## Operation, Maintenance and Monitoring Report October 2003

NOW Corporation Site Site 3-14-008

Work Assignment No. D003821-29

Prepared for:



# SUPERFUND STANDBY PROGRAM New York State Department of Environmental Conservation

625 Broadway Albany, New York 12233

Prepared by:

Earth Tech Northeast, Inc. 40 British American Boulevard Latham, New York 12110 November 24, 2003

Mr. Carl Hoffman NYSDEC Division of Environmental Remediation 625 Broadway, 12<sup>th</sup> Floor Albany, New York 12233-7013

Re: NOW Corporation - Site #3-14-008 Monthly Summary Report - October 2003

Dear Mr. Hoffman:

Enclosed is a monthly summary report for the operation, monitoring and maintenance (OM&M) of the groundwater treatment system at the NOW Corporation site in the Town of Clinton, New York. This report covers the OM&M of the vapor extraction system (VES) and the groundwater pumpand-treat (P&T) system for a 31-day period (September 30 – October 31, 2003).

518.951.2200 Facsimile

518,051.2300

Telephone

The P&T and VES systems were online and operational throughout the reporting period. The submersible pump in recovery well TW-3 was offline for the first half of the reporting period, whereas the pump in TW-1 was inoperative for the entire period (details below). Nevertheless, approximately 714,600 gallons of water were treated during the reporting period. Discharge from the treatment system averaged approximately 23,100 gallons per day (gpd). During the prior reporting period, the average discharge was 23,500 gpd.

As of the last day of the reporting period, a total of 34,140,000 gallons of groundwater had been recovered and treated by the system since it became operational.

Table 1 summarizes influent and effluent data for samples collected on October 14, 2003. All effluent discharge requirements were met. A copy of the laboratory data is included in this report. Table 2 summarizes the operation and maintenance data collected on the last day of the reporting period. Table 3 summarizes monitoring well water-level data collected on the sampling date. Table 4 summarizes the VES air sampling data, as well as air-stripper stack emissions (sample PAS).

Earth Tech made two site visits during the reporting period to conduct the required system inspections, maintenance, monitoring well water-level measurements, and monthly sampling. Details follow:

October 14<sup>th</sup> – Monthly sampling and bi-weekly system inspection. The on-site modem had locked up sometime after September 30, the date of our most recent system inspection, precluding Earth Tech's remote monitoring of system operation. The modem was "reset" on this date, thereby restoring that capability. Technician installed the repaired Red Lion Controls meter in the PLC unit in treatment building, thereby reactivating submersible pump in recovery well TW-3. As



Page 2 Mr. Carl Hoffman NYSDEC

previously reported, the meter had failed on September 15, shutting off the pump. Technician noted that the Red Lion Controls meter related to the operation of submersible pump TW-1 was displaying a negative water level reading, and the pump was not operating. Pump was taken out of "auto" mode and run "manually" so influent water samples would have a contribution from TW-1. The pump was returned to "auto" mode (effectively shutting it off) after sampling. With remote monitoring capability restored, the datalogger was later downloaded to reveal that the submersible pump in recovery well TW-1 had ceased operating on October 1.

October 31<sup>st</sup> – Changed oil in VES blower motor. Greased air stripper blower motor. Technician determined that the Red Lion Controls meter was the source of the negative water levels displayed for well TW-1, rather than the in-well pressure transducer. The faulty meter was removed, and shipped out for repair. Successfully tested operation of building propane heater.

Please feel free to contact me at (518) 951-2262 if you have any questions regarding either this report, or the operation of the treatment system.

Sincerely,

Earth Tech Northeast

Stephen I Morney

Stephen R. Choiniere Project Manager

Attachments

**Tables** 

Table 1
Summary of Influent and Effluent Data
Sampling Date: October 14, 2003
NOW Corporation Site
Town of Clinton, New York

Analytes/	Total		]	Recovery Well	s	Treatment		
Parameters	Influent	Effluent	TW-1	TW-2A	TW-3	Requ	irements	
							(units)	
Flow		23,052				Monitor	gpd	
рН	6.8	7.4	NA	NA	NA	6.5 to 8.5	standard units	
TSS	<5	<5	NA	NA	NA	50	mg/L	
TDS	260	250	NA	NA	NA	1000	mg/L	
Oil and Grease	<1.4	<1.4	NA	NA	NA	15	mg/L	
Cyanide	< 0.01	< 0.01	NA	NA	NA	0.01	mg/L	
Zinc	0.004	0.004	NA	NA	NA	0.15	mg/L	
Aluminum, Total	0.017	0.022	NA	NA	NA	2	mg/L	
Arsenic, Total	< 0.004	< 0.004	NA	NA	NA	0.05	mg/L	
Barium, Total	0.074	0.07	NA	NA	NA	2	mg/L	
Copper	0.003	0.003	NA	NA	NA	0.024	mg/L	
Chromium	< 0.001	< 0.001	NA	NA	NA	0.1	mg/L	
Iron	0.041	0.043	NA	NA	NA	0.6	mg/L	
Manganese	0.228	0.302	NA	NA	NA	0.6	mg/L	
Mercury	< 0.0002	< 0.0002	NA	NA	NA	0.0008	mg/L	
Nickel	0.002	0.002	NA	NA	NA	0.2	mg/L	
Benzene	< 0.5	< 0.5	< 0.5	<0.5	< 0.5	0.8	ug/L	
Chlorobenzene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	5	ug/L	
Chloroethane	< 0.5	< 0.5	0.7	4.7	< 0.5	5	ug/L	
1,1-Dichloroethane	90	< 0.5	60	170	14	5	ug/L	
1,2-Dichloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.6	ug/L	
cis-1,2-Dichloroethene	11	< 0.5	2.4	19	< 0.5	5	ug/L	
trans-1,2-Dichloroethene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	5	ug/L	
1,1-Dichloroethene	26	< 0.5	11	46	2.0	0.5	ug/L	
Ethylbenzene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	5	ug/L	
Methyl tert-butyl ether	<2	<2	<2	<2	<2	None	ug/L	
Tetrachloroethene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.4	ug/L	
Toluene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	5	ug/L	
1,1,1-Trichloroethane	420	< 0.5	8.7	920	3.9	5	ug/L	
1,1,2-Trichloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	ug/L	
Trichloroethene	180	< 0.5	53	340	11	5	ug/L	
Vinyl Chloride	3.8	< 0.5	< 0.5	7.1	< 0.5	0.6	ug/L	
1,2- and 1,4-Xylenes	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	10	ug/L	
1,3-Xylene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	5	ug/L	

#### Notes:

- 1) Positive results are presented in **bold** typeface. Numeric values are in units shown in far right column.
- 2) Effluent concentration boxed in **bold** denotes exceedance of treatment requirements.
- 3) NA indicates not analyzed.
- 4) "J" indicates an estimated concentration below the method detection limit.

10-03 Tables.xls 11/21/2003

Table 2 Summary of October 2003 O&M Data

### NOW Corporation Site Town of Clinton, New York

Instrume TW-1	ntation/Readings:	10/31/2003	Units
	Pumping Rate	NW	GPM
	Water Level Above Transducer	-	feet
	Flow Meter Reading	832,700	gallons
	Pump Pressure	-	psi
TW-2A	-		_
	Pumping Rate	14	GPM
	Water Level Above Transducer	41.97	feet
	Flow Meter Reading	584,400	gallons
	Pump Pressure	15	psi
TW-3			
	Pumping Rate	5	GPM
	Water Level Above Transducer	34.59	feet
	Flow Meter Reading	7,824,700	gallons
	Pump Pressure	68	psi
Air Stripp	er		
	Stripper Blower Pressure	18.5	inches H <sub>2</sub> O
	Air Temperature in Stripper	48	°F
	Pressure Gauge - Left Leg	1.1	inches H <sub>2</sub> O
	Pressure Gauge - Right Leg	1.2	inches H <sub>2</sub> O
	Pressure/Vacuum on the Stripper	-	inches H <sub>2</sub> O
Sand Filte			-
	Influent Pressure	-	psi
	Effluent Pressure	-	psi
	Differential Pressure Across Filter	-	psi
Effluent F	low		
	Total System Meter Reading	34,139,800	gallons
	IW-1 Flow Meter Reading	6,881	gallons
	IW-2 Flow Meter Reading	-	gallons
Vapor Ext	raction System		
	Vapor Blower Vacuum	9	inches Hg
	Vacuum before Filter with Dilution Air	8	inches Hg
£.,	Vacuum on Knock-out Pot	11.5	inches Hg
	Blower Inlet Temperature	64	°F
	Blower Outlet Temperature	185	°F
	Pressure After Blower	42	psi
	Heat Exchanger Outlet Temperature	66	°F

Note: N/A indicates data/measurement is not available.

NW - Not working

10-03 Tables.xls 11/21/2003

Table 3
October 2003 Groundwater Levels

### NOW Corporation Site Town of Clinton, New York

MP	10/14	1/2003
Elevation	Depth to Water	<b>GW</b> Elevation
	(Ft below MP)	
289.50	11.31	278.19
332.51	28.55	303.96
312.83	25.64	287.19
312.51	23.90	288.61
298.29	21.47	276.82
298.16	21.53	276.63
285.48	17.91	267.57
287.90	4.58	283.32
287.25	7.87	279.38
292.12	24.88	267.24
292.54	62.97	229.57
307.75	46.00	261.75
305.96	58.13	247.83
294.81	5.42	289.39
312.46	8.90	303.56
306.56	6.68	299.88
283.65	N/A	N/A
275.37	N/A	N/A
280.92	N/A	N/A
283.72	N/A	N/A
307.35	N/A	N/A
308.30	N/A	N/A
307.41	N/A	N/A
290.52	N/A	N/A
	289.50 332.51 312.83 312.51 298.29 298.16 285.48 287.90 287.25 292.12 292.54 307.75 305.96 294.81 312.46 306.56 283.65 275.37 280.92 283.72 307.35 308.30 307.41	Elevation         Depth to Water (Ft below MP)           289.50         11.31           332.51         28.55           312.83         25.64           312.51         23.90           298.29         21.47           298.16         21.53           285.48         17.91           287.90         4.58           287.25         7.87           292.12         24.88           292.54         62.97           307.75         46.00           305.96         58.13           294.81         5.42           312.46         8.90           306.56         6.68           283.65         N/A           275.37         N/A           280.92         N/A           307.35         N/A           308.30         N/A           307.41         N/A

Note: N/A indicates groundwater level was not measured. MP denotes measuring point.

10-03 Tables.xls 11/21/2003

Table 4
Groundwater Treatment System Air Sampling Data
Sampling Date: October 14, 2003

#### NOW Corporation Site Town of Clinton, New York

Analyte	TW-1	VE	VE-1	VE	VE-2	VE	TW-2	AVE	ST-	1	PA	s	SVE-E	EXH	ST-	-4
Analyte	Results	RL	Results	RL	Results	RL										
Vinyl Chloride	ND	1.0	ND	10.0	ND	1.0	ND	1.0								
Chloroethane	ND	1.0	ND	10.0	ND	1.0	ND	1.0								
1,1-Dichloroethene	ND	1.0	32.0	10.0	2.2	1.0	3.0	1.0								
1,1-Dichloroethane	ND	1.0	ND	1.0	ND	1.0	ND	1.0	4.6	1.0	310.0	10.0	7.9	1.0	ND	1.0
cis-1,2-Dichloroethene	ND	1.0	ND	1.0	ND	1.0	ND	1.0	1.3	1.0	19.0	10.0	ND	1.0	ND	1.0
1,1,1-Trichloroethane	2.3	1.0	2.7	1.0	3.5	1.0	4.8	1.0	21.0	1.0	1200.0	10.0	ND	1.0	ND	1.0
Benzene	ND	1.0	ND	10.0	ND	1.0	ND	0.1								
1,2-Dichloroethane	ND	1.0	ND	10.0	ND	1.0	ND	1.0								
Trichloroethene	29.0	1.0	30.0	1.0	30.0	1.0	31.0	1.0	48.0	1.0	550.0	10.0	ND	1.0	ND	1.0
Toluene	2.1	1.0	1.9	1.0	2.1	1.0	2.6	1.0	2.0	1.0	ND	10.0	2.1	1.0	2.9	1.0
1,1,2-Trichloroethane	ND	1.0	ND	10.0	ND	1.0	ND	1.0								
Tetrachloroethene	ND	1.0	18.0	10.0	ND	1.0	ND	1.0								
Chlorobenzene	ND	1.0	ND	10.0	ND	1.0	ND	1.0								
Ethylbenzene	ND	1.0	ND	1.0	ND	1.0	1.1	1.0	ND	1.0	ND	10.0	ND	1.0	ND	1.0
p&m -Xylene	2.3	1.0	1.7	1.0	2.7	1.0	4.0	1.0	2.4	1.0	ND	10.0	2.6	1.0	2.3	1.0
o-Xylene	1.3	1.0	ND	1.0	1.3	0.1	1.8	1.0	ND	1.0	ND	10.0	1.1	1.0	ND	1.0

#### Notes:

- 1) All results are reported in ppbv.
- 2) Positive results are presented in bold typeface.
- 3) ND indicates Not Detected (Below RL).
- 4) RL = Reporting Limit

#### Sample IDs:

TW-1VE = Well TW-1 Dual-Phase Vapor Extraction

TW-2AVE = Well TW-2A Dual-Phase Vapor Extraction

VE-1VE = Well VE-1 Vapor Extraction

VE-2VE = Well VE-2 Vapor Extraction

ST-1 = Sampling Tap #1 (Raw; Four Vapor Extraction Wells Combined)

SVE-EXH = Intermediate Sampling Tap, Between (2) 55-gal. drum carbon adsorbers

ST-4 = Sampling Tap #4 (Final, After 2nd Carbon Adsorber)

PAS = Air-stripper stack emissions

**Analytical Data** 



587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06045-0370 Tel. (860) 645-1102 Fax (860) 645-0823

Thursday, November 06, 2003

107 10 233

Earthtech

40 British American Blvd

Latham

NY 12110

Attention: Mr Steve Chroiniere

Sample ID#: AF14132-14133

This laboratory is in compliance with the QA/QC procedure outlined in EPA 600/4-79-019, Handbook for Analytical Quality in Water and Waste Water, March 1979, and SW846 QA/QC requirements of procedures used.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

Phyllis Shiller

**Laboratory Director** 

CT Lab Registration #PH-0618

MA Lab Registration #MA-CT-007

NY Lab Registration #11301

RI Lab Registration #63

NH Lab Registration #213693-A,B

ME Lab Registration #CT-007

NJ Lab Registration #CT-003





587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040 Tel. (860) 645-1102 Fax (860) 645-0823

### **Analysis Report**

November  $06, \overline{2003}$ 

FOR: Attn:

Earthtech Inc

40 British American Boulevard

Latham, NY 12110

Sample Information

Matrix: WATER

Location Code: RUST-ENV

Rush Request:

P.O.#:

ADD ON

**Custody Information** 

Collected by: BSReceived by:

**KJB** 

10/14/03

<u>Date</u>

11:45

Time

10/15/03

10:15

see "By" below

### **Laboratory Data**

Analyzed by:

SDG I.D.: GAF14132 Phoenix I.D.: AF14132

Client ID:

NOW CORP EFFLUENT

Parameter	Result	RL	Units	Date	Time	$\mathbf{B}\mathbf{y}$	Reference
Aluminum	0.022	0.01	mg/L	10/17/03		EK	200.7/6010
Arsenic (Furnace)	BDL	0.004	mg/L	10/16/03		RS	206.2
Barium	0.07	0.002	mg/L	10/17/03		$\mathbf{E}\mathbf{K}$	6010/E200.7
Chromium	BDL	0.001	mg/L	10/17/03		$\mathbf{E}\mathbf{K}$	200.7/6010
Copper	0.003	0.001	mg/L	10/17/03		$\mathbf{E}\mathbf{K}$	6010/E200.7
Iron	0.043	0.002	mg/L	10/17/03		$\mathbf{E}\mathbf{K}$	6010/E200.7
Mercury	BDL	0.0002	mg/L	10/17/03		RS	7470/E245.1
Manganese	0.302	0.001	mg/L	10/17/03		EK	200.7/6010
Nickel	0.002	0.001	mg/L	10/17/03		EK	200.7/6010
Zinc	0.004	0.002	mg/L	10/17/03		$\mathbf{E}\mathbf{K}$	200.7/6010
Oil and Grease by EPA 1664	BDL	1.4	mg/L	10/20/03		SD	EPA 1664
Total Cyanide	BDL	0.01	mg/L	10/17/03		PJ	9010/335.3
Tot. Diss. Solids	250	5	mg/L	10/16/03		$\mathbf{CF}$	SM2540C
Total Suspended Solids	BDL	5	mg/L	10/16/03		$\mathbf{CF}$	SM2540D
Mercury Digestion	Completed			10/17/03		TR	E245.1
Total Metals Digestion	Completed			10/15/03		$\mathbf{AG}$	
<u>Volatiles</u>							
1,1,1-Trichloroethane	ND	0.5	ug/L	10/16/03		RM	SW8260
1,1,2-Trichloroethane	ND	0.5	ug/L	10/16/03		RM	SW8260
1,1-Dichloroethane	ND	0.5	ug/L	10/16/03		RM	SW8260
1,1-Dichloroethene	ND	0.5	ug/L	10/16/03		RM	SW8260
1,2-Dichloroethane	ND	0.5	ug/L	10/16/03		RM	SW8260
Benzene	ND	0.5	ug/L	10/16/03		RM	SW8260
Chlorobenzene	ND	0.5	ug/L	10/16/03		RM	SW8260

Client ID: NOW CORP EFFLUENT

	Phoen	ix	I.D.:	AF1	4132
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Parameter	Result	RL	Units	Date Time	$\mathbf{B}\mathbf{y}$	Reference
Chloroethane	ND	0.5	ug/L	10/16/03	RM	SW8260
cis-1,2-Dichloroethene	ND	0.5	ug/L	10/16/03	RM	SW8260
Ethylbenzene	ND	0.5	ug/L	10/16/03	RM	SW8260
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	10/16/03	RM	SW8260
o-Xylene	ND	0.5	ug/L	10/16/03	RM	SW8260
p&m-Xylene	ND	0.5	ug/L	10/16/03	RM	SW8260
Tetrachloroethene	ND	0.5	ug/L	10/16/03	RM	SW8260
Toluene	ND	0.5	ug/L	10/16/03	RM	SW8260
trans-1,2-Dichloroethene	ND	0.5	ug/L	10/16/03	RM	SW8260
Trichloroethene	ND	0.5	ug/L	10/16/03	RM	SW8260
Vinyl chloride	ND	0.5	${\tt ug/\!L}$	10/16/03	RM	SW8260
QA/QC Surrogates %4-Bromofluorobenzene (Surrogate)	85		%	10/16/03	RM	SW8260

Comments:

ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

Phyllis Shiller, Laboratory Director

November 06, 2003





587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040 Tel. (860) 645-1102 Fax (860) 645-0823

### **Analysis Report**

November 06, 2003

FOR: Attn:

Earthtech Inc

40 British American Boulevard

Latham, NY 12110

Sample Information

WATER Matrix:

Location Code: RUST-ENV

Rush Request:

P.O.#:

ADD ON

Custody Information Date **Time** BSCollected by: 10/14/03 11:50 10:15

Received by: **KJB** 10/15/03

Analyzed by: see "By" below

Laboratory Data

SDG I.D.: GAF14132

Phoenix I.D.: AF14133

NOW CORP INFLUENT Client ID:

Parameter	Result	RL	Units	Date T	ime	$\mathbf{B}\mathbf{y}$	Reference
Aluminum	0.017	0.01	 mg/L	10/17/03		EK	200.7/6010
Arsenic (Furnace)	BDL	0.004	mg/L	10/16/03		RS	206.2
Barium	0.074	0.002	mg/L	10/17/03		EK	6010/E200.7
Chromium	BDL	0.001	mg/L	10/17/03		$\mathbf{E}\mathbf{K}$	200.7/6010
Copper	0.003	0.001	mg/L	10/17/03		EK	6010/E200.7
Iron	0.041	0.002	mg/L	10/17/03		$\mathbf{E}\mathbf{K}$	6010/E200.7
Mercury	BDL	0.0002	mg/L	10/17/03		RS	7470/E245.1
Manganese	0.228	0.001	mg/L	10/17/03		EK	200.7/6010
Nickel	0.002	0.001	mg/L	10/17/03		EK	200.7/6010
Zinc	0.004	0.002	mg/L	10/17/03		EK	200.7/6010
Oil and Grease by EPA 1664	BDL	1.4	mg/L	10/20/03		SD	EPA 1664
Total Cyanide	BDL	0.01	mg/L	10/17/03		PJ	9010/335.3
Tot. Diss. Solids	260	5	mg/L	10/16/03		$\mathbf{CF}$	SM2540C
Total Suspended Solids	BDL	5	mg/L	10/16/03		$\mathbf{CF}$	SM2540D
Mercury Digestion	Completed			10/17/03		TR	E245.1
Total Metals Digestion	Completed			10/15/03		$\mathbf{AG}$	
<u>Volatiles</u>							
1,1,1-Trichloroethane	420	10	ug/L	10/16/03		RM	SW8260
1,1,2-Trichloroethane	ND	0.5	ug/L	10/16/03		RM	SW8260
1,1-Dichloroethane	90	10	ug/L	10/16/03		RM	SW8260
1,1-Dichloroethene	26	0.5	ug/L	10/16/03		RM	SW8260
1,2-Dichloroethane	ND	0.5	ug/L	10/16/03		RM	SW8260
Benzene	ND	0.5	ug/L	10/16/03		RM	SW8260
Chlorobenzene	ND	0.5	ug/L	10/16/03		RM	SW8260

Client ID: NOW CORP INFLUENT

Phoenix I.D.:	AF14133
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Parameter	Result	$\mathbf{RL}$	Units	Date Time	By	Reference
Chloroethane	ND	0.5	ug/L	10/16/03	RM	SW8260
cis-1,2-Dichloroethene	11	0.5	ug/L	10/16/03	$\mathbf{R}\mathbf{M}$	SW8260
Ethylbenzene	ND	0.5	ug/L	10/16/03	$\mathbf{R}\mathbf{M}$	SW8260
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	10/16/03	$\mathbf{R}\mathbf{M}$	SW8260
o-Xylene	ND	0.5	ug/L	10/16/03	$\mathbf{R}\mathbf{M}$	SW8260
p&m-Xylene	ND	0.5	ug/L	10/16/03	$\mathbf{R}\mathbf{M}$	SW8260
Tetrachloroethene	ND	0.5	ug/L	10/16/03	$\mathbf{R}\mathbf{M}$	SW8260
Toluene	ND	0.5	ug/L	10/16/03	RM	SW8260
trans-1,2-Dichloroethene	ND	0.5	ug/L	10/16/03	$\mathbf{R}\mathbf{M}$	SW8260
Trichloroethene	180	10	${f ug/L}$	10/16/03	$\mathbf{R}\mathbf{M}$	SW8260
Vinyl chloride	3.8	0.5	ug/L	10/16/03	RM	SW8260
QA/QC Surrogates %4-Bromofluorobenzene (Surrogate)	89		%	10/16/03	RM	SW8260

### **Comments:**

ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

Phyllis Shiller, Laboratory Director

November 06, 2003





587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040 Tel. (860) 645-1102 Fax (860) 645-0823

### **Analysis Report**

October 21, 2003

FOR: Attn:

Earthtech Inc

40 British American Boulevard

Latham, NY 12110

Sample Information

WATER Matrix:

**Location Code: RUST-ENV** 

**Rush Request:** 

P.O.#:

**Custody Information** <u>Date</u> **Time** BSCollected by: 10/14/03

see "By" below

Received by: **KJB** 

10/15/03

12:00

10:15

**Laboratory Data** 

Analyzed by:

**SDG I.D.: GAF14132** 

Phoenix I.D.: AF14134

**NOW CORP TW-1** Client ID:

Parameter	Result	$\mathbf{RL}$	Units	Date	Time	$\mathbf{B}\mathbf{y}$	Reference
Volatiles							
1,1,1-Trichloroethane	8.7	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
1,1,2-Trichloroethane	ND	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
1,1-Dichloroethane	60	0.5	ug/L	10/16/03		RM	SW8260
1,1-Dichloroethene	11	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
1,2-Dichloroethane	ND	0.5	ug/L	10/16/03		RM	SW8260
Benzene	ND	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
Chlorobenzene	ND	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
Chloroethane	0.7	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
cis-1,2-Dichloroethene	2.4	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
Ethylbenzene	ND	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	10/16/03		RM	SW8260
o-Xylene	ND	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
p&m-Xylene	ND	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
Tetrachloroethene	ND	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
Toluene	ND	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
trans-1,2-Dichloroethene	ND	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
Trichloroethene	53	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
Vinyl chloride	ND	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
QA/QC Surrogates							
%4-Bromofluorobenzene (Surrogate)	86		%	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260

Comments:

ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

Phyllis Shiller, Laboratory Director

October 21, 2003





587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040 Tel. (860) 645-1102 Fax (860) 645-0823

### **Analysis Report**

October 21, 2003

FOR: Attn:

Earthtech Inc

40 British American Boulevard

Latham, NY 12110

Sample Information			Custody Infor	<u>mation</u>	<u>Date</u>	<u>Time</u>
•	Matrix: WATER		Collected by:	BS	10/14/03	11:55
	<b>Location Code</b>	: RUST-ENV	Received by:	KJB	10/15/03	10:15
j	Rush Request:		Analyzed by:	see "By" below		

Rush Request:

P.O.#:

**SDG I.D.: GAF14132** 

**Laboratory Data** Phoenix I.D.: AF14135

**NOW CORP TW-2A** Client ID:

Parameter	Result	RL	Units	Date	Time	$\mathbf{B}\mathbf{y}$	Reference
Volatiles					· · · · ·		
1,1,1-Trichloroethane	920	10	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
1,1,2-Trichloroethane	ND	0.5	ug/L	10/16/03		RM	SW8260
1,1-Dichloroethane	170	10	ug/L	10/16/03		RM	SW8260
1,1-Dichloroethene	46	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
1,2-Dichloroethane	ND	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
Benzene	ND	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
Chlorobenzene	ND	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
Chloroethane	4.7	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
cis-1,2-Dichloroethene	19	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
Ethylbenzene	ND	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
o-Xylene	ND	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
p&m-Xylene	ND	0.5	ug/L	10/16/03		RM	SW8260
Tetrachloroethene	ND	0.5	ug/L	10/16/03		RM	SW8260
Toluene	ND	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
trans-1,2-Dichloroethene	ND	0.5	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
Trichloroethene	340	10	ug/L	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260
Vinyl chloride	7.1	0.5	ug/L	10/16/03		RM	SW8260
QA/QC Surrogates							
%4-Bromofluorobenzene (Surrogate)	87		%	10/16/03		$\mathbf{R}\mathbf{M}$	SW8260

**Comments:** 

ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

Phyllis Shiller, Laboratory Director

October 21, 2003





587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040 Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report** 

October 21, 2003

FOR: Attn:

Earthtech Inc

40 British American Boulevard

Latham, NY 12110

Sample InformationCustody InformationDateTimeMatrix:WATERCollected by: BS10/14/0312:05Location Code: RUST-ENVReceived by: KJB10/15/0310:15

Rush Request: Analyzed by: see "By" below

P.O.#:

SDG I.D.: GAF14132

Laboratory Data

Phoenix I.D.: AF14136

Client ID: NOW CORP TW-3

Parameter	Result	RL	Units	Date	Time	$\mathbf{B}\mathbf{y}$	Reference
Volatiles							
1,1,1-Trichloroethane	3.9	0.5	ug/L	10/17/03		RM	SW8260
1,1,2-Trichloroethane	ND	0.5	ug/L	10/17/03		RM	SW8260
1,1-Dichloroethane	14	0.5	ug/L	10/17/03		$\mathbf{R}\mathbf{M}$	SW8260
1,1-Dichloroethene	2.0	0.5	ug/L	10/17/03		$\mathbf{R}\mathbf{M}$	SW8260
1,2-Dichloroethane	ND	0.5	ug/L	10/17/03		RM	SW8260
Benzene	ND	0.5	ug/L	10/17/03		RM	SW8260
Chlorobenzene	ND	0.5	ug/L	10/17/03		$\mathbf{R}\mathbf{M}$	SW8260
Chloroethane	ND	0.5	ug/L	10/17/03		RM	SW8260
cis-1,2-Dichloroethene	ND	0.5	ug/L	10/17/03		RM	SW8260
Ethylbenzene	ND	0.5	ug/L	10/17/03		RM	SW8260
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	10/17/03		RM	SW8260
o-Xylene	ND	0.5	ug/L	10/17/03		RM	SW8260
p&m-Xylene	ND	0.5	ug/L	10/17/03		RM	SW8260
Tetrachloroethene	ND	0.5	ug/L	10/17/03		RM	SW8260
Toluene	ND	0.5	ug/L	10/17/03		RM	SW8260
trans-1,2-Dichloroethene	ND	0.5	ug/L	10/17/03		RM	SW8260
Trichloroethene	11	0.5	ug/L	10/17/03		RM	SW8260
Vinyl chloride	ND	0.5	ug/L	10/17/03		RM	SW8260
QA/QC Surrogates							
%4-Bromofluorobenzene (Surrogate)	79		%	10/17/03		$\mathbf{R}\mathbf{M}$	SW8260

Comments:

ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

Phyllis Shiller, Laboratory Director

October 21, 2003





587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040 Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report** 

October 21, 2003

FOR: Attn:

BS

Earthtech Inc

40 British American Boulevard

Latham, NY 12110

Sample Information

WATER

Collected by:

Date

Time

Matrix:

Location Code: RUST-ENV

Received by:

**Custody Information** 

10/14/03 **KJB** 10/15/03 0:00

**Rush Request:** 

QA/QC Surrogates

%4-Bromofluorobenzene (Surrogate)

92

Analyzed by:

see "By" below

10:15

P.O.#:

**SDG I.D.: GAF14132** 

Phoenix I.D.: AF14137

RM

SW8260

**Laboratory Data** 

NOW CORP TRIP BLANK Client ID: Parameter Result RLUnits Date Time By Reference **Volatiles** 1,1,1-Trichloroethane ND 0.5 ug/L 10/16/03 RMSW8260 1,1,2-Trichloroethane ND 0.5 RMSW8260 ug/L 10/16/03 1,1-Dichloroethane ND 0.5 ug/L 10/16/03 RMSW8260 1,1-Dichloroethene ND 0.5ug/L 10/16/03 RMSW8260 1.2-Dichloroethane ND 0.5RMSW8260 ug/L 10/16/03 Benzene ND 0.5 ug/L 10/16/03 RMSW8260 Chlorobenzene ND 0.5 ug/L 10/16/03 RMSW8260 Chloroethane ND 0.5ug/L 10/16/03 RMSW8260 cis-1,2-Dichloroethene ND 0.510/16/03 RMSW8260 ug/L Ethylbenzene ND 0.5ug/L 10/16/03 RMSW8260 Methyl tert-butyl ether (MTBE) ND2.0 ug/L 10/16/03 RMSW8260 o-Xylene ND 0.5 ug/L 10/16/03 RMSW8260 p&m-Xylene ND 0.5 ug/L 10/16/03 RMSW8260 Tetrachloroethene SW8260 ND 0.5 ug/L 10/16/03 RMToluene ND ug/L 0.5 10/16/03 RMSW8260 trans-1,2-Dichloroethene ND 0.5 ug/L 10/16/03 RMSW8260 Trichloroethene SW8260 ND 0.5 ug/L 10/16/03 RMVinyl chloride ND 0.5 ug/L 10/16/03 RMSW8260

%

10/16/03

Comments	:
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ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

TRIP BLANK INCLUDED.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

Phyllis Shiller, Laboratory Director

October 21, 2003





587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040 Tel. (860) 645-1102 Fax (860) 645-0823

### QA/QC Report

October 21, 2003 QA/QC Data SDG I.D.: GAF14132 MS Dup Dup Rec % **■**Parameter Blank LCS % **RPD** MS Rec % **RPD** QA/QC Batch Sample No: AF12104 (AF14132, AF14133) NR 100 110 9.5 Mercury QA/QC Batch Sample No: AF14242 (AF14132, AF14133) NCBDL NCArsenic 99 84 QA/QC Batch Sample No: AF14242 (AF14132, AF14133) ICP Metals - Aqueous BDL 103 1 99.4 99.1 0.3 -Aluminum Antimony BDL 98.4 NC 98.6 98.7 0.1 Arsenic BDL 96.2 NC 96.3 96.7 0.4 BDL Barium 101 NC 99.1 99.6 0.5Beryllium BDL 98.0 NC 97.4 97.4 0.0 Boron BDL BDL Cadmium BDL 103 NC 101 101 0.0 BDL BDL Calcium BDL NC 98.0 97.0 1.0 Chromium 97.3 98.2 0.2 Cobalt **BDL** 99.5 NC 98.4 Copper 0.001 99.2 NC98.4 98.2 0.2 BDL98.2 1.9 97.2 97.0 0.2 ■Iron Lead **BDL** 102 NC 101 101 0.0 Magnesium BDL BDL Manganese BDL 99.5 NC 99.1 98.7 0.4 Molybdenum BDL BDL Nickel BDL 101 NC 99.7 99.3 0.4 Phosphorus BDL BDL Selenium BDL 96.2 NC 96.7 97.2 0.5 -Silver BDL104 NC 100 98.8 1.2 Thallium BDL 95.2 NC 93.9 94.3 0.4 Tin **BDL BDL** Vanadium BDL97.6 NC 96.6 96.6 0.0 Zinc BDL97.4 NC 96.6 96.6 0.0 ■QA/QC Batch Sample No: AF14242 (AF14132, AF14133) Lead Analysis by Furnace BDL 104 NC 108 NC

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
RPD - Relative Percent Difference
LCS - Laboratory Control Sample

Phyllis Shiller, Laboratory Director

October 21, 2003





587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040 Tel. (860) 645-1102 Fax (860) 645-0823

### QA/QC Report

October 21, 2003

### QA/QC Data

SDG I.D.: GAF14132

Parameter	Blank	LCS Rec % MS	${ m Rec}~\% { m RPD}$
QA/QC Batch Sample No: AF12843	(AF14132, AF14133)		
Fotal Cyanide	BDL	101	11.0
QA/QC Batch Sample No: AF13733 Oil and Grease by EPA 1664	(AF14132, AF14133) BDL	85	NR
QA/QC Batch Sample No: AF14132	(AF14132, AF14133)		
Tot. Diss. Solids	BDL	101	NR 3.9
A/QC Batch Sample No: AF14132	(AF14132, AF14133)		
Total Suspended Solids	BDL	110	NR NC

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

LCS - Laboratory Control Sample

MS - Matrix Spike

RPD - Relative Percent Difference

Between Sample and Sample Duplicate

Phyllis Shiller, Laboratory Director

October 21, 2003





Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040
Tel. (860) 645-1102 Fax (860) 645-0823

### QA/QC Report

October 21, 2003

### QA/QC Data

**SDG I.D.: GAF14132** 

MS Dup

Parameter	Blank	LCS %	$\mathbf{MS} \; \mathbf{Rec} \; \%$	Rec %	RPD
QA/QC Batch Sample No: AF14158 (	AF14132, AF14134, A	AF14135, AF1413	7)		
Volatiles Organics					
1,1,1,2-Tetrachloroethane	ND	99			
l,1,1-Trichloroethane	ND	110			
1,1,2,2-Tetrachloroethane	ND	91			
1,1,2-Trichloroethane	ND	99			
l,1-Dichloroethane	ND	89			
1,1-Dichloroethene	ND	111	113	106	6.4
1,1-Dichloropropene	ND	110			
1,2,3-Trichlorobenzene	ND	90			
1,2,3-Trichloropropane	ND	90			
1,2,3-Trimethylbenzene	ND				
1,2,4-Trichlorobenzene	ND	114			
1,2,4-Trimethylbenzene	ND	99			
1,2-Dibromo-3-chloropropane	ND	105			
1,2-Dichlorobenzene	ND	94			
1,2-Dichloroethane	ND	93			
.,2-Dichloropropane	ND	98			
1,3,5-Trimethylbenzene	ND	101			
.,3-Dichlorobenzene	ND	98			
1,3-Dichloropropane	ND	99			
1,4-Dichlorobenzene	ND	99			
?,2-Dichloropropane	ND	131			
2-Chlorotoluene	ND	101			
4-Chlorotoluene	ND	98			
3enzene **	ND	100	103	97	6.0
Bromobenzene	ND	96			
Bromochloromethane	ND	96			
$oldsymbol{eta}$ romodichloromethane	ND	100			
Bromoform	ND	97			
3romomethane	ND	125			
Carbon Tetrachloride	ND	107			
Chlorobenzene	ND	100	104	95	9.0
Chloroethane	ND	108			

SDG I.D.: GAF14132

Chloroform Chloromethane cis-1,2-Dichloroethene cis-1,3-Dichloropropene Dibromochloromethane Dibromoethane	ND	99 126 104 98 101 95 90			_
Chloromethane cis-1,2-Dichloroethene cis-1,3-Dichloropropene Dibromochloromethane Dibromoethane	ND ND ND ND ND ND	104 98 101 95			
pis-1,3-Dichloropropene Dibromochloromethane Dibromoethane	ND ND ND ND ND	98 101 95			
Dibromochloromethane Dibromoethane	ND ND ND ND	101 95			
Dibromoethane	ND ND ND	95			
	ND ND				
	ND	90			
Dibromomethane					
Dichlorodifluoromethane	ND				
Ethylbenzene		104			
Hexachlorobutadiene	ND	112			
<sup>1</sup> sopropylbenzene	ND	104			
n&p-Xylene	ND	100			
Methyl t Butyl Ether (MTBE)	ND				
√ethylene Chloride	ND	99			
h-Butylbenzene	ND	119			
n-Propylbenzene	ND	102			
Naphthalene	ND	107			
o-Xylene	ND	104			
n-Isopropyltoluene	ND	107			
ec-Butylbenzene	ND	95			
Styrene	ND	107			
ert-Butylbenzene	ND	100			
Tetrachloroethene	ND	109			
Toluene	ND	104	101	96	5.1
Cotal Trihalomethanes (TTHM)	ND				
trans-1,2-Dichloroethene	ND	105			
trans-1,3-Dichloropropene	ND	102			
Crichloroethene	ND	103	109	97	11.7
Trichlorofluoromethane	ND	116			
<sup>17</sup> inyl Chloride	ND	111			
& Bromofluorobenzene	92	100	84	82	2.4
Comment: LFB was analyzed with this batch in	nstead of MS/M	ISD			
A/QC Batch Sample No: AF14696 (AF14132	2, AF14133, A	F14134, AF14135	, AF14136, AF14137)		
Volatiles Organics					
1,1,1,2-Tetrachloroethane	ND	99			
,1,1-Trichloroethane	ND	110			
1,1,2,2-Tetrachloroethane	ND	91			
,1,2-Trichloroethane	ND	99			
,1-Dichloroethane	ND	89			
1,1-Dichloroethene	ND	111	101	106	4.8
,1-Dichloropropene	ND	110			

Parameter	Blank	LCS %	MS Rec %	MS Dup Rec %	RPD
,2,3-Trichlorobenzene	ND	90			
1,2,3-Trichloropropane	ND	90			
,2,3-Trimethylbenzene	ND				
.2,4-Trichlorobenzene	ND	114			
1,2,4-Trimethylbenzene	ND	, 99			
.,2-Dibromo-3-chloropropane	ND	105			
,2-Dichlorobenzene	ND	94			
1,2-Dichloroethane	ND	93			
,2-Dichloropropane	ND	98			
1,3,5-Trimethylbenzene	ND	101			
.,3-Dichlorobenzene	ND	98			
,3-Dichloropropane	ND	99			
1,4-Dichlorobenzene	ND	99			
2,2-Dichloropropane	ND	131			
-Chlorotoluene	ND	101			
4-Chlorotoluene	ND	98			
Benzene	ND	100	103	106	2.9
Bromobenzene	ND	96			
Bromochloromethane	ND	96			
3romodichloromethane	ND	100			
Bromoform	ND	97			
3romomethane	ND	125			
Carbon Tetrachloride	ND	107			
Chlorobenzene	ND	100	103	95	8.1
Chloroethane	ND	108			
Chloroform	ND	99			
Chloromethane	ND	126			
is-1,2-Dichloroethene	ND	104			
cis-1,3-Dichloropropene	ND	98			
Dibromochloromethane	ND	101			
Dibromoethane	ND	95			
Dibromomethane	ND	90			
Dichlorodifluoromethane	ND				
$\Sigma$ thylbenzene	ND	104			
Hexachlorobutadiene	ND	112			
sopropylbenzene	ND	104			
m&p-Xylene	ND	100			
Methyl t Butyl Ether (MTBE)	ND				
Methylene Chloride	ND	99			
n-Butylbenzene	ND	119			
1-Propylbenzene	ND	102			
Naphthalene	ND	107			

SDG I.D.: GAF14132

• Parameter	Blank	LCS %	MS Rec %	MS Dup Rec %	RPD
Xylene	ND	104			
p-Isopropyltoluene	ND	107			
ec-Butylbenzene	ND	95			
■tyrene	ND	107			
tert-Butylbenzene	ND	100			
etrachloroethene	ND	109			
Toluene	ND	104	101	96	5.1
Total Trihalomethanes (TTHM)	ND				
rans-1,2-Dichloroethene	ND	105			
trans-1,3-Dichloropropene	ND	102			
¬richloroethene	ND	103	109	97	11.7
richlorofluoromethane	ND	116			
Vinyl Chloride	ND	111			
Bromofluorobenzene	92	100	84	82	2.4
<b>Comment:</b> LFB was analyzed with this b	atch instead of MS/M	SD			
OA/QC Batch Sample No: AF15066 (AF					
	11100,111 11100)				
1,1,1,2-Tetrachloroethane	ND	95			
,1,1-Trichloroethane	ND	100			
•,1,2,2-Tetrachloroethane	ND	94			
1,1,2-Trichloroethane	ND	98			
,1-Dichloroethane	ND	92			
1,1-Dichloroethene	ND	107	103	100	3.0
1,1-Dichloropropene	ND	109	100	100	0.0
,2,3-Trichlorobenzene	ND	120			
1,2,3-Trichloropropane	ND	99			
,2,3-Trimethylbenzene	ND	00			
,2,4-Trichlorobenzene	ND	117			
1,2,4-Trimethylbenzene	ND	108			
,2-Dibromo-3-chloropropane	ND	96			
7,2-Dichlorobenzene	ND	102			
1,2-Dichloroethane	ND	94			
,2-Dichloropropane	ND	102			
1,3,5-Trimethylbenzene	ND	112			
¹,3-Dichlorobenzene	ND	108			
,3-Dichloropropane	ND	99			
1,4-Dichlorobenzene	ND	104			
;,2-Dichloropropane	ND	96			
<b>□</b> -Chlorotoluene	ND	108			
4-Chlorotoluene	ND	109			
Benzene	ND	100	97	96	1.0
•				-	<del>-</del>

•				MS Dup	
Parameter	Blank	LCS %	$\_\_$ MS Rec $\%$	$\operatorname{Rec}  \%$	RPD
3romobenzene	ND	100			
Bromochloromethane	ND	97			
Bromodichloromethane	ND	97			
Bromoform	ND	95			
Bromomethane	ND				
Carbon Tetrachloride	ND	100			
Chlorobenzene	ND	102	93	92	1.1
Chloroethane	ND	119			
Chloroform	ND	95			
Chloromethane	ND	125			
ris-1,2-Dichloroethene	ND	103			
is-1,3-Dichloropropene	ND	98			
Dibromochloromethane	ND	98			
Dibromoethane	ND	96			
Dibromomethane	ND	97			
Dichlorodifluoromethane	ND				
Ethylbenzene	ND	106			
Hexachlorobutadiene	ND	120			
Isopropylbenzene	ND	111			
_n&p-Xylene	ND	108			
Methyl t Butyl Ether (MTBE)	ND				
Methylene Chloride	ND	94			
n-Butylbenzene	ND	121			
n-Propylbenzene	ND	112			
Naphthalene	ND	97			
o-Xylene	ND	101			
p-Isopropyltoluene	ND	123			
jec-Butylbenzene	ND	114			
Styrene	ND	101			
'ert-Butylbenzene	ND	106			
Tetrachloroethene	ND	110			
Toluene	ND	104	99	98	1.0
Γotal Trihalomethanes (TTHM)	ND				
rans-1,2-Dichloroethene	ND	100			
trans-1,3-Dichloropropene	ND	95			
	ND	108	87	82	5.9
Trichlorofluoromethane	ND	112			
Vinyl Chloride	ND	123			
% Bromofluorobenzene	83	93	75	77	2.6
Comment: LFB was analyzed with this b	oatch instead of MS/M	SD			
¿A/QC Batch Sample No: AF15097 (Al	F14133)				
<u> </u>	•				

QA/QC Data

SDG I.D.: GAF14132

•				MS Dup	
Parameter	Blank	LCS %	MS Rec %	Rec %	RPD
Volatiles Organics		<del></del>			
1,1,1,2-Tetrachloroethane	ND	100			
.,1,1-Trichloroethane	ND	101			
1,1,2,2-Tetrachloroethane	ND	106			
1,1,2-Trichloroethane	ND	89			
,1-Dichloroethane	ND	88			
1,1-Dichloroethene	ND	93	81	84	3.6
<sup>1</sup> ,1-Dichloropropene	ND	92			
,2,3-Trichlorobenzene	ND	88			
1,2,3-Trichloropropane	ND	99			
.,2,3-Trimethylbenzene	ND				
2,4-Trichlorobenzene	ND	101			
1,2,4-Trimethylbenzene	ND	112			
.,2-Dibromo-3-chloropropane	ND	115			
1,2-Dichlorobenzene	ND	100			
1,2-Dichloroethane	ND	84			
1,2-Dichloropropane	ND	80			
1,3,5-Trimethylbenzene	ND	113			
1,3-Dichlorobenzene	ND	106			
,3-Dichloropropane	ND	102			
1,4-Dichlorobenzene	ND	101			
2,2-Dichloropropane	ND	105			
	ND	110			
4-Chlorotoluene	ND	106			
Benzene	ND	85	82	80	2.5
	ND	101			
Bromochloromethane	ND	89			
Bromodichloromethane	ND				
Bromoform	ND	108			
3romomethane	ND	101			
Carbon Tetrachloride	ND	97			
Chlorobenzene	ND	100	89	91	2.2
Chloroethane	ND	97			
Chloroform	ND	90			
Chloromethane	ND				
cis-1,2-Dichloroethene	ND	93			
cis-1,3-Dichloropropene	ND	98			
Dibromochloromethane	ND	105			
Dibromoethane	ND	96			
Dibromomethane	ND				
Dichlorodifluoromethane	ND				
Ethylbenzene	ND	105			

### QA/QC Data

SDG I.D.: GAF14132

				MS Dup	
Parameter	Blank	LCS %	MS Rec %	Rec %	RPD
lexachlorobutadiene	ND	112			
Isopropylbenzene	ND	120			
n&p-Xylene	ND	112			
Methyl t Butyl Ether (MTBE)	ND				
Methylene Chloride	ND	90			
1-Butylbenzene	ND	115			
n-Propylbenzene	ND	108			
Naphthalene	ND	107			
Xylene	ND	105			
p-Isopropyltoluene	ND	122			
ec-Butylbenzene	ND	111			
tyrene	ND	101			
tert-Butylbenzene	ND	117			
etrachloroethene	ND	106			
Toluene	ND	99	85	84	1.2
Total Trihalomethanes (TTHM)	ND				
_rans-1,2-Dichloroethene	ND	92			
trans-1,3-Dichloropropene	ND	101			
Trichloroethene	ND	81	70	71	1.4
richlorofluoromethane	ND	98			
Vinyl Chloride	ND	106			
& Bromofluorobenzene	86	100	83	78	6.2
<b>Comment:</b> LFB was analyzed with this l	oatch instead of MS/M	SD			

<sup>&#</sup>x27;f there are any questions regarding this data, please call Phoenix Client Services at extension 200.

MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
RPD - Relative Percent Difference

**■**LCS - Laboratory Control Sample

Phyllis Shiller, Laboratory Director

October 21, 2003

#		Sample Container				tames.					7		control of	-ATT-SMALL							\$10	i.	Date / Time	Date / Time 	· · · · · · · · · · · · · · · · · · ·			
Earth Tech Cooler #	Matrix	Sample Type S	7.00	2h	×				Duracire	7		**************************************	Committee	الموسود	76	2	75						Items:	Items:	Laboratory Receiving Notes:	Custody Seal Intact?	Temp. of Shipping Container:	Sample Condition:
Custody Seal #	quired			A A Y D					×					У.									Disposed of by: (Signature)	Disposed of by: (Signature)	Check Delivery Method: Labo		Common carrier Tem	Sami
	Analysis Required	, v.	) 1 5 <u>51</u>		×	× ×	×	*		*		× .	4	\$	- X	X	×	×					Received by: (Signature)	Received by: (Signature)	1 3260 !!			
	TH TECH	CORP.		Time Comp. Comp. (ppm)	₹ ×					10511			-Carponia	<u> </u>	12001	الكلما	126 1						Noffiles Time Received by:	Date!/ Time Received b	Kemarks: 20.5 dL eN EF		Federal Express Airbill No.: Lab:	
1	Project Name/Client EAKTH	Non	Signature)	Sample Description (Field ID Number) Date	163/0	_				10/03	,				141.34	\$ 111135	19136	RLANK	141127				JULION 7	(;	Send Lab Results To: STEVE CHOINIERE	THE THE STATE OF T	VERKIERS DIVO.	
	Project Number	55849.01	Sample Cystodian: (Sig	Item Sample Do (Field ID	m	2 14133	3	4	\$	6 TOF	7 11173	8	6	10	11 myrs	12 Tw- 214	13 Tw-3	14 TRIP B	15	16	17	18	Relinquished by: (Signature)	Relinquished by: (Signature)	Send Lab Results To: ST	4 :0, 1, 00	YOURSTISH MIER	* WILLIAM

F514/Earth.Sci

10/22/2003

Earth Tech

ATTN: Steve Choiniere 40 British American Blvd. Latham, NY 12110

Project Reference: NOW Corp., 55849.01

Lab Number:

A3101501-01/08

Enclosed are results for sample(s) received 10/15/03 by Air Technology Laboratories. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

#### Report Narrative:

Sample analyses were performed within method performance criteria. All results are reported without qualifications.

Results were faxed to Steve Choiniere on 10/21/03.

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

Mark Johnson

Operations Manager

MJohnson@AirTechLabs.com

Enclosures

Note: The cover letter is an integral part of this analytical report.

Client: EarthTech Atm: Steve Choiniere

Client's Project: NOW CORP., 55849.01

Date Received: Matrix:

10/15/03 Air

Units:

ppbv

#### EPA Method TO14

Lab No:	A31015	01-01	A31015	01-02	A31015	01-03	A31015	01-04	A3101501-05			
Client Sample I.D.:	TW-1VE	10/03	VE-1VE	10/03	VE-2VE	10/03	TW-2AV	E 10/03	ST-1 10/03			
Date Sampled:		10/14	/03	10/14	/03	10/14	/03	10/14	/03	10/14/03		
Date Analyzed:		10/16	/03	10/16	/03	10/16	/03	10/16	/03	10/16	/03	
QC Batch No:		031016N	1S2A1	031016N	1S2A1	031016N	IS2A1	031016N	IS2A1	031016M	IS2A1	
Analyst Initials:		SC		SC		SC		SC		SC		
Dilution Factor:		1.0	·	1.0		1.0		1.0		1.0		
ANALYTE	PQL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	
Vinyl Chloride	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	
Chloroethane	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	
1,1-Dichloroethene	1.0	ND	1.0	ND	1.0	ND	1.0	ND	10	ND	1.0	
1,1-Dichloroethane	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	4.6_	1.0	
c-1,2-Dichloroethene	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	1.3	1.0	
1,1,1-Trichloroethane	1.0	2.3	1.0	2.7	1.0	3.5	1.0	4.8	1.0	21	1.0	
Benzene	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	
1,2-Dichloroethane	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	
Trichloroethene	1.0	29	1.0	30	1.0	30	1.0	31	1.0	48	1.0	
Toluene	1.0	2.1	1.0	1.9	1.0	2.1	1.0	2.6	1.0	2.0	1.0	
1,1,2-Trichloroethane	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	10	
Tetrachloroethene	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	
Chlorobenzene	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	
Ethylbenzene	1.0	ND	1.0	ND	1.0	ND	1.0	1.1	1.0	ND	1.0	
p,&m-Xylene	1.0	2.3	1.0	1.7	1.0	2.7	1.0	4.0	1.0	2.4	1.0	
o-Xylene	1.0	1.3	1.0	ND	1.0	1.3	1.0	1.8	1.0	ND	1.0	

PQL = Practical Quantitation Limit

ND= Not Detected (below RL)

RL = PQL X Dilution Factor

Mark Johnson

Air Toxics Operations Manager

The cover letter is an integral part of this analytical report

Date 10-21-03

Client: EarthTech
Attn: Steve Choiniere

Client's Project: NOW CORP., 55849.01

Date Received: 10/15/03 Matrix: Air Units: ppbv

			E	PA Method	l TO14						
Lab No:	A31015	01-06	A31015	01-07	A31015	01-08	=			<del></del>	
Client Sample I.D.:	PAS 10	0/03	SVE-EXF	I 10/03	ST-4 1	0/03					
Date Sampled:		10/14	/03	10/14	/03	10/14	/03	-	-		
Date Analyzed:		10/16	/03	10/16	/03	10/16	/03				
QC Batch No:		031016N	IS2A1	031016N	IS2A1	031016N	1S2A1				
Analyst Initials:		sc		SC		SC					
Dilution Factor:	10		1.0		1.0						
ANALYTE	PQL	Result	RL	Result	RL	Result	RL				
Vinyi Chloride	1.0	ND	10	ND	1.0	ND_	1.0				
Chloroethane	1.0	ND	10	ND	1.0	ND	1.0				
1,1-Dichloroethene	1.0	32	10	2.2	1.0	3.0	1.0				
1,1-Dichloroethane	1.0	310	10	7.9	1.0	ND	1.0				
c-1,2-Dichloroethene	1.0	19	10	ND	1.0	ND	1.0				
1,1,1-Trichloroethane	1.0	1,200	10	ND_	1.0	ND	1.0				
Benzene	1.0	ND_	10	ND	1.0	ND	1.0				
1,2-Dichloroethane	1.0	ND	10	ND	1.0	ND	1.0				
Trichloroethene	1.0	550	10	ND	1.0	ND	1.0				
Toluene	1.0	ND	10	2.1	1.0	2.9	1.0	_			
1,1,2-Trichloroethane	1.0	ND	10	ND	1.0	ND	1.0				
Tetrachloroethene	1.0	18	10	ND	1.0	ND	1.0				
Chlorobenzene	1.0	ND	10	ND	1.0	ND	1.0				
Ethylbenzene	1.0	ND	10	ND	1.0	ND_	1.0		$\perp$		
p,&m-Xylene	1.0	ND	10	2.6	1.0	2.3	1.0			<u> </u>	
o-Xylene	1.0	ND	10	1.1	1.0	ND	1.0				
			<u> </u>		لا		<u></u> _				

PQL = Practical Quantitation Limit

ND= Not Detected (below RL)

RL = PQL X Dilution Factor

Reviewed/Approved By: \_

Mark Johnson

Air Toxics Operations Manager

The cover letter is an integral part of this analytical report

Date 10-21-03

Date: 10-21-03

#### LCS/LCSD Recovery and RPD Summary Report

QC Batch #: 031016MS2A1

Matrix: Air

EPA Method TO-14/TO-15														
Lab No:	Method Blank		L	CS	LC	CSD								
Date Analyzed:	10/16/03		10/1	10/16/03 10/16/										
Data File ID:	16OCT005.D		16 <b>0</b> C	Г002.D	16 <b>0</b> C′	Г003.D								
Analyst Initials:	SC		S	C	S	C								
Dilution Factor:	1.0		1	.0	1	.0	_		Limits					
ANALYTE	Result ppbv	Spike Amount	Result ppbv	% Rec	Result ppbv	% Rec	RPD	Low %Rec	High %Rec	Max. RPD	Pass/ Fail			
1,1-Dichloroethene	0.0	10.0	10.0	100	9.8	98	2.6	70	130	25	Pass			
Methylene Chloride	0.0	10.0	7.8	78	7.6	76	3.4	70	130_	25	Pass			
Trichloroethene	0.0	10.0	11.4	114	10.5	105	8.4	70	130	25	Pass			
Toluene	0.1	10.0	10.0	99	9.1	90	9.8	70	130	25	Pass			
1,1,2,2-Tetrachloroethane	0.0	10.0	9.6	96	9.7	97	0.6	70	130	25	Pass			

RPD = Relative Percent Difference

Reviewed/Approved By:

Mark Johnson

Air Toxics Operations Manager

The cover letter is an integral part of this analytical report



A **TUCO** INTERNATIONAL LTD. COMPANY

				43101201									Custody Seal #							Earth Tech Cooler #								
Projec	roject Number Project Name/Client EARTH TECH 55849.01 Now Gorp								Analysis Re					ired									1atrix					
5.	5849.01	Nou	N G	907[	)				l									. `	/	Sample Type			e	Sample Contain				
Sample Qustodian: (Signature)							1.16 11.65		AM	4)(	. <b>y</b>	TE	[ <i>L</i>	, s	+	Perm		1				Sags	,					
ltem No.	Sample De (Field ID )		Date	Time	Grab	Сошр.	PID Reading (ppm)	Label Number	Joiothe Organics	7	a//	2/4	18	ĺ	} .d	:{	Follo	r.m	/	X				Jed 14				
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2	VE-IVE	10/03		VHO		ŀ		oz																				
3	VE- ZUE	10/03		1135				03																				
4	TW-ZAU	5 10/03		1130				04																				
5	ST-1	10/03		1125				OS																				
6	PAS	10/03		11:10		Ц		OΣφ																				
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	ab Results To: Ste	ve Chainier	e-	Rema					<del>- ()</del>			Chec	k De	liver	y Meth	nod:			Laboratory Receiving Notes:									
EARTH TECH				☐ Samn						mples delivered in person					Custody Seal Intact?													
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Rev. 10/98

