# Operation, Maintenance and Monitoring Report September 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 10, 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 - "September" 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 27-day period (September 3 – September 30, 2003).

Except for a maintenance shutdown for a few hours, the P&T system was online and operational throughout the reporting period. The submersible pump in recovery well TW-3 was inoperable from September 15<sup>th</sup> to beyond the end of the reporting period (details below). Nevertheless, approximately 634,800 gallons of water were treated during the reporting period. Discharge from the treatment system averaged approximately 23,500 gallons per day (gpd). During the prior reporting period, the average discharge was 18,300 gpd.

The VES was down until the last day of the reporting period (details below).

As of the last day of the reporting period, a total of 33,425,000 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 September 17, 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, which normally summarizes the vapor extraction system air sampling data, is excluded from the report because the VES was down and air sampling was not performed.

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:

September 17<sup>th</sup> – Removed Red Lion Controls meter from PLC unit in treatment building. Meter had failed on September 15, shutting off submersible pump in recovery well TW-3. Pump was

Telephone

518.951.2200

Facsimile

518.951.2300



Page 2 Mr. Carl Hoffman NYSDEC

taken out of "auto" mode and run "manually" so influent water samples would have a contribution from TW-3. The pump was returned to "auto" mode (effectively shutting it off) after sampling. Meter was shipped out for repair.

September 30<sup>th</sup> - Installed rebuilt VES blower motor, which had been removed on August 5<sup>th</sup>. Restarted VES. Shutdown P&T system and pumped water out of the meter and distribution pits. Removed about 15 gallons of scale and debris from the distribution pit. Water was observed flowing into the meter pit around the outside of a PVC line which passes through the pit. We will attempt to repair this leak on a future site visit. Cut PVC line and moved the gate valves to the upstream side of the flow meters, so water can be shut off when the flow meters need to be cleaned. Installed new pick-up wire on IW-1 flow meter so that data will be relayed to the PLC. Broke a small part of IW-2 flow meter. Part will be purchased and replaced. Restarted P&T system.

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

Steller Mornier

Stephen R. Choiniere Project Manager

Attachments

**Tables** 

Table 1
Summary of Influent and Effluent Data
Sampling Date: September 17, 2003
NOW Corporation Site
Town of Clinton, New York

Analytes/	Total		]	Recovery Well	ls	Tre	atment
Parameters	Influent	Effluent	TW-1	TW-2A	TW-3	Requ	irements
							(units)
Flow		23,511				Monitor	gpd
pH	NA	NA	NA	NA	NA	6.5 to 8.5	standard units
TSS	10	<5	NA	NA	NA	50	mg/L
TDS	280	240	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	< 0.002	< 0.002	NA	NA	NA	0.15	mg/L
Aluminum, Total	0.03	< 0.01	NA	NA	NA	2	mg/L
Arsenic, Total	< 0.004	< 0.004	NA	NA	NA	0.05	mg/L
Barium, Total	0.07	0.077	NA	NA	NA	2	mg/L
Copper	0.004	0.004	NA	NA	NA	0.024	mg/L
Chromium	0.001	< 0.001	NA	NA	NA	0.1	mg/L
Iron	0.102	0.031	NA	NA	NA	0.6	mg/L
Manganese	0.187	0.146	NA	NA	NA	0.6	mg/L
Mercury	< 0.0002	< 0.0002	NA	NA	NA	0.0008	mg/L
Nickel	< 0.001	< 0.001	NA	NA	NA	0.2	mg/L
Benzene	<30	<0.5	< 0.5	<30	< 0.5	0.8	ug/L
Chlorobenzene	<30	< 0.5	< 0.5	< 30	< 0.5	5	ug/L
Chloroethane	<30	< 0.5	0.6	< 30	< 0.5	5	ug/L
1,1-Dichloroethane	<30	< 0.5	84	<30	< 0.5	5	ug/L
1,2-Dichloroethane	<30	< 0.5	< 0.5	<30	< 0.5	1.6	ug/L
cis-1,2-Dichloroethene	200	< 0.5	3	260	14	5	ug/L
trans-1,2-Dichloroethene	<30	< 0.5	< 0.5	<30	< 0.5	5	ug/L
1,1-Dichloroethene	<30	< 0.5	12	<30	2.2	0.5	ug/L
Ethylbenzene	<30	< 0.5	< 0.5	<30	< 0.5	5	ug/L
Methyl tert-butyl ether	<100	<2	<2	<100	<2	None	ug/L
Tetrachloroethene	<30	< 0.5	< 0.5	<30	< 0.5	1.4	ug/L
Toluene	<30	< 0.5	< 0.5	<30	< 0.5	5	ug/L
1,1,1-Trichloroethane	930	< 0.5	9.7	1400	8.0	5	ug/L
1,1,2-Trichloroethane	<30	< 0.5	< 0.5	<30	< 0.5	1.2	ug/L
Trichloroethene	290	< 0.5	62	400	<u>1</u> 6	5	ug/L
Vinyl Chloride	<30	< 0.5	< 0.5	<30	< 0.5	0.6	ug/L
1,2- and 1,4-Xylenes	<30	< 0.5	< 0.5	<30	< 0.5	10	ug/L
1,3-Xylene	<30	< 0.5	< 0.5	<30	< 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.

9-03 Tables.xls 11/7/2003

#### Table 2 Summary of September 2003 O&M Data

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

Instrumei	ntation/Readings:	9/30/2003	Units
	Pumping Rate	8	GPM
	Water Level Above Transducer	23.52	feet
	Flow Meter Reading	826,400	gallons
	Pump Pressure	35	psi
TW- $2A$	•		
	Pumping Rate	13	GPM
	Water Level Above Transducer	42.29	feet
	Flow Meter Reading	9,928,700	gallons
	Pump Pressure	14	psi
TW-3			
	Pumping Rate	NW	GPM
	Water Level Above Transducer	-	feet
	Flow Meter Reading	-	gallons
	Pump Pressure	-	psi
Air Strippe	27		
	Stripper Blower Pressure	17	inches H <sub>2</sub> O
	Air Temperature in Stripper	50	°F
	Pressure Gauge - Left Leg	1.4	inches H <sub>2</sub> O
	Pressure Gauge - Right Leg	0.8	inches H <sub>2</sub> O
	Pressure/Vacuum on the Stripper	1.0	inches H <sub>2</sub> O
Sand Filte	- <del></del>		*
	Influent Pressure	_	psi
	Effluent Pressure	-	psi
	Differential Pressure Across Filter	-	psi
Effluent F			•
	Total System Meter Reading	33,425,200	gallons
	IW-1 Flow Meter Reading	13	gallons
	IW-2 Flow Meter Reading	14,534	gallons
Vapor Ext	raction System		
	Vapor Blower Vacuum	8	inches Hg
	Vacuum before Filter with Dilution Air	8	inches Hg
	Vacuum on Knock-out Pot	10.5	inches Hg
	Blower Inlet Temperature	60	°F
	Blower Outlet Temperature	132	٥F
	Pressure After Blower	50	psi
	Heat Exchanger Outlet Temperature	58	°F

Note: N/A indicates Not Available.

NW - Not working

Table 3
September 2003 Groundwater Levels

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

	MP	9/17	/2003
Well ID	Elevation	Depth to Water	<b>GW</b> Elevation
		(Ft below MP)	
MW-1	289.50	10.64	278.86
MW-2	332.51	28.19	304.32
MW-3	312.83	25.83	287.00
MW-3S	312.51	24.24	288.27
MW-4	298.29	21.10	277.19
MW-4D	298.16	20.94	277.22
MW-5	285.48	17.67	267.81
MW-6S	287.90	4.20	283.70
MW-6D	287.25	7.00	280.25
MW-7S	292.12	22.07	270.05
MW-7D	292.54	59.20	233.34
OW-1	307.75	49.03	258.72
OW-2	305.96	69.01	236.95
OW-6	294.81	4.97	289.84
IW-1	312.46	27.51	284.95
IW-2	306.56	40.27	266.29
MW-8	283.65	N/A	N/A
MW-9	275.37	N/A	N/A
MW-10	280.92	N/A	N/A
MW-11	283.72	N/A	N/A
OW-3	307.35	N/A	N/A
OW-4	308.30	N/A	N/A
OW-5	307.41	N/A	N/A
TW-2	290.52	N/A	N/A

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

9-03 Tables.xls 11/7/2003

**Analytical Data** 



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

Friday, September 26, 2003

Earthtech 40 British American Blvd

Latham

NY 12110

Attention: Mr Steve Choiniere

Sample ID#: AF07666-07671

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.

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**

September  $26, \overline{2003}$ 

FOR: Attn: Mr. Roger Gray

EarthTech Inc.

40 British American Boulevard

Latham NY 12110

Sample Information

Matrix: WATER

**Location Code: EARTH-NY** 

Rush Request:

P.O.#:

5584901

Custody Information

Collected by: ROGER G

Received by: SW

SW

see "By" below

09/17/03

Date

11:55

Time

09/18/03

9:41

**Laboratory Data** 

Analyzed by:

**SDG I.D.: GAF07666** 

Phoenix I.D.: AF07667

Client ID: NOW CORP INFLUENT

Parameter	Result	$\mathbf{RL}$	Units	Date 7	Гime	$\mathbf{B}\mathbf{y}$	Reference
Aluminum	0.03	0.010	mg/L	09/25/03		EK	200.7/6010
Arsenic (Furnace)	BDL	0.004	mg/L	09/23/03		RS	206.2
Barium	0.07	0.002	mg/L	09/22/03		EK	6010/E200.7
Chromium	0.001	0.001	mg/L	09/22/03		EK	200.7/6010
Copper	0.004	0.001	mg/L	09/22/03		EK	6010/E200.7
Iron	0.102	0.002	mg/L	09/22/03		EK	6010/E200.7
Mercury	BDL	0.0002	mg/L	09/22/03		RS	7470/E245.1
Manganese	0.187	0.001	mg/L	09/22/03		EK	200.7/6010
Nickel	BDL	0.001	mg/L	09/22/03		EK	200.7/6010
Zinc	BDL	0.002	mg/L	09/22/03		EK	200.7/6010
Oil and Grease by EPA 1664	BDL	1.4	mg/L	09/22/03		SD	EPA 1664
Total Cyanide	BDL	0.01	mg/L	09/23/03		PJ	9010/335.3
Tot. Diss. Solids	280	5	mg/L	09/19/03		$\mathbf{C}/\mathbf{E}$	SM2540C
Total Suspended Solids	10	<b>5</b> .	mg/L	09/19/03		$\mathbf{CF}$	SM2540D
Mercury Digestion	Completed			09/22/03		$\mathbf{TR}$	E245.1
Total Metals Digestion	Completed			09/18/03		AG	
<u>Volatiles</u>							
1,1,1-Trichloroethane	930	30	ug/L	09/23/03		RM	SW8260
1,1,2-Trichloroethane	ND	30	ug/L	09/23/03		RM	SW8260
1,1-Dichloroethane	ND	30	ug/L	09/23/03		RM	SW8260
1,1-Dichloroethene	ND	30	ug/L	09/23/03		RM	SW8260
1,2-Dichloroethane	ND	30	ug/L	09/23/03		RM	SW8260
Benzene	ND	30	ug/L	09/23/03		$\mathbf{R}\mathbf{M}$	SW8260
Chlorobenzene	ND	30	ug/L	09/23/03		RM	SW8260

Client ID: NOW CORP INFLUENT

Phoenix I.D.:	AF07667
---------------	---------

Parameter	Result	RL	Units	Date Time	e By	Reference
Chloroethane	ND	30	ug/L	09/23/03	RM	SW8260
cis-1,2-Dichloroethene	200	30	ug/L	09/23/03	$\mathbf{R}\mathbf{M}$	SW8260
Ethylbenzene	ND	30	ug/L	09/23/03	$\mathbf{R}\mathbf{M}$	SW8260
Methyl tert-butyl ether (MTBE)	ND	100	ug/L	09/23/03	$\mathbf{R}\mathbf{M}$	SW8260
o-Xylene	ND	30	ug/L	09/23/03	$\mathbf{R}\mathbf{M}$	SW8260
p&m-Xylene	ND	30	ug/L	09/23/03	$\mathbf{R}\mathbf{M}$	SW8260
Tetrachloroethene	ND	30	ug/L	09/23/03	$\mathbf{R}\mathbf{M}$	SW8260
Toluene	ND	30	ug/L	09/23/03	$\mathbf{R}\mathbf{M}$	SW8260
trans-1,2-Dichloroethene	ND	30	ug/L	09/23/03	$\mathbf{R}\mathbf{M}$	SW8260
Trichloroethene	290	30	ug/L	09/23/03	$\mathbf{R}\mathbf{M}$	SW8260
Vinyl chloride	ND	30	ug/L	09/23/03	$\mathbf{R}\mathbf{M}$	SW8260
QA/QC Surrogates						
%4-Bromofluorobenzene (Surrogate)	85		%	09/23/03	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





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

# **Analysis Report**

**September 26, 2003** 

FOR:

**Custody Information** 

Attn: Mr. Roger Gray

EarthTech Inc.

40 British American Boulevard

Latham NY 12110

Sample Information

WATER

**Location Code: EARTH-NY** 

Received by: SW Analyzed by:

Collected by:

ROGER G

see "By" below

Date 09/17/03

09/18/03

**Time** 11:20

9:41

**Rush Request:** 

P.O.#:

Matrix:

5584901

**SDG I.D.: GAF07666** 

Phoenix I.D.: AF07666

## **Laboratory Data**

NOW CORP EFFLUENT Client ID:

Parameter	Result	$\mathbf{RL}$	Units	Date	Time	$\mathbf{B}\mathbf{y}$	Reference
Aluminum	BDL	0.010	mg/L	09/25/03		EK	200.7/6010
Arsenic (Furnace)	BDL	0.004	mg/L	09/23/03		$\mathbf{RS}$	206.2
Barium	0.077	0.002	mg/L	09/22/03		EK	6010/E200.7
Chromium	BDL	0.001	$\mathbf{mg}/\mathbf{L}$	09/22/03		EK	200.7/6010
Copper	0.004	0.001	mg/L	09/22/03		EK	6010/E200.7
Iron	0.031	0.002	mg/L	09/22/03		EK	6010/E200.7
Mercury	BDL	0.0002	mg/L	09/22/03		$\mathbf{RS}$	7470/E245.1
Manganese	0.146	0.001	mg/L	09/22/03		EK	200.7/6010
Nickel	BDL	0.001	$\mathbf{mg}/\mathbf{L}$	09/22/03		EK	200.7/6010
Zinc	BDL	0.002	mg/L	09/22/03		EK	200.7/6010
Oil and Grease by EPA 1664	BDL	1.4	mg/L	09/22/03		SD	EPA 1664
Total Cyanide	BDL	0.01	mg/L	09/23/03		$\mathbf{PJ}$	9010/335.3
Tot. Diss. Solids	240	5	mg/L	09/19/03		$\mathbf{C}/\mathbf{E}$	SM2540C
Total Suspended Solids	$\mathbf{BDL}$	5	mg/L	09/19/03		$\mathbf{CF}$	SM2540D
Mercury Digestion	Completed			09/22/03		TR	E245.1
Total Metals Digestion	Completed			09/18/03		$\mathbf{AG}$	
<u>Volatiles</u>							
1,1,1-Trichloroethane	ND	0.5	ug/L	09/19/03		$\mathbf{R}\mathbf{M}$	SW8260
1,1,2-Trichloroethane	ND	0.5	ug/L	09/19/03		RM	SW8260
1,1-Dichloroethane	ND	0.5	ug/L	09/19/03		RM	SW8260
1,1-Dichloroethene	ND	0.5	ug/L	09/19/03		RM	SW8260
1,2-Dichloroethane	ND	0.5	ug/L	09/19/03		$\mathbf{R}\mathbf{M}$	SW8260
Benzene	ND	0.5	ug/L	09/19/03		$\mathbf{R}\mathbf{M}$	SW8260
Chlorobenzene	ND	0.5	ug/L	09/19/03		RM	SW8260

**Client ID: NOW CORP EFFLUENT** 

Phoenix	<b>I.D.:</b>	AF07666
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arameter	Result	$\mathbf{RL}$	Units	Date Time	$\mathbf{B}\mathbf{y}$	Reference
hloroethane	ND	0.5	ug/L	09/19/03	RM	SW8260
s-1,2-Dichloroethene	ND	0.5	ug/L	09/19/03	RM	SW8260
thylbenzene	ND	0.5	ug/L	09/19/03	$\mathbf{R}\mathbf{M}$	SW8260
lethyl tert-butyl ether (MTBE)	ND	2.0	ug/L	09/19/03	RM	SW8260
Xylene	ND	0.5	ug/L	09/19/03	$\mathbf{R}\mathbf{M}$	SW8260
&m-Xylene	ND	0.5	ug/L	09/19/03	$\mathbf{R}\mathbf{M}$	SW8260
etrachloroethene	ND	0.5	ug/L	09/19/03	$\mathbf{R}\mathbf{M}$	SW8260
oluene	ND	0.5	ug/L	09/19/03	RM	SW8260
ans-1,2-Dichloroethene	ND	0.5	ug/L	09/19/03	$\mathbf{R}\mathbf{M}$	SW8260
${ m richloroethene}$	ND	0.5	ug/L	09/19/03	$\mathbf{R}\mathbf{M}$	SW8260
inyl chloride	ND	0.5	ug/L	09/19/03	RM	SW8260
A/QC Surrogates 4-Bromofluorobenzene (Surrogate)	106		%	09/19/03	RM	SW8260
A/QC Surrogates	ND		ug/L	09/19/03		

#### **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





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

Analyzed by: see "By" below

# **Analysis Report**

**September 26, 2003** 

FOR: Attn: Mr. Roger Gray

EarthTech Inc.

40 British American Boulevard

Latham NY 12110

_	Sample Inform	<u>iation</u>	Custody Infor	<u>mation</u>	<u>Date</u>	Time
	Matrix:	WATER	Collected by:	ROGER G	09/17/03	12:22
	<b>Location Code</b>	EARTH-NY	Received by:	SW	09/18/03	9:41

Rush Request:

P.O.#:

5584901

SDG I.D.: GAF07666

Laboratory Data

Phoenix I.D.: AF07668

Client ID: NOW CORP TW-1

Parameter	Result	RL	Units	Date Ti	ime	$\mathbf{B}\mathbf{y}$	Reference
Volatiles							
1,1,1-Trichloroethane	9.7	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
1,1,2-Trichloroethane	ND	0.5	ug/L	09/18/03		RM	SW8260
1,1-Dichloroethane	84	0.5	ug/L	09/18/03		RM	SW8260
1,1-Dichloroethene	12	0.5	ug/L	09/18/03		RM	SW8260
1,2-Dichloroethane	ND	0.5	ug/L	09/18/03		RM	SW8260
Benzene	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
Chlorobenzene	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
Chloroethane	0.6	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
cis-1,2-Dichloroethene	3.0	0.5	ug/L	09/18/03		RM	SW8260
Ethylbenzene	ND	0.5	ug/L	09/18/03		RM	SW8260
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	09/18/03		RM	SW8260
o-Xylene	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
p&m-Xylene	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
Tetrachloroethene	ND	0.5	ug/L	09/18/03		RM	SW8260
Toluene	ND	0.5	ug/L	09/18/03		RM	SW8260
trans-1,2-Dichloroethene	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
Trichloroethene	62	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
Vinyl chloride	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
QA/QC Surrogates							
%4-Bromofluorobenzene (Surrogate)	88		%	09/18/03		$\mathbf{R}\mathbf{M}$	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





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

# **Analysis Report**

September 26, 2003

FOR: Attn: Mr. Roger Gray

EarthTech Inc.

40 British American Boulevard

Latham NY 12110

	Sample Inform	<u>nation</u>	Custody Infor	<u>mation</u>	<u>Date</u> 09/17/03 09/18/03	<u>Time</u>
•	Matrix:	WATER	Collected by:	ROGER G	09/17/03	12:25
Location Code: EARTH-NY		Received by:	SW	09/18/03	9:41	
,	Rush Request:		Analyzed by:	see "By" below		

P.O.#: 5584901

**Laboratory Data** 

**SDG I.D.: GAF07666** 

Phoenix I.D.: AF07669

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

Parameter	Result	$\mathbf{RL}$	Units	Date	Time	$\mathbf{B}\mathbf{y}$	Reference
Volatiles							
1,1,1-Trichloroethane	1400	30	ug/L	09/23/03		RM	SW8260
1,1,2-Trichloroethane	ND	30	ug/L	09/23/03		RM	SW8260
1,1-Dichloroethane	ND	30	ug/L	09/23/03		RM	SW8260
1,1-Dichloroethene	ND	30	ug/L	09/23/03		RM	SW8260
1,2-Dichloroethane	ND	30	ug/L	09/23/03		$\mathbf{R}\mathbf{M}$	SW8260
Benzene	ND	30	ug/L	09/23/03		RM	SW8260
Chlorobenzene	ND	30	ug/L	09/23/03		RM	SW8260
Chloroethane	ND	30	ug/L	09/23/03		RM	SW8260
cis-1,2-Dichloroethene	260	30	ug/L	09/23/03		RM	SW8260
Ethylbenzene	ND	30	ug/L	09/23/03		RM	SW8260
Methyl tert-butyl ether (MTBE)	ND	100	ug/L	09/23/03		RM	SW8260
o-Xylene	ND	30	ug/L	09/23/03		RM	SW8260
p&m-Xylene	ND	30	ug/L	09/23/03		RM	SW8260
Tetrachloroethene	ND	30	ug/L	09/23/03		$\mathbf{R}\mathbf{M}$	SW8260
Toluene	ND	30	ug/L	09/23/03		RM	SW8260
trans-1,2-Dichloroethene	ND	30	ug/L	09/23/03		RM	SW8260
Trichloroethene	400	30	ug/L	09/23/03		RM	SW8260
Vinyl chloride	ND	30	ug/L	09/23/03		$\mathbf{R}\mathbf{M}$	SW8260
QA/QC Surrogates							
% 4-Bromofluor obenzene~(Surrogate)	84		%	09/23/03		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





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

# Analysis Report

**September 26, 2003** 

FOR: Attn: Mr. Roger Gray

EarthTech Inc.

40 British American Boulevard

Latham NY 12110

Sample Information		<u>Custody Infor</u>	<u>mation</u>	$\underline{\mathbf{Date}}$	<u>Time</u>	
	Matrix:	WATER	Collected by:	ROGER G	09/17/03	12:30
	<b>Location Code</b>	: EARTH-NY	Received by:	SW	09/18/03	9:41
	Rush Request:		Analyzed by:	goo "Py" bolow		

Rush Request: Analyzed by: see "By" below

**Laboratory Data** 

**SDG I.D.: GAF07666** 

Phoenix I.D.: AF07670

Client ID: NOW CORP TW 3

5584901

P.O.#:

Parameter	Result	$\mathbf{RL}$	Units	Date	Time	$\mathbf{B}\mathbf{y}$	Reference
Volatiles							
1,1,1-Trichloroethane	8.0	0.5	ug/L	09/18/03		RM	SW8260
1,1,2-Trichloroethane	ND	0.5	ug/L	09/18/03		RM	SW8260
1,1-Dichloroethane	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
1,1-Dichloroethene	2.2	0.5	ug/L	09/18/03		RM	SW8260
1,2-Dichloroethane	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
Benzene	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
Chlorobenzene	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
Chloroethane	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
cis-1,2-Dichloroethene	14	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
Ethylbenzene	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	09/18/03		RM	SW8260
o-Xylene	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
p&m-Xylene	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
Гetrachloroethene	ND	0.5	ug/L	09/18/03		RM	SW8260
Toluene	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
trans-1,2-Dichloroethene	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
Trichloroethene	16	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
Vinyl chloride	ND	0.5	ug/L	09/18/03		RM	SW8260
QA/QC Surrogates							
%4-Bromofluorobenzene (Surrogate)	88		%	09/18/03		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





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

# **Analysis Report**

**September 26, 2003** 

FOR: Attn: Mr. Roger Gray

EarthTech Inc.

40 British American Boulevard

Latham NY 12110

	Sample Inform	ample Information		<u>mation</u>	<u>Date</u>		
•	Matrix:	WATER	Collected by:	ROGER G	09/17/03	0:00	
	<b>Location Code</b>	EARTH-NY	Received by:	SW	09/18/03	9:41	
j	Rush Request:		Analyzed by:	see "By" below			

P.O.#: 5584901

**SDG I.D.: GAF07666** 

**Laboratory Data** Phoenix I.D.: AF07671

NOW CORP TRIP BLANK Client ID:

Parameter	Result	$\mathbf{RL}$	Units	Date	Time	$\mathbf{B}\mathbf{y}$	Reference
Volatiles							
1,1,1-Trichloroethane	ND	0.5	ug/L	09/18/03		RM	SW8260
1,1,2-Trichloroethane	ND	0.5	ug/L	09/18/03		RM	SW8260
1,1-Dichloroethane	ND	0.5	ug/L	09/18/03		RM	SW8260
1,1-Dichloroethene	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
1,2-Dichloroethane	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
Benzene	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
Chlorobenzene	ND	0.5	ug/L	09/18/03		RM	SW8260
Chloroethane	ND	0.5	ug/L	09/18/03		RM	SW8260
cis-1,2-Dichloroethene	ND	0.5	ug/L	09/18/03		RM	SW8260
Ethylbenzene	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
o-Xylene	ND	0.5	ug/L	09/18/03		RM	SW8260
p&m-Xylene	ND	0.5	ug/L	09/18/03		RM	SW8260
Tetrachloroethene	ND	0.5	ug/L	09/18/03		RM	SW8260
Toluene	ND	0.5	ug/L	09/18/03		$\mathbf{R}\mathbf{M}$	SW8260
trans-1,2-Dichloroethene	ND	0.5	ug/L	09/18/03		RM	SW8260
Trichloroethene	ND	0.5	ug/L	09/18/03		RM	SW8260
Vinyl chloride	ND	0.5	ug/L	09/18/03		RM	SW8260
QA/QC Surrogates							
%4-Bromofluorobenzene (Surrogate)	98		%	09/18/03		RM	SW8260

Comments	3:

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

trip blank inc

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

Phyllis Shiller, Laboratory Director





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

**1**ercury

September 26, 2003	$\mathbf{Q}\mathbf{A}/\mathbf{Q}$	QA/QC Data		SDG I.D.: GAF07666				
Parameter  QA/QC Batch Sample No: AF07653 (Alarsenic)  QA/QC Batch Sample No: AF07653 (Alarenic)  QA/QC Batch Sample No: AF07653 (Alarenic)  Aluminum  Antimony  Arsenic  Barium  Beryllium  Boron  Cadmium  Calcium  Chromium  Cobalt	<del></del> _		Dup					
	Blank	LCS %	RPD	MS Rec %	Rec %	RPD		
QA/QC Batch Sample No: AF07653 (AF0	07666, AF07667)		_	_		_		
Arsenic	BDL	100	NC	102		NC		
QA/QC Batch Sample No: AF07653 (AF0	07666, AF07667)							
ICP Metals - Aqueous								
Aluminum	0.01	78.3	1.3	118	118	0.0		
Antimony	BDL	82.3	1.20	104	105	1.0		
Arsenic	BDL	80.9	NC	106	106	0.0		
Barium	BDL	91.5	0.5	104	106	1.9		
Beryllium	BDL	87.6	NC	95.4	96.2	0.8		
Boron	0.05		BDL					
Cadmium	BDL	77.0	NC	94.0	94.2	0.2		
Calcium	BDL		BDL					
Chromium	BDL	87.3	0.8	NC	NC	NC		
Cobalt	BDL	87.3	NC	98.6	99.4	0.8		
Copper	0.003	87.3	2.2	108	110	1.8		
Iron	BDL	89.9	6.1	99.3	100	0.7		
Lead	BDL	85.9	NC	95.3	96.7	1.5		
Magnesium	BDL		BDL					
Manganese	BDL	89.2	NC	101	102	1.0		
Molybdenum	BDL		BDL					
Nickel	BDL	86.4	NC	97.0	98.5	1.5		
Phosphorus	$\mathbf{BDL}$		BDL					
Selenium	BDL	77.1	NC	101	102	1.0		
Silver	BDL	88.0	NC	106	107	0.9		
Thallium	$\mathbf{BDL}$	82.8	NC	93.3	94.5	1.3		
fin .	0.11		BDL					
Vanadium	BDL	86.9	NC	101	102	1.0		
Zinc	BDL	79.4	NC	101	104	2.9		

NR

107

109

1.9

BDL

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





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

# QA/QC Report

**September 26, 2003** 

### QA/QC Data

**SDG I.D.: GAF07666** 

Parameter	Blank	LCS Rec %	MS Rec %	RPD
QA/QC Batch Sample No: AF05734 ( Dil and Grease by EPA 1664	(AF07666, AF07667) BDL			NR
QA/QC Batch Sample No: AF07666 (	(AF07666, AF07667) BDL	96.0	NR	11.8
QA/QC Batch Sample No: AF07666 ( Total Suspended Solids	AF07666, AF07667) BDL	99	NR	NC
A/QC Batch Sample No: AF07667 ( Total Cyanide	AF07666, AF07667) BDL	100	84.0	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





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

**September 26, 2003** 

**SDG I.D.: GAF07666** 

**MS Dup** 

<b>P</b> arameter	Blank	LCS %	MS Rec %	Rec %	RPD
QA/QC Batch Sample No: AF07807 (A	AF07666, AF07668, A	AF07670, AF0767	1)		
<b>√</b> olatiles Organics					
1,1,1,2-Tetrachloroethane	ND	106			
t,1,1-Trichloroethane	ND	100			
,1,2,2-Tetrachloroethane	ND	83			
1,1,2-Trichloroethane	ND	102			
,1-Dichloroethane	ND	82			
1,1-Dichloroethene	ND	95	94	93	1.1
1,1-Dichloropropene	ND	99			
,2,3-Trichlorobenzene	ND	97			
1,2,3-Trichloropropane	ND	98			
.,2,3-Trimethylbenzene	ND				
,2,4-Trichlorobenzene	ND	97			
1,2,4-Trimethylbenzene	ND	100			
.,2-Dibromo-3-chloropropane	ND	104			
1,2-Dichlorobenzene	ND	98			
¹,2-Dichloroethane	ND	94			
,2-Dichloropropane	ND	89			
1,3,5-Trimethylbenzene	ND	104			
.,3-Dichlorobenzene	ND	101			
,3-Dichloropropane	ND	101			
1,4-Dichlorobenzene	ND	95			
,2-Dichloropropane	ND	73			
<b>2</b> -Chlorotoluene	ND	105			
4-Chlorotoluene	ND	100			
Benzene	ND	91	90	89	1.1
Bromobenzene	ND	103			
Bromochloromethane	ND	105			
<b>F</b> romodichloromethane	ND	100			
Bromoform	ND	108			
Gromomethane	ND				
🗬 arbon Tetrachloride	ND	109			
Chlorobenzene	ND	101	94	85	10.1
hloroethane	ND	87			

**SDG I.D.: GAF07666** 

• Parameter	Blank	LCS %	MS Rec %	MS Dup Rec %	RPD
Chloroform	ND	89			
Chloromethane	ND	70			
sis-1,2-Dichloroethene	ND	90			
ris-1,3-Dichloropropene	ND				
Dibromochloromethane	ND	105			
Dibromoethane	ND	102			
Dibromomethane	ND	94			
Dichlorodifluoromethane	ND	72			
Ethylbenzene	ND	103			
Hexachlorobutadiene	ND	103			
<sup>†</sup> sopropylbenzene	ND	112			
n&p-Xylene	ND	103			
Methyl t Butyl Ether (MTBE)	ND				
¶ethylene Chloride	ND	81			
-Butylbenzene	ND	98			
n-Propylbenzene	ND	102			
Naphthalene	ND	102			
o-Xylene	ND	94			
າ-Isopropyltoluene	ND	109			
ec-Butylbenzene	ND	102			
Styrene	ND	92			
ert-Butylbenzene	ND	104			
etrachloroethene	ND	107			
Toluene	ND	109	94	92	2.2
'otal Trihalomethanes (TTHM)	ND				
trans-1,2-Dichloroethene	ND	87			
trans-1,3-Dichloropropene	ND	101			
`richloroethene	ND	110	86	85	1.2
Trichlorofluoromethane	ND	99			
'inyl Chloride	ND				
Bromofluorobenzene	88	98	84	83	1.2
Comment: LFB was analyzed with this batch	instead of MS/M	SD			
A/QC Batch Sample No: AF08848 (AF076	67, AF07669)				
Volatiles Organics					
<sup>1</sup> ,1,1,2-Tetrachloroethane	ND	98			
1,1-Trichloroethane	ND	110			
1,1,2,2-Tetrachloroethane	ND	112			
,1,2-Trichloroethane	ND	98			
,1-Dichloroethane	ND	112			
1,1-Dichloroethene	ND	115	120	113	6.0
,1-Dichloropropene	ND	92			

Parameter	Blank	LCS %	MS Rec %	MS Dup	DDD
			MIS Rec %	Rec %	RPD_
.,2,3-Trichlorobenzene	ND	87			
1,2,3-Trichloropropane	ND	108			
1,2,3-Trimethylbenzene	ND				
,2,4-Trichlorobenzene	ND	89			
1,2,4-Trimethylbenzene	ND	99			
.,2-Dibromo-3-chloropropane	ND	93			
,2-Dichlorobenzene	ND	95			
1,2-Dichloroethane	ND	107			
,2-Dichloropropane	ND	111			
1,3,5-Trimethylbenzene	ND	94			
<sup>1</sup> ,3-Dichlorobenzene	ND	93			
,3-Dichloropropane	ND	104			
1,4-Dichlorobenzene	ND	93			
.,2-Dichloropropane	ND	102			
-Chlorotoluene	ND	91			
4-Chlorotoluene	ND	91			
Benzene	ND	103	120	109	9.6
Bromobenzene	ND	90			
Bromochloromethane	ND	107			
	ND	104			
Bromoform	ND	107			
Gromomethane	ND	168			
arbon Tetrachloride	ND	95			
Chlorobenzene	ND	94	94	96	2.1
Chloroethane	ND	122			
Chloroform	ND	110			
Chloromethane	ND	136			
is-1,2-Dichloroethene	ND	110			
cis-1,3-Dichloropropene	ND	97			
Dibromochloromethane	ND	99			
ibromoethane	ND	102			
Dibromomethane	ND	103			
tichlorodifluoromethane	ND	119			
thylbenzene	ND	94			
Hexachlorobutadiene	ND	84			
sopropylbenzene	ND	95			
m&p-Xylene	ND	97			
Methyl t Butyl Ether (MTBE)	ND	•			
_Iethylene Chloride	ND	118			
n-Butylbenzene	ND ND	109			
-Propylbenzene	ND	91			
<b>M</b> aphthalene	ND	102			

## QA/QC Data

**SDG I.D.: GAF07666** 

				MS Dup		
Parameter	Blank	LCS %	MS Rec %	Rec %	RPD	
ɔ-Xylene	ND	99	-			
p-Isopropyltoluene	ND	100				
sec-Butylbenzene	ND	95				
Styrene	ND	101				
tert-Butylbenzene	ND	85				
Γetrachloroethene	ND	83				
Foluene	ND	93	95	96	1.0	
Total Trihalomethanes (TTHM)	ND					
rans-1,2-Dichloroethene	ND	110				
trans-1,3-Dichloropropene	ND	99				
Trichloroethene	ND	90	89	87	2.3	
frichlorofluoromethane	ND	115				
Vinyl Chloride	ND	114				
% Bromofluorobenzene	84	103	94	85	10.1	

<sup>&</sup>lt;sup>1</sup>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

**CS** - Laboratory Control Sample

Phyllis Shiller, Laboratory Director

EARTH **(S) T E C H** 

A **TUCO** INTERNATIONAL LTD. COMPANY

												_ [	Custody Se	al#		Earth Tech Cooler #									
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White Copy - Lab

Yellow Copy - File

Pink Copy - Client

