER SOURCE
- 34 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
- 35 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
PETROLEUM DISTILLATES
- 36 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
- 37 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
- 38 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL₂) / POUNDS (LBS)
PER DAY OF CL₂
- 39 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
- 40 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
PER DAY LAS
- 41 RESULTS ARE REPORTED ON AN AS REC.D BASIS
- 42 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
CREATING A THEORETICAL TCLP VALUE
- 43 METAL BY CONCENTRATION PROCEDURE
- 44 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

ULI Computer Input Form

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., New York

Site No. 3-60-005
Contract No. D003635

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovato (201) 703-1324

4/1 HOD
475-0550

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
15	3/30/98	11:35	T.B.	GW.	2	HCL	COMBINED INFLUENT 033098	VOCs 8010	24 hours
16		11:40			2		MIDPOINT 033098		
17		11:50			2		EFFLUENT 033098		
		11:52			2		MS/MSD		
		11:37			1	HNO3	COMBINED INFLUENT 033098	Zn, Fe 60	
		11:42			1		MIDPOINT 033098		
		11:54			1		EFFLUENT 033098		
18	(3/30/98) ^{HO}			(W)	1	HCL	(W) Trip Blank	VOCs 8010	
19	(3/31/98) ^{HO}	(0915)		(W)	1		(HOLDING BLANK) ^{HO}	(VOCs 8010) ^{HO}	
Relinquished by: <u>T.P.</u> Time/Date: <u>1:45 3/31/98</u>			Received By: <u>C. Kinney</u> Time/Date: <u>3/31/98 0826</u>			Comments: (VOCs 8010 = PERC, TCE, cis + trans-1,2-DCE, Vinyl Chloride)			

MS/MSD-DU

✓

cc/ Eastern

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New Jersey (201) 703-1324

April 21, 1998

RECEIVED
APR 24 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #09998042 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on April 9, 1998.

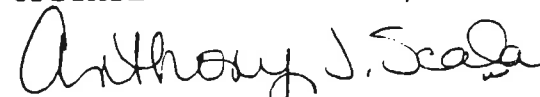
We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 4/10 and 4/17/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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New Jersey (201) 703-1324

April 21, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, New York 11729

RE: Armonk Private Wells Site, Samples Collected April 7 & 8, 1998
Case Narrative for ULI Laboratory Report No. 09998042

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3521	Criteria were satisfied.

Mr. Ted Masters
April 21, 1998
Page 2

Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1305	Criteria were satisfied.
Zn	ME1305	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

File: JHENV-04.doc

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 04/21/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 09998042
Client I.D.: ENVIROTRAC

APPROVAL: QJS
QC: PF Lab I.D.: 10170
Sampled by: Client

09998042 Mat:Water ARMONK PRIVATE WELLS SITE EW-1 040798 0745H 04/07/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<500ug/l	05	VA3521
cis-1,2-Dichloroethene	<500ug/l	05	VA3521
trans-1,2-Dichloroethene	1000ug/l		VA3521
Trichloroethene	<500ug/l	05	VA3521
Tetrachloroethene	6900ug/l		VA3521

09998043 Mat:Water ARMONK PRIVATE WELLS SITE EW-2 040798 0750H 04/07/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<500ug/l	05	VA3521
cis-1,2-Dichloroethene	<500ug/l	05	VA3521
trans-1,2-Dichloroethene	<500ug/l	05	VA3521
Trichloroethene	<500ug/l	05	VA3521
Tetrachloroethene	2700ug/l		VA3521

09998044 Mat:Water ARMONK PRIVATE WELLS SITE EW-3 040798 0755H 04/07/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<100ug/l	05	VA3521
cis-1,2-Dichloroethene	<100ug/l	05	VA3521
trans-1,2-Dichloroethene	<100ug/l	05	VA3521
Trichloroethene	<100ug/l	05	VA3521
Tetrachloroethene	1500ug/l		VA3521

DATE: 04/21/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 09998042
Client I.D.: ENVIROTRAC

APPROVAL: QJS
QC: PF Lab I.D.: 10170
Sampled by: Client

ID:09998045 Mat:Water ARMONK PRIVATE WELLS SITE EFF 040798 0740H 04/07/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	97.1ug/l		MR1305
Total Zinc	<10.0ug/l		MR1305
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3521
cis-1,2-Dichloroethene	<1ug/l		VA3521
trans-1,2-Dichloroethene	<1ug/l		VA3521
Trichloroethene	<1ug/l		VA3521
Tetrachloroethene	<0.5ug/l		VA3521

ID:09998046 Mat:Water ARMONK PRIVATE WELLS SITE COMBINED INF 040798 0720H 04/07/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	537ug/l		MR1305
Total Zinc	107ug/l		MR1305

ID:09998047 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 04/07/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3521
cis-1,2-Dichloroethene	<1ug/l		VA3521
trans-1,2-Dichloroethene	<1ug/l		VA3521
Trichloroethene	<1ug/l		VA3521
Tetrachloroethene	<0.5ug/l		VA3521

ID:09998048 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 04/09/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3521
cis-1,2-Dichloroethene	<1ug/l		VA3521
trans-1,2-Dichloroethene	<1ug/l		VA3521
Trichloroethene	<1ug/l		VA3521
Tetrachloroethene	<0.5ug/l		VA3521

DATE: 04/21/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 09998042
Client I.D.: ENVIROTRAC

APPROVAL: QJS
QC: PF
Lab I.D.: 10170
Sampled by: Client

ID:09998049 Mat:Water ARMONK PRIVATE WELLS SITE EW-1 040898 1022H 04/08/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<500ug/l	05	VA3521
cis-1,2-Dichloroethene	<500ug/l	05	VA3521
trans-1,2-Dichloroethene	<100ug/l	05	VA3521
Trichloroethene	<500ug/l	05	VA3521
Tetrachloroethene	5900ug/l		VA3521

ID:09998050 Mat:Water ARMONK PRIVATE WELLS SITE EW-2 040898 1025H 04/08/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<500ug/l	05	VA3521
cis-1,2-Dichloroethene	<500ug/l	05	VA3521
trans-1,2-Dichloroethene	<500ug/l	05	VA3521
Trichloroethene	<500ug/l	05	VA3521
Tetrachloroethene	2300ug/l		VA3521

ID:09998051 Mat:Water ARMONK PRIVATE WELLS SITE EW-3 040898 1028H 04/08/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<100ug/l	05	VA3521
cis-1,2-Dichloroethene	<100ug/l	05	VA3521
trans-1,2-Dichloroethene	<100ug/l	05	VA3521
Trichloroethene	<100ug/l	05	VA3521
Tetrachloroethene	1600ug/l		VA3521

DATE: 04/21/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 09998042
Client I.D.: ENVIROTRAC

APPROVAL: QJS
QC: PF Lab I.D.: 10170
Sampled by: Client

ID:09998052 Mat:Water ARMONK PRIVATE WELLS SITE EFF 040898 1035-1038H 04/08/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	73.3ug/l	---	ME1305
Total Zinc	<10.0ug/l	---	ME1305
EPA Method 8010			
Vinyl Chloride	<1ug/l	---	VA3521
cis-1,2-Dichloroethene	<1ug/l	---	VA3521
trans-1,2-Dichloroethene	<1ug/l	---	VA3521
Trichloroethene	<1ug/l	---	VA3521
Tetrachloroethene	<0.5ug/l	---	VA3521

ID:09998053 Mat:Water ARMONK PRIVATE WELLS SITE COMBINED INF 040898 1039H 04/08/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	87.6ug/l	---	ME1305
Total Zinc	20.0ug/l	---	ME1305

ID:09998054 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 04/08/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<1ug/l	---	VA3521
cis-1,2-Dichloroethene	<1ug/l	---	VA3521
trans-1,2-Dichloroethene	<1ug/l	---	VA3521
Trichloroethene	<1ug/l	---	VA3521
Tetrachloroethene	<0.5ug/l	---	VA3521

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
9 QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
10 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
11 ADL(AVERAGE DETECTION LIMITS)
12 PQL(PRACTICAL QUANTITATION LIMITS)
13 SAMPLE ANALYZED OVER HOLDING TIME
14 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
15 THE FILTERING PROCEDURE
16 SAMPLED BY ULI
17 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
18 WITHIN EXPERIMENTAL ERROR
19 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
20 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
21 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
22 INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
23 CALCULATION BASED ON DRY WEIGHT
24 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
25 LIMITS
26 UG/KG AS REC.D / UG/KG DRY WT
27 MG/KG AS REC.D / MG/KG DRY WT
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33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
35 ANALYZED BY METHOD OF STANDARD ADDITIONS
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
37 FIELD MEASURED PARAMETER TAKEN BY CLIENT
38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
39 NON-POTABLE WATER SOURCE
40 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
41 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
42 LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
43 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
44 PETROLEUM DISTILLATES
45 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
46 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
47 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL₂) / POUNDS (LBS)
48 PER DAY OF CL₂
49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
51 PER DAY LAS
52 RESULTS ARE REPORTED ON AN AS REC.D BASIS
53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
55 CREATING A THEORETICAL TCLP VALUE
56 METAL BY CONCENTRATION PROCEDURE
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

EnviroTrac

UPSTATE LABORATORIES CHAIN OF CUSTODY

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters


Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., New York

Site No. 3-60-005
Contract No. D003635

4/23

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057

Contact: Russ Trovalo (201) 703-1324

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
42	4/7/98	7:45	T.B.	G.W.	(2)	HCL	EW 1 040798	VOCs 8010	14 DAY
43		7:50			(2)		EW 2 040798		
44		7:55			(2)		EW 3 040798		
45		7:40			(2)		effluent 040798		48hrs
		7:40			(2)		ms/msd		14 DAY
46		7:20			(1)	HND3	COMBINED Inflow 040798	Zn, Fe 6010	
		7:40			(1)		Effluent 040798		48hrs
47	4/7/98				(1)	HCL	TRIP BLANK	VOCs 8010	14 DAY.
48	4/9/98				(1)	HCL	(HOLDING BLANK)	(VOCs 8010)	
Relinquished by:  303 4/8/98		Time/Date:		Received By:		Time/Date:		Comments:	
Relinquished by:		Time/Date:		Received By:		Time/Date:		G.W. = ground water.	
				C Kenney 4/9/98 0815					

4/10 HPI

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., New York

Site No. 3-60-005
Contract No. D003635

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovato (201) 703-1324

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
49	4/8/98	10:22	B.R.	G.W.	(2)	HCL	EW-1 040898	VOCs 3010	14 DAY
50	↓	10:25	↓	↓	(2)	HCL	EW-2 040898	↓	↓
51	↓	10:28	↓	↓	(2)	HCL	EW-3 040898	↓	↓
52	↓	10:38	↓	↓	(2)	HCL	Effluent 040898	↓	48hr
	↓	10:35	↓	↓	(3)	HCL	ms/msd	↓	14 DAY
53	↓	10:39	↓	↓	(1)	HNO ₃	Combined Inflow	Zn, Fe 6010	14 DAY
	↓	10:35	↓	↓	(1)	HNO ₃	Effluent 040898	↓	48hr
54	(4/8/98)				(1)	HCL	Trip Blank	VOCs 3010	14 DAY
Relinquished by: <i>T.R.</i> Time/Date: 3:20 4/8/98		Received By: C Kinney Time/Date: 4/9/98 0815		Comments: gw = ground water.					
Relinquished by:		Received By:		Comments:					

4/10 HDP



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Binghamton (607) 724-0478

Buffalo (716) 649-2533
Rochester (716) 436-9070
New Jersey (201) 703-1324

May 7, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

RECEIVED
MAY 12 1998

Re: Analysis Report #10598023 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on April 15, 1998.


We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 4/16 and 4/27/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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New Jersey (201) 703-1324

May 6, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, New York 11729

RE: Armonk Private Wells Site, Samples Collected April 14, 1998
Case Narrative for ULI Laboratory Report No. 10598023

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3536	Criteria were satisfied.
	VA3545	Criteria were satisfied.

Mr. Ted Masters
May 6, 1998
Page 2

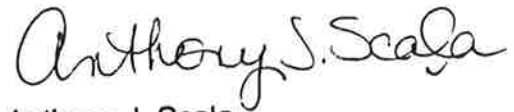
Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1325 ME1326	Criteria were satisfied. Criteria were satisfied.
Zn	ME1325	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

File: JHENV-05.doc

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 05/07/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 10598023
Client I.D.: ENVIROTRAC

APPROVAL: *ALS*
QC: *PF* Lab I.D.: 10170
Sampled by: Client

ID:10598023 Mat:Water ARMONK PRIVATE WELLS SITE EW1 041498 1000H 04/14/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<500ug/l	05	VA3536
cis-1,2-Dichloroethene	<500ug/l	05	VA3536
trans-1,2-Dichloroethene	<500ug/l	05	VA3536
Trichloroethene	<500ug/l	05	VA3536
Tetrachloroethene	6000ug/l		VA3536

ID:10598024 Mat:Water ARMONK PRIVATE WELLS SITE EW2 041498 1005H 04/14/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<500ug/l	05	VA3536
cis-1,2-Dichloroethene	<500ug/l	05	VA3536
trans-1,2-Dichloroethene	<500ug/l	05	VA3536
Trichloroethene	<500ug/l	05	VA3536
Tetrachloroethene	2000ug/l		VA3536

ID:10598025 Mat:Water ARMONK PRIVATE WELLS SITE EW3 041498 1010H 04/14/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<100ug/l	05	VA3536
cis-1,2-Dichloroethene	<100ug/l	05	VA3536
trans-1,2-Dichloroethene	<100ug/l	05	VA3536
Trichloroethene	<100ug/l	05	VA3536
Tetrachloroethene	1500ug/l		VA3536

ID:10598026 Mat:Water ARMONK PRIVATE WELLS SITE EFF 041498 0955H 04/14/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3545
cis-1,2-Dichloroethene	<1ug/l		VA3545
trans-1,2-Dichloroethene	<1ug/l		VA3545
Trichloroethene	<1ug/l		VA3545
Tetrachloroethene	<0.5ug/l		VA3545

DATE: 05/07/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 10598023
Client I.D.: ENVIROTRAC

APPROVAL: QJS
QC: PT - Lab I.D.: 10170
Sampled by: Client

ID:10598027 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 04/14/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3536
cis-1,2-Dichloroethene	<1ug/l		VA3536
trans-1,2-Dichloroethene	<1ug/l		VA3536
Trichloroethene	<1ug/l		VA3536
Tetrachloroethene	<0.5ug/l		VA3536

ID:10598028 Mat:Water ARMONK PRIVATE WELLS SITE CIN 041498 1015H 04/14/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	1320ug/l		ME1325
Total Zinc	83.0ug/l		ME1325

ID:10598029 Mat:Water ARMONK PRIVATE WELLS SITE AFTER BAG 041498 1011H 04/14/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	85.2ug/l		ME1326
Total Zinc	7580ug/l		ME1325

ID:10598030 Mat:Water ARMONK PRIVATE WELLS SITE EFF 041498 1012H 04/14/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	<60ug/l		ME1325
Total Zinc	25.1ug/l		MW1325

ID:10598031 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 0940 04/15/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3536
cis-1,2-Dichloroethene	<1ug/l		VA3536
trans-1,2-Dichloroethene	<1ug/l		VA3536
Trichloroethene	<1ug/l		VA3536
Tetrachloroethene	<0.5ug/l		VA3536

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
9 QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
10 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
11 ADL(AVERAGE DETECTION LIMITS)
12 PQL(PRACTICAL QUANTITATION LIMITS)
13 SAMPLE ANALYZED OVER HOLDING TIME
14 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
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17 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
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27 MG/KG AS REC.D / MG/KG DRY WT
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29 SAMPLE DILUTED/BLANK CORRECTED
30 ND(NON-DETECTED)
31 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
32 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
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35 ANALYZED BY METHOD OF STANDARD ADDITIONS
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
37 FIELD MEASURED PARAMETER TAKEN BY CLIENT
38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
39 NON-POTABLE WATER SOURCE
40 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
41 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
42 LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
43 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
44 PETROLEUM DISTILLATES
45 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
46 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
47 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
48 PER DAY OF CL2
49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
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52 RESULTS ARE REPORTED ON AN AS REC.D BASIS
53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
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56 METAL BY CONCENTRATION PROCEDURE
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

EnviroTrac

UPSTATE LABORATORIES CHAIN OF CUSTODY

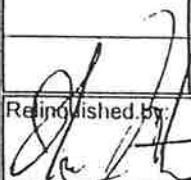
4/29

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., New York

Site No. 3-60-005
Contract No. D003635

10598023 - 31

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround	
10598023	4/14/98	1000	TM	CW	(2)	HCl	EW1 041498	VOCs* 8010	14 Days	
24		1005			(2)		EW2 041498			
25		1010			(2)		EW3 041498			
26		0955			(2)		EFF 041498		2 Days	
		0955			(2)		EFF 041498 MS/MSD		14 Days	
27		NT		TB	(2)		TRIP BLANK		14 Days	
28		1015		CW	(1)	HNO ₃	CIN 041498	Zn, Fe 6010		
29		1011			(1)		After Bag 041498			
30		1012			(1)		EFF 041498		2 Days	
31	4/15/98	0940			(1)		(HOLDING BLANK) ^{cc}	(VOCs 8010)		
Relinquished by:  Time/Date: 3:30/4/14/98			Received By: Time/Date			Comments: *VOCs = TCE, PCE cis + Trans 1,2 DCE Vinyl chloride				
Relinquished by: Time/Date:			Received By: CKennedy 4/15/98 0843			CW = Ground Water TB = Trip Blank				

dd = 4/16 HI
MS/MSD!

MS/DOPE!
dd = 4/16 HI

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Buffalo (716) 649-2533

Rochester (716) 436-9070

New Jersey (201) 703-1324

RECEIVED
MAY 05 1998

May 1, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #10698017 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your sample which was received on April 16, 1998.

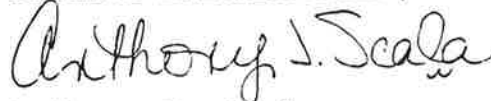
We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

AJS/jd

Enclosures: report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 5/1/98. AJS

Disclaimer: 'The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.'

DATE: 05/01/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 10698017
Client I.D.: ENVIROTRAC
Sampled by: Client

APPROVAL: *AS*
QC: *PF*
Lab I.D.: 10170

ARMONK PRIVATE WELLS
SITE BAG FILTER & SEDIMENT 0950H 04/15/98

ULI I.D.: 10698017

Matrix: Soil

PARAMETERS	RESULTS	KEY	FILE#
TCLP Volatile Organic Compounds by 8240			
TCLP Benzene	<0.03mg/l		VM1861
TCLP Carbon Tetrachloride	<0.03mg/l		VM1861
TCLP Chlorobenzene	<0.03mg/l		VM1861
TCLP Chloroform	<0.03mg/l		VM1861
TCLP 1,4-Dichlorobenzene	<0.03mg/l		VM1861
TCLP 1,2-Dichloroethane	<0.03mg/l		VM1861
TCLP 1,1-Dichloroethene	<0.03mg/l		VM1861
TCLP Methyl Ethyl Ketone	<0.1mg/l		VM1861
TCLP Tetrachloroethene	<0.03mg/l		VM1861
TCLP Trichloroethene	<0.03mg/l		VM1861
TCLP Vinyl Chloride	<0.02mg/l		VM1861

dw = Dry weight

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., New York

Site No. 3-60-005
Contract No. D003635

4/30

10698017

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
17	4/15/98	9:50	T.B.	SEDIMENT + BAG FILTER	(4)	NONE	BAG FILTER + SEDIMENT	TCLP BZYU	14 DAY.
Relinquished by: <i>Tim Byrnes</i> 1:00 4/16/98			Received By: <i>C. Kenney</i> 4/16/98 09:55			Comments:			
Relinquished by/			Received By:			Time/Date:			

Upstate Laboratories inc.

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Buffalo (716) 649-2533

Rochester (716) 436-9070

New Jersey (201) 703-1324

May 7, 1998

RECEIVED
MAY 12 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #10698011 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on April 16, 1998.

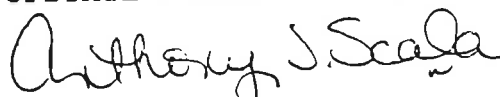
We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

AJS/jk

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 4/17 and 5/1/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

Upstate Laboratories inc.

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Binghamton (607) 724-0478

Buffalo (716) 649-2533
Rochester (716) 436-9070
New Jersey (201) 703-1324

May 6, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, New York 11729

RE: Armonk Private Wells Site, Samples Collected April 15, 1998
Case Narrative for ULI Laboratory Report No. 10698011

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3536	Criteria were satisfied.

Mr. Ted Masters
May 6, 1998
Page 2

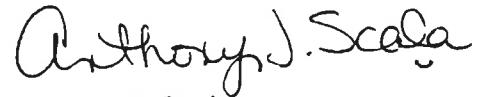
Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1328	Criteria were satisfied.
Zn	ME1328	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

File: JHENV-05A.doc

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 05/07/98

Westate Laboratories, Inc.
Analysis Results
Report Number: 10698011
Client I.D.: ENVIROTRAC

APPROVAL: CJS
QC: PE - Lab I.D.: 10170
Sampled by: Client

ID:10698011 Mat:Water ARMONK PRIVATE WELLS SITE EW-1 041598 0910H 04/15/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<500ug/l	05	VA3536
cis-1,2-Dichloroethene	<500ug/l	05	VA3536
trans-1,2-Dichloroethene	<500ug/l	05	VA3536
Trichloroethene	<500ug/l	05	VA3536
Tetrachloroethene	5900ug/l		VA3536

ID:10698012 Mat:Water ARMONK PRIVATE WELLS SITE EW-2 041598 0900H 04/15/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<500ug/l	05	VA3536
cis-1,2-Dichloroethene	<500ug/l	05	VA3536
trans-1,2-Dichloroethene	<500ug/l	05	VA3536
Trichloroethene	<500ug/l	05	VA3536
Tetrachloroethene	2100ug/l		VA3536

ID:10698013 Mat:Water ARMONK PRIVATE WELLS SITE EW-3 041598 0905H 04/15/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<100ug/l	05	VA3536
cis-1,2-Dichloroethene	<100ug/l	05	VA3536
trans-1,2-Dichloroethene	<100ug/l	05	VA3536
Trichloroethene	<100ug/l	05	VA3536
Tetrachloroethene	1500ug/l		VA3536

DATE: 05/07/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 10698011
Client I.D.: ENVIROTRAC

APPROVAL: QSS
QC: PF Lab I.D.: 10170
Sampled by: Client

ID:10698014 Mat:Water ARMONK PRIVATE WELLS SITE EFF 041598 0920H 04/15/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	<60ug/l		ME1328
Total Zinc	<10ug/l		ME1328
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3536
cis-1,2-Dichloroethene	<1ug/l		VA3536
trans-1,2-Dichloroethene	<1ug/l		VA3536
Trichloroethene	<1ug/l		VA3536
Tetrachloroethene	<0.5ug/l		VA3536

ID:10698015 Mat:Water ARMONK PRIVATE WELLS SITE CIN-041598 0925H 04/15/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	912ug/l		ME1328
Total Zinc	41.3ug/l		ME1328

ID:10698016 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 04/15/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3536
cis-1,2-Dichloroethene	<1ug/l		VA3536
trans-1,2-Dichloroethene	<1ug/l		VA3536
Trichloroethene	<1ug/l		VA3536
Tetrachloroethene	<0.5ug/l		VA3536

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
9 QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
10 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
11 ADL(AVERAGE DETECTION LIMITS)
12 PQL(PRACTICAL QUANTITATION LIMITS)
13 SAMPLE ANALYZED OVER HOLDING TIME
14 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
15 THE FILTERING PROCEDURE
16 SAMPLED BY ULI
17 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
18 WITHIN EXPERIMENTAL ERROR
19 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
20 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
21 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
22 INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
23 CALCULATION BASED ON DRY WEIGHT
24 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
25 LIMITS
26 UG/KG AS REC.D / UG/KG DRY WT
27 MG/KG AS REC.D / MG/KG DRY WT
28 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
29 SAMPLE DILUTED/BLANK CORRECTED
30 ND(NON-DETECTED)
31 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
32 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
35 ANALYZED BY METHOD OF STANDARD ADDITIONS
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
37 FIELD MEASURED PARAMETER TAKEN BY CLIENT
38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
39 NON-POTABLE WATER SOURCE
40 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
41 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
42 LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
43 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
44 PETROLEUM DISTILLATES
45 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
46 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
47 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
48 PER DAY OF CL2
49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
51 PER DAY LAS
52 RESULTS ARE REPORTED ON AN AS REC.D BASIS
53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
55 CREATING A THEORETICAL TCLP VALUE
56 METAL BY CONCENTRATION PROCEDURE
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

EnviroTrac

UPSTATE LABORATORIES CHAIN OF CUSTODY

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., New York

Site No. 3-60-005
Contract No. D003635

4/30

10698011-16

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
11	4/15/98	9:10	T.P.	G.W.	2	HCL	EW-1-041598	VOCs 3010	14 DAY
12	↓	9:00	↓	↓	2	↓	EW-2-041598	↓	↓
13	↓	9:05	↓	↓	2	↓	EW-3-041598	↓	↓
14	↓	9:20	↓	↓	2	↓	EFF-041598	↓	24 hrs.
	↓	9:20	↓	↓	2	↓	MS/MSD	↓	14 DAY
15	↓	9:25	↓	↓	1	HNO ₃	CIN-041598	Zn, Fe 6010	↓
	↓	9:20	↓	↓	1	↓	EFF-041598	↓	24 hrs.
16	(4/15/98) ^{cc}				1	HCL	(WJ) ^{cc} TRIP BLANK	VOCs 3010	14 DAY.
Relinquished by: Time/Date:			Received By: Time/Date			Comments:			
T.M. 1:00 4/15/98									
Relinquished by: Time/Date:			Received By: Time/Date						
			C Kenney 4/16/98 0855						

4/17 HDD

Upstate Laboratories inc.

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MAY 28 1998

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Buffalo (716) 649-2533
Rochester (716) 436-9070
New Jersey (201) 703-1324

May 22, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #11198129 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on April 21, 1998.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala
Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 5/20/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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New Jersey (201) 703-1324

May 22, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, New York 11729

RE: Armonk Private Wells Site, Samples Collected April 20, 1998
Case Narrative for ULI Laboratory Report No. 11198129

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3561	Criteria were satisfied.

Mr. Ted Masters

May 22, 1998

Page 2

Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1404	Criteria were satisfied.
Zn	ME1404	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala
Anthony J. Scala
Director

File: JHENV-06.doc

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 05/22/98

State Laboratories, Inc.
Analysis Results
Report Number: 11198129
Client I.D.: ENVIROTRAC

APPROVAL: *J/S*
QC: *RF*
Lab I.D.: 10170
Sampled by: Client

ID:11198129 Mat:Water ARMONK PRIVATE WELLS SITE CIN042098 1100H 04/20/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	600ug/l	05/18/98		ME1404
Total Zinc	32.1ug/l	05/18/98		ME1404
EPA Method 8010				
Vinyl Chloride	<500ug/l	04/28/98	05	VA3561
cis-1,2-Dichloroethene	<500ug/l	04/28/98	05	VA3561
trans-1,2-Dichloroethene	<500ug/l	04/28/98	05	VA3561
Trichloroethene	<500ug/l	04/28/98	05	VA3561
Tetrachloroethene	3500ug/l	04/28/98		VA3561

ID:11198130 Mat:Water ARMONK PRIVATE WELLS SITE AB042098 1115H 04/20/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	75.5ug/l	05/18/98		ME1404
Total Zinc	16.5ug/l	05/18/98		ME1404

ID:11198131 Mat:Water ARMONK PRIVATE WELLS SITE AGAC1042098 1120H 04/20/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	04/28/98		VA3561
cis-1,2-Dichloroethene	<1ug/l	04/28/98		VA3561
trans-1,2-Dichloroethene	<1ug/l	04/28/98		VA3561
Trichloroethene	<1ug/l	04/28/98		VA3561
Tetrachloroethene	<0.5ug/l	04/28/98		VA3561

ID:11198132 Mat:Water ARMONK PRIVATE WELLS SITE EFF042098 1125H 04/20/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	<60.0ug/l	05/18/98		ME1404
Total Zinc	67.5ug/l	05/18/98		ME1404
EPA Method 8010				
Vinyl Chloride	<1ug/l	04/28/98		VA3561
cis-1,2-Dichloroethene	<1ug/l	04/28/98		VA3561
trans-1,2-Dichloroethene	<1ug/l	04/28/98		VA3561
Trichloroethene	<1ug/l	04/28/98		VA3561
Tetrachloroethene	<0.5ug/l	04/28/98		VA3561

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
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33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
35 ANALYZED BY METHOD OF STANDARD ADDITIONS
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
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49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
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56 METAL BY CONCENTRATION PROCEDURE
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

EnviroTrac

UPSTATE LABORATORIES CHAIN OF CUSTODY

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., NY

Site No. 3-60-005
Contract No. D003635

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovato (201) 703-1324

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
129	4/20/98	(1100)		GW	③	VOC - 1161 Zn, Fe HNO ₃	CIN042098	VOC(8010) Zn, Fe(6010)	2 weeks
130	↓	(1115)		↓	①	HNO ₃	AB042098	Zn, Fe(6010)	↓
131	↓	(1120)		↓	②	HCl	BB AGAC1042098	VOC(8010)	↓
132	↓	(1125) ^{CE}		↓	⑤*	VOC nci Zn, Fe, HNO ₃	EFF042098	VOC(8010) Zn, Fe(6010)	↓
					1	HCl	Trip Blank	VOC(8010)	↓
133	4/21/98	(0900) ^{CE}			①		(HOLDING BLANK)	(VOC(8010)) ^{HD}	
Relinquished by: <i>Russ Trovato</i> Time/Date: 4/20/98 2:30 PM			Received By: C. Kinney Time/Date: 4/21/98 0814			Comments: GW = Ground Water VOC = Tetrachloroethane CIN = Combined Influent - Trichloroethane AB = After Bag Filters Cis + Trans 1,2 DCE AGAC1 = After GAC 1 Vinyl Chloride EFF = Effluent * 2 vials for MS/MSD			

MS/MSD-DU



Upstate Laboratories inc.

RECEIVED
MAY 28 1998

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Buffalo (716) 649-2533
Rochester (716) 436-9070
New Jersey (201) 703-1324

May 22, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #11898001 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on April 28, 1998.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala
Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 4/30 and 5/4/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

Upstate Laboratories inc.

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Rochester (716) 436-9070
New Jersey (201) 703-1324

May 22, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, New York 11729

RE: Armonk Private Wells Site, Samples Collected April 27, 1998
Case Narrative for ULI Laboratory Report No. 11898001

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3561	Criteria were satisfied.

Mr. Ted Masters
May 22, 1998
Page 2

Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1347	Criteria were satisfied.
Zn	ME1347	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

05/22/98

State Laboratories, Inc.
Analysis Results
Report Number: 11898001
Client I.D.: ENVIROTRAC

APPROVAL: *QJS*
QC: *PF*
Lab I.D.: 10170
Sampled by: Client

ID: 11898001 Mat: Water ARMONK PRIVATE WELLS SITE CIN042798 0800H 04/27/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	1870ug/l	04/29/98		ME1347
Total Zinc	108ug/l	04/29/98		ME1347
EPA Method 8010				
Vinyl Chloride	<500ug/l	04/28/98	05	VA3561
cis-1,2-Dichloroethene	<500ug/l	04/28/98	05	VA3561
trans-1,2-Dichloroethene	<500ug/l	04/28/98	05	VA3561
Trichloroethene	<500ug/l	04/28/98	05	VA3561
Tetrachloroethene	3200ug/l	04/28/98		VA3561

ID: 11898002 Mat: Water ARMONK PRIVATE WELLS SITE AG1042798 0810H 04/27/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	04/28/98		VA3561
cis-1,2-Dichloroethene	<1ug/l	04/28/98		VA3561
trans-1,2-Dichloroethene	<1ug/l	04/28/98		VA3561
Trichloroethene	<1ug/l	04/28/98		VA3561
Tetrachloroethene	<0.5ug/l	04/28/98		VA3561

ID: 11898003 Mat: Water ARMONK PRIVATE WELLS SITE EFF042798 0805H 04/27/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	<60ug/l	04/29/98		ME1347
Total Zinc	<10ug/l	04/29/98		ME1347
EPA Method 8010				
Vinyl Chloride	<1ug/l	04/28/98		VA3561
cis-1,2-Dichloroethene	<1ug/l	04/28/98		VA3561
trans-1,2-Dichloroethene	<1ug/l	04/28/98		VA3561
Trichloroethene	<1ug/l	04/28/98		VA3561
Tetrachloroethene	<0.5ug/l	04/28/98		VA3561

ID: 11898004 Mat: Water ARMONK PRIVATE WELLS SITE ABF042798 0820H 04/27/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	1170ug/l	04/29/98		ME1347
Total Zinc	1080ug/l	04/29/98		ME1347

DATE: 05/22/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 11898001
Client I.D.: ENVIROTRAC

APPROVAL: *CJS*
QC: *PF*
Lab I.D.: 10170
Sampled by: Client

ID:11898005 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 04/27/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	04/28/98		VA3561
cis-1,2-Dichloroethene	<1ug/l	04/28/98		VA3561
trans-1,2-Dichloroethene	<1ug/l	04/28/98		VA3561
Trichloroethene	<1ug/l	04/28/98		VA3561
Tetrachloroethene	<0.5ug/l	04/28/98		VA3561

ID:11898006 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 0900H 04/28/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	04/28/98		VA3561
cis-1,2-Dichloroethene	<1ug/l	04/28/98		VA3561
trans-1,2-Dichloroethene	<1ug/l	04/28/98		VA3561
Trichloroethene	<1ug/l	04/28/98		VA3561
Tetrachloroethene	<0.5ug/l	04/28/98		VA3561

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
9 QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
10 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
11 ADL(AVERAGE DETECTION LIMITS)
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16 SAMPLED BY ULI
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18 WITHIN EXPERIMENTAL ERROR
19 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
20 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
21 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
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24 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
25 LIMITS
26 UG/KG AS REC.D / UG/KG DRY WT
27 MG/KG AS REC.D / MG/KG DRY WT
28 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
29 SAMPLE DILUTED/BLANK CORRECTED
30 ND(NON-DETECTED)
31 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
32 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
35 ANALYZED BY METHOD OF STANDARD ADDITIONS
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
37 FIELD MEASURED PARAMETER TAKEN BY CLIENT
38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
39 NON-POTABLE WATER SOURCE
40 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
41 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
42 LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
43 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
44 PETROLEUM DISTILLATES
45 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
46 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
47 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
48 PER DAY OF CL2
49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
51 PER DAY LAS
52 RESULTS ARE REPORTED ON AN AS REC.D BASIS
53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
55 CREATING A THEORETICAL TCLP VALUE
56 METAL BY CONCENTRATION PROCEDURE
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., New York

Site No. 3-60-005
Contract No. D003635

5/12

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
1	4/27/98	8:00	TB.	G.W.	2	HCL	CIN042798 ✓	VOCs 8010*	14 days
2	↓	8:10	↓	↓	2	↓	AG1042798 ✓	↓	↓
3	↓	8:05	↓	↓	2	↓	EFF042798 ✓	↓	24hrs
	↓	3:05	↓	↓	2	↓	MS/MSD	↓	14 days
	↓	8:00	↓	↓	1	HNO ₃	CIN042798 ✓	Zn, Fe 6010	↓
4	↓	9:20	↓	↓	1	↓	ABF042798 ✓	↓	↓
	↓	9:05	↓	↓	1	↓	EFF042798 ✓	↓	24hrs
5	4/27/98			↓	1	HCL	(W) TRIP BLANK ✓	VOCs 8010	14 days
6	4/28/98	(0900)			1		(HOLDING BLANK) ✓	(VOCs 8010)	
Relinquished by: Time/Date:			Received By: Time/Date			Comments:			
E.D. 4:30 4/27/98						(* Tetrachloroethene, TCE, Cis+trans-1,2-DCE, Vinyl Chloride)			
Relinquished by: Time/Date:			Received By: Time/Date						
			C. Kenney 4/28/98 0818						

dd = 4/29/98
MS/MSD - D44

Upstate Laboratories inc.

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MAY 28 1998

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May 22, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #12598005 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on May 5, 1998.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala
Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 5/20/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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New Jersey (201) 703-1324

May 22, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, New York 11729

RE: Armonk Private Wells Site, Samples Collected May 4, 1998
Case Narrative for ULI Laboratory Report No. 12598005

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3595	Criteria were satisfied.

Mr. Ted Masters
May 22, 1998
Page 2

Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1362	Criteria were satisfied.
Zn	ME1362	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

File: JHENV-08.doc

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 05/22/98

State Laboratories, Inc.
Analysis Results
Report Number: 12598005
Client I.D.: ENVIROTRAC

APPROVAL: *Q/S*
QC: *PF*
Lab I.D.: 10170
Sampled by: Client

0:12598005 Mat:Water ARMONK PRIVATE WELLS SITE CIN050498 0635H 05/04/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	735ug/l	05/07/98		ME1362
Total Zinc	37.5ug/l	05/07/98		ME1362
EPA Method 8010				
Vinyl Chloride	<500ug/l	05/10/98	05	VA3595
cis-1,2-Dichloroethene	<500ug/l	05/10/98	05	VA3595
trans-1,2-Dichloroethene	<500ug/l	05/10/98	05	VA3595
Trichloroethene	<500ug/l	05/10/98	05	VA3595
Tetrachloroethene	2600ug/l	05/10/98		VA3595

0:12598006 Mat:Water ARMONK PRIVATE WELLS SITE AG1050498 0650H 05/04/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	05/10/98		VA3595
cis-1,2-Dichloroethene	<1ug/l	05/10/98		VA3595
trans-1,2-Dichloroethene	<1ug/l	05/10/98		VA3595
Trichloroethene	<1ug/l	05/10/98		VA3595
Tetrachloroethene	<0.5ug/l	05/10/98		VA3595

0:12598007 Mat:Water ARMONK PRIVATE WELLS SITE EFF050498 0640H 05/04/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	<60ug/l	05/07/98		ME1362
Total Zinc	18.5ug/l	05/07/98		ME1362
EPA Method 8010				
Vinyl Chloride	<1ug/l	05/10/98		VA3595
cis-1,2-Dichloroethene	<1ug/l	05/10/98		VA3595
trans-1,2-Dichloroethene	<1ug/l	05/10/98		VA3595
Trichloroethene	<1ug/l	05/10/98		VA3595
Tetrachloroethene	<0.5ug/l	05/10/98		VA3595

0:12598008 Mat:Water ARMONK PRIVATE WELLS SITE ABF050498 0645H 05/04/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	2240ug/l	05/07/98		ME1362
Total Zinc	703ug/l	05/07/98		ME1362

DATE: 05/22/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 12598005
Client I.D.: ENVIROTRAC

APPROVAL: *JJS*
QC: *PF* Lab I.D.: 10170
Sampled by: Client

ID:12598009 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 0830H 05/05/98

PARAMETERS -----	RESULTS -----	DATE ANAL. -----	KEY ---	FILE# -----
EPA Method 8010				
Vinyl Chloride	<1ug/l	05/10/98		VA3595
cis-1,2-Dichloroethene	<1ug/l	05/10/98		VA3595
trans-1,2-Dichloroethene	<1ug/l	05/10/98		VA3595
Trichloroethene	<1ug/l	05/10/98		VA3595
Tetrachloroethene	<0.5ug/l	05/10/98		VA3595

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., New York

Site No. 3-60-005
Contract No. D003635

5/19

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID:	Analyses Required	Requested Turnaround
12598005	5/1/98	6:35	T.B.	G.W.	2	HCL	CIN050498 ✓	VOCs 8010	14 DAY
6	↓	6:30	↓	↓	2	↓	AG2050498 ✓	↓	↓
7	↓	6:40	↓	↓	2	↓	EFF050498 ✓	↓	24hrs
	↓	6:40	↓	↓	2	↓	MS/MSD	↓	14 DAY
	↓	6:35	↓	↓	1	HNO3	CIN050498 ✓	Zn, Fe 6010	↓
8	↓	6:45	↓	↓	1	↓	ABF050498	↓	↓
	↓	6:40	↓	↓	1	↓	EFF050498 ✓	↓	24hrs
				H ₂ O	1	HCL	TRIP BLANK	VOCs 8010	14 DAY
9	(5/6/98)	(0830)			1		(HOLDING BLANK)	(VOCs) ^{cc}	
Relinquished by: <i>T.B.</i> Time/Date: 5/1/98 2:30			Received By: C. Kenney Time/Date: 5/5/98 0818			Comments: G.W. ground water.			

:ASP!

dd=5/6/98

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
9 QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
10 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
11 ADL(AVERAGE DETECTION LIMITS)
12 PQL(PRACTICAL QUANTITATION LIMITS)
13 SAMPLE ANALYZED OVER HOLDING TIME
14 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
15 THE FILTERING PROCEDURE
16 SAMPLED BY ULI
17 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
18 WITHIN EXPERIMENTAL ERROR
19 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
20 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
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22 INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
23 CALCULATION BASED ON DRY WEIGHT
24 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
25 LIMITS
26 UG/KG AS REC.D / UG/KG DRY WT
27 MG/KG AS REC.D / MG/KG DRY WT
28 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
29 SAMPLE DILUTED/BLANK CORRECTED
30 ND(NON-DETECTED)
31 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
32 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
35 ANALYZED BY METHOD OF STANDARD ADDITIONS
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
37 FIELD MEASURED PARAMETER TAKEN BY CLIENT
38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
39 NON-POTABLE WATER SOURCE
40 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
41 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
42 LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
43 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
44 PETROLEUM DISTILLATES
45 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
46 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
47 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
48 PER DAY OF CL2
49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
51 PER DAY LAS
52 RESULTS ARE REPORTED ON AN AS REC.D BASIS
53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
55 CREATING A THEORETICAL TCLP VALUE
56 METAL BY CONCENTRATION PROCEDURE
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

Upstate Laboratories inc.

RECEIVED
JUN 15 1998

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New Jersey (201) 703-1324

June 12, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #13398042 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on May 13, 1998.

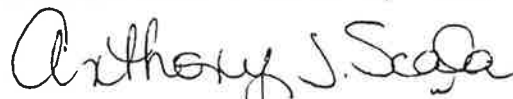
We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 5/22/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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Rochester (716) 436-9070
New Jersey (201) 703-1324

June 11, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, New York 11729

RE: Armonk Private Wells Site, Samples Collected May 11, 1998
Case Narrative for ULI Laboratory Report No. 13398042

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3618	Criteria were satisfied.

Mr. Ted Masters

June 11, 1998

Page 2

Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1392	Criteria were satisfied.
Zn	ME1392	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

File: JHENV-09.doc

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 06/12/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 13398042
Client I.D.: ENVIROTRAC

APPROVAL: ASS
QC: PF - Lab I.D.: 10170
Sampled by: Client

ID:13398042 Mat:Water ARMONK PRIVATE WELLS SITE CIN051198 0920H 05/11/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	313ug/l		ME1392
Total Zinc	62.0ug/l		ME1392
EPA Method 8010			
Vinyl Chloride	<500ug/l	05	VA3618
cis-1,2-Dichloroethene	<500ug/l	05	VA3618
trans-1,2-Dichloroethene	<500ug/l	05	VA3618
Trichloroethene	<500ug/l	05	VA3618
Tetrachloroethene	2100ug/l		VA3618

ID:13398043 Mat:Water ARMONK PRIVATE WELLS SITE AG1051198 0930H 05/11/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3618
cis-1,2-Dichloroethene	<1ug/l		VA3618
trans-1,2-Dichloroethene	<1ug/l		VA3618
Trichloroethene	<1ug/l		VA3618
Tetrachloroethene	<0.5ug/l		VA3618

ID:13398044 Mat:Water ARMONK PRIVATE WELLS SITE EFF051198 1000H 05/11/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	<60ug/l		ME1392
Total Zinc	<10ug/l		ME1392
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3618
cis-1,2-Dichloroethene	<1ug/l		VA3618
trans-1,2-Dichloroethene	<1ug/l		VA3618
Trichloroethene	<1ug/l		VA3618
Tetrachloroethene	<0.5ug/l		VA3618

ID:13398045 Mat:Water ARMONK PRIVATE WELLS SITE ABF051198 0940H 05/11/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	391ug/l		ME1392
Total Zinc	861ug/l		ME1392

DATE: 06/12/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 13398042
Client I.D.: ENVIROTRAC

APPROVAL: AS
QC: PF - Lab I.D.: 10170
Sampled by: Client

ID:13398046 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 05/11/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3618
cis-1,2-Dichloroethene	<1ug/l		VA3618
trans-1,2-Dichloroethene	<1ug/l		VA3618
Trichloroethene	<1ug/l		VA3618
Tetrachloroethene	<0.5ug/l		VA3618

DATE: 06/12/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 13398042
Client I.D.: ENVIROTRAC

APPROVAL: ASS
QC: PF Lab I.D.: 10170
Sampled by: Client

ID:13398062 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 1100H 05/11/98 G

PARAMETERS -----	RESULTS -----	KEY ---	FILE# -----
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3621
cis-1,2-Dichloroethene	<1ug/l		VA3621
trans-1,2-Dichloroethene	<1ug/l		VA3621
Trichloroethene	<1ug/l		VA3621
Tetrachloroethene	<0.5ug/l		VA3621

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
9 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
10 ADL(AVERAGE DETECTION LIMITS)
11 PQL(PRACTICAL QUANTITATION LIMITS)
12 SAMPLE ANALYZED OVER HOLDING TIME
13 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
THE FILTERING PROCEDURE
14 SAMPLED BY ULI
15 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
WITHIN EXPERIMENTAL ERROR
16 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
17 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
18 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
19 CALCULATION BASED ON DRY WEIGHT
20 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
LIMITS
21 UG/KG AS REC.D / UG/KG DRY WT
22 MG/KG AS REC.D / MG/KG DRY WT
23 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
24 SAMPLE DILUTED/BLANK CORRECTED
25 ND(NON-DETECTED)
26 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
27 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
28 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
29 ANALYZED BY METHOD OF STANDARD ADDITIONS
30 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
31 FIELD MEASURED PARAMETER TAKEN BY CLIENT
32 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
33 NON-POTABLE WATER SOURCE
34 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
35 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
PETROLEUM DISTILLATES
36 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
37 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
38 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
PER DAY OF CL2
39 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
40 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
PER DAY LAS
41 RESULTS ARE REPORTED ON AN AS REC.D BASIS
42 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
CREATING A THEORETICAL TCLP VALUE
43 METAL BY CONCENTRATION PROCEDURE
44 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

EnviroTrac

UPSTATE LABORATORIES CHAIN OF CUSTODY

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., New York

Site No. 3-60-005
Contract No. D003635

5/28

ASP! Cat A

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
42	5/11/98	9:20	T.B.	G.U.	2	HCL	CINOS1198 ✓	JOCs 8010	14 day
43		9:30			2		AG7051198 ✓		
44		10:00			2		EFFOS1198 ✓		24hr
		10:00			2		MS/MSD		14 DAY
45		9:40			1	HNO ₃	ABFOS1198 ✓	Zn, Fe 6010	14 DAY
		10:00			1		EFFOS1198 ✓		24hr
		9:20			1		CINOS1198 ✓		14 DAY
46	(5/11/98) ^{HO}			(W) ^{HO}	1	HCL	(ULI) ^{HO} TIP BLANK ✓	JOCs 8010	14 DAY
62	(5/13/98) ^{HO}	(1100) ^{HO}		(W) ^{HO}	1		(HOLDING-BLANK) ^{HO}	(JOCs 8010) ^{HO}	
Relinquished by: Time/Date:			Received By: Time/Date			Comments:			
T. B. 4:30 5/6/98									
Relinquished by: Time/Date:			Received By: Time/Date						
E. B. 9:15 5/12/98			Heather Dora 5/12/98 0807						

~~det-5/14 HOD~~
MS/MSD-DUPE



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Rochester (716) 436-9070

New Jersey (201) 703-1324

June 12, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #13998014 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on May 19, 1998.

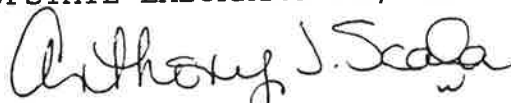
We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 6/8/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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New Jersey (201) 703-1324

June 11, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, New York 11729

RE: Armonk Private Wells Site, Samples Collected May 18, 1998
Case Narrative for ULI Laboratory Report No. 13998014

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3637	Criteria were satisfied.

Mr. Ted Masters
June 11, 1998
Page 2

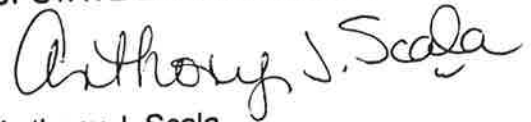
Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1419	Criteria were satisfied.
Zn	ME1419	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 06/12/98

State Laboratories, Inc.
Analysis Results
Report Number: 13998014
Client I.D.: ENVIROTRAC

APPROVAL: QSS
QC: PF Lab I.D.: 10170
Sampled by: Client

ID: 13998014 Mat: Water ARMONK PRIVATE WELLS SITE CIN051898 0830H 05/18/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	626ug/l		ME1419
Total Zinc	74.3ug/l		ME1419
EPA Method 8010			
Vinyl Chloride	<500ug/l	05	VA3637
cis-1,2-Dichloroethene	<500ug/l	05	VA3637
trans-1,2-Dichloroethene	<500ug/l	05	VA3637
Trichloroethene	<500ug/l	05	VA3637
Tetrachloroethene	2500ug/l		VA3637

ID: 13998015 Mat: Water ARMONK PRIVATE WELLS SITE AG1051898 0840H 05/18/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3637
cis-1,2-Dichloroethene	<1ug/l		VA3637
trans-1,2-Dichloroethene	<1ug/l		VA3637
Trichloroethene	<1ug/l		VA3637
Tetrachloroethene	<0.5ug/l		VA3637

ID: 13998016 Mat: Water ARMONK PRIVATE WELLS SITE EFF051898 0850H 05/18/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	<60ug/l		ME1419
Total Zinc	17.6ug/l		ME1419
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3637
cis-1,2-Dichloroethene	<1ug/l		VA3637
trans-1,2-Dichloroethene	<1ug/l		VA3637
Trichloroethene	<1ug/l		VA3637
Tetrachloroethene	<0.5ug/l		VA3637

ID: 13998017 Mat: Water ARMONK PRIVATE WELLS SITE ABF051898 0845H 05/18/98

PARAMETERS	RESULTS	KEY	FILE#
Total Iron	227ug/l		ME1419
Total Zinc	238ug/l		ME1419

DATE: 06/12/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 13998014
Client I.D.: ENVIROTRAC

APPROVAL: QIS
QC: PF Lab I.D.: 10170
Sampled by: Client

ID:13998018 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 05/18/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3637
cis-1,2-Dichloroethene	<1ug/l		VA3637
trans-1,2-Dichloroethene	<1ug/l		VA3637
Trichloroethene	<1ug/l		VA3637
Tetrachloroethene	<0.5ug/l		VA3637

ID:13998019 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 05/18/98

PARAMETERS	RESULTS	KEY	FILE#
EPA Method 8010			
Vinyl Chloride	<1ug/l		VA3637
cis-1,2-Dichloroethene	<1ug/l		VA3637
trans-1,2-Dichloroethene	<1ug/l		VA3637
Trichloroethene	<1ug/l		VA3637
Tetrachloroethene	<0.5ug/l		VA3637

136110014-11

ULI Computer Input Form

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., NY

Site No. 3-60-005
Contract No. D003635

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovalo (201) 703-1324

6/3

ASP!
Cat A

MS/MSD

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
14	5/18/98	8:30	T.B.	G.W.	2	HCL	CIN051898 ✓	VOCs 8010	14 days
15		8:40			2		AG1051898 ✓		
16		8:50			2		EFF051898 ✓		
		8:50			2		MS/MSD		
17		8:45			1	NONE	ABF051898 ✓	Zn, Fe 6010	
		8:30			1	NONE	CIN051898 ✓		
		8:50			1	HNO3	EFF051898 ✓		
18					1	HCL	(ULI) TRIP BLANK ✓	VOCs 8010	
19	(5/19/98)	(0900)			1		(HOLDING BLANK) (C)	(VOCs 8010)	
Relinquished by: <i>TEM</i> sv 5/19/98			Received By: C Kinney 5/19/98 0829			Comments:			
Relinquished by:			Received By:						

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
9 QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
10 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
11 ADL(AVERAGE DETECTION LIMITS)
12 PQL(PRACTICAL QUANTITATION LIMITS)
13 SAMPLE ANALYZED OVER HOLDING TIME
14 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
15 THE FILTERING PROCEDURE
16 SAMPLED BY ULI
17 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
18 WITHIN EXPERIMENTAL ERROR
19 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
20 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
21 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
22 INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
23 CALCULATION BASED ON DRY WEIGHT
24 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
25 LIMITS
26 UG/KG AS REC.D / UG/KG DRY WT
27 MG/KG AS REC.D / MG/KG DRY WT
28 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
29 SAMPLE DILUTED/BLANK CORRECTED
30 ND(NON-DETECTED)
31 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
32 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
35 ANALYZED BY METHOD OF STANDARD ADDITIONS
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
37 FIELD MEASURED PARAMETER TAKEN BY CLIENT
38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
39 NON-POTABLE WATER SOURCE
40 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
41 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
42 LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
43 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
44 PETROLEUM DISTILLATES
45 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
46 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
47 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
48 PER DAY OF CL2
49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
51 PER DAY LAS
52 RESULTS ARE REPORTED ON AN AS REC.D BASIS
53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
55 CREATING A THEORETICAL TCLP VALUE
56 METAL BY CONCENTRATION PROCEDURE
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

Upstate Laboratories inc.

5/26/98

RECEIVED
JUL 16 1998

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Rochester (716) 436-9070

New Jersey (201) 703-1324

July 13, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #14898088 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on May 28, 1998.

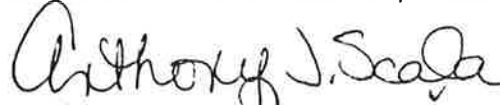
We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 6/16/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

Upstate Laboratories inc.

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Binghamton (607) 724-0478

Buffalo (716) 649-2533

Rochester (716) 436-9070

New Jersey (201) 703-1324

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, New York 11729

July 10, 1998

RE: Armonk Private Wells Site, Samples Collected May 26, 1998
Case Narrative for ULI Laboratory Report No. 14898088

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3661	Criteria were satisfied.

Mr. Ted Masters

July 10, 1998

Page 2

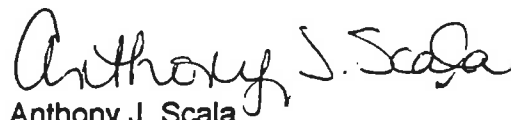
Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1447	Criteria were satisfied.
Zn	ME1447	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

File: JHENV-11.doc

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

ATE: 07/13/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 14898088
Client I.D.: ENVIROTRAC

APPROVAL: *AS*
QC: *PF* Lab I.D.: 10170
Sampled by: Client

D:14898088 Mat:Water ARMONK PRIVATE WELLS SITE CIN052698 1138H 05/26/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	131ug/l	06/10/98		ME1447
Total Zinc	26.2ug/l	06/10/98		ME1447
EPA Method 8010				
Vinyl Chloride	<500ug/l	06/08/98	05	VA3661
cis-1,2-Dichloroethene	<500ug/l	06/08/98	05	VA3661
trans-1,2-Dichloroethene	<500ug/l	06/08/98	05	VA3661
Trichloroethene	<500ug/l	06/08/98	05	VA3661
Tetrachloroethene	2100ug/l	06/08/98		VA3661

ID:14898089 Mat:Water ARMONK PRIVATE WELLS SITE AG1052698 1150H 05/26/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/08/98		VA3661
cis-1,2-Dichloroethene	<1ug/l	06/08/98		VA3661
trans-1,2-Dichloroethene	<1ug/l	06/08/98		VA3661
Trichloroethene	<1ug/l	06/08/98		VA3661
Tetrachloroethene	1ug/l	06/08/98		VA3661

D:14898090 Mat:Water ARMONK PRIVATE WELLS SITE ABF052698 1157H 05/26/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	447ug/l	06/10/98		ME1447
Total Zinc	592ug/l	06/10/98		ME1447

ID:14898091 Mat:Water ARMONK PRIVATE WELLS SITE EFF052698 1200H 05/26/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	226ug/l	06/10/98		ME1447
Total Zinc	13.4ug/l	06/10/98		ME1447
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/07/98		VA3661
cis-1,2-Dichloroethene	<1ug/l	06/07/98		VA3661
trans-1,2-Dichloroethene	<1ug/l	06/07/98		VA3661
Trichloroethene	<1ug/l	06/07/98		VA3661
Tetrachloroethene	<0.5ug/l	06/07/98		VA3661

DATE: 07/13/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 14898088
Client I.D.: ENVIROTRAC

APPROVAL: QSS
QC: PF Lab I.D.: 10170
Sampled by: Client

ID:14898092 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 05/26/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/07/98		VA3661
cis-1,2-Dichloroethene	<1ug/l	06/07/98		VA3661
trans-1,2-Dichloroethene	<1ug/l	06/07/98		VA3661
Trichloroethene	<1ug/l	06/07/98		VA3661
Tetrachloroethene	<0.5ug/l	06/07/98		VA3661

ID:14898093 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 05/28/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/07/98		VA3661
cis-1,2-Dichloroethene	<1ug/l	06/07/98		VA3661
trans-1,2-Dichloroethene	<1ug/l	06/07/98		VA3661
Trichloroethene	<1ug/l	06/07/98		VA3661
Tetrachloroethene	<0.5ug/l	06/07/98		VA3661

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
9 QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
10 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
11 ADL(AVERAGE DETECTION LIMITS)
12 PQL(PRACTICAL QUANTITATION LIMITS)
13 SAMPLE ANALYZED OVER HOLDING TIME
14 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
15 THE FILTERING PROCEDURE
16 SAMPLED BY ULI
17 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
18 WITHIN EXPERIMENTAL ERROR
19 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
20 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
21 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
22 INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
23 CALCULATION BASED ON DRY WEIGHT
24 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
25 LIMITS
26 UG/KG AS REC.D / UG/KG DRY WT
27 MG/KG AS REC.D / MG/KG DRY WT
28 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
29 SAMPLE DILUTED/BLANK CORRECTED
30 ND(NON-DETECTED)
31 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
32 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
35 ANALYZED BY METHOD OF STANDARD ADDITIONS
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
37 FIELD MEASURED PARAMETER TAKEN BY CLIENT
38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
39 NON-POTABLE WATER SOURCE
40 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
41 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
42 LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
43 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
44 PETROLEUM DISTILLATES
45 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
46 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
47 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
48 PER DAY OF CL2
49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
51 PER DAY LAS
52 RESULTS ARE REPORTED ON AN AS REC.D BASIS
53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
55 CREATING A THEORETICAL TCLP VALUE
56 METAL BY CONCENTRATION PROCEDURE
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

EnviroTrac

UPSTATE LABORATORIES CHAIN OF CUSTODY

(ASP-A)

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., NY

Site No. 3-60-005
Contract No. D003635

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovato (201) 703-1324

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
14898088	5/26/98	11:38	PC.	H ₂ O	(2)	HCl	CIN052698	8010	2 weeks
	5/26/98	11:35	PC.	H ₂ O	(1)	HNO ₃	CIN052698	6010	↓
89	5/26/98	11:50	PC.	H ₂ O	(2)	HCl	AG1052698	8010	
90	5/26/98	11:57	PC.	H ₂ O	(1)	HNO ₃	ABF052698	6010	
91	5/26/98	12:00	PC.	H ₂ O	(2)	HCl	EFF052698	8010	
	5/26/98	12:08	PC.	H ₂ O	(2)	HCl	EFF052698 (MS/MSD) !	8010	
	5/26/98	12:15	PC.	H ₂ O	(1)	HNO ₃	(USE FOR MS/DOPE) TFF EFF052698	6010	
92	5/26/98	15:00	PC.	H ₂ O	(1)	HCl	(u) TRIP BLANK	8010	
93	(6/28/98)				(1)		(HOLDING BLANK)	(8010) *	
Relinquished by: Time/Date:			Received By: Time/Date			Comments:			
PC. 5/26/98			C. Kenney 5/28/98 0920						
Relinquished by: Time/Date:			Received By: Time/Date						

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6/4/98

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JUL 16 1998

Buffalo (716) 649-2533
Rochester (716) 436-9070
New Jersey (201) 703-1324

July 14, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #15698058 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on June 5, 1998.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 6/25/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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New Jersey (201) 703-1324

July 13, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn Street
Deer Park, New York 11729

RE: Armonk Private Wells Site, Samples Collected June 4, 1998
Case Narrative for ULI Laboratory Report No. 15698058

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3664	Criteria were satisfied.

Mr. Ted Masters

July 13, 1998

Page 2

Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1463	Criteria were satisfied.
Zn	ME1463	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

File: JHENV-12.doc

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 07/14/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 15698058
Client I.D.: ENVIROTRAC

APPROVAL: *JFS*
QC: *PE*
Lab I.D.: 10170
Sampled by: Client

ID:15698058 Mat:Water ARMONK PRIVATE WELLS SITE CIN060498 0620H 06/04/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	287ug/l	06/18/98		ME1463
Total Zinc	65.2ug/l	06/18/98		ME1463
EPA Method 8010				
Vinyl Chloride	<500ug/l	06/08/98	05	VA3664
cis-1,2-Dichloroethene	<500ug/l	06/08/98	05	VA3664
trans-1,2-Dichloroethene	<500ug/l	06/08/98	05	VA3664
Trichloroethene	<500ug/l	06/08/98	05	VA3664
Tetrachloroethene	2000ug/l	06/08/98		VA3664

ID:15698059 Mat:Water ARMONK PRIVATE WELLS SITE AG1060498 0625H 06/04/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/08/98		VA3664
cis-1,2-Dichloroethene	<1ug/l	06/08/98		VA3664
trans-1,2-Dichloroethene	<1ug/l	06/08/98		VA3664
Trichloroethene	<1ug/l	06/08/98		VA3664
Tetrachloroethene	0.9ug/l	06/08/98		VA3664

ID:15698060 Mat:Water ARMONK PRIVATE WELLS SITE ABF060498 0630H 06/04/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	381ug/l	06/18/98		ME1463
Total Zinc	2210ug/l	06/18/98		ME1463

ID:15698061 Mat:Water ARMONK PRIVATE WELLS SITE EFF060498 0635H 06/04/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	<60ug/l	06/18/98		ME1463
Total Zinc	11.1ug/l	06/18/98		ME1463
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/08/98		VA3664
cis-1,2-Dichloroethene	<1ug/l	06/08/98		VA3664
trans-1,2-Dichloroethene	<1ug/l	06/08/98		VA3664
Trichloroethene	<1ug/l	06/08/98		VA3664
Tetrachloroethene	<0.5ug/l	06/08/98		VA3664

DATE: 07/14/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 15698058
Client I.D.: ENVIROTRAC

APPROVAL: *JLS*
QC: *PF* Lab I.D.: 10170
Sampled by: Client

ID:15698062 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 1130H 06/05/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
-----	-----	-----	---	-----
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/09/98		VA3664
cis-1,2-Dichloroethene	<1ug/l	06/09/98		VA3664
trans-1,2-Dichloroethene	<1ug/l	06/09/98		VA3664
Trichloroethene	<1ug/l	06/09/98		VA3664
Tetrachloroethene	<0.5ug/l	06/09/98		VA3664

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
9 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
10 ADL(AVERAGE DETECTION LIMITS)
11 PQL(PRACTICAL QUANTITATION LIMITS)
12 SAMPLE ANALYZED OVER HOLDING TIME
13 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
THE FILTERING PROCEDURE
14 SAMPLED BY ULI
15 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
WITHIN EXPERIMENTAL ERROR
16 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
17 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
18 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
19 CALCULATION BASED ON DRY WEIGHT
20 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
LIMITS
21 UG/KG AS REC.D / UG/KG DRY WT
22 MG/KG AS REC.D / MG/KG DRY WT
23 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
24 SAMPLE DILUTED/BLANK CORRECTED
25 ND(NON-DETECTED)
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27 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
28 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
29 ANALYZED BY METHOD OF STANDARD ADDITIONS
30 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
31 FIELD MEASURED PARAMETER TAKEN BY CLIENT
32 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
33 NON-POTABLE WATER SOURCE
34 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
35 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
PETROLEUM DISTILLATES
36 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
37 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
38 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
PER DAY OF CL2
39 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
40 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
PER DAY LAS
41 RESULTS ARE REPORTED ON AN AS REC.D BASIS
42 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
CREATING A THEORETICAL TCLP VALUE
43 METAL BY CONCENTRATION PROCEDURE
44 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

ULI Computer Input Form

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., NY

Site No. 3-60-005
Contract No. D003635

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovato (201) 703-1324

6/19 HDD

15698058-62

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
15698058	6/4/98	6:20	T.B.	(H ₂ O?)	(2)	HCl	CIN060498	8010	2 weeks
		6:20			(1)	HNO3	CIN060498	6010	
59		6:25			(2)	HCl	AG1060498	8010	
60		6:30			(1)	HNO3	ABF060498	6010	
61		6:35			(2)	HCl	EFF060498	8010	
		6:35			2	HCl	EFF060498 (MS/MSD)	8010	
		6:35			(1)	HNO3	(USE FOR MS/DUPE) PFF EFF060498	6010	
					1	HCL	TRIP BLANK	8010	
62	(6/5/98)	(1130) ^{ca}		(W)	(1)		(HOLDING BLANK)	(8010)	
Relinquished by: Time/Date:			Received By: Time/Date			Comments: w.			
T.E. Bj 1:00 6/4/98			C Kenney 6/5/98 08:44						
Relinquished by: Time/Date:			Received By: Time/Date						

MS/DUPE

6/8/98

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JUL 16 1998

Upstate Laboratories inc.

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Albany (518) 459-3134
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Buffalo (716) 649-2533
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July 14, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #16198163 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on June 10, 1998.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 6/30/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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Buffalo (716) 649-2533
Rochester (716) 436-9070
New Jersey (201) 703-1324

July 13, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, New York 11729

RE: Armonk Private Wells Site, Samples Collected June 8, 1998
Case Narrative for ULI Laboratory Report No. 16198163

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3683	The continuing calibration %RSD for Vinyl Chloride exceeded QC criteria.

Mr. Ted Masters
July 13, 1998
Page 2

Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1473	Criteria were satisfied.
Zn	ME1473	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

File: JHENV-13.doc

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 07/14/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 16198163
Client I.D.: ENVIROTRAC

APPROVAL: *OJS*
QC: *PF*
Lab I.D.: 10170
Sampled by: Client

ID:16198163 Mat:Water ARMONK PRIVATE WELLS SITE CIN060898 0715H 06/08/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	1030ug/l	06/25/98		ME1473
Total Zinc	77.8ug/l	06/25/98		ME1473
EPA Method 8010				
Vinyl Chloride	<500ug/l	06/16/98	05	VA3683
cis-1,2-Dichloroethene	<500ug/l	06/16/98	05	VA3683
trans-1,2-Dichloroethene	<500ug/l	06/16/98	05	VA3683
Trichloroethene	<500ug/l	06/16/98	05	VA3683
Tetrachloroethene	2400ug/l	06/16/98		VA3683

ID:16198164 Mat:Water ARMONK PRIVATE WELLS SITE AG1060898 0725H 06/08/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/16/98		VA3683
cis-1,2-Dichloroethene	<1ug/l	06/16/98		VA3683
trans-1,2-Dichloroethene	<1ug/l	06/16/98		VA3683
Trichloroethene	<1ug/l	06/16/98		VA3683
Tetrachloroethene	<0.5ug/l	06/16/98		VA3683

ID:16198165 Mat:Water ARMONK PRIVATE WELLS SITE ABF060898 0720H 06/08/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	365ug/l	06/25/98		ME1473
Total Zinc	1410ug/l	06/25/98		ME1473

ID:16198166 Mat:Water ARMONK PRIVATE WELLS SITE EFF060898 0730H 06/08/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	<60ug/l	06/25/98		ME1473
Total Zinc	14.0ug/l	06/25/98		ME1473
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/16/98		VA3683
cis-1,2-Dichloroethene	<1ug/l	06/16/98		VA3683
trans-1,2-Dichloroethene	<1ug/l	06/16/98		VA3683
Trichloroethene	<1ug/l	06/16/98		VA3683
Tetrachloroethene	<0.5ug/l	06/16/98		VA3683

DATE: 07/14/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 16198163
Client I.D.: ENVIROTRAC

APPROVAL: *QJS*
QC: *PF*
Lab I.D.: 10170
Sampled by: Client

ID:16198167 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 06/08/98

PARAMETERS -----	RESULTS -----	DATE ANAL. -----	KEY ---	FILE# -----
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/16/98		VA3683
cis-1,2-Dichloroethene	<1ug/l	06/16/98		VA3683
trans-1,2-Dichloroethene	<1ug/l	06/16/98		VA3683
Trichloroethene	<1ug/l	06/16/98		VA3683
Tetrachloroethene	<0.5ug/l	06/16/98		VA3683

ID:16198168 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 1015H 06/10/98

PARAMETERS -----	RESULTS -----	DATE ANAL. -----	KEY ---	FILE# -----
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/16/98		VA3683
cis-1,2-Dichloroethene	<1ug/l	06/16/98		VA3683
trans-1,2-Dichloroethene	<1ug/l	06/16/98		VA3683
Trichloroethene	<1ug/l	06/16/98		VA3683
Tetrachloroethene	<0.5ug/l	06/16/98		VA3683

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
9 QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
10 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
11 ADL (AVERAGE DETECTION LIMITS)
12 PQL (PRACTICAL QUANTITATION LIMITS)
13 SAMPLE ANALYZED OVER HOLDING TIME
14 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
15 THE FILTERING PROCEDURE
16 SAMPLED BY ULI
17 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
18 WITHIN EXPERIMENTAL ERROR
19 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
20 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
21 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
22 INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
23 CALCULATION BASED ON DRY WEIGHT
24 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
25 LIMITS
26 UG/KG AS REC.D / UG/KG DRY WT
27 MG/KG AS REC.D / MG/KG DRY WT
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29 SAMPLE DILUTED/BLANK CORRECTED
30 ND (NON-DETECTED)
31 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
32 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
35 ANALYZED BY METHOD OF STANDARD ADDITIONS
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND (NON-DETECTED)
37 FIELD MEASURED PARAMETER TAKEN BY CLIENT
38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
39 NON-POTABLE WATER SOURCE
40 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
41 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
42 LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
43 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
44 PETROLEUM DISTILLATES
45 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
46 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
47 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
48 PER DAY OF CL2
49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
51 PER DAY LAS
52 RESULTS ARE REPORTED ON AN AS REC.D BASIS
53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
55 CREATING A THEORETICAL TCLP VALUE
56 METAL BY CONCENTRATION PROCEDURE
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

16198163-168

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., NY

Site No. 3-60-005
Contract No. D003635

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovalo (201) 703-1324

6/24
ASP! GFA

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
16198163	6/8/98	7:15	T.B.	H ₂ O	2	HCl	CIN060898	8010	2 weeks
		7:15			1	HNO ₃	CIN060898	6010 (T-2, R)	
164		7:25			2	HCl	AG1060898	8010	
165		7:20			1	HNO ₃	ABF060898	6010	
166		7:30			2	HCl	EFF060898	8010	
		7:30			2	HCl	EFF060898 (MS/MSD)	8010	
		7:30			1	HNO ₃	EFF060838 (MS/DUPE) PFF	6010	
167	(6/8/98) ^{HO}				1		(u) TRIP BLANK	8010	
168	(6/10/98) ^{HO}	(1015) ^{HO}		(W)	1		(HOLDING BLANK) ^{HO}	(8010) ^{HO}	

ms/msd - dup

Relinquished by: <i>T. B. Jones</i>	Time/Date: <i>6/8/98</i>	Received By:	Time/Date:	Comments:
Relinquished by:	Time/Date:	<i>Heather Dana</i>	<i>6/10/98 0833</i>	

Upstate Laboratories inc.

6/15/98

RECEIVED
JUL 16 1998

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New Jersey (201) 703-1324

July 14, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #16898166 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on June 17, 1998.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala
Anthony J. Scala
Director

AJS/jk

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 7/9/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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New Jersey (201) 703-1324

July 13, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn Street
Deer Park, New York 11729

RE: Armonk Private Wells Site, Samples Collected June 15, 1998
Case Narrative for ULI Laboratory Report No. 16898166

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3700	The continuing calibration %RSD for Vinyl Chloride and trans-1,2-Dichloro-ethene exceeded QC criteria.

Mr. Ted Masters
July 13, 1998
Page 2

Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1490	Criteria were satisfied.
Zn	ME1490	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala
Anthony J. Scala
Director

File: JHENV-14.doc

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 07/14/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 16898166
Client I.D.: ENVIROTRAC

APPROVAL: *JIS*
QC: *PF*
Lab I.D.: 10170
Sampled by: Client

ID:16898166 Mat:Water ARMONK PRIVATE WELLS SITE CIN060898 0715H 06/15/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	842ug/l	07/02/98		ME1490
Total Zinc	67.2ug/l	07/02/98		ME1490
EPA Method 8010				
Vinyl Chloride	<500ug/l	06/22/98	05	VA3700
cis-1,2-Dichloroethene	<500ug/l	06/22/98	05	VA3700
trans-1,2-Dichloroethene	<500ug/l	06/22/98	05	VA3700
Trichloroethene	<500ug/l	06/22/98	05	VA3700
Tetrachloroethene	1700ug/l	06/22/98		VA3700

ID:16898167 Mat:Water ARMONK PRIVATE WELLS SITE AG1060898 0725H 06/15/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/22/98		VA3700
cis-1,2-Dichloroethene	<1ug/l	06/22/98		VA3700
trans-1,2-Dichloroethene	<1ug/l	06/22/98		VA3700
Trichloroethene	<1ug/l	06/22/98		VA3700
Tetrachloroethene	0.60ug/l	06/22/98		VA3700

ID:16898168 Mat:Water ARMONK PRIVATE WELLS SITE ABF060898 0720H 06/15/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	1030ug/l	07/02/98		ME1490
Total Zinc	708ug/l	07/02/98		ME1490

ID:16898169 Mat:Water ARMONK PRIVATE WELLS SITE EFF060898 0730H 06/15/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	<60ug/l	07/02/98		ME1490
Total Zinc	17.8ug/l	07/02/98		ME1490
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/22/98		VA3700
cis-1,2-Dichloroethene	<1ug/l	06/22/98		VA3700
trans-1,2-Dichloroethene	<1ug/l	06/22/98		VA3700
Trichloroethene	<1ug/l	06/22/98		VA3700
Tetrachloroethene	<0.5ug/l	06/22/98		VA3700

DATE: 07/14/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 16898166
Client I.D.: ENVIROTRAC

APPROVAL: *J/S*
QC: *PF*
Lab I.D.: 10170
Sampled by: Client

ID:16898170 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 06/15/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/22/98		VA3700
cis-1,2-Dichloroethene	<1ug/l	06/22/98		VA3700
trans-1,2-Dichloroethene	<1ug/l	06/22/98		VA3700
Trichloroethene	<1ug/l	06/22/98		VA3700
Tetrachloroethene	<0.5ug/l	06/22/98		VA3700

ID:16898171 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 1800H 06/17/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/22/98		VA3700
cis-1,2-Dichloroethene	<1ug/l	06/22/98		VA3700
trans-1,2-Dichloroethene	<1ug/l	06/22/98		VA3700
Trichloroethene	<1ug/l	06/22/98		VA3700
Tetrachloroethene	<0.5ug/l	06/22/98		VA3700

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
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8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
9 QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
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14 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
15 THE FILTERING PROCEDURE
16 SAMPLED BY ULI
17 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
18 WITHIN EXPERIMENTAL ERROR
19 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
20 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
21 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
22 INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
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24 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
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30 ND(NON-DETECTED)
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32 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
35 ANALYZED BY METHOD OF STANDARD ADDITIONS
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
37 FIELD MEASURED PARAMETER TAKEN BY CLIENT
38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
39 NON-POTABLE WATER SOURCE
40 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
41 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
42 LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
43 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
44 PETROLEUM DISTILLATES
45 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
46 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
47 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
48 PER DAY OF CL2
49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
51 PER DAY LAS
52 RESULTS ARE REPORTED ON AN AS REC.D BASIS
53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
55 CREATING A THEORETICAL TCLP VALUE
56 METAL BY CONCENTRATION PROCEDURE
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., NY

Site No. 3-60-005
Contract No. D003635

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovalo (201) 703-1324

7/1
ASP! Cat

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
166	6/15/98	7:15	T.B.	H ₂ O	2	HCI	CIN060898	8010	2 weeks
		7:15			1	HNO3	CIN060898	6010	
167		7:25			2	HCI	AG1060898	8010	
168		7:20			1	HNO3	ABF060898	6010	
169		7:30			2	HCI	EFF060898	8010	
		7:30			2	HCI	EFF060898 (MS/MSD)	8010	
		7:30			1	HNO3	EFF060898 (MS/DUPE)	6010	
170	6/15/98				1		(ULI) TRIP BLANK	8010	
171	6/17/98	(1800) ^{uo}		(w)	1		(HOLDING BLANK) ^{uo}	(8010)	
Relinquished by: <i>Ted Masters</i> Time/Date: 6/15/98			Received By: <i>Heather Dow</i> Time/Date: 6/17/98 0810			Comments:			

ms/ms
D

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Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

August 12, 1998
RECEIVED
AUG 14 1998

Re: Analysis Report #17598063 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on June 24, 1998.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 7/17/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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New Jersey (201) 703-1324

August 10, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, New York 11729

RE: Armonk Private Wells Site, Samples Collected June 22, 1998
Case Narrative for ULI Laboratory Report No. 17598063

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3714	The continuing calibration %RSD exceeded criteria for trans-1,2-Dichloroethene however, the reference sample and all remaining batch QC were satisfied.
	VA3717	Criteria were satisfied.

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Buffalo (716) 649-2533

Rochester (716) 436-9070

New Jersey (201) 703-1324

FAX TRANSMISSION

TO: Ted Masters
OF: EnviroTrac
FAX NO.: (914)-273-0238/(516)-586-1879
RE: Analytical Results
Armonk Private Wells Site
{Samples collected on June 22, 1998}

FROM: Peter Fricano
DATE: July 17, 1998
TIME: 9:20 AM
NUMBER OF PAGES (including this sheet): 4

MESSAGE:

Please find attached results for the above project.

Should you have any questions, please feel free to call me.

Thank you,

Peter Fricano.

*If you do not receive all pages or if portions are illegible,
please call (315) 437-0255 for Retransmission*

DATE: 08/12/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 17598063
Client I.D.: ENVIROTRAC

APPROVAL: *ajs*
QC: *PF* Lab I.D.: 10170
Sampled by: Client

ID:17598063 Mat:Water ARMONK PRIVATE WELLS SITE EW1062298 1030H 06/22/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<500ug/l	06/29/98	05	VA3714
cis-1,2-Dichloroethene	<500ug/l	06/29/98	05	VA3714
trans-1,2-Dichloroethene	<500ug/l	06/29/98	05	VA3714
Trichloroethene	<500ug/l	06/29/98	05	VA3714
Tetrachloroethene	3500ug/l	06/29/98		VA3714

ID:17598064 Mat:Water ARMONK PRIVATE WELLS SITE EW2062298 1035H 06/22/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<20ug/l	06/30/98	05	VA3717
cis-1,2-Dichloroethene	<20ug/l	06/30/98	05	VA3717
trans-1,2-Dichloroethene	<20ug/l	06/30/98	05	VA3717
Trichloroethene	<20ug/l	06/30/98	05	VA3717
Tetrachloroethene	600ug/l	06/30/98		VA3717

ID:17598065 Mat:Water ARMONK PRIVATE WELLS SITE EW3062298 1040H 06/22/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<100ug/l	06/29/98	05	VA3714
cis-1,2-Dichloroethene	<100ug/l	06/29/98	05	VA3714
trans-1,2-Dichloroethene	<100ug/l	06/29/98	05	VA3714
Trichloroethene	<100ug/l	06/29/98	05	VA3714
Tetrachloroethene	760ug/l	06/29/98		VA3714

ID:17598066 Mat:Water ARMONK PRIVATE WELLS SITE CIN062298 1045H 06/22/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	340ug/l	07/09/98		ME149
Total Zinc	15.5ug/l	07/09/98		ME1499

DATE: / /

Upstate Laboratories, Inc.
 Analysis Results
 Report Number: 17598063
 Client I.D.: ENVIROTRAC

APPROVAL: _ _ _ _
 QC: _ _ _ _ Lab I.D.: 10170
 Sampled by: Client

ID:17598063 Mat:Water ARMONK PRIVATE WELLS SITE EW1062298 1030H 06/22/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<500ug/l	06/29/98	05	VA3714
cis-1,2-Dichloroethene	<500ug/l	06/29/98	05	VA3714
trans-1,2-Dichloroethene	<500ug/l	06/29/98	05	VA3714
Trichloroethene	<500ug/l	06/29/98	05	VA3714
Tetrachloroethene	3500ug/l	06/29/98		VA3714

ID:17598064 Mat:Water ARMONK PRIVATE WELLS SITE EW2062298 1035H 06/22/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<20ug/l	06/30/98	05	VA3717
cis-1,2-Dichloroethene	<20ug/l	06/30/98	05	VA3717
trans-1,2-Dichloroethene	<20ug/l	06/30/98	05	VA3717
Trichloroethene	<20ug/l	06/30/98	05	VA3717
Tetrachloroethene	600ug/l	06/30/98		VA3717

ID:17598065 Mat:Water ARMONK PRIVATE WELLS SITE EW3062298 1040H 06/22/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<100ug/l	06/29/98	05	VA3714
cis-1,2-Dichloroethene	<100ug/l	06/29/98	05	VA3714
trans-1,2-Dichloroethene	<100ug/l	06/29/98	05	VA3714
Trichloroethene	<100ug/l	06/29/98	05	VA3714
Tetrachloroethene	760ug/l	06/29/98		VA3714

ID:17598066 Mat:Water ARMONK PRIVATE WELLS SITE CIN062298 1045H 06/22/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	340ug/l	07/09/98		ME1499
Total Zinc	15.5ug/l	07/09/98		ME1499

DATE: / /

Upstate Laboratories, Inc.
 Analysis Results
 Report Number: 17598063
 Client I.D.: ENVIROTRAC

APPROVAL: - - - -
 QC: - - - - Lab I.D.: 10170
 Sampled by: Client

ID:17598067 Mat:Water ARMONK PRIVATE WELLS SITE AG1062298 1050H 06/22/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/29/98		VA3714
cis-1,2-Dichloroethene	<1ug/l	06/29/98		VA3714
trans-1,2-Dichloroethene	<1ug/l	06/29/98		VA3714
Trichloroethene	<1ug/l	06/29/98		VA3714
Tetrachloroethene	<0.5ug/l	06/29/98		VA3714

ID:17598068 Mat:Water ARMONK PRIVATE WELLS SITE EFF062298 1055H 06/22/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	<60ug/l	07/09/98		ME1499
Total Zinc	99.7ug/l	07/09/98		ME1499
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/29/98		VA3714
cis-1,2-Dichloroethene	<1ug/l	06/29/98		VA3714
trans-1,2-Dichloroethene	<1ug/l	06/29/98		VA3714
Trichloroethene	<1ug/l	06/29/98		VA3714
Tetrachloroethene	<0.5ug/l	06/29/98		VA3714

ID:17598069 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 06/22/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/29/98		VA3714
cis-1,2-Dichloroethene	<1ug/l	06/29/98		VA3714
trans-1,2-Dichloroethene	<1ug/l	06/29/98		VA3714
Trichloroethene	<1ug/l	06/29/98		VA3714
Tetrachloroethene	<1ug/l	06/29/98		VA3714

ID:17598070 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 06/24/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/29/98		VA3714
cis-1,2-Dichloroethene	<1ug/l	06/29/98		VA3714
trans-1,2-Dichloroethene	<1ug/l	06/29/98		VA3714

DATE: / /

Upstate Laboratories, Inc.
Analysis Results
Report Number: 17598063
Client I.D.: ENVIROTRAC

APPROVAL: _ _ _ _
QC: _ _ _ _ Lab I.D.: 10170
Sampled by: Client

ID:17598070 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 06/24/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Trichloroethene	<1ug/l	06/29/98		VA3714
Tetrachloroethene	<1ug/l	06/29/98		VA3714

DATE: 08/12/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 17598063
Client I.D.: ENVIROTRAC

APPROVAL: *AS*
QC: *PF* Lab I.D.: 10170
Sampled by: Client

ID:17598067 Mat:Water ARMONK PRIVATE WELLS SITE AG1062298 1050H 06/22/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/29/98		VA3714
cis-1,2-Dichloroethene	<1ug/l	06/29/98		VA3714
trans-1,2-Dichloroethene	<1ug/l	06/29/98		VA3714
Trichloroethene	<1ug/l	06/29/98		VA3714
Tetrachloroethene	<0.5ug/l	06/29/98		VA3714

ID:17598068 Mat:Water ARMONK PRIVATE WELLS SITE EFF062298 1055H 06/22/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	<60ug/l	07/09/98		ME1499
Total Zinc	99.7ug/l	07/09/98		ME1499
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/29/98		VA3714
cis-1,2-Dichloroethene	<1ug/l	06/29/98		VA3714
trans-1,2-Dichloroethene	<1ug/l	06/29/98		VA3714
Trichloroethene	<1ug/l	06/29/98		VA3714
Tetrachloroethene	<0.5ug/l	06/29/98		VA3714

ID:17598069 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 06/22/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/29/98		VA3714
cis-1,2-Dichloroethene	<1ug/l	06/29/98		VA3714
trans-1,2-Dichloroethene	<1ug/l	06/29/98		VA3714
Trichloroethene	<1ug/l	06/29/98		VA3714
Tetrachloroethene	<0.5ug/l	06/29/98		VA3714

DATE: 08/12/98

Opstate Laboratories, Inc.
Analysis Results
Report Number: 17598063
Client I.D.: ENVIROTRAC

APPROVAL: *CJS*
QC: *PF* Lab I.D.: 10170
Sampled by: Client

ID:17598070 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 06/24/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	06/29/98		VA3714
cis-1,2-Dichloroethene	<1ug/l	06/29/98		VA3714
trans-1,2-Dichloroethene	<1ug/l	06/29/98		VA3714
Trichloroethene	<1ug/l	06/29/98		VA3714
Tetrachloroethene	<0.5ug/l	06/29/98		VA3714

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
9 QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
10 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
11 ADL(AVERAGE DETECTION LIMITS)
12 PQL(PRACTICAL QUANTITATION LIMITS)
13 SAMPLE ANALYZED OVER HOLDING TIME
14 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
15 THE FILTERING PROCEDURE
16 SAMPLED BY ULI
17 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
18 WITHIN EXPERIMENTAL ERROR
19 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
20 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
21 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMIC
22 INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
23 CALCULATION BASED ON DRY WEIGHT
24 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
25 LIMITS
26 UG/KG AS REC.D / UG/KG DRY WT
27 MG/KG AS REC.D / MG/KG DRY WT
28 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
29 SAMPLE DILUTED/BLANK CORRECTED
30 ND(NON-DETECTED)
31 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
32 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
35 ANALYZED BY METHOD OF STANDARD ADDITIONS
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
37 FIELD MEASURED PARAMETER TAKEN BY CLIENT
38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
39 NON-POTABLE WATER SOURCE
40 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
41 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
42 LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
43 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
44 PETROLEUM DISTILLATES
45 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
46 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
47 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL₂) / POUNDS (LBS)
48 PER DAY OF CL₂
49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
51 PER DAY LAS
52 RESULTS ARE REPORTED ON AN AS REC.D BASIS
53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
55 CREATING A THEORETICAL TCLP VALUE
56 METAL BY CONCENTRATION PROCEDURE
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., NY

Site No. 3-60-005
Contract No. D003635

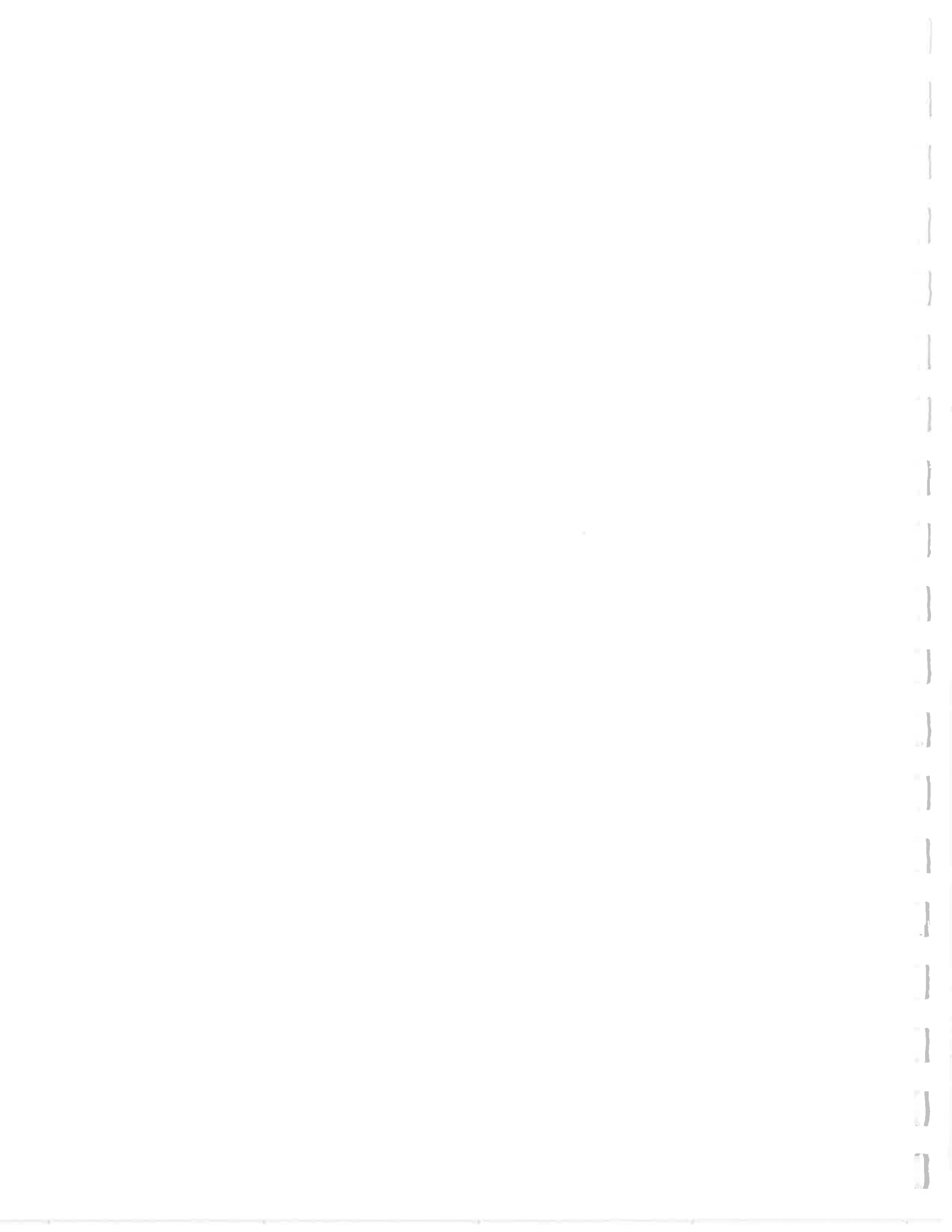
Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovato (201) 703-1324

ASP!
Category A:

7/9

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
17598063	6/22/98	10:30	T.B.	H2O	(2)	HCl	EW1062298	8010	2 weeks.
64	6/22/98	10:35	T.B.	H2O	(2)	HCl	EW2062298	8010 (8010)	↓
65	6/22/98	10:40	T.B.	H2O	(2)	HCl	EW3062298	8010	
66	6/22/98	10:45	T.B.	H2O	(1)	HNO3	CIN062298	6010	
67	6/22/98	10:50	T.B.	H2O	(2)	HCl	AG1062298	8010	
68	6/22/98	10:55	T.B.	H2O	(2)	HCl	EFF062298	8010	
	6/22/98	10:55	T.B.	H2O	(1)	HNO3	EFF060898 ^(UL)	6010	
	6/22/98	10:55	T.B.	H2O	(2)	HCl	EFF062298 (MS/MSD)	8010	
69	(6/22/98) ^{MS}			(w)	(1)		(UL) TRIP BLANK	8010	
70	(6/24/98) ^{MS}			(w)	(1)		(HOLDING BLANK) ^{MS}	(8010) ^{MS}	
Relinquished by: <u>T. Masters</u> Time/Date: <u>6/23/98 5:30</u>			Received By: <u>Heather Dove</u> Time/Date: <u>6/24/98 0820</u>			Comments:			

ms/msd-
DUPE



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August 12, 1998

RECEIVED
AUG 14 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #18298072 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on July 1, 1998.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 7/23/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

Upstate Laboratories inc.

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Buffalo (716) 649-253

Rochester (716) 436-9070

New Jersey (201) 703-132

August 11, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, New York 11729

RE: Armonk Private Wells Site, Samples Collected June 29 and July 1, 1998
Case Narrative for ULI Laboratory Report No. 18298072

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3725	Criteria were satisfied.

Mr. Ted Masters
August 11, 1998
Page 2


Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1517	Criteria were satisfied.
Zn	ME1517	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 08/12/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 18298072
Client I.D.: ENVIROTRAC

APPROVAL: *QJS*
QC: *PF* - Lab I.D.: 10170
Sampled by: Client

ID:18298072 Mat:Water ARMONK PRIVATE WELLS SITE EW1062998 1100H 06/29/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	2030ug/l	07/21/98		ME1517
Total Zinc	105ug/l	07/21/98		ME1517
EPA Method 8010				
Vinyl Chloride	<500ug/l	07/02/98	05	VA3725
cis-1,2-Dichloroethene	<500ug/l	07/02/98	05	VA3725
trans-1,2-Dichloroethene	<500ug/l	07/02/98	05	VA3725
Trichloroethene	<500ug/l	07/02/98	05	VA3725
Tetrachloroethene	5800ug/l	07/02/98		VA3725

ID:18298073 Mat:Water ARMONK PRIVATE WELLS SITE EW2062998 1110H 06/29/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	25,900ug/l	07/21/98		ME1517
Total Zinc	90.0ug/l	07/21/98		ME1517
EPA Method 8010				
Vinyl Chloride	<50ug/l	07/02/98	05	VA3725
cis-1,2-Dichloroethene	<50ug/l	07/02/98	05	VA3725
trans-1,2-Dichloroethene	<50ug/l	07/02/98	05	VA3725
Trichloroethene	<50ug/l	07/02/98	05	VA3725
Tetrachloroethene	1100ug/l	07/02/98		VA3725

ID:18298074 Mat:Water ARMONK PRIVATE WELLS SITE EW3062998 1120H 06/29/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	3490ug/l	07/21/98		ME1517
Total Zinc	88.2ug/l	07/21/98		ME1517
EPA Method 8010				
Vinyl Chloride	<100ug/l	07/02/98	05	VA3725
cis-1,2-Dichloroethene	<100ug/l	07/02/98	05	VA3725
trans-1,2-Dichloroethene	<100ug/l	07/02/98	05	VA3725
Trichloroethene	<100ug/l	07/02/98	05	VA3725
Tetrachloroethene	750ug/l	07/02/98		VA3725

DATE: 08/12/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 18298072
Client I.D.: ENVIROTRAC

APPROVAL: AS
QC: PF Lab I.D.: 10170
Sampled by: Client

ID:18298075 Mat:Water ARMONK PRIVATE WELLS SITE CIN062998 1130H 06/29/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	225ug/l	07/21/98		ME1517
Total Zinc	36.8ug/l	07/21/98		ME1517
EPA Method 8010				
Vinyl Chloride	<200ug/l	07/02/98	05	VA3725
cis-1,2-Dichloroethene	<200ug/l	07/02/98	05	VA3725
trans-1,2-Dichloroethene	<200ug/l	07/02/98	05	VA3725
Trichloroethene	<200ug/l	07/02/98	05	VA3725
Tetrachloroethene	1800ug/l	07/02/98		VA3725

ID:18298076 Mat:Water ARMONK PRIVATE WELLS SITE ABF062998 1200H 06/29/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	328ug/l	07/21/98		ME1517
Total Zinc	413ug/l	07/21/98		ME1517
EPA Method 8010				
Vinyl Chloride	<500ug/l	07/02/98	05	VA3725
cis-1,2-Dichloroethene	<500ug/l	07/02/98	05	VA3725
trans-1,2-Dichloroethene	<500ug/l	07/02/98	05	VA3725
Trichloroethene	<500ug/l	07/02/98	05	VA3725
Tetrachloroethene	1300ug/l	07/02/98		VA3725

ID:18298077 Mat:Water ARMONK PRIVATE WELLS SITE INBED1062998 1210H 06/29/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	120ug/l	07/21/98		ME1517
Total Zinc	18.6ug/l	07/21/98		ME1517
EPA Method 8010				
Vinyl Chloride	<1ug/l	07/02/98		VA3725
cis-1,2-Dichloroethene	<1ug/l	07/02/98		VA3725
trans-1,2-Dichloroethene	<1ug/l	07/02/98		VA3725
Trichloroethene	<1ug/l	07/02/98		VA3725
Tetrachloroethene	<0.5ug/l	07/07/98		VA3725

DATE: 08/12/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 18298072
Client I.D.: ENVIROTRAC

APPROVAL: *QSS*
QC: *PF*
Lab I.D.: 10170
Sampled by: Client

ID:18298078 Mat:Water ARMONK PRIVATE WELLS SITE INBED2062998 1220H 06/29/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	81.5ug/l	07/21/98		ME1517
Total Zinc	13.4ug/l	07/21/98		ME1517
EPA Method 8010				
Vinyl Chloride	<1ug/l	07/02/98		VA3725
cis-1,2-Dichloroethene	<1ug/l	07/02/98		VA3725
trans-1,2-Dichloroethene	<1ug/l	07/02/98		VA3725
Trichloroethene	<1ug/l	07/02/98		VA3725
Tetrachloroethene	<0.5ug/l	07/02/98		VA3725

ID:18298079 Mat:Water ARMONK PRIVATE WELLS SITE AG1062998 1150H 06/29/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	226ug/l	07/21/98		ME1517
Total Zinc	619ug/l	07/21/98		ME1517
EPA Method 8010				
Vinyl Chloride	<1ug/l	07/02/98		VA3725
cis-1,2-Dichloroethene	<1ug/l	07/02/98		VA3725
trans-1,2-Dichloroethene	<1ug/l	07/02/98		VA3725
Trichloroethene	<1ug/l	07/02/98		VA3725
Tetrachloroethene	0.80ug/l	07/02/98		VA3725

ID:18298080 Mat:Water ARMONK PRIVATE WELLS SITE EFF062998 1140H 06/29/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	73.5ug/l	07/21/98		ME1517
Total Zinc	14.1ug/l	07/21/98		ME1517
EPA Method 8010				
Vinyl Chloride	<1ug/l	07/02/98		VA3725
cis-1,2-Dichloroethene	<1ug/l	07/02/98		VA3725
trans-1,2-Dichloroethene	<1ug/l	07/02/98		VA3725
Trichloroethene	<1ug/l	07/02/98		VA3725
Tetrachloroethene	<0.5ug/l	07/02/98		VA3725

DATE: 08/12/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 18298072
Client I.D.: ENVIROTRAC

APPROVAL: AS
QC: PF Lab I.D.: 10170
Sampled by: Client

ID:18298081 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 06/29/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	07/02/98		VA3725
cis-1,2-Dichloroethene	<1ug/l	07/02/98		VA3725
trans-1,2-Dichloroethene	<1ug/l	07/02/98		VA3725
Trichloroethene	<1ug/l	07/02/98		VA3725
Tetrachloroethene	<0.5ug/l	07/02/98		VA3725

DATE: 08/12/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 18298072
Client I.D.: ENVIROTRAC

APPROVAL: QJS
QC: PF Lab I.D.: 10170
Sampled by: Client

D:18298148 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 07/01/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	07/02/98		VA3725
cis-1,2-Dichloroethene	<1ug/l	07/02/98		VA3725
trans-1,2-Dichloroethene	<1ug/l	07/02/98		VA3725
Trichloroethene	<1ug/l	07/02/98		VA3725
Tetrachloroethene	<0.5ug/l	07/02/98		VA3725

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
9 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
10 ADL(AVERAGE DETECTION LIMITS)
11 PQL(PRACTICAL QUANTITATION LIMITS)
12 SAMPLE ANALYZED OVER HOLDING TIME
13 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
THE FILTERING PROCEDURE
14 SAMPLED BY ULI
15 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
WITHIN EXPERIMENTAL ERROR
16 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
17 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
18 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
19 CALCULATION BASED ON DRY WEIGHT
20 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
LIMITS
21 UG/KG AS REC.D / UG/KG DRY WT
22 MG/KG AS REC.D / MG/KG DRY WT
23 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
24 SAMPLE DILUTED/BLANK CORRECTED
25 ND(NON-DETECTED)
26 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
27 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
28 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
29 ANALYZED BY METHOD OF STANDARD ADDITIONS
30 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
31 FIELD MEASURED PARAMETER TAKEN BY CLIENT
32 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
33 NON-POTABLE WATER SOURCE
34 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
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36 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
37 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
38 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
PER DAY OF CL2
39 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
40 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
PER DAY LAS
41 RESULTS ARE REPORTED ON AN AS REC.D BASIS
42 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
CREATING A THEORETICAL TCLP VALUE
43 METAL BY CONCENTRATION PROCEDURE
44 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., NY

Site No. 3-60-005
Contract No. D003635

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovato (201) 703-1324

7/16

ASPI

Category A

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
18298072	6/29/98	1100	T.B.	H2O	3	HCl/HNO3	EW1062998	8010/6010	2 WKS
73		1110			3	HCl/HNO3	EW2062998	8010/6010	
74		1120			3	HCl/HNO3	EW3062998	8010/6010	
75		1130			3	HCl/HNO3	CIN062998	8010/6010	
76		1200			3	HCl/HNO3	ABF 062998	8010/6010	
77		1210			3	HCl/HNO3	INBED1062998	8010/6010	
78		1220			3	HCl/HNO3	INBED2062998	8010/6010	
79		1150			3	HCl/HNO3	AG1062998	8010/6010	
80		1140			3	HCl/HNO3	EFF062998	8010/6010	
80					3	HCl/HNO3	EFF062998	8010/6010	
80					2	HCl/HNO3	EFF062998 (MS/MSD)	8010/6010	
81					2	HCL	(w) TRIP BLANK	8010	
18298148	(7/1/98)			(w)			(HOLDING BLANK)	(2010)	
Relinquished by: <i>[Signature]</i> Time/Date: 3:30/6/30/98			Received By: Time/Date			Comments:			
Relinquished by: Time/Date:			Received By: <i>Heather Down</i> 7/1/98 0810						

MS/MSD - DUPE



Upstate Laboratories inc.

Shipping: 5034 Corporate Dr. • E. Syracuse, NY 13057-1017 • (315) 437-0255 • Fax (315) 437-1209

Mailing: Box 289 • Syracuse, NY 13206

Albany (518) 459-3134

Binghamton (607) 724-0478

Buffalo (716) 649-2533

Rochester (716) 436-9070

New Jersey (201) 703-1324

August 12, 1998

RECEIVED
AUG 14 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #18998085 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on July 8, 1998.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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New Jersey (201) 703-1320

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, New York 11729

August 11, 1998

RE: Armonk Private Wells Site, Samples Collected July 6, 1998
Case Narrative for ULI Laboratory Report No. 18998085

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3748	The continuing calibration %RSD exceeded criteria for trans-1,2-Dichloroethene however, the reference sample and all remaining batch QC were satisfied.

DATE: 08/12/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 18998085
Client I.D.: ENVIROTRAC

APPROVAL: *ASB*
QC: *WM* Lab I.D.: 10170
Sampled by: Client

ID:18998085 Mat:Water ARMONK PRIVATE WELLS SITE EFF070698 0715H 07/06/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	<60ug/l	07/23/98		ME1522
Total Zinc	18.6ug/l	07/23/98		ME1522
EPA Method 8010				
Vinyl Chloride	<1ug/l	07/14/98		VA3748
cis-1,2-Dichloroethene	<1ug/l	07/14/98		VA3748
trans-1,2-Dichloroethene	<1ug/l	07/14/98		VA3748
Trichloroethene	<1ug/l	07/14/98		VA3748
Tetrachloroethene	<0.5ug/l	07/14/98		VA3748

ID:18998086 Mat:Water ARMONK PRIVATE WELLS SITE CIN070698 0730H 07/06/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	544ug/l	07/23/98		ME1522
Total Zinc	81.4ug/l	07/23/98		ME1522
EPA Method 8010				
Vinyl Chloride	<200ug/l	07/14/98	05	VA3748
cis-1,2-Dichloroethene	<200ug/l	07/14/98	05	VA3748
trans-1,2-Dichloroethene	<200ug/l	07/14/98	05	VA3748
Trichloroethene	<200ug/l	07/14/98	05	VA3748
Tetrachloroethene	1100ug/l	07/14/98		VA3748

ID:18998087 Mat:Water ARMONK PRIVATE WELLS SITE AG1070698 0720H 07/06/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	07/14/98		VA3748
cis-1,2-Dichloroethene	<1ug/l	07/14/98		VA3748
trans-1,2-Dichloroethene	<1ug/l	07/14/98		VA3748
Trichloroethene	<1ug/l	07/14/98		VA3748
Tetrachloroethene	<0.5ug/l	07/14/98		VA3748

ID:18998088 Mat:Water ARMONK PRIVATE WELLS SITE ABF070698 0725H 07/06/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	791ug/l	07/23/98		ME1522
Total Zinc	852ug/l	07/23/98		ME1522

DATE: 08/12/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 18998085
Client I.D.: ENVIROTRAC

APPROVAL: QJS
QC: pm Lab I.D.: 10170
Sampled by: Client

ID:18998089 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 07/06/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
-----	-----	-----	---	-----
EPA Method 8010				
Vinyl Chloride	<1ug/l	07/14/98		VA3748
cis-1,2-Dichloroethene	<1ug/l	07/14/98		VA3748
trans-1,2-Dichloroethene	<1ug/l	07/14/98		VA3748
Trichloroethene	<1ug/l	07/14/98		VA3748
Tetrachloroethene	<0.5ug/l	07/14/98		VA3748

ID:18998090 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 1100H 07/08/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
-----	-----	-----	---	-----
EPA Method 8010				
Vinyl Chloride	<1ug/l	07/14/98		VA3748
cis-1,2-Dichloroethene	<1ug/l	07/14/98		VA3748
trans-1,2-Dichloroethene	<1ug/l	07/14/98		VA3748
Trichloroethene	<1ug/l	07/14/98		VA3748
Tetrachloroethene	<0.5ug/l	07/14/98		VA3748

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
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15 THE FILTERING PROCEDURE
16 SAMPLED BY ULI
17 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
18 WITHIN EXPERIMENTAL ERROR
19 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
20 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
21 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
22 INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
23 CALCULATION BASED ON DRY WEIGHT
24 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
25 LIMITS
26 UG/KG AS REC.D / UG/KG DRY WT
27 MG/KG AS REC.D / MG/KG DRY WT
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29 SAMPLE DILUTED/BLANK CORRECTED
30 ND(NON-DETECTED)
31 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
32 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
35 ANALYZED BY METHOD OF STANDARD ADDITIONS
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
37 FIELD MEASURED PARAMETER TAKEN BY CLIENT
38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
39 NON-POTABLE WATER SOURCE
40 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
41 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
42 LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
43 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
44 PETROLEUM DISTILLATES
45 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
46 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
47 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
48 PER DAY OF CL2
49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
51 PER DAY LAS
52 RESULTS ARE REPORTED ON AN AS REC.D BASIS
53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
55 CREATING A THEORETICAL TCLP VALUE
56 METAL BY CONCENTRATION PROCEDURES
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., NY

Site No. 3-60-005
Contract No. D003635

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovato (201) 703-1324

7/22

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround	
18998085	7/6/98	7:15	T.B.	H2O	3	HCl/HNO3	EFF070698	8010/6010	2 weeks	
85	↓	7:15	T.B.	H2O	2.3	HCl/HNO3	MS/MSD	8010/6010	↓	
86		7:30	T.B.	H2O	3	HCl/HNO3	CIN070698	8010/6010		
87		7:20	T.B.	H2O	2	HCl	AG1070698	8010		
88		7:25	T.B.	H2O	1	HNO3	ABF070698	6010		
89					H2O	1	HCL	(U1) Trip Blank		8010
90		(7/8/98)	(1100)		(w)	1		(HOLDING BLANK) ^{no}		(8010)

ASPI
Category A #1
MS/MSD - DUPE

Relinquished by: <u>T.B.</u> Time/Date: <u>8:30 7/7/98</u>	Received By: _____ Time/Date: _____	Comments: _____ _____ _____
Relinquished by: _____ Time/Date: _____	Received By: <u>Heather Dora</u> Time/Date: <u>7/8/98 0820</u>	

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Buffalo (716) 649-2533
Rochester (716) 436-9070
New Jersey (201) 703-1324

August 26, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

RECEIVED
AUG 31 1998

Re: Analysis Report #19698041 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on July 15, 1998.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala
Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 8/6/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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Rochester (716) 436-9070
New Jersey (201) 703-1324

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, New York 11729

August 25, 1998

RE: Armonk Private Wells Site, Samples Collected July 13, 1998
Case Narrative for ULI Laboratory Report No. 19698041

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3768	Criteria were satisfied.

Mr. Ted Masters
August 25, 1998
Page 2

Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1543	Criteria were satisfied.
Zn	ME1543	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

KMENV-1doc

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 08/26/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 19698041
Client I.D.: ENVIROTRAC

APPROVAL: *AJS*
QC: *PF* Lab I.D.: 10170
Sampled by: Client

ID:19698041 Mat:Water ARMONK PRIVATE WELLS SITE EFF071398 0650H 07/13/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	<60ug/l	08/03/98		ME1543
Total Zinc	11.1ug/l	08/03/98		ME1543
EPA Method 8010				
Vinyl Chloride	<1ug/l	07/22/98		VA3768
cis-1,2-Dichloroethene	<1ug/l	07/22/98		VA3768
trans-1,2-Dichloroethene	<1ug/l	07/22/98		VA3768
Trichloroethene	<1ug/l	07/22/98		VA3768
Tetrachloroethene	<0.5ug/l	07/22/98		VA3768

ID:19698042 Mat:Water ARMONK PRIVATE WELLS SITE CIN071398 0705H 07/13/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	249ug/l	08/03/98		ME1543
Total Zinc	20.4ug/l	08/03/98		ME1543
EPA Method 8010				
Vinyl Chloride	<200ug/l	07/22/98	05	VA3768
cis-1,2-Dichloroethene	<200ug/l	07/22/98	05	VA3768
trans-1,2-Dichloroethene	<200ug/l	07/22/98	05	VA3768
Trichloroethene	<200ug/l	07/22/98	05	VA3768
Tetrachloroethene	1100ug/l	07/22/98		VA3768

ID:19698043 Mat:Water ARMONK PRIVATE WELLS SITE AG1013698 0655H 07/13/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	07/22/98		VA3768
cis-1,2-Dichloroethene	<1ug/l	07/22/98		VA3768
trans-1,2-Dichloroethene	<1ug/l	07/22/98		VA3768
Trichloroethene	<1ug/l	07/22/98		VA3768
Tetrachloroethene	<0.5ug/l	07/22/98		VA3768

ID:19698044 Mat:Water ARMONK PRIVATE WELLS SITE ABF071398 0700H 07/13/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	364ug/l	08/03/98		ME1543
Total Zinc	421ug/l	08/03/98		ME1543

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
9 QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
10 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
11 ADL (AVERAGE DETECTION LIMITS)
12 PQL (PRACTICAL QUANTITATION LIMITS)
13 SAMPLE ANALYZED OVER HOLDING TIME
14 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
15 THE FILTERING PROCEDURE
16 SAMPLED BY ULI
17 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
18 WITHIN EXPERIMENTAL ERROR
19 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
20 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
21 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
22 INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
23 CALCULATION BASED ON DRY WEIGHT
24 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
25 LIMITS
26 UG/KG AS REC.D / UG/KG DRY WT
27 MG/KG AS REC.D / MG/KG DRY WT
28 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
29 SAMPLE DILUTED/BLANK CORRECTED
30 ND (NON-DETECTED)
31 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
32 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
35 ANALYZED BY METHOD OF STANDARD ADDITIONS
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND (NON-DETECTED)
37 FIELD MEASURED PARAMETER TAKEN BY CLIENT
38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
39 NON-POTABLE WATER SOURCE
40 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
41 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
42 LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
43 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
44 PETROLEUM DISTILLATES
45 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 80.0% RECOVERY
46 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
47 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
48 PER DAY OF CL2
49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
51 PER DAY LAS
52 RESULTS ARE REPORTED ON AN AS REC.D BASIS
53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
55 CREATING A THEORETICAL TCLP VALUE
56 METAL BY CONCENTRATION PROCEDURE
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

12690111 - 20

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., NY

Site No. 3-60-005
Contract No. D003635

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovato (201) 703-1324

7/29

ASP!
Category A
MS/MSD-DUPES!

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
41 41	7/13/98	6:50	T.B.	H2O	3	HCl/HNO3	EFF071398	(select) (T-Zn,Fe) 8010/6010	2 weeks
42		6:50	T.B.	H2O	3	HCl/HNO3	MS/MSD	8010/6010	↓
42 42		7:05	T.B.	H2O	3	HCl/HNO3	CIN071398	8010/6010	
43		6:55	T.B.	H2O	2	HCl	AG1013698	8010	
44		7:00	T.B.	H2O	1	HNO3	ABF071398	6010	
45	(7/13/98)			H2O	1	HCL	(ULI) Trip Blank	8010	↓
46	(7/15/98)	(1030)		(w)	1		(HOLDING BLANK) ¹⁰	(8010)	

Relinquished by: <i>T. Masters</i>	Time/Date: 7/14/98 9:40	Received By:	Time/Date:	Comments:
Relinquished by:	Time/Date:	Received By: <i>Heather Dore</i>	Time/Date: 7/15/98 0830	

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Buffalo (716) 649-2533

Rochester (716) 436-9070

New Jersey (201) 703-1324

August 26, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #20398076 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on July 22, 1998.

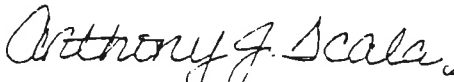
We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 8/12/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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Rochester (716) 436-9070
New Jersey (201) 703-1324

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, New York 11729

August 25, 1998

RE: Armonk Private Wells Site, Samples Collected July 20, 1998
Case Narrative for ULI Laboratory Report No. 20398076

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3775	The continuing calibration %RSD exceeded criteria for trans-1,2-Dichloroethene however, the reference sample and all remaining batch QC were satisfied.
	VA3779	The continuing calibration %RSD exceeded criteria for trans-1,2-Dichloroethene however, the reference sample and all remaining batch QC were satisfied.

Mr. Ted Masters
August 25, 1998
Page 2

Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1543 ME1544	Criteria were satisfied. Criteria were satisfied.
Zn	ME1543 ME1544	Criteria were satisfied. Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 08/26/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 20398076
Client I.D.: ENVIROTRAC

APPROVAL: *QJS*
QC: *PF*
Lab I.D.: 10170
Sampled by:

ID:20398076 Mat:Water ARMONK PRIVATE WELLS SITE EFF072098 0610H 07/20/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	143ug/l	08/03/98		ME1544
Total Zinc	20.6ug/l	08/03/98		ME1544
EPA Method 8010				
Vinyl Chloride	<1ug/l	07/26/98		VA3775
cis-1,2-Dichloroethene	<1ug/l	07/26/98		VA3775
trans-1,2-Dichloroethene	<1ug/l	07/26/98		VA3775
Trichloroethene	<1ug/l	07/26/98		VA3775
Tetrachloroethene	<0.5ug/l	07/26/98		VA3775

ID:20398077 Mat:Water ARMONK PRIVATE WELLS SITE CIN072098 0630H 07/20/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	2100ug/l	08/03/98		ME1543
Total Zinc	15.9ug/l	08/03/98		ME1543
EPA Method 8010				
Vinyl Chloride	<200ug/l	07/26/98	05	VA3775
cis-1,2-Dichloroethene	<200ug/l	07/26/98	05	VA3775
trans-1,2-Dichloroethene	<200ug/l	07/26/98	05	VA3775
Trichloroethene	<200ug/l	07/26/98	05	VA3775
Tetrachloroethene	630ug/l	07/26/98		VA3775

ID:20398078 Mat:Water ARMONK PRIVATE WELLS SITE AG1072098 0615H 07/20/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	07/26/98		VA3775
cis-1,2-Dichloroethene	<1ug/l	07/26/98		VA3775
trans-1,2-Dichloroethene	<1ug/l	07/26/98		VA3775
Trichloroethene	<1ug/l	07/26/98		VA3775
Tetrachloroethene	<0.5ug/l	07/26/98		VA3775

ID:20398079 Mat:Water ARMONK PRIVATE WELLS SITE ABF072098 0620H 07/20/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	271ug/l	08/03/98		ME1543
Total Zinc	305ug/l	08/03/98		ME1543

DATE: 08/26/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 20398076
Client I.D.: ENVIROTRAC

APPROVAL: *CJS*
QC: *PF* Lab I.D.: 10170
Sampled by:

ID:20398080 Mat:Water ARMONK PRIVATE WELLS SITE AB2072098 0625H 07/20/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	220ug/l	08/03/98		ME1543
Total Zinc	17.0ug/l	08/03/98		ME1543
EPA Method 8010				
Vinyl Chloride	<100ug/l	07/27/98	05	VA3779
cis-1,2-Dichloroethene	<100ug/l	07/27/98	05	VA3779
trans-1,2-Dichloroethene	<100ug/l	07/27/98	05	VA3779
Trichloroethene	<100ug/l	07/27/98	05	VA3779
Tetrachloroethene	870ug/l	07/27/98		VA3779

ID:20398081 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 1050H 07/22/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	07/26/98		VA3775
cis-1,2-Dichloroethene	<1ug/l	07/26/98		VA3775
trans-1,2-Dichloroethene	<1ug/l	07/26/98		VA3775
Trichloroethene	<1ug/l	07/26/98		VA3775
Tetrachloroethene	<0.5ug/l	07/26/98		VA3775

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
9 QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
10 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
11 ADL(AVERAGE DETECTION LIMITS)
12 PQL(PRACTICAL QUANTITATION LIMITS)
13 SAMPLE ANALYZED OVER HOLDING TIME
14 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
15 THE FILTERING PROCEDURE
16 SAMPLED BY ULI
17 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
18 WITHIN EXPERIMENTAL ERROR
19 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
20 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
21 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
22 INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
23 CALCULATION BASED ON DRY WEIGHT
24 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
25 LIMITS
26 UG/KG AS REC.D / UG/KG DRY WT
27 MG/KG AS REC.D / MG/KG DRY WT
28 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
29 SAMPLE DILUTED/BLANK CORRECTED
30 ND(NON-DETECTED)
31 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
32 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
35 ANALYZED BY METHOD OF STANDARD ADDITIONS
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
37 FIELD MEASURED PARAMETER TAKEN BY CLIENT
38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
39 NON-POTABLE WATER SOURCE
40 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
41 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
42 LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
43 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
44 PETROLEUM DISTILLATES
45 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
46 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
47 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
48 PER DAY OF CL2
49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
51 PER DAY LAS
52 RESULTS ARE REPORTED ON AN AS REC.D BASIS
53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
55 CREATING A THEORETICAL TCLP VALUE
56 METAL BY CONCENTRATION PROCEDURE
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., NY

Site No. 3-60-005
Contract No. D003635

8/5

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovato (201) 703-1324

ASP!
Category A

ms/msd - pure!

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
20398076	7/20/98	6:10	T.B.	H2O	3	HCl/HNO3	EFF072098	8010/6010	2 weeks
77	↓	6:10	T.B.	H2O	2	HCl	MS/MSD	8010	↓
77		6:30	T.B.	H2O	3	HCl/HNO3	CIN072098	8010/6010	
78		6:15	T.B.	H2O	2	HCl	AG1072098	8010	
79		6:20	T.B.	H2O	1	HNO3	ABF072098	6010	
80		6:25	T.B.	H2O	3	HNO3	AB2072098	6010 (8010)	
				H2O	1	HCl	Trip Blank	8010	↓
81	7/22/98	(1050)		(W)	1		(HOLDING BLANK)	(8010)	
Relinquished by: <i>T. Masters</i> Time/Date: 7/21/98 10:35			Received By: Time/Date			Comments: (6010 = T-Zn, Fe)			
Relinquished by: Time/Date:			Received By: <i>Heather Dean</i> 7/22/98 0840						

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New Jersey (201) 703-1324

August 26, 1998

RECEIVED
AUG 31 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #21098129 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on July 29, 1998.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala

Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 8/12/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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New Jersey (201) 703-1324

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, New York 11729

August 25, 1998

RE: Armonk Private Wells Site, Samples Collected July 27, 1998
Case Narrative for ULI Laboratory Report No. 21098129

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3799	The continuing calibration %RSD exceeded criteria for Vinyl Chloride and trans-1,2-Dichloroethene however, the reference sample and all remaining batch QC were satisfied.

Mr. Ted Masters
August 25, 1998
Page 2

Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1543 ME1544	Criteria were satisfied. MS %Recovery ran biased low for location EFF072098 however, the post spike ran within QC limits at 113%.
Zn	ME1543 ME1544	Criteria were satisfied. Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

KMENV-3doc

DATE: 08/26/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 21098129
Client I.D.: ENVIROTRAC

APPROVAL: *Q/S*
QC: *PF* Lab I.D.: 10170
Sampled by: ULI

ID: 21098129 Mat: Water ARMONK PRIVATE WELLS SITE EFF072098 0630H 07/27/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	245ug/l	08/03/98		ME1544
Total Zinc	<10ug/l	08/03/98		ME1544
EPA Method 8010				
Vinyl Chloride	<1ug/l	08/05/98		VA3799
cis-1,2-Dichloroethene	<1ug/l	08/05/98		VA3799
trans-1,2-Dichloroethene	<1ug/l	08/05/98		VA3799
Trichloroethene	<1ug/l	08/05/98		VA3799
Tetrachloroethene	<0.5ug/l	08/05/98		VA3799

ID: 21098130 Mat: Water ARMONK PRIVATE WELLS SITE CIN072098 0650H 07/27/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	258ug/l	08/03/98		ME1543
Total Zinc	30.7ug/l	08/03/98		ME1543
EPA Method 8010				
Vinyl Chloride	<200ug/l	08/05/98	05	VA3799
cis-1,2-Dichloroethene	<200ug/l	08/05/98	05	VA3799
trans-1,2-Dichloroethene	<200ug/l	08/05/98	05	VA3799
Trichloroethene	<200ug/l	08/05/98	05	VA3799
Tetrachloroethene	1100ug/l	08/05/98		VA3799

ID: 21098131 Mat: Water ARMONK PRIVATE WELLS SITE AG1072098 0635H 07/27/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	08/05/98		VA3799
cis-1,2-Dichloroethene	<1ug/l	08/05/98		VA3799
trans-1,2-Dichloroethene	<1ug/l	08/05/98		VA3799
Trichloroethene	<1ug/l	08/05/98		VA3799
Tetrachloroethene	<0.5ug/l	08/05/98		VA3799

ID: 21098132 Mat: Water ARMONK PRIVATE WELLS SITE ABF072098 0640H 07/27/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	444ug/l	08/03/98		ME1543
Total Zinc	510ug/l	08/03/98		ME1543

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
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9 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
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14 SAMPLED BY ULI
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WITHIN EXPERIMENTAL ERROR
16 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
17 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
18 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
19 CALCULATION BASED ON DRY WEIGHT
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LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
29 ANALYZED BY METHOD OF STANDARD ADDITIONS
30 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
31 FIELD MEASURED PARAMETER TAKEN BY CLIENT
32 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
33 NON-POTABLE WATER SOURCE
34 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
35 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
PETROLEUM DISTILLATES
36 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
37 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
38 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
PER DAY OF CL2
39 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
40 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
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41 RESULTS ARE REPORTED ON AN AS REC.D BASIS
42 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
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CREATING A THEORETICAL TCLP VALUE
43 METAL BY CONCENTRATION PROCEDURE
44 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

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RECEIVED
NOV 18 1998

November 18, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #21798065 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on August 5, 1998.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala

Anthony J. Scala
Director

RECEIVED

DEC 02 1998

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

TAMS Consultants, Inc.
Bloomfield, NJ

Note: Faxed results were given to your office on 10/7/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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November 18, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn Street
Deer Park, New York 11729

RE: Armonk Private Wells Site, Samples Collected August 3, 1998
Case Narrative for ULI Laboratory Report No. 21798065

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

Test

Select List

Batch

VA3813

Anomaly

CCI criteria for all select compounds were outside control limits.

Mr. Ted Masters

November 18, 1998

Page 2

Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1639	Duplicate RSD was outside of \pm 20% range all other QC was acceptable.
Zn	ME1639	Duplicate RSD was outside of \pm 20% range all other QC was acceptable.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 11/18/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 21798065
Client I.D.: ENVIROTRAC

APPROVAL: QJS
QC: PF
Lab I.D.: 10170
Sampled by: Client

ID:21798065 Mat:Water ARMONK PRIVATE WELLS SITE EFF080398 0635H 08/03/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	<60ug/l	08/29/98		ME1639
Total Zinc	20.2ug/l	08/29/98		ME1639
EPA Method 8010				
Vinyl Chloride	<1ug/l	08/10/98		VA3813
cis-1,2-Dichloroethene	<1ug/l	08/10/98		VA3813
trans-1,2-Dichloroethene	<1ug/l	08/10/98		VA3813
Trichloroethene	<1ug/l	08/10/98		VA3813
Tetrachloroethene	<0.5ug/l	08/10/98		VA3813

ID:21798066 Mat:Water ARMONK PRIVATE WELLS SITE CIN080398 0650H 08/03/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	315ug/l	08/29/98		ME1639
Total Zinc	29.3ug/l	08/29/98		ME1639
EPA Method 8010				
Vinyl Chloride	<200ug/l	08/10/98	05	VA3813
cis-1,2-Dichloroethene	<200ug/l	08/10/98	05	VA3813
trans-1,2-Dichloroethene	<200ug/l	08/10/98	05	VA3813
Trichloroethene	<200ug/l	08/10/98	05	VA3813
Tetrachloroethene	980ug/l	08/10/98		VA3813

ID:21798067 Mat:Water ARMONK PRIVATE WELLS SITE AG1080398 0640H 08/03/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	08/10/98		VA3813
cis-1,2-Dichloroethene	<1ug/l	08/10/98		VA3813
trans-1,2-Dichloroethene	<1ug/l	08/10/98		VA3813
Trichloroethene	<1ug/l	08/10/98		VA3813
Tetrachloroethene	<0.5ug/l	08/10/98		VA3813

ID:21798068 Mat:Water ARMONK PRIVATE WELLS SITE ABF080398 0645H 08/03/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	553ug/l	08/29/98		ME1639
Total Zinc	432ug/l	08/29/98		ME1639

DATE: 11/18/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 21798065
Client I.D.: ENVIROTRAC

APPROVAL: ASS
QC: PF - Lab I.D.: 10170
Sampled by: Client

ID:21798069 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 08/03/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
-----	-----	-----	---	-----
EPA Method 8010				
Vinyl Chloride	<1ug/l	08/10/98		VA3813
cis-1,2-Dichloroethene	<1ug/l	08/10/98		VA3813
trans-1,2-Dichloroethene	<1ug/l	08/10/98		VA3813
Trichloroethene	<1ug/l	08/10/98		VA3813
Tetrachloroethene	<0.5ug/l	08/10/98		VA3813

ID:21798070 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 1105H 08/05/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
-----	-----	-----	---	-----
EPA Method 8010				
Vinyl Chloride	<1ug/l	08/10/98		VA3813
cis-1,2-Dichloroethene	<1ug/l	08/10/98		VA3813
trans-1,2-Dichloroethene	<1ug/l	08/10/98		VA3813
Trichloroethene	<1ug/l	08/10/98		VA3813
Tetrachloroethene	<0.5ug/l	08/10/98		VA3813

9/2

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Tod Masters


UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., NY

Site No. 3-60-005
Contract No. D003635

8/19

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovato (201) 703-1324

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround	
21748065	8/3/98	6:35	T.B.	H2O	3	HCl/HNO3	EFF080398	8010/6010	2 weeks	
		6:35	T.B.	H2O	2/3	HCl/HNO3	MS/MSD	8010/6010	ms/msd-blurp!	
66	✓	6:50	T.B.	H2O	3	HCl/HNO3	CIN080398	8010/6010	↓	
67		6:40	T.B.	H2O	2	HCl	AG1080398	8010		
68		6:45	T.B.	H2O	1	HNO3	ABF080398	6010		
69					H2O	1	HCL	(UL) Trip Blank		8010
70		(8/5/98)	(1105)		(w)	1		(HOLDING BLANK) ¹¹⁰		(2010)
Relinquished by:  Time/Date: 8/4/98			Received By: S. Miller Time/Date: 0903 8/5/98			Comments: CC/ECD				

ASP!
Custodian

KEY PAGE

- 1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
- 2 MATRIX INTERFERENCE
- 3 PRESENT IN BLANK
- 4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
- 5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
- 6 BLANK CORRECTED
- 7 HEAD SPACE PRESENT IN SAMPLE
- 8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
- 9 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
- 10 ADL(AVERAGE DETECTION LIMITS)
- 11 PQL(PRACTICAL QUANTITATION LIMITS)
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- 13 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM THE FILTERING PROCEDURE
- 14 SAMPLED BY ULI
- 15 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE WITHIN EXPERIMENTAL ERROR
- 16 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
- 17 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
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- 21 UG/KG AS REC.D / UG/KG DRY WT
- 22 MG/KG AS REC.D / MG/KG DRY WT
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- 25 ND(NON-DETECTED)
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- 28 POST-DIGESTION SPIKE FOR FURNACE RA ANALYSIS IS OUTSIDE OF THE CONTROL LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
- 29 ANALYZED BY METHOD OF STANDARD ADDITIONS
- 30 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
- 31 FIELD MEASURED PARAMETER TAKEN BY CLIENT
- 32 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
- 33 NON-POTABLE WATER SOURCE
- 34 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
- 35 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON PETROLEUM DISTILLATES
- 36 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
- 37 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
- 38 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL₂) / POUNDS (LBS) PER DAY OF CL₂
- 39 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
- 40 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS) PER DAY LAS
- 41 RESULTS ARE REPORTED ON AN AS REC.D BASIS
- 42 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20, CREATING A THEORETICAL TCLP VALUE
- 43 METAL BY CONCENTRATION PROCEDURE
- 44 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

Upstate Laboratories inc.

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New Jersey (201) 703-1324

RECEIVED
NOV 18 1998

November 18, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #22398032 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on August 11, 1998.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala

Anthony J. Scala
Director

RECEIVED
NOV 02 1998

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

TAMS Consultants, Inc.

Bloomfield, NJ

Note: Faxed results were given to your office on 10/7/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

Upstate Laboratories inc.

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Buffalo (716) 649-2131

Rochester (716) 436-9070

New Jersey (201) 703-1314

Mr. Ted Masters
EnviroTrac
561 P. Acorn Street
Deer Park, New York 11729

November 18, 1998

RE: Armonk Private Wells Site, Samples Collected August 9, 1998
Case Narrative for ULI Laboratory Report No. 22398032

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3834	CCI selected compounds were outside of criteria due to bad solution.

Mr. Ted Masters
November 18, 1998
Page 2

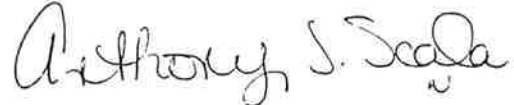
Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1639	Duplicate RSD was outside $\pm 20\%$ range all other QC was acceptable.
Zn	ME1639	Duplicate RSD was outside $\pm 20\%$ range all other QC was acceptable.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 11/18/98

Opstate Laboratories, Inc.
Analysis Results
Report Number: 22398032
Client I.D.: ENVIROTRAC

APPROVAL:
QC: PE -
Lab I.D.: 10170
Sampled by:

ID:22398032 Mat:Water ARMONK PRIVATE WELLS SITE EFF080998 0645H 08/09/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	<60ug/l	08/29/98		ME1639
Total Zinc	22.3ug/l	08/29/98		ME1639
EPA Method 8010				
Vinyl Chloride	<1ug/l	08/18/98		VA3834
cis-1,2-Dichloroethene	<1ug/l	08/18/98		VA3834
trans-1,2-Dichloroethene	<1ug/l	08/18/98		VA3834
Trichloroethene	<1ug/l	08/18/98		VA3834
Tetrachloroethene	<0.5ug/l	08/18/98		VA3834

ID:22398033 Mat:Water ARMONK PRIVATE WELLS SITE CIN080998 0700H 08/09/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	180ug/l	08/29/98		ME1639
Total Zinc	26.6ug/l	08/29/98		ME1639
EPA Method 8010				
Vinyl Chloride	<20ug/l	08/19/98	05	VA3836
cis-1,2-Dichloroethene	<20ug/l	08/19/98	05	VA3836
trans-1,2-Dichloroethene	<20ug/l	08/19/98	05	VA3836
Trichloroethene	<20ug/l	08/19/98	05	VA3836
Tetrachloroethene	620ug/l	08/19/98		VA3836

ID:22398034 Mat:Water ARMONK PRIVATE WELLS SITE AG1080998 0650H 08/09/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	08/18/98		VA3834
cis-1,2-Dichloroethene	<1ug/l	08/18/98		VA3834
trans-1,2-Dichloroethene	<1ug/l	08/18/98		VA3834
Trichloroethene	<1ug/l	08/18/98		VA3834
Tetrachloroethene	<0.5ug/l	08/18/98		VA3834

ID:22398035 Mat:Water ARMONK PRIVATE WELLS SITE ABF080998 0655H 08/09/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	175ug/l	08/29/98		ME1639
Total Zinc	258ug/l	08/29/98		ME1639

DATE: 11/18/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 22398032
Client I.D.: ENVIROTRAC

APPROVAL: QSS
QC: PF - Lab I.D.: 10170
Sampled by:

ID:22398036 Mat:Water ARMONK PRIVATE WELLS ULI TRIP BLANK 08/09/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	08/18/98		VA3834
cis-1,2-Dichloroethene	<1ug/l	08/18/98		VA3834
trans-1,2-Dichloroethene	<1ug/l	08/18/98		VA3834
Trichloroethene	<1ug/l	08/18/98		VA3834
Tetrachloroethene	<0.5ug/l	08/18/98		VA3834

ID:22398037 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 0935H 08/11/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	08/18/98		VA3834
cis-1,2-Dichloroethene	<1ug/l	08/18/98		VA3834
trans-1,2-Dichloroethene	<1ug/l	08/18/98		VA3834
Trichloroethene	<1ug/l	08/18/98		VA3834
Tetrachloroethene	<0.5ug/l	08/18/98		VA3834

22392032-37

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., NY

ULI Computer Input Form

Site No. 3-60-005
Contract No. D003635

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovalo (201) 703-1324

8/25

ASP!
Category A

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
22398082	8/9/98	6:45	T.B.	H2O	3	HCl/HNO3	EFF080998	8010/6010	2 weeks
		6:45	T.B.	H2O	2	HCl/HNO3	MS/MSD	8010/6010	
33		7:00	T.B.	H2O	3	HCl/HNO3	CIN080998	8010/6010	
34		6:50	T.B.	H2O	2	HCl	AG1080998	8010	
35		6:55	T.B.	H2O	1	HNO3	ABF080998	6010	
36				H2O	1	HCL	(w) Trip Blank	8010	
37	(8/11/98)	(0935)		(w)	1		(HOLDING BLANK)*	(2010)	

ms/msd - dup

Relinquished by: <i>[Signature]</i>	Time/Date: 8/11/98 11:30	Received By:	Time/Date:	Comments: Cr/Eastern Connection (6010 = T-2, Fe)
Relinquished by:	Time/Date:	Received By: <i>Heather Dora</i>	Time/Date: 8/11/98 0844	

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
9 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
10 ADL(AVERAGE DETECTION LIMITS)
11 PQL(PRACTICAL QUANTITATION LIMITS)
12 SAMPLE ANALYZED OVER HOLDING TIME
13 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
THE FILTERING PROCEDURE
14 SAMPLED BY ULI
15 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
WITHIN EXPERIMENTAL ERROR
16 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
17 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
18 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
19 CALCULATION BASED ON DRY WEIGHT
20 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
LIMITS
21 UG/KG AS REC.D / UG/KG DRY WT
22 MG/KG AS REC.D / MG/KG DRY WT
23 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
24 SAMPLE DILUTED/BLANK CORRECTED
25 ND(NON-DETECTED)
26 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
27 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
28 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
29 ANALYZED BY METHOD OF STANDARD ADDITIONS
30 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
31 FIELD MEASURED PARAMETER TAKEN BY CLIENT
32 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
33 NON-POTABLE WATER SOURCE
34 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
35 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
PETROLEUM DISTILLATES
36 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
37 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
38 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
PER DAY OF CL2
39 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
40 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
PER DAY LAS
41 RESULTS ARE REPORTED ON AN AS REC.D BASIS
42 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
CREATING A THEORETICAL TCLP VALUE
43 METAL BY CONCENTRATION PROCEDURE
44 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

Upstate Laboratories inc.

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Buffalo (716) 649-2533

Rochester (716) 436-9070

New Jersey (201) 703-1324

RECEIVED
NOV 23 1998

November 18, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #23098068 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on August 18, 1998.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala
Director

RECEIVED

DEC 02 1998

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

TAMS Consultants, Inc.
Bloomfield, NJ

Note: Faxed results were given to your office on 10/13/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

Upstate Laboratories inc.

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Buffalo (716) 649-2533
Rochester (716) 436-9070
New Jersey (201) 703-1324

November 18, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn Street
Deer Park, New York 11729

RE: Armonk Private Wells Site, Samples Collected August 17, 1998
Case Narrative for ULI Laboratory Report No. 23098068

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3849	Criteria were satisfied.

Mr. Ted Masters
November 18, 1998
Page 2


Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1709	Duplicate did not satisfy criteria due to sample matrix.
Zn	ME1709	Duplicate did not satisfy criteria due to sample matrix.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

KMENV-1doc

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 11/18/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 23098068
Client I.D.: ENVIROTRAC

APPROVAL *QSS*
QC: *PF* - Lab I.D.: 10170
Sampled by: Client

ID:23098068 Mat:Water ARMONK PRIVATE WELLS SITE EFF081798 0645H 08/17/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	115ug/l	10/08/98		ME1709
Total Zinc	<10ug/l	10/08/98		ME1709
EPA Method 8010				
Vinyl Chloride	<1ug/l	08/22/98		VA3844
cis-1,2-Dichloroethene	<1ug/l	08/22/98		VA3844
trans-1,2-Dichloroethene	<1ug/l	08/22/98		VA3844
Trichloroethene	<1ug/l	08/22/98		VA3844
Tetrachloroethene	<0.5ug/l	08/22/98		VA3844

ID:23098069 Mat:Water ARMONK PRIVATE WELLS SITE CIN081798 0700H 08/17/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	105ug/l	10/08/98		ME1709
Total Zinc	19.4ug/l	10/08/98		ME1709
EPA Method 8010				
Vinyl Chloride	<100ug/l	08/24/98	05	VA3849
cis-1,2-Dichloroethene	<100ug/l	08/24/98	05	VA3849
trans-1,2-Dichloroethene	<100ug/l	08/24/98	05	VA3849
Trichloroethene	<100ug/l	08/24/98	05	VA3849
Tetrachloroethene	2500ug/l	08/24/98		VA3849

ID:23098070 Mat:Water ARMONK PRIVATE WELLS SITE AG1081798 0650H 08/17/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	08/23/98		VA3844
cis-1,2-Dichloroethene	<1ug/l	08/23/98		VA3844
trans-1,2-Dichloroethene	<1ug/l	08/23/98		VA3844
Trichloroethene	<1ug/l	08/23/98		VA3844
Tetrachloroethene	<0.5ug/l	08/23/98		VA3844

ID:23098071 Mat:Water ARMONK PRIVATE WELLS SITE ABF081798 0655H 08/17/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	<60ug/l	10/08/98		ME1709
Total Zinc	15.2ug/l	10/08/98		ME1709

DATE: 11/18/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 23098068
Client I.D.: ENVIROTRAC

APPROVAL: QJS
QC: PP - Lab I.D.: 10170
Sampled by: Client

ID:23098072 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 08/17/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
-----	-----	-----	---	-----
EPA Method 8010				
Vinyl Chloride	<1ug/l	08/22/98		VA3844
cis-1,2-Dichloroethene	<1ug/l	08/22/98		VA3844
trans-1,2-Dichloroethene	<1ug/l	08/22/98		VA3844
Trichloroethene	<1ug/l	08/22/98		VA3844
Tetrachloroethene	<0.5ug/l	08/22/98		VA3844

ID:23098073 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 08/18/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
-----	-----	-----	---	-----
EPA Method 8010				
Vinyl Chloride	<1ug/l	08/22/98		VA3844
cis-1,2-Dichloroethene	<1ug/l	08/22/98		VA3844
trans-1,2-Dichloroethene	<1ug/l	08/22/98		VA3844
Trichloroethene	<1ug/l	08/22/98		VA3844
Tetrachloroethene	<0.5ug/l	08/22/98		VA3844

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., NY

Site No. 3-60-005
Contract No. D003635

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovato (201) 703-1324

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
23098068	8/17/98	6:45	O.L.	H2O	3	HCl/HNO3	EFF081798	8010/6010 MS/MSI	2 weeks
		6:45	O.L.	H2O	2 ⁵⁰	HCl/HNO3	MS/MSI	8010/6010 DUPE	2 weeks
69		7:00	O.L.	H2O	3	HCl/HNO3	CIN081798	8010/6010	2 weeks
70		6:50	O.L.	H2O	2	HCl	AG1081798	8010	2 weeks
71		6:55	O.L.	H2O	1	HNO3	ABF081798	6010	2 weeks
72				H2O	1	HCL	(u) Trip Blank	8010	2 weeks
73	(8/18/98)				1		(Holding Blank)	(8010)	

Asp. Cat.

Relinquished by: <i>[Signature]</i>	Time/Date: 2:30 8/17/98	Received By: <i>[Signature]</i>	Time/Date: 8/18/98 08:31	Comments:
Relinquished by:	Time/Date:	Received By:	Time/Date:	

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
9 QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
10 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
11 ADL (AVERAGE DETECTION LIMITS)
12 PQL (PRACTICAL QUANTITATION LIMITS)
13 SAMPLE ANALYZED OVER HOLDING TIME
14 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
15 THE FILTERING PROCEDURE
16 SAMPLED BY ULI
17 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
18 WITHIN EXPERIMENTAL ERROR
19 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
20 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
21 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
22 INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
23 CALCULATION BASED ON DRY WEIGHT
24 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
25 LIMITS
26 UG/KG AS REC.D / UG/KG DRY WT
27 MG/KG AS REC.D / MG/KG DRY WT
28 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
29 SAMPLE DILUTED/BLANK CORRECTED
30 ND (NON-DETECTED)
31 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
32 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
35 ANALYZED BY METHOD OF STANDARD ADDITIONS
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND (NON-DETECTED)
37 FIELD MEASURED PARAMETER TAKEN BY CLIENT
38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
39 NON-POTABLE WATER SOURCE
40 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
41 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
42 LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
43 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
44 PETROLEUM DISTILLATES
45 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
46 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
47 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
48 PER DAY OF CL2
49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
51 PER DAY LAS
52 RESULTS ARE REPORTED ON AN AS REC.D BASIS
53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
55 CREATING A THEORETICAL TCLP VALUE
56 METAL BY CONCENTRATION PROCEDURE
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

Upstate Laboratories inc.

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Rochester (716) 436-9070

New Jersey (201) 703-1324

RECEIVED
NOV 23 1998

November 18, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #23898076 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on August 26, 1998.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala
Director

RECEIVED

NOV 02 1998

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

TAMS Consultants, Inc.
Bloomfield, NJ

Note: Faxed results were given to your office on 10/13/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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New Jersey (201) 703-1324

Mr. Ted Masters
EnviroTrac
561 P. Acorn Street
Deer Park, New York 11729

November 18, 1998

RE: Armonk Private Wells Site, Samples Collected August 24, 1998
Case Narrative for ULI Laboratory Report No. 23898076

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3869	Criteria were satisfied.

Mr. Ted Masters
November 18, 1998
Page 2

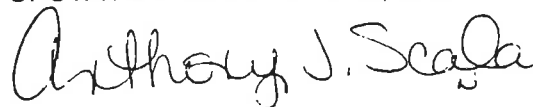
Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1709	Duplicate did not satisfy criteria due to sample matrix.
Zn	ME1709	Duplicate did not satisfy criteria due to sample matrix.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 11/18/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 23898076
Client I.D.: ENVIROTRAC

APPROVAL: AS
QC: PF - Lab I.D.: 10170
Sampled by: Client

ID:23898076 Mat:Water ARMONK PRIVATE WELLS SITE EFF082498 0830H 08/24/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	92.2ug/l	10/08/98		ME1709
Total Zinc	<10ug/l	10/08/98		ME1709
EPA Method 8010				
Vinyl Chloride	<1ug/l	09/01/98		VA3869
cis-1,2-Dichloroethene	<1ug/l	09/01/98		VA3869
trans-1,2-Dichloroethene	<1ug/l	09/01/98		VA3869
Trichloroethene	<1ug/l	09/01/98		VA3869
Tetrachloroethene	<0.5ug/l	09/01/98		VA3869

ID:23898077 Mat:Water ARMONK PRIVATE WELLS SITE CIN082498 0845H 08/24/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	313ug/l	10/08/98		ME1709
Total Zinc	28.8ug/l	10/08/98		ME1709
EPA Method 8010				
Vinyl Chloride	<100ug/l	09/01/98	05	VA3869
cis-1,2-Dichloroethene	<100ug/l	09/01/98	05	VA3869
trans-1,2-Dichloroethene	<100ug/l	09/01/98	05	VA3869
Trichloroethene	<100ug/l	09/01/98	05	VA3869
Tetrachloroethene	660ug/l	09/01/98		VA3869

ID:23898078 Mat:Water ARMONK PRIVATE WELLS SITE AG1082498 0835H 08/24/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	09/01/98		VA3869
cis-1,2-Dichloroethene	<1ug/l	09/01/98		VA3869
trans-1,2-Dichloroethene	<1ug/l	09/01/98		VA3869
Trichloroethene	<1ug/l	09/01/98		VA3869
Tetrachloroethene	<0.5ug/l	09/01/98		VA3869

ID:23898079 Mat:Water ARMONK PRIVATE WELLS SITE ABF082498 0840H 08/24/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	202ug/l	10/08/98		ME1709
Total Zinc	490ug/l	10/08/98		ME1709

DATE: 11/18/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 23898076
Client I.D.: ENVIROTRAC

APPROVAL: QJS
QC: PF Lab I.D.: 10170
Sampled by: Client

ID:23898080 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 08/24/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	09/01/98		VA3869
cis-1,2-Dichloroethene	<1ug/l	09/01/98		VA3869
trans-1,2-Dichloroethene	<1ug/l	09/01/98		VA3869
Trichloroethene	<1ug/l	09/01/98		VA3869
Tetrachloroethene	<0.5ug/l	09/01/98		VA3869

ID:23898081 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 1045H 08/26/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	09/01/98		VA3869
cis-1,2-Dichloroethene	<1ug/l	09/01/98		VA3869
trans-1,2-Dichloroethene	<1ug/l	09/01/98		VA3869
Trichloroethene	<1ug/l	09/01/98		VA3869
Tetrachloroethene	<0.5ug/l	09/01/98		VA3869

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
9 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
10 ADL(AVERAGE DETECTION LIMITS)
11 PQL(PRACTICAL QUANTITATION LIMITS)
12 SAMPLE ANALYZED OVER HOLDING TIME
13 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
THE FILTERING PROCEDURE
14 SAMPLED BY ULI
15 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
WITHIN EXPERIMENTAL ERROR
16 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
17 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
18 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
19 CALCULATION BASED ON DRY WEIGHT
20 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
LIMITS
21 UG/KG AS REC.D / UG/KG DRY WT
22 MG/KG AS REC.D / MG/KG DRY WT
23 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
24 SAMPLE DILUTED/BLANK CORRECTED
25 ND(NON-DETECTED)
26 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
27 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
28 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
ANALYZED BY METHOD OF STANDARD ADDITIONS
29 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
30 FIELD MEASURED PARAMETER TAKEN BY CLIENT
31 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
32 NON-POTABLE WATER SOURCE
33 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
34 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
PETROLEUM DISTILLATES
35 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
36 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
37 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
PER DAY OF CL2
38 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
39 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
PER DAY LAS
40 RESULTS ARE REPORTED ON AN AS REC.D BASIS
41 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
CREATING A THEORETICAL TCLP VALUE
42 METAL BY CONCENTRATION PROCEDURE
43 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

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NOV 20 1998

November 18, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #24498020 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on September 1, 1998.

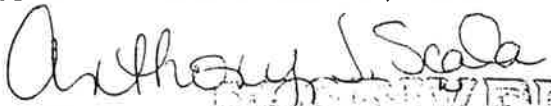
We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.


Anthony J. Scala
Director

RECEIVED
NOV 20 1998

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

TAMS Consultants, Inc.
Bloomfield, NJ

Note: Faxed results were given to your office on 10/13/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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November 18, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn Street
Deer Park, New York 11729

RE: Armonk Private Wells Site, Samples Collected August 31, 1998
Case Narrative for ULI Laboratory Report No. 24498020

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA388	CC gas compounds did not meet criteria. RS criteria and all other criteria were met.

Mr. Ted Masters

November 18, 1998

Page 2

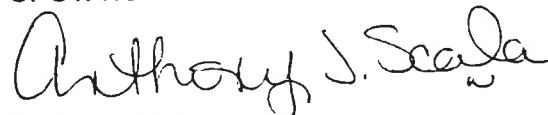
Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1705	Duplicate was outside of control limits due to sample matrix.
Zn	ME1705	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

KMENV-1doc

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 11/18/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 24498020
Client I.D.: ENVIROTRAC

APPROVAL: AS
QC: PF - Lab I.D.: 10170
Sampled by: Client

ID:24498020 Mat:Water ARMONK PRIVATE WELLS SITE EFF082498 0630H 08/31/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	263ug/l	10/06/98		ME1705
Total Zinc	<10ug/l	10/06/98		ME1705
EPA Method 8010				
Vinyl Chloride	<1ug/l	09/06/98		VA3878
cis-1,2-Dichloroethene	<1ug/l	09/06/98		VA3878
trans-1,2-Dichloroethene	<1ug/l	09/06/98		VA3878
Trichloroethene	<1ug/l	09/06/98		VA3878
Tetrachloroethene	<0.5ug/l	09/06/98		VA3878

ID:24498021 Mat:Water ARMONK PRIVATE WELLS SITE CIN082498 0645H 08/31/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	333ug/l	10/06/98		ME1705
Total Zinc	32.1ug/l	10/06/98		ME1705
EPA Method 8010				
Vinyl Chloride	<100ug/l	09/06/98	05	VA3878
cis-1,2-Dichloroethene	<100ug/l	09/06/98	05	VA3878
trans-1,2-Dichloroethene	<100ug/l	09/06/98	05	VA3878
Trichloroethene	<100ug/l	09/06/98	05	VA3878
Tetrachloroethene	1100ug/l	09/06/98		VA3878

ID:24498022 Mat:Water ARMONK PRIVATE WELLS SITE AG1082498 0635H 08/31/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	09/06/98		VA3878
cis-1,2-Dichloroethene	<1ug/l	09/06/98		VA3878
trans-1,2-Dichloroethene	<1ug/l	09/06/98		VA3878
Trichloroethene	<1ug/l	09/06/98		VA3878
Tetrachloroethene	<0.5ug/l	09/06/98		VA3878

ID:24498023 Mat:Water ARMONK PRIVATE WELLS SITE ABF082498 0640H 08/31/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	226ug/l	10/06/98		ME1705
Total Zinc	302ug/l	10/06/98		ME1705

DATE: 11/18/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 24498020
Client I.D.: ENVIROTRAC

APPROVAL: ASS
QC: PF
Lab I.D.: 10170
Sampled by: Client

ID:24498024 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 08/31/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	09/06/98		VA3878
cis-1,2-Dichloroethene	<1ug/l	09/06/98		VA3878
trans-1,2-Dichloroethene	<1ug/l	09/06/98		VA3878
Trichloroethene	<1ug/l	09/06/98		VA3878
Tetrachloroethene	<0.5ug/l	09/06/98		VA3878

ID:24498025 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 09/01/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	09/06/98		VA3878
cis-1,2-Dichloroethene	<1ug/l	09/06/98		VA3878
trans-1,2-Dichloroethene	<1ug/l	09/06/98		VA3878
Trichloroethene	<1ug/l	09/06/98		VA3878
Tetrachloroethene	<0.5ug/l	09/06/98		VA3878

KEY PAGE

- 1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
- 2 MATRIX INTERFERENCE
- 3 PRESENT IN BLANK
- 4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
- 5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
- 6 BLANK CORRECTED
- 7 HEAD SPACE PRESENT IN SAMPLE
- 8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
9 QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
- 10 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
- 11 ADL(AVERAGE DETECTION LIMITS)
- 12 PQL(PRACTICAL QUANTITATION LIMITS)
- 13 SAMPLE ANALYZED OVER HOLDING TIME
- 14 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
15 THE FILTERING PROCEDURE
- 16 SAMPLED BY ULI
- 17 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
18 WITHIN EXPERIMENTAL ERROR
- 19 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
- 20 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
- 21 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
22 INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
- 23 CALCULATION BASED ON DRY WEIGHT
- 24 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
25 LIMITS
- 26 UG/KG AS REC.D / UG/KG DRY WT
- 27 MG/KG AS REC.D / MG/KG DRY WT
- 28 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
- 29 SAMPLE DILUTED/BLANK CORRECTED
- 30 ND(NON-DETECTED)
- 31 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
- 32 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
- 33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
- 35 ANALYZED BY METHOD OF STANDARD ADDITIONS
- 36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
- 37 FIELD MEASURED PARAMETER TAKEN BY CLIENT
- 38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
- 39 NON-POTABLE WATER SOURCE
- 40 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
41 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
42 LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
- 43 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
44 PETROLEUM DISTILLATES
- 45 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
- 46 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
- 47 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
48 PER DAY OF CL2
- 49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
- 50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
51 PER DAY LAS
- 52 RESULTS ARE REPORTED ON AN AS REC.D BASIS
- 53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20.
55 CREATING A THEORETICAL TCLP VALUE
- 56 METAL BY CONCENTRATION PROCEDURE
- 57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

Upstate Laboratories inc.

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New Jersey (201) 703-1324

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NOV 20 1998

November 18, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #25498057 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on September 11, 1998.

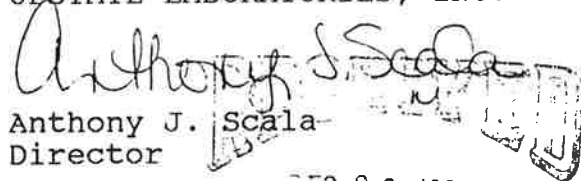
We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.


Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

TAMS Consultants, Inc.
Bloomfield, NJ

Note: Faxed results were given to your office on 10/13/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

Upstate Laboratories inc.

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Rochester (716) 436-9070
New Jersey (201) 703-1324

Mr. Ted Masters
EnviroTrac
561 P. Acorn Street
Deer Park, New York 11729

November 18, 1998

RE: Armonk Private Wells Site, Samples Collected September 9, 1998
Case Narrative for ULI Laboratory Report No. 25498057

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3895	Criteria were satisfied, for all but the CCI

Mr. Ted Masters

November 18, 1998

Page 2

Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1706	Criteria were satisfied.
Zn	ME1706	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

KMENV-1doc

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 11/18/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 25498057
Client I.D.: ENVIROTRAC

APPROVAL: *QSS*
QC: *PF* - Lab I.D.: 10170
Sampled by: Client

ID:25498057 Mat:Water ARMONK PRIVATE WELLS SITE EFF090998 0630H 09/09/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	706ug/l	10/07/98		ME1706
Total Zinc	<10ug/l	10/07/98		ME1706
EPA Method 8010				
Vinyl Chloride	<1ug/l	09/17/98		VA3895
cis-1,2-Dichloroethene	<1ug/l	09/17/98		VA3895
trans-1,2-Dichloroethene	<1ug/l	09/17/98		VA3895
Trichloroethene	<1ug/l	09/17/98		VA3895
Tetrachloroethene	<0.5ug/l	09/17/98		VA3895

ID:25498058 Mat:Water ARMONK PRIVATE WELLS SITE CIN09/09/98 0645H 09/09/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	516ug/l	10/07/98		ME1706
Total Zinc	14.7ug/l	10/07/98		ME1706
EPA Method 8010				
Vinyl Chloride	<100ug/l	09/17/98	05	VA3895
cis-1,2-Dichloroethene	<100ug/l	09/17/98	05	VA3895
trans-1,2-Dichloroethene	<100ug/l	09/17/98	05	VA3895
Trichloroethene	<100ug/l	09/17/98	05	VA3895
Tetrachloroethene	950ug/l	09/17/98		VA3895

ID:25498059 Mat:Water ARMONK PRIVATE WELLS SITE AG109/09/98 0635H 09/09/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	09/17/98		VA3895
cis-1,2-Dichloroethene	<1ug/l	09/17/98		VA3895
trans-1,2-Dichloroethene	<1ug/l	09/17/98		VA3895
Trichloroethene	<1ug/l	09/17/98		VA3895
Tetrachloroethene	<0.5ug/l	09/17/98		VA3895

ID:25498060 Mat:Water ARMONK PRIVATE WELLS SITE ABF09/09/98 0640H 09/09/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	305ug/l	10/07/98		ME1706
Total Zinc	691ug/l	10/07/98		ME1706

DATE: 11/18/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 25498057
Client I.D.: ENVIROTRAC

APPROVAL: *AS*
QC: *PF* - - - -
Lab I.D.: 10170
Sampled by: Client

ID:25498061 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 1400H 09/11/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	09/17/98		VA3895
cis-1,2-Dichloroethene	<1ug/l	09/17/98		VA3895
trans-1,2-Dichloroethene	<1ug/l	09/17/98		VA3895
Trichloroethene	<1ug/l	09/17/98		VA3895
Tetrachloroethene	<0.5ug/l	09/17/98		VA3895

9/25

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., NY

Site No. 3-60-005
Contract No. D003635

Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovato (201) 703-1324

ASP!
Category: A

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
25498057	9/9/98	6:30	T.B.	H2O	3	HCl/HNO3	EFF090998	8010/6010	2 weeks
		6:30	T.B.	H2O	2	HCl/HNO3	MS/MSD	8010/6010	2 weeks
58		6:45	T.B.	H2O	3	HCl/HNO3	CIN09/09/98	8010/6010	2 weeks
59		6:35	T.B.	H2O	2	HCl	AG109/09/98	8010	2 weeks
60		6:40	T.B.	H2O	1	HNO3	ABF09/09/98	6010	2 weeks
				H2O	1	HCL	Trip Blank	8010	2 weeks
61	(9/11/98)	(1400) ^{msd}		(w)	1		(HOLDING BLANK) ^{msd}	(240)	

ms/msd ->

Relinquished by: <u>TE</u>	Time/Date: <u>9/11/98</u>	Received By: <u>S. Wilson</u>	Time/Date: <u>9/11/98 0840</u>	Comments: <u>cc/ Eastern Conn.</u>
Relinquished by:	Time/Date:	Received By:	Time/Date:	

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
9 QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
10 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
11 ADL(AVERAGE DETECTION LIMITS)
12 PQL(PRACTICAL QUANTITATION LIMITS)
13 SAMPLE ANALYZED OVER HOLDING TIME
14 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
15 THE FILTERING PROCEDURE
16 SAMPLED BY ULI
17 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
18 WITHIN EXPERIMENTAL ERROR
19 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
20 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
21 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
22 INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
23 CALCULATION BASED ON DRY WEIGHT
24 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
25 LIMITS
26 UG/KG AS REC.D / UG/KG DRY WT
27 MG/KG AS REC.D / MG/KG DRY WT
28 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
29 SAMPLE DILUTED/BLANK CORRECTED
30 ND(NON-DETECTED)
31 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
32 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
35 ANALYZED BY METHOD OF STANDARD ADDITIONS
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
37 FIELD MEASURED PARAMETER TAKEN BY CLIENT
38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
39 NON-POTABLE WATER SOURCE
40 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
41 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
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44 PETROLEUM DISTILLATES
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46 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
47 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
48 PER DAY OF CL2
49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
51 PER DAY LAS
52 RESULTS ARE REPORTED ON AN AS REC.D BASIS
53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
55 CREATING A THEORETICAL TCLP VALUE
56 METAL BY CONCENTRATION PROCEDURE
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

Upstate Laboratories inc.

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Mailing: Box 289 • Syracuse, NY 13206

Albany (518) 459-3134

Binghamton (607) 724-0478

Buffalo (716) 649-2533

Rochester (716) 436-9070

New Jersey (201) 703-1324

RECEIVED
NOV 20 1998

November 18, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #25998071 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on September 16, 1998.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala
Director

NOV 22 1998

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

TAMS Consultants, Inc.
Bloomfield, NJ

Note: Faxed results were given to your office on 10/13/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

Upstate Laboratories inc.

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Rochester (716) 436-9070

New Jersey (201) 703-1324

November 18, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn Street
Deer Park, New York 11729

RE: Armonk Private Wells Site, Samples Collected September 14, 1998
Case Narrative for ULI Laboratory Report No. 25998071

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3897	Criteria were satisfied.

Mr. Ted Masters
November 18, 1998
Page 2

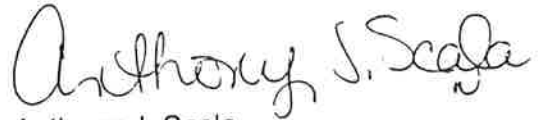
Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1705	Duplicate was outside control limits due to sample matrix.
Zn	ME1705	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DE: 11/18/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 25998071
Client I.D.: ENVIROTRAC

APPROVAL: AS
QC: PF - Lab I.D.: 10170
Sampled by: Client

ID: 25998071 Mat:Water ARMONK PRIVATE WELLS SITE EFF091498 0600H 09/14/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	100ug/l	10/06/98		ME1705
Total Zinc	<10ug/l	10/06/98		ME1705
EPA Method 8010				
Vinyl Chloride	<1ug/l	09/18/98		VA3897
cis-1,2-Dichloroethene	<1ug/l	09/18/98		VA3897
trans-1,2-Dichloroethene	<1ug/l	09/18/98		VA3897
Trichloroethene	<1ug/l	09/18/98		VA3897
Tetrachloroethene	<0.5ug/l	09/18/98		VA3897

ID: 25998072 Mat:Water ARMONK PRIVATE WELLS SITE CIN09/14/98 0615H 09/14/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	1280ug/l	10/06/98		ME1705
Total Zinc	41.5ug/l	10/06/98		ME1705
EPA Method 8010				
Vinyl Chloride	<100ug/l	09/18/98	05	VA3897
cis-1,2-Dichloroethene	<100ug/l	09/18/98	05	VA3897
trans-1,2-Dichloroethene	<100ug/l	09/18/98	05	VA3897
Trichloroethene	<100ug/l	09/18/98	05	VA3897
Tetrachloroethene	1200ug/l	09/18/98		VA3897

ID: 25998073 Mat:Water ARMONK PRIVATE WELLS SITE AG109/14/98 0605H 09/14/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	09/18/98		VA3897
cis-1,2-Dichloroethene	<1ug/l	09/18/98		VA3897
trans-1,2-Dichloroethene	<1ug/l	09/18/98		VA3897
Trichloroethene	<1ug/l	09/18/98		VA3897
Tetrachloroethene	<0.5ug/l	09/18/98		VA3897

ID: 25998074 Mat:Water ARMONK PRIVATE WELLS SITE ABF09/14/98 0610H 09/14/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	594ug/l	10/06/98		ME1705
Total Zinc	1150ug/l	10/06/98		ME1705

DATE: 11/18/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 25998071
Client I.D.: ENVIROTRAC

APPROVAL: Q/S
QC: PF - Lab I.D.: 10170
Sampled by: Client

ID:25998075 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 09/14/98

PARAMETERS -----	RESULTS -----	DATE ANAL. -----	KEY ---	FILE# -----
EPA Method 8010				
Vinyl Chloride	<1ug/l	09/18/98		VA3897
cis-1,2-Dichloroethene	<1ug/l	09/18/98		VA3897
trans-1,2-Dichloroethene	<1ug/l	09/18/98		VA3897
Trichloroethene	<1ug/l	09/18/98		VA3897
Tetrachloroethene	<0.5ug/l	09/18/98		VA3897

ID:25998076 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 1230H 09/16/98

PARAMETERS -----	RESULTS -----	DATE ANAL. -----	KEY ---	FILE# -----
EPA Method 8010				
Vinyl Chloride	<1ug/l	09/18/98		VA3897
cis-1,2-Dichloroethene	<1ug/l	09/18/98		VA3897
trans-1,2-Dichloroethene	<1ug/l	09/18/98		VA3897
Trichloroethene	<1ug/l	09/18/98		VA3897
Tetrachloroethene	<0.5ug/l	09/18/98		VA3897

25998071-76

U.I. Computer Input Form

EnviroTrac

561 P. Acorn St.
Deer Park, NY 11729
(516) 586-1800 Fax (516) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., NY

Site No. 3-60-005
Contract No. D003635


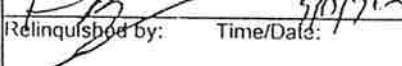
Laboratory Address: 6034 Corporate Dr.
East Syracuse, NY 13057
Contact: Russ Trovalo (201) 703-1324

9/30 400

ASP Cat A

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround	
25998071	9/14/98	6:00	T.B.	H2O	3	HCl/HNO3	EFF091498	8010/6010	2 weeks	
72	↓	6:00	T.B.	H2O	2	HCl/HNO3	MS/MSD	8010/6010	2 weeks	
73		6:15	T.B.	H2O	3	HCl/HNO3	CIN09/14/98	8010/6010	2 weeks	
74		6:05	T.B.	H2O	2	HCl	AG109/14/98	8010	2 weeks	
75		(9/14/98)			H2O	1	HNO3	ABF09/14/98	6010	2 weeks
76		(9/14/98)	(12:30)		(W)	1	HCL	(U.I.) Trip Blank	8010	2 weeks
							(HOLDING BLANK)**	(2010)**		

ms/msd-Dur

Relinquished by:  Time/Date: 9/15/98	Received By: Time/Date	Comments: U.I. Eastern Conn.
Relinquished by:  Time/Date:	Received By: Heather Done 9/16/98 0821	

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
9 QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
10 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
11 ADL (AVERAGE DETECTION LIMITS)
12 PQL (PRACTICAL QUANTITATION LIMITS)
13 SAMPLE ANALYZED OVER HOLDING TIME
14 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
15 THE FILTERING PROCEDURE
16 SAMPLED BY ULI
17 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
18 WITHIN EXPERIMENTAL ERROR
19 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
20 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
21 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
22 INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
23 CALCULATION BASED ON DRY WEIGHT
24 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
25 LIMITS
26 UG/KG AS REC.D / UG/KG DRY WT
27 MG/KG AS REC.D / MG/KG DRY WT
28 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
29 SAMPLE DILUTED/BLANK CORRECTED
30 ND (NON-DETECTED)
31 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
32 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
35 ANALYZED BY METHOD OF STANDARD ADDITIONS
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND (NON-DETECTED)
37 FIELD MEASURED PARAMETER TAKEN BY CLIENT
38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
39 NON-POTABLE WATER SOURCE
40 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
41 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
42 LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
43 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
44 PETROLEUM DISTILLATES
45 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
46 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
47 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
48 PER DAY OF CL2
49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
51 PER DAY LAS
52 RESULTS ARE REPORTED ON AN AS REC.D BASIS
53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
55 CREATING A THEORETICAL TCLP VALUE
56 METAL BY CONCENTRATION PROCEDURE
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

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Buffalo (716) 649-2533

Rochester (716) 436-9070

New Jersey (201) 703-1324

RECEIVED
NOV 20 1998

November 18, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #26798042 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on September 24, 1998.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

TAMS Consultants, Inc.
Sloomfield, NJ

Note: Faxed results were given to your office on 10/13/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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New Jersey (201) 703-1324

Mr. Ted Masters
EnviroTrac
561 P. Acorn Street
Deer Park, New York 11729

November 18, 1998

RE: Armonk Private Wells Site, Samples Collected September 21, 1998
Case Narrative for ULI Laboratory Report No. 26798042

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3916	CCI had several compounds outside of control limits.

Mr. Ted Masters
November 18, 1998
Page 2


Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1705	Duplicate was outside control limits due to sample matrix.
Zn	ME1705	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.


Anthony J. Scala
Director

KMENV-1doc

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

DATE: 11/18/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 26798042
Client I.D.: ENVIROTRAC

APPROVAL ajs
QC: PE - Lab I.D.: 10170
Sampled by: Client

ID:26798042 Mat:Water ARMONK PRIVATE WELLS SITE EFF092198 0800H 09/21/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	<60ug/l	10/06/98		ME1705
Total Zinc	<10ug/l	10/06/98		ME1705
EPA Method 8010				
Vinyl Chloride	<1ug/l	09/29/98		VA3916
cis-1,2-Dichloroethene	<1ug/l	09/29/98		VA3916
trans-1,2-Dichloroethene	<1ug/l	09/29/98		VA3916
Trichloroethene	<1ug/l	09/29/98		VA3916
Tetrachloroethene	<0.5ug/l	09/29/98		VA3916

ID:26798043 Mat:Water ARMONK PRIVATE WELLS SITE CIN09/21/98 0815H 09/21/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	<60ug/l	10/06/98		ME1705
Total Zinc	13.0ug/l	10/06/98		ME1705
EPA Method 8010				
Vinyl Chloride	<200ug/l	09/29/98	05	VA3916
cis-1,2-Dichloroethene	<200ug/l	09/29/98	05	VA3916
trans-1,2-Dichloroethene	<200ug/l	09/29/98	05	VA3916
Trichloroethene	<200ug/l	09/29/98	05	VA3916
Tetrachloroethene	1200ug/l	09/29/98		VA3916

ID:26798044 Mat:Water ARMONK PRIVATE WELLS SITE AG109/21/98 0805H 09/21/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	09/29/98		VA3916
cis-1,2-Dichloroethene	<1ug/l	09/29/98		VA3916
trans-1,2-Dichloroethene	<1ug/l	09/29/98		VA3916
Trichloroethene	<1ug/l	09/29/98		VA3916
Tetrachloroethene	<0.5ug/l	09/29/98		VA3916

ID:26798045 Mat:Water ARMONK PRIVATE WELLS SITE ABF09/21/98 0810H 09/21/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	988ug/l	10/06/98		ME1705
Total Zinc	318ug/l	10/06/98		ME1705

DATE: 11/18/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 26798042
Client I.D.: ENVIROTRAC

APPROVAL: Q.S.
QC: PF - Lab I.D.: 10170
Sampled by: Client

ID:26798046 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 09/21/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	09/29/98		VA3916
cis-1,2-Dichloroethene	<1ug/l	09/29/98		VA3916
trans-1,2-Dichloroethene	<1ug/l	09/29/98		VA3916
Trichloroethene	<1ug/l	09/29/98		VA3916
Tetrachloroethene	<0.5ug/l	09/29/98		VA3916

ID:26798047 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 1000H 09/24/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	09/29/98		VA3916
cis-1,2-Dichloroethene	<1ug/l	09/29/98		VA3916
trans-1,2-Dichloroethene	<1ug/l	09/29/98		VA3916
Trichloroethene	<1ug/l	09/29/98		VA3916
Tetrachloroethene	<0.5ug/l	09/29/98		VA3916

KEY PAGE

- 1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
- 2 MATRIX INTERFERENCE
- 3 PRESENT IN BLANK
- 4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
- 5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
- 6 BLANK CORRECTED
- 7 HEAD SPACE PRESENT IN SAMPLE
- 8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
- 9 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
- 10 ADL (AVERAGE DETECTION LIMITS)
- 11 PQL (PRACTICAL QUANTITATION LIMITS)
- 12 SAMPLE ANALYZED OVER HOLDING TIME
- 13 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
THE FILTERING PROCEDURE
- 14 SAMPLED BY ULI
- 15 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
WITHIN EXPERIMENTAL ERROR
- 16 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
- 17 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
- 18 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
- 19 CALCULATION BASED ON DRY WEIGHT
- 20 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
LIMITS
- 21 UG/KG AS REC.D / UG/KG DRY WT
- 22 MG/KG AS REC.D / MG/KG DRY WT
- 23 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
- 24 SAMPLE DILUTED/BLANK CORRECTED
- 25 ND (NON-DETECTED)
- 26 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
- 27 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
- 28 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
- 29 ANALYZED BY METHOD OF STANDARD ADDITIONS
- 30 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND (NON-DETECTED)
- 31 FIELD MEASURED PARAMETER TAKEN BY CLIENT
- 32 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
- 33 NON-POTABLE WATER SOURCE
- 34 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
- 35 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
PETROLEUM DISTILLATES
- 36 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
- 37 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
- 38 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
PER DAY OF CL2
- 39 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
- 40 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
PER DAY LAS
- 41 RESULTS ARE REPORTED ON AN AS REC.D BASIS
- 42 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
CREATING A THEORETICAL TCLP VALUE
- 43 METAL BY CONCENTRATION PROCEDURES
- 44 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

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NOV 20 1998

November 18, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #27398057 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on September 30, 1998.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala
Anthony J. Scala
Director

RECEIVED

NOV 02 1998

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

TAMS Consultants, Inc.
Bloomfield, NJ

Note: Faxed results were given to your office on 10/16/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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November 18, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn Street
Deer Park, New York 11729

RE: Armonk Private Wells Site, Samples Collected September 28, 1998
Case Narrative for ULI Laboratory Report No. 27398057

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3949	Criteria were satisfied.

Mr. Ted Masters
November 18, 1998
Page 2

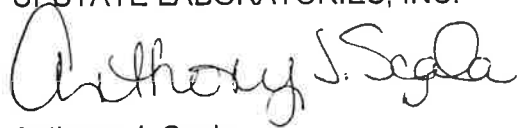
Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Fe	ME1705	Duplicate was outside control limits due to sample matrix.
Zn	ME1705	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

KMENV-1doc

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

E: 11/18/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 27398057
Client I.D.: ENVIROTRAC

APPROVAL: QNS
QC: PF Lab I.D.: 10170
Sampled by: Client

ID: 27398057 Mat: Water ARMONK PRIVATE WELLS SITE EFF092898 0600H 09/28/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	<60ug/l	10/06/98		ME1705
Total Zinc	<10ug/l	10/06/98		ME1705
EPA Method 8010				
Vinyl Chloride	<1ug/l	10/12/98		VA3949
cis-1,2-Dichloroethene	<1ug/l	10/12/98		VA3949
trans-1,2-Dichloroethene	<1ug/l	10/12/98		VA3949
Trichloroethene	<1ug/l	10/12/98		VA3949
Tetrachloroethene	<0.5ug/l	10/12/98		VA3949

ID: 27398058 Mat: Water ARMONK PRIVATE WELLS SITE CIN092898 0615H 09/28/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	<60ug/l	10/06/98		ME1705
Total Zinc	43.9ug/l	10/06/98		ME1705
EPA Method 8010				
Vinyl Chloride	<200ug/l	10/12/98	05	VA3949
cis-1,2-Dichloroethene	<200ug/l	10/12/98	05	VA3949
trans-1,2-Dichloroethene	<200ug/l	10/12/98	05	VA3949
Trichloroethene	<200ug/l	10/12/98	05	VA3949
Tetrachloroethene	1100ug/l	10/12/98		VA3949

ID: 27398059 Mat: Water ARMONK PRIVATE WELLS SITE AG1092898 0605H 09/28/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	10/12/98		VA3949
cis-1,2-Dichloroethene	<1ug/l	10/12/98		VA3949
trans-1,2-Dichloroethene	<1ug/l	10/12/98		VA3949
Trichloroethene	<1ug/l	10/12/98		VA3949
Tetrachloroethene	<0.5ug/l	10/12/98		VA3949

ID: 27398060 Mat: Water ARMONK PRIVATE WELLS SITE ABF092898 0610H 09/28/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	179ug/l	10/06/98		ME1705
Total Zinc	241ug/l	10/06/98		ME1705

DATE: 11/18/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 27398057
Client I.D.: ENVIROTRAC

APPROVAL: ajs
QC: PP Lab I.D.: 10170
Sampled by: Client

ID:27398061 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 09/28/98

PARAMETERS -----	RESULTS -----	DATE ANAL. -----	KEY ---	FILE# -----
EPA Method 8010				
Vinyl Chloride	<1ug/l	10/12/98		VA3949
cis-1,2-Dichloroethene	<1ug/l	10/12/98		VA3949
trans-1,2-Dichloroethene	<1ug/l	10/12/98		VA3949
Trichloroethene	<1ug/l	10/12/98		VA3949
Tetrachloroethene	<0.5ug/l	10/12/98		VA3949

DATE: 11/18/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 27398057
Client I.D.: ENVIROTRAC

APPROVAL AS
QC: PF Lab I.D.: 10170
Sampled by: Client

ID: 27398176 Mat: Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 1200H 09/30/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	10/12/98		VA3949
cis-1,2-Dichloroethene	<1ug/l	10/12/98		VA3949
trans-1,2-Dichloroethene	<1ug/l	10/12/98		VA3949
Trichloroethene	<1ug/l	10/12/98		VA3949
Tetrachloroethene	<0.5ug/l	10/12/98		VA3949

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
9 QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
10 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
11 ADL (AVERAGE DETECTION LIMITS)
12 PQL (PRACTICAL QUANTITATION LIMITS)
13 SAMPLE ANALYZED OVER HOLDING TIME
14 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
15 THE FILTERING PROCEDURE
16 SAMPLED BY ULI
17 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
18 WITHIN EXPERIMENTAL ERROR
19 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
20 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
21 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
22 INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
23 CALCULATION BASED ON DRY WEIGHT
24 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
25 LIMITS
26 UG/KG AS REC.D / UG/KG DRY WT
27 MG/KG AS REC.D / MG/KG DRY WT
28 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
29 SAMPLE DILUTED/BLANK CORRECTED
30 ND (NON-DETECTED)
31 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
32 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
35 ANALYZED BY METHOD OF STANDARD ADDITIONS
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND (NON-DETECTED)
37 FIELD MEASURED PARAMETER TAKEN BY CLIENT
38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
39 NON-POTABLE WATER SOURCE
40 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
41 1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
42 LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
43 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
44 PETROLEUM DISTILLATES
45 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
46 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
47 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
48 PER DAY OF CL2
49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
51 PER DAY LAS
52 RESULTS ARE REPORTED ON AN AS REC.D BASIS
53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
55 CREATING A THEORETICAL TCLP VALUE
56 METAL BY CONCENTRATION PROCEDURE
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

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New Jersey (201) 703-1324

RECEIVED
JAN 17 1999

December 31, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acorn St.
Deer Park, NY 11729

Re: Analysis Report #28598087 - Armonk Private Wells Site

Dear Mr. Masters:

Please find enclosed the results for your samples which were received on October 12, 1998.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala
Anthony J. Scala
Director

AJS/jd

Enclosures: narrative, report, invoice

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 12/10/98. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

Upstate Laboratories inc.

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Rochester (716) 436-9070
New Jersey (201) 703-1324

December 28, 1998

Mr. Ted Masters
EnviroTrac
561 P. Acom Street
Deer Park, NY 11729

RE: Armonk Private Wells Site, Samples Collected October 8, 1998
Case Narrative for ULI Laboratory Report No. 28598087

Dear Mr. Masters:

The following is a New York State Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category A case narrative for the above referenced project. The test results were subject to an internal validation as described below:

Internal Validation

For each test, the chemist sorted the leachate samples into batches of twenty samples or less and added quality control (QC) samples. The batches were analyzed by USEPA and NYSDEC approved test procedures (Table 1). During the course of the analyses the chemist compared the quality control test results to performance criteria and (if necessary) took corrective actions. At the end of the analysis, the data was assembled into data packages and submitted to the section supervisor for review and approval. On the cover of each data package the analyst described any anomaly that may have occurred and, if it did occur, why the data was still found acceptable. A summary of the comments on the cover sheet of each test from each laboratory follows:

Volatile Organic Compounds (VOCs)

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Select List	VA3958	The continuing calibration %RSD for cis-1,2-Dichloroethene and trans-1,2-Dichloroethene exceeded QC criteria.
Select List	VA3973	The continuing calibration %RSD for Vinyl Chloride and trans-1,2-Dichloroethene exceeded QC criteria.

Mr. Ted Masters
December 28, 1998
Page 2

Trace Metals

<u>Test</u>	<u>Batch</u>	<u>Anomaly</u>
Zn	ME1820	Criteria were satisfied.
Fe	ME1821	Criteria were satisfied.

Should questions arise please do not hesitate to call the Environmental Project Coordinator (EPC) assigned to your job or myself.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala
Director

Table 1
Methodologies

Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

<u>Parameter</u>	<u>Method</u>	<u>Reference</u>
VOCs	8010	1)
Iron	6010	1)
Zinc	6010	1)

Reference: 1) New York State Department of Conservation Analytical Services Protocol (NYSDEC ASP), 10/95 Revision

12/31/98

APPROVAL: *CJS*
QC: *BE* Lab I.D.: 10170
Sampled by: CLIENT

ate Laboratories, Inc.
ysis Results
port Number: 28598087
lient I.D.: ENVIROTRAC

28598087 Mat:Water ARMONK PRIVATE WELLS SITE EFF100898 0749H 10/08/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	61.3ug/l	12/05/98		ME1821
Total Zinc	11.0ug/l	12/04/98		ME1820
EPA Method 8010				
Vinyl Chloride	<1ug/l	10/17/98		VA3958
cis-1,2-Dichloroethene	<1ug/l	10/17/98		VA3958
trans-1,2-Dichloroethene	<1ug/l	10/17/98		VA3958
Trichloroethene	<1ug/l	10/17/98		VA3958
Tetrachloroethene	<0.5ug/l	10/17/98		VA3958

28598088 Mat:Water ARMONK PRIVATE WELLS SITE AG1100898 0757H 10/08/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	10/17/98		VA3958
cis-1,2-Dichloroethene	<1ug/l	10/17/98		VA3958
trans-1,2-Dichloroethene	<1ug/l	10/17/98		VA3958
Trichloroethene	<1ug/l	10/17/98		VA3958
Tetrachloroethene	<0.5ug/l	10/17/98		VA3958

28598089 Mat:Water ARMONK PRIVATE WELLS SITE ABF100898 0824H 10/08/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	<60ug/l	12/05/98		ME1821
Total Zinc	26.8ug/l	12/04/98		ME1820

28598090 Mat:Water ARMONK PRIVATE WELLS SITE EW3100898 0827H 10/08/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	<60ug/l	12/05/98		ME1821
Total Zinc	40.2ug/l	12/04/98		ME1820
EPA Method 8010				
Vinyl Chloride	<100ug/l	10/17/98	05	VA3958
cis-1,2-Dichloroethene	<100ug/l	10/17/98	05	VA3958
trans-1,2-Dichloroethene	<100ug/l	10/17/98	05	VA3958
Trichloroethene	<100ug/l	10/17/98	05	VA3958
Tetrachloroethene	400ug/l	10/17/98		VA3958

DATE: 12/31/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 28598087
Client I.D.: ENVIROTRAC

APPROVAL: *CJS*
QC: *PF* Lab I.D.: 10170
Sampled by: CLIENT

ID:28598091 Mat:Water ARMONK PRIVATE WELLS SITE EW2100898 0841H 10/08/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	66.8ug/l	12/05/98		ME1821
Total Zinc	19.6ug/l	12/04/98		ME1820
EPA Method 8010				
Vinyl Chloride	<100ug/l	10/17/98	05	VA3958
cis-1,2-Dichloroethene	<100ug/l	10/17/98	05	VA3958
trans-1,2-Dichloroethene	<100ug/l	10/17/98	05	VA3958
Trichloroethene	<100ug/l	10/17/98	05	VA3958
Tetrachloroethene	340ug/l	10/17/98		VA3958

ID:28598092 Mat:Water ARMONK PRIVATE WELLS SITE EW1100898 0847H 10/08/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	135ug/l	12/05/98		ME1821
Total Zinc	16.3ug/l	12/04/98		ME1820
EPA Method 8010				
Vinyl Chloride	<500ug/l	10/17/98	05	VA3958
cis-1,2-Dichloroethene	<500ug/l	10/17/98	05	VA3958
trans-1,2-Dichloroethene	<500ug/l	10/17/98	05	VA3958
Trichloroethene	<500ug/l	10/17/98	05	VA3958
Tetrachloroethene	2800ug/l	10/17/98		VA3958

ID:28598093 Mat:Water ARMONK PRIVATE WELLS SITE ULI TRIP BLANK 10/08/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	10/17/98		VA3958
cis-1,2-Dichloroethene	<1ug/l	10/17/98		VA3958
trans-1,2-Dichloroethene	<1ug/l	10/17/98		VA3958
Trichloroethene	<1ug/l	10/17/98		VA3958
Tetrachloroethene	<0.5ug/l	10/17/98		VA3958

DATE: 12/31/98

State Laboratories, Inc.
Analysis Results
Report Number: 28598087
Client I.D.: ENVIROTRAC

APPROVAL: *OJS*
QC: *PF* Lab I.D.: 10170
Sampled by: CLIENT

ID:28598094 Mat:Water ARMONK PRIVATE WELLS SITE GAC1IB1100898 0820H 10/08/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	10/17/98		VA3958
cis-1,2-Dichloroethene	<1ug/l	10/17/98		VA3958
trans-1,2-Dichloroethene	<1ug/l	10/17/98		VA3958
Trichloroethene	<1ug/l	10/17/98		VA3958
Tetrachloroethene	<0.5ug/l	10/17/98		VA3958

ID:28598095 Mat:Water ARMONK PRIVATE WELLS SITE GAC1IB2100898 0802H 10/08/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	10/18/98		VA3958
cis-1,2-Dichloroethene	<1ug/l	10/18/98		VA3958
trans-1,2-Dichloroethene	<1ug/l	10/18/98		VA3958
Trichloroethene	<1ug/l	10/18/98		VA3958
Tetrachloroethene	<0.5ug/l	10/18/98		VA3958

ID:28598096 Mat:Water ARMONK PRIVATE WELLS SITE CIN100898 0835H 10/08/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Iron	<60ug/l	12/05/98		ME1821
Total Zinc	73.0ug/l	12/04/98		ME1820
EPA Method 8010				
Vinyl Chloride	<20ug/l	10/23/98	05	VA3973
cis-1,2-Dichloroethene	<20ug/l	10/23/98	05	VA3973
trans-1,2-Dichloroethene	<20ug/l	10/23/98	05	VA3973
Trichloroethene	<20ug/l	10/23/98	05	VA3973
Tetrachloroethene	470ug/l	10/23/98		VA3973

DATE: 12/31/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 28598087
Client I.D.: ENVIROTRAC

APPROVAL: *CJS*
QC: *PE* Lab I.D.: 10170
Sampled by: CLIENT

ID:28598138 Mat:Water ARMONK PRIVATE WELLS SITE HOLDING BLANK 10/10/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
EPA Method 8010				
Vinyl Chloride	<1ug/l	10/23/98		VA3973
cis-1,2-Dichloroethene	<1ug/l	10/23/98		VA3973
trans-1,2-Dichloroethene	<1ug/l	10/23/98		VA3973
Trichloroethene	<1ug/l	10/23/98		VA3973
Tetrachloroethene	<0.5ug/l	10/23/98		VA3973

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE
QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
9 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
10 ADL (AVERAGE DETECTION LIMITS)
11 PQL (PRACTICAL QUANTITATION LIMITS)
12 SAMPLE ANALYZED OVER HOLDING TIME
13 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM
THE FILTERING PROCEDURE
14 SAMPLED BY ULI
15 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE
WITHIN EXPERIMENTAL ERROR
16 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
17 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
18 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL
INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
19 CALCULATION BASED ON DRY WEIGHT
20 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION
LIMITS
21 UG/KG AS REC.D / UG/KG DRY WT
22 MG/KG AS REC.D / MG/KG DRY WT
23 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
24 SAMPLE DILUTED/BLANK CORRECTED
25 ND (NON-DETECTED)
26 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
27 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
28 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL
LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
29 ANALYZED BY METHOD OF STANDARD ADDITIONS
30 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND (NON-DETECTED)
31 FIELD MEASURED PARAMETER TAKEN BY CLIENT
32 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
33 NON-POTABLE WATER SOURCE
34 THE QUALITY CONTROL RESULTS FOR THIS ANALYSIS INDICATE A POSITIVE BIAS OF
1-5 MG/L. THE POSITIVE BIAS FALLS BELOW THE PUBLISHED EPA REGULATORY DETECTION
LIMIT OF 5 MG/L BUT ABOVE 1 MG/L.
35 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON
PETROLEUM DISTILLATES
36 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
37 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
38 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)
PER DAY OF CL2
39 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
40 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)
PER DAY LAS
41 RESULTS ARE REPORTED ON AN AS REC.D BASIS
42 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED
TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,
CREATING A THEORETICAL TCLP VALUE
43 METAL BY CONCENTRATION PROCEDURE
44 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

11/9
10/24

EnviroTrac

581 P. Acorn St.
Deer Park, NY 11729
(518) 586-1800 Fax (518) 586-1879
Contact: Ted Masters

UPSTATE LABORATORIES CHAIN OF CUSTODY

Armonk Private Wells Site
New York State Superfund Project
Town of North Castle,
Westchester Co., NY

File No. 3-00-005
Contract No. D003635

Laboratory Address: 6034 Corporate Dr.
Enst Syracuse, NY 13057
Contact: Russ Trovalto (201) 703-1324

ASP Cont. A.
MSD -
MS/Dupe

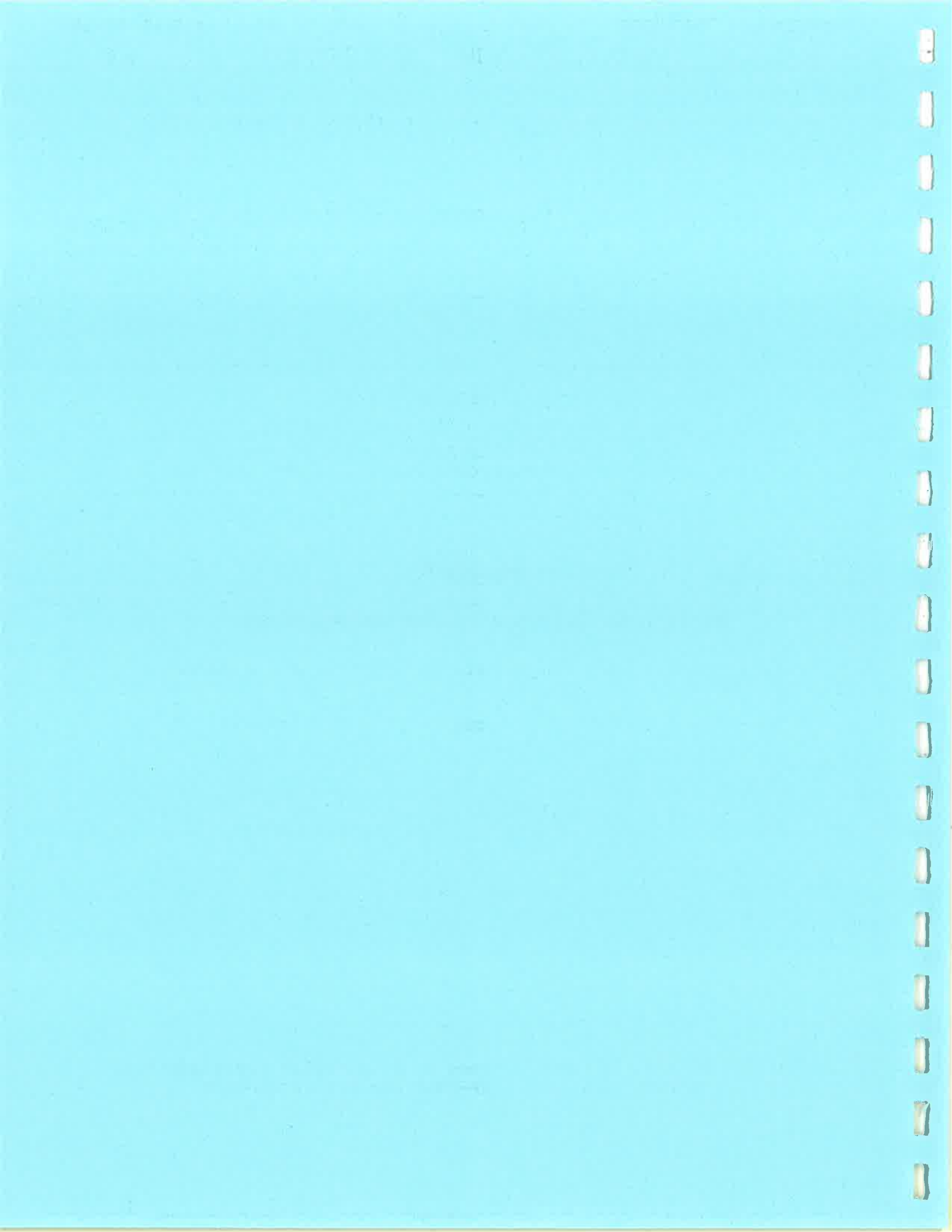
Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Requested Turnaround
8598087	10/1/98	0749	TM	H2O	2 VOA's	HCl	EFF 10598 100898	8010	2 weeks
	10/3/98	0749		H2O	1 Plastic	HNO3	EFF 10598 100898	6010	2 weeks
	10/6/98	0749		H2O	2 VOA's	HCl	MS/MSD (EFF)	8010	2 weeks
88	10/3/98	0757		H2O	2 VOA's	HCl	AG1 10598 100898	8010	2 weeks
89	10/6/98	0824		H2O	1 Plastic	HNO3	ABF 10598 100898	6010	2 weeks
90	10/6/98	0827		H2O	2 VOA's	HCL	EW3 10608 100898	8010	2 weeks
	10/6/98	0827		H2O	1 Plastic	HNO3	EW3 10608 100898	6010	2 weeks
91	10/6/98	0841		H2O	2 VOA's	HCL	EW2 10598 100898	8010	2 weeks
	10/6/98	0841		H2O	1 Plastic	HNO3	EW2 10598 100898	6010	2 weeks
92	10/6/98	0847		H2O	2 VOA's	HCL	EW1 10598 100898	8010	2 weeks
	10/6/98	0847		H2O	1 Plastic	HNO3	EW1 10598 100898	6010	2 weeks
93	10/9/98	0847		H2O	1 VOA	HCL	(w) Trip Blank 10598 TM	8010	2 weeks
							INBL10 TM		
94	10/8/98	0820	TM	H2O	2 VOA's	HCl	GAC I B1 100898	8010	
95	10/8/98	0802		H2O	2 VOA's	HCl	GAC I B2 100898	8010	
96	10/8/98	0835		H2O	2 VOA's	HCl	CIN 100898	8010	
	10/9/98	0835		H2O	1 Plastic	HNO3	CIN 100898	6010	
2138	(10-12-98)			H2O	1	(HCL)	(Holding Blank) TM	(8010)	
Relinquished by: <i>[Signature]</i> Time/Date: 120/10/9/98			Received By: <i>[Signature]</i> Time/Date: 10/2/98 0815			Comments: ASP Category A Deliverables 8010 for: Tetrachloroethylene, Trichloroethylene 1,2-cis-Dichloroethylene, 1,2-trans Dichloroethylene & Vinyl Chloride Metals 6010 - Zn & Iron			

cc/western



Appendix H

Bag Filter and Bag Filter Sediment Sampling Results



MAY- 1-98 FRI 7:14

UPSTATE LABORATORIES INC

FAX NO. 3154371209

P. 01

Sampling

02903

Upstate Laboratories Inc.

Shipping: 6034 Corporate Dr. • E. Syracuse, NY 13057-1017 • (315) 437-0255 • Fax (315) 437-1209

Mailing: Box 289 • Syracuse, NY 13206

Albany (518) 459-3134

Binghamton (607) 724-0478

Buffalo (716) 649-2533

Rochester (716) 436-9070

New Jersey (201) 703-1324

FAX TRANSMISSION

TO: Ted Masters
OF: EnviroTrac
FAX NO.: (914)-273-0238/(516)-586-1879

RE: Analytical Results
Armonk Private Wells Site
(Samples collected on April 15, 1998)

FROM: Peter Fricano
DATE: May 1, 1998
TIME: 8:10 AM
NUMBER OF PAGES (including this sheet): 4

MESSAGE:

Please find attached complete results for samples collected on April 15, 1998.

Should you have any questions, please feel free to call me.

Thank you,

Peter Fricano.

If you do not receive all pages or if portions are illegible,
please call (315) 437-0255 for Retransmission

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MAY- 1-98 FRI 7:15

UPSTATE LABORATORIES INC

FAX NO. 3154371209

P.02

DATE: / /

Upstate Laboratories, Inc.
 Analysis Results
 Report Number: 10698017
 Client I.D.: ENVIROTRAC

APPROVAL: _____
 QC: _____
 Lab I.D.: 10170
 Sampled by: Client

ID:10698017 Mat:Soil ARMONK PRIVATE WELLS SITE BAG FILTER & SEDIMENT 0950H 04/15/98

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCLP Volatile Organic Compounds by 8240				
TCLP Benzene	<0.03mg/l	04/28/98		VM1861
TCLP Carbon Tetrachloride	<0.03mg/l	04/28/98		VM1861
TCLP Chlorobenzene	<0.03mg/l	04/28/98		VM1861
TCLP Chloroform	<0.03mg/l	04/28/98		VM1861
TCLP 1,4-Dichlorobenzene	<0.03mg/l	04/28/98		VM1861
TCLP 1,2-Dichloroethane	<0.03mg/l	04/28/98		VM1861
TCLP 1,1-Dichloroethene	<0.03mg/l	04/28/98		VM1861
TCLP Methyl Ethyl Ketone	<0.1mg/l	04/28/98		VM1861
TCLP Tetrachloroethane	<0.03mg/l	04/28/98		VM1861
TCLP Trichloroethene	<0.03mg/l	04/28/98		VM1861
TCLP Vinyl Chloride	<0.02mg/l	04/28/98		VM1861

dw = Dry weight

Appendix I
As-Built Drawings