

Operation, Maintenance and Monitoring Report July 2011

**NOW Corporation
Site 3-14-008**

**Work Assignment No.
D004445-4.2**

Prepared for:

SUPERFUND STANDBY PROGRAM
New York State
Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Prepared by:

AECOM Technical Services Northeast, Inc.
40 British American Boulevard
Latham, New York 12110

September 2011

September 14, 2011

Mr. Carl Hoffman, P.E.
NYSDEC Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, New York 12233-7013

**Re: NOW Corporation - Site #3-14-008
O&M Summary Report: "July" 2011**

Dear Mr. Hoffman:

This monthly summary report describes the operation, monitoring and maintenance (OM&M) of the remedial system at the NOW Corporation site in the Town of Clinton, New York, for a 30-day period **(June 28 – July 28, 2011)**.

With the exceptions noted below, if any, the P&T system was online and operational throughout the reporting period. Approximately 632,100 gallons of water were treated during the period. Discharge from the treatment system averaged approximately 21,100 gallons per day (gpd), compared to 21,900 gpd in the prior reporting period.

As of the last day of the reporting period, a total of 85,593,000 gallons of groundwater had been recovered and treated by the system since it became operational in February 1998.

Table 1 summarizes influent and effluent analytical data for water samples collected on July 28, 2011. The unusually low aggregate VOC concentration in the total influent sample (approximately 50 ppb) indicates that the pump in recovery well TW-2A was probably idle at the time of sample collection. This was a rare departure from sampling protocol by our technician.

Although three VOCs were detected in system effluent, effluent limitations were not exceeded for VOCs. Three metals (barium, manganese, and zinc) were also detected in the system effluent, but at levels well below their respective effluent limitations. The effluent limitation was exceeded for iron during the last month's sampling event (June 28), but iron was not detected in this month's effluent sample. Table 2 summarizes operational data, as recorded on the sampling date.

AECOM made one site visit during the period to conduct the required system inspection, perform scheduled and unscheduled maintenance, and to collect water samples. The June 28 service visit was described in the previous report. Details for the current period follow:

July 28 – Performed monthly system inspection, noted system readings, and collected monthly influent and effluent samples.

Page 2
Mr. Carl Hoffman
NYSDEC

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

Sincerely,
AECOM Technical Services Northeast, Inc.

A handwritten signature in cursive script, reading "Stephen Choiniere".

Stephen R. Choiniere
Project Manager

Table 1
Summary of Influent and Effluent Data
Sampling Date: July 28, 2011
NOW Corporation Site
Town of Clinton, New York

Analytes/ Parameters	Total Influent	Effluent	Recovery Wells			Effluent Limitations	
			TW-1	TW-2A	TW-3	Monitor 6.5 to 8.5	(units) gallons standard units
Quantity treated, per day		21,070					
pH	6.8	7.1					
Oil and Grease	<5.0	<5.0	NA	NA	NA	15	mg/L
Total Cyanide	<10	<10	NA	NA	NA	10	ug/L
TDS	260	300	NA	NA	NA	1000	mg/L
TSS	<10	<10	NA	NA	NA	50	mg/L
Aluminum, Total	<200	<200	NA	NA	NA	2000	ug/L
Arsenic, Total	<20	<20	NA	NA	NA	50	ug/L
Barium, Total	53 J	73 J	NA	NA	NA	2000	ug/L
Chromium	0.83 J	<20	NA	NA	NA	100	ug/L
Copper	<25	<25	NA	NA	NA	24	ug/L
Iron	99 J	<200	NA	NA	NA	600	ug/L
Mercury	<0.20	<0.20	NA	NA	NA	0.8	ug/L
Manganese	51	37 J	NA	NA	NA	600	ug/L
Nickel	<50	<50	NA	NA	NA	200	ug/L
Zinc	14 J	10 J	NA	NA	NA	150	ug/L
1,1,1-Trichloroethane	4.7	0.99	0.74	440	4.7	5	ug/L
1,1,2-Trichloroethane	<0.50	<0.50	<0.50	<10	<0.50	1.2	ug/L
1,1-Dichloroethane	19	1.1	28	170	16	5	ug/L
1,1-Dichloroethene	4.4	<0.50	8.5	15	2.0	0.5	ug/L
1,2-Dichloroethane	<0.50	<0.50	<0.50	<10	<0.50	1.6	ug/L
Benzene	<0.50	<0.50	<0.50	<10	<0.50	0.8	ug/L
Chlorobenzene	<0.50	<0.50	<0.50	<10	<0.50	5	ug/L
Chloroethane	<0.50	<0.50	<0.50	<10	<0.50	5	ug/L
cis -1,2-Dichloroethene	1.3	<0.50	2.2	13	<0.50	5	ug/L
Ethylbenzene	<0.50	<0.50	<0.50	<10	<0.50	5	ug/L
Methyl tert-butyl ether	<0.50	<0.50	<0.50	<10	<0.50	5	ug/L
o-Xylene	<0.50	<0.50	<0.50	<10	<0.50	5	ug/L
m,p-Xylene	<0.50	<0.50	<0.50	<10	<0.50	10	ug/L
Tetrachloroethene	<0.50	<0.50	<0.50	<10	<0.50	1.4	ug/L
Toluene	<0.50	<0.50	<0.50	<10	<0.50	5	ug/L
trans -1,2-Dichloroethene	<0.50	<0.50	<0.50	<10	<0.50	5	ug/L
Trichloroethene	22	1.5	32	340	20	5	ug/L
Vinyl Chloride	<0.50	<0.50	<0.50	<10	<0.50	0.6	ug/L

Notes:

- 1) Detected concentrations are presented in **bold** typeface, and are expressed in the units shown in far right column.
- 2) Effluent concentration boxed in **bold** denotes exceedance of effluent limitations.
- 3) NA indicates not analyzed.
- 4) "J" indicates an estimated concentration below the reporting limit (RL).
- 5) "B" denotes metal detected in method blank at concentration below the RL, but above the method detection limit.

Table 2
Summary of July 2011 O&M Data

NOW Corporation Site
Town of Clinton, New York

Instrumentation/Readings:		7/28/11	Units
<i>TW-1</i>			
	Pumping Rate	3	GPM
	Water Level Above Transducer	18.45	feet
	Flow Meter Reading	6,197,400	gallons
	Pump Pressure	82	psi
<i>TW-2A</i>			
	Pumping Rate	~14	GPM
	Water Level Above Transducer	22.39	feet
	Flow Meter Reading	22,222,000	gallons
	Pump Pressure	0	psi
<i>TW-3</i>			
	Pumping Rate	3	GPM
	Water Level Above Transducer	28.07	feet
	Flow Meter Reading	9,212,400	gallons
	Pump Pressure	74	psi
<i>Air Stripper</i>			
	Stripper Blower Pressure	24	inches H ₂ O
	Air Temperature in Stripper	52	°F
	Pressure Gauge - Left Leg	3	inches H ₂ O
	Pressure Gauge - Right Leg	0.3	inches H ₂ O
<i>Effluent Flow</i>			
	Effluent Flow this period (calculated)	632,100	gallons
	Total Effluent Flow (calculated)	85,593,000	gallons

Report Date:
15-Aug-11 15:39



- ☒ Final Report
☐ Re-Issued Report
☐ Revised Report

Laboratory Report

AECOM Technical Services, Inc.
40 British American Boulevard
Latham, NY 12110

Work Order: K1344
Project : NOW Corp. Site
Project #:

Attn: Stephen Choiniere

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
K1344-01	EFF072811	Aqueous	28-Jul-11 11:50	29-Jul-11 09:20
K1344-02	INF072811	Aqueous	28-Jul-11 12:00	29-Jul-11 09:20
K1344-03	TW-1 072811	Aqueous	28-Jul-11 12:10	29-Jul-11 09:20
K1344-04	TW-2A 072811	Aqueous	28-Jul-11 12:15	29-Jul-11 09:20
K1344-05	TW-3 072811	Aqueous	28-Jul-11 12:20	29-Jul-11 09:20
K1344-06	TB 072811	Aqueous	28-Jul-11 00:00	29-Jul-11 09:20

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. The results relate only to the sample(s) as received. This report may not be reproduced, except in full, without written approval from Mitkem Laboratories.

All applicable NELAC or USEPA CLP requirements have been met.

Mitkem Laboratories is accredited under the National Environmental Laboratory Approval Program (NELAP) and is certified by several States, as well as USEPA and US Department of Defense. The current list of our laboratory approvals and certifications is available on the Certifications page on our web site at www.mitkem.com.

Please contact the Laboratory or Technical Director at 401-732-3400 with any questions regarding the data contained in the laboratory report.

Department of Defense	N/A
Connecticut	PH-0153
Delaware	N/A
Maine	2007037
Massachusetts	M-RI907
New Hampshire	2631
New Jersey	RI001
New York	11522
North Carolina	581
Pennsylvania	68-00520
Rhode Island	LAI00301
USDA	P330-08-00023
USEPA - ISM	EP-W-09-039
USEPA - SOM	EP-W-05-030



Authorized by:

Yihai Ding
Laboratory Director

REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : AECOM Technical Services, Inc.

Project: NOW Corp. Site

Laboratory Workorder / SDG #: K1344

SW846 8260C, VOC by GC-MS (25 mL Purge)

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test code:
SW846 8260C

IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW5030

V. INSTRUMENTATION

The following instrumentation was used

Instrument Code: V5

Instrument Type: GCMS-VOA

Description: HP6890 / HP6890

Manufacturer: Hewlett-Packard

Model: 6890 / 6890

GC Column used: 30 m X 0.25 mm ID [1.40 um thickness] DB-624 capillary column.

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Surrogates:

Surrogate standard percent recoveries were within the QC limits.

D. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits.

2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

No client-requested MS/MSD analyses were included in this SDG.

E. Internal Standards:

Internal standard peak areas were within the QC limits.

F. Dilutions:

The following sample was analyzed at dilution:

TW-2A 072811 (K1344-04A) : Dilution Factor: 20

G. Samples:

No other unusual occurrences were noted during sample analysis.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum RI, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Signed:

Date: 08/15/11

REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : AECOM Technical Services, Inc.

Project: NOW Corp. Site

Laboratory Workorder / SDG #: K1344

SW846 6010C, SW846 7470A

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test code:
SW846 6010C, SW846 7470A

IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW3005
Aqueous Samples were prepared following procedures in laboratory test code: SW7470A

V. INSTRUMENTATION

The following instrumentation was used to perform

Instrument Code: FIMS2

Instrument Type: CVAA

Description: FIMS

Manufacturer: Perkin-Elmer

Model: FIMS100

Instrument Code: OPTIMA3

Instrument Type: ICP

Description: Optima ICP-OES

Manufacturer: Perkin-Elmer

Model: 4300 DV

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recoveries for laboratory control samples were within the QC limits.

2. Matrix spike (MS):

A matrix spike was not performed on any sample in this SDG.

D. Post Digestion Spike (PDS):

A post-digestion spike was not performed on any sample in this SDG.

E. Duplicate sample:

A duplicate analysis was not performed on any sample in this SDG.

F. Serial Dilution (SD):

A serial dilution was not performed on any sample in this SDG.

G. Samples:

No unusual occurrences were noted during sample analysis.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum RI, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Signed:

Date: 08/15/11

REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : AECOM Technical Services, Inc.

Project: NOW Corp. Site

Laboratory Workorder / SDG #: K1344

EPA 1664A, Oil & Grease, HEM

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test code:
EPA 1664A

IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW3510

V. INSTRUMENTATION

The following instrumentation was used to perform Oil and Grease analysis.

Instrument Type: Analytical Balance
Manufacturer: Denver Instrument Company
Model: A-250

VI. ANALYSIS

A. Calibration:

Analytical balance was calibrated based on SOP/Method criteria.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recovery for lab control samples was within the QC limits.

2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

No client-requested MS/MSD analyses were included in this SDG.

D. Duplicate sample:

No client-requested duplicate analyses were included in this SDG.

E. Samples:

No unusual occurrences were noted during sample analysis.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum RI, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has

been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Signed:

Date: 08/15/11

REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : AECOM Technical Services, Inc.

Project: NOW Corp. Site

Laboratory Workorder / SDG #: K1344

SM 2540C, SM 2540D, SW846 9012B, TOTAL DISSOLVED SOLIDS

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test code: SM 2540C, SM 2540D, SW846 9012B

IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SM 2540C, SM 2540D, SW846 9012B

V. INSTRUMENTATION

The following instrumentation was used to perform

Instrument Code: LACHAT1
Instrument Type: WC
Description: Flow Injection Analyzer
Manufacturer: Zellweger Analytics
Model: Quik-Chem 8000

Instrument Code: MANUAL
Instrument Type: WC
Description:
Manufacturer:
Model:

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recovery for lab control samples for Total Dissolved Solids, Total Suspended Solids and Cyanide was within the QC limits.

2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

No client-requested MS/MSD analyses were included in this SDG.

D. Duplicate sample:

No client-requested laboratory duplicate analyses were included in this SDG.

E. Dilutions:

No sample in this SDG required analysis at dilution.

F. Samples:

No unusual occurrences were noted during sample analysis.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum RI, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Signed:

Date: 08/15/11

Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

12-Aug-

Client: AECOM Technical Services, Inc.

Client Sample ID: EFF072811

Lab ID: K1344-01

Project: NOW Corp. Site

Collection Date: 07/28/11 11:50

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 8260C -- VOC by GC-MS (25 mL Purge)							SW8260_25_W
Vinyl chloride	ND		0.50	µg/L		1 08/02/2011 19:43	60751
Chloroethane	ND		0.50	µg/L		1 08/02/2011 19:43	60751
1,1-Dichloroethene	ND		0.50	µg/L		1 08/02/2011 19:43	60751
trans-1,2-Dichloroethene	ND		0.50	µg/L		1 08/02/2011 19:43	60751
Methyl tert-butyl ether	ND		0.50	µg/L		1 08/02/2011 19:43	60751
1,1-Dichloroethane	1.1		0.50	µg/L		1 08/02/2011 19:43	60751
cis-1,2-Dichloroethene	ND		0.50	µg/L		1 08/02/2011 19:43	60751
1,1,1-Trichloroethane	0.99		0.50	µg/L		1 08/02/2011 19:43	60751
1,2-Dichloroethane	ND		0.50	µg/L		1 08/02/2011 19:43	60751
Benzene	ND		0.50	µg/L		1 08/02/2011 19:43	60751
Trichloroethene	1.5		0.50	µg/L		1 08/02/2011 19:43	60751
Toluene	ND		0.50	µg/L		1 08/02/2011 19:43	60751
1,1,2-Trichloroethane	ND		0.50	µg/L		1 08/02/2011 19:43	60751
Tetrachloroethene	ND		0.50	µg/L		1 08/02/2011 19:43	60751
Chlorobenzene	ND		0.50	µg/L		1 08/02/2011 19:43	60751
Ethylbenzene	ND		0.50	µg/L		1 08/02/2011 19:43	60751
m,p-Xylene	ND		0.50	µg/L		1 08/02/2011 19:43	60751
o-Xylene	ND		0.50	µg/L		1 08/02/2011 19:43	60751
Surrogate: Dibromofluoromethane	101		88-124	%REC		1 08/02/2011 19:43	60751
Surrogate: 1,2-Dichloroethane-d4	107		79-115	%REC		1 08/02/2011 19:43	60751
Surrogate: Toluene-d8	98.7		80-114	%REC		1 08/02/2011 19:43	60751
Surrogate: Bromofluorobenzene	96.6		60-123	%REC		1 08/02/2011 19:43	60751

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range
 RL - Reporting Limit

Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

12-Aug-

Client: AECOM Technical Services, Inc.

Client Sample ID: INF072811

Lab ID: K1344-02

Project: NOW Corp. Site

Collection Date: 07/28/11 12:00

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 8260C -- VOC by GC-MS (25 mL Purge)							SW8260_25_W
Vinyl chloride	ND		0.50	µg/L		1 08/03/2011 11:00	60754
Chloroethane	ND		0.50	µg/L		1 08/03/2011 11:00	60754
1,1-Dichloroethene	4.4		0.50	µg/L		1 08/03/2011 11:00	60754
trans-1,2-Dichloroethene	ND		0.50	µg/L		1 08/03/2011 11:00	60754
Methyl tert-butyl ether	ND		0.50	µg/L		1 08/03/2011 11:00	60754
1,1-Dichloroethane	19		0.50	µg/L		1 08/03/2011 11:00	60754
cis-1,2-Dichloroethene	1.3		0.50	µg/L		1 08/03/2011 11:00	60754
1,1,1-Trichloroethane	4.7		0.50	µg/L		1 08/03/2011 11:00	60754
1,2-Dichloroethane	ND		0.50	µg/L		1 08/03/2011 11:00	60754
Benzene	ND		0.50	µg/L		1 08/03/2011 11:00	60754
Trichloroethene	22		0.50	µg/L		1 08/03/2011 11:00	60754
Toluene	ND		0.50	µg/L		1 08/03/2011 11:00	60754
1,1,2-Trichloroethane	ND		0.50	µg/L		1 08/03/2011 11:00	60754
Tetrachloroethene	ND		0.50	µg/L		1 08/03/2011 11:00	60754
Chlorobenzene	ND		0.50	µg/L		1 08/03/2011 11:00	60754
Ethylbenzene	ND		0.50	µg/L		1 08/03/2011 11:00	60754
m,p-Xylene	ND		0.50	µg/L		1 08/03/2011 11:00	60754
o-Xylene	ND		0.50	µg/L		1 08/03/2011 11:00	60754
Surrogate: Dibromofluoromethane	96.7		88-124	%REC		1 08/03/2011 11:00	60754
Surrogate: 1,2-Dichloroethane-d4	103		79-115	%REC		1 08/03/2011 11:00	60754
Surrogate: Toluene-d8	100		80-114	%REC		1 08/03/2011 11:00	60754
Surrogate: Bromofluorobenzene	97.9		60-123	%REC		1 08/03/2011 11:00	60754

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

12-Aug-

Client: AECOM Technical Services, Inc.

Client Sample ID: TW-1 072811

Lab ID: K1344-03

Project: NOW Corp. Site

Collection Date: 07/28/11 12:10

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 8260C -- VOC by GC-MS (25 mL Purge)							SW8260_25_W
Vinyl chloride	ND		0.50	µg/L		1 08/03/2011 11:30	60754
Chloroethane	ND		0.50	µg/L		1 08/03/2011 11:30	60754
1,1-Dichloroethene	8.5		0.50	µg/L		1 08/03/2011 11:30	60754
trans-1,2-Dichloroethene	ND		0.50	µg/L		1 08/03/2011 11:30	60754
Methyl tert-butyl ether	ND		0.50	µg/L		1 08/03/2011 11:30	60754
1,1-Dichloroethane	28		0.50	µg/L		1 08/03/2011 11:30	60754
cis-1,2-Dichloroethene	2.2		0.50	µg/L		1 08/03/2011 11:30	60754
1,1,1-Trichloroethane	0.74		0.50	µg/L		1 08/03/2011 11:30	60754
1,2-Dichloroethane	ND		0.50	µg/L		1 08/03/2011 11:30	60754
Benzene	ND		0.50	µg/L		1 08/03/2011 11:30	60754
Trichloroethene	32		0.50	µg/L		1 08/03/2011 11:30	60754
Toluene	ND		0.50	µg/L		1 08/03/2011 11:30	60754
1,1,2-Trichloroethane	ND		0.50	µg/L		1 08/03/2011 11:30	60754
Tetrachloroethene	ND		0.50	µg/L		1 08/03/2011 11:30	60754
Chlorobenzene	ND		0.50	µg/L		1 08/03/2011 11:30	60754
Ethylbenzene	ND		0.50	µg/L		1 08/03/2011 11:30	60754
m,p-Xylene	ND		0.50	µg/L		1 08/03/2011 11:30	60754
o-Xylene	ND		0.50	µg/L		1 08/03/2011 11:30	60754
Surrogate: Dibromofluoromethane	99.3		88-124	%REC		1 08/03/2011 11:30	60754
Surrogate: 1,2-Dichloroethane-d4	98.5		79-115	%REC		1 08/03/2011 11:30	60754
Surrogate: Toluene-d8	102		80-114	%REC		1 08/03/2011 11:30	60754
Surrogate: Bromofluorobenzene	100		60-123	%REC		1 08/03/2011 11:30	60754

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range
 RL - Reporting Limit

Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

12-Aug-

Client: AECOM Technical Services, Inc.

Client Sample ID: TW-2A 072811

Lab ID: K1344-04

Project: NOW Corp. Site

Collection Date: 07/28/11 12:15

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 8260C -- VOC by GC-MS (25 mL Purge)							SW8260_25_W
Vinyl chloride	ND		10	µg/L		20 08/02/2011 21:12	60751
Chloroethane	ND		10	µg/L		20 08/02/2011 21:12	60751
1,1-Dichloroethene	15		10	µg/L		20 08/02/2011 21:12	60751
trans-1,2-Dichloroethene	ND		10	µg/L		20 08/02/2011 21:12	60751
Methyl tert-butyl ether	ND		10	µg/L		20 08/02/2011 21:12	60751
1,1-Dichloroethane	170		10	µg/L		20 08/02/2011 21:12	60751
cis-1,2-Dichloroethene	13		10	µg/L		20 08/02/2011 21:12	60751
1,1,1-Trichloroethane	440		10	µg/L		20 08/02/2011 21:12	60751
1,2-Dichloroethane	ND		10	µg/L		20 08/02/2011 21:12	60751
Benzene	ND		10	µg/L		20 08/02/2011 21:12	60751
Trichloroethene	340		10	µg/L		20 08/02/2011 21:12	60751
Toluene	ND		10	µg/L		20 08/02/2011 21:12	60751
1,1,2-Trichloroethane	ND		10	µg/L		20 08/02/2011 21:12	60751
Tetrachloroethene	ND		10	µg/L		20 08/02/2011 21:12	60751
Chlorobenzene	ND		10	µg/L		20 08/02/2011 21:12	60751
Ethylbenzene	ND		10	µg/L		20 08/02/2011 21:12	60751
m,p-Xylene	ND		10	µg/L		20 08/02/2011 21:12	60751
o-Xylene	ND		10	µg/L		20 08/02/2011 21:12	60751
Surrogate: Dibromofluoromethane	95.2		88-124	%REC		20 08/02/2011 21:12	60751
Surrogate: 1,2-Dichloroethane-d4	94.8		79-115	%REC		20 08/02/2011 21:12	60751
Surrogate: Toluene-d8	99.3		80-114	%REC		20 08/02/2011 21:12	60751
Surrogate: Bromofluorobenzene	95.8		60-123	%REC		20 08/02/2011 21:12	60751

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

12-Aug-

Client: AECOM Technical Services, Inc.

Client Sample ID: TW-3 072811

Lab ID: K1344-05

Project: NOW Corp. Site

Collection Date: 07/28/11 12:20

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 8260C -- VOC by GC-MS (25 mL Purge)							SW8260_25_W
Vinyl chloride	ND		0.50	µg/L		1 08/02/2011 21:39	60751
Chloroethane	ND		0.50	µg/L		1 08/02/2011 21:39	60751
1,1-Dichloroethene	2.0		0.50	µg/L		1 08/02/2011 21:39	60751
trans-1,2-Dichloroethene	ND		0.50	µg/L		1 08/02/2011 21:39	60751
Methyl tert-butyl ether	ND		0.50	µg/L		1 08/02/2011 21:39	60751
1,1-Dichloroethane	16		0.50	µg/L		1 08/02/2011 21:39	60751
cis-1,2-Dichloroethene	ND		0.50	µg/L		1 08/02/2011 21:39	60751
1,1,1-Trichloroethane	4.7		0.50	µg/L		1 08/02/2011 21:39	60751
1,2-Dichloroethane	ND		0.50	µg/L		1 08/02/2011 21:39	60751
Benzene	ND		0.50	µg/L		1 08/02/2011 21:39	60751
Trichloroethene	20		0.50	µg/L		1 08/02/2011 21:39	60751
Toluene	ND		0.50	µg/L		1 08/02/2011 21:39	60751
1,1,2-Trichloroethane	ND		0.50	µg/L		1 08/02/2011 21:39	60751
Tetrachloroethene	ND		0.50	µg/L		1 08/02/2011 21:39	60751
Chlorobenzene	ND		0.50	µg/L		1 08/02/2011 21:39	60751
Ethylbenzene	ND		0.50	µg/L		1 08/02/2011 21:39	60751
m,p-Xylene	ND		0.50	µg/L		1 08/02/2011 21:39	60751
o-Xylene	ND		0.50	µg/L		1 08/02/2011 21:39	60751
Surrogate: Dibromofluoromethane	97.9		88-124	%REC		1 08/02/2011 21:39	60751
Surrogate: 1,2-Dichloroethane-d4	97.0		79-115	%REC		1 08/02/2011 21:39	60751
Surrogate: Toluene-d8	99.0		80-114	%REC		1 08/02/2011 21:39	60751
Surrogate: Bromofluorobenzene	97.0		60-123	%REC		1 08/02/2011 21:39	60751

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range
 RL - Reporting Limit

Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

12-Aug-

Client: AECOM Technical Services, Inc.

Client Sample ID: TB 072811

Lab ID: K1344-06

Project: NOW Corp. Site

Collection Date: 07/28/11 0:00

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 8260C -- VOC by GC-MS (25 mL Purge)							SW8260_25_W
Vinyl chloride	ND		0.50	µg/L		1 08/02/2011 22:08	60751
Chloroethane	ND		0.50	µg/L		1 08/02/2011 22:08	60751
1,1-Dichloroethene	ND		0.50	µg/L		1 08/02/2011 22:08	60751
trans-1,2-Dichloroethene	ND		0.50	µg/L		1 08/02/2011 22:08	60751
Methyl tert-butyl ether	ND		0.50	µg/L		1 08/02/2011 22:08	60751
1,1-Dichloroethane	ND		0.50	µg/L		1 08/02/2011 22:08	60751
cis-1,2-Dichloroethene	ND		0.50	µg/L		1 08/02/2011 22:08	60751
1,1,1-Trichloroethane	ND		0.50	µg/L		1 08/02/2011 22:08	60751
1,2-Dichloroethane	ND		0.50	µg/L		1 08/02/2011 22:08	60751
Benzene	ND		0.50	µg/L		1 08/02/2011 22:08	60751
Trichloroethene	ND		0.50	µg/L		1 08/02/2011 22:08	60751
Toluene	ND		0.50	µg/L		1 08/02/2011 22:08	60751
1,1,2-Trichloroethane	ND		0.50	µg/L		1 08/02/2011 22:08	60751
Tetrachloroethene	ND		0.50	µg/L		1 08/02/2011 22:08	60751
Chlorobenzene	ND		0.50	µg/L		1 08/02/2011 22:08	60751
Ethylbenzene	ND		0.50	µg/L		1 08/02/2011 22:08	60751
m,p-Xylene	ND		0.50	µg/L		1 08/02/2011 22:08	60751
o-Xylene	ND		0.50	µg/L		1 08/02/2011 22:08	60751
Surrogate: Dibromofluoromethane	99.7		88-124	%REC		1 08/02/2011 22:08	60751
Surrogate: 1,2-Dichloroethane-d4	95.9		79-115	%REC		1 08/02/2011 22:08	60751
Surrogate: Toluene-d8	100		80-114	%REC		1 08/02/2011 22:08	60751
Surrogate: Bromofluorobenzene	98.1		60-123	%REC		1 08/02/2011 22:08	60751

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

CLIENT: AECOM Technical Services, Inc.
Work Order: K1344
Project: NOW Corp. Site

ANALYTICAL QC SUMMARY REPORT

SW8260_25_W
SW846 8260C -- VOC by GC-MS (25 mL Purge)

Sample ID: MB-60754	SampType: MBLK	TestCode: SW8260_25_W	Prep Date: 08/02/11 16:01	Run ID: V5_110803A	
Client ID: MB-60754	Batch ID: 60754	Units: µg/L	Analysis Date: 08/03/11 3:57	SeqNo: 1574214	
Analyte	Result	MDL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Vinyl chloride	ND	0.15			
Chloroethane	ND	0.24			
1,1-Dichloroethene	ND	0.19			
trans-1,2-Dichloroethene	ND	0.14			
Methyl tert-butyl ether	ND	0.13			
1,1-Dichloroethane	ND	0.18			
cis-1,2-Dichloroethene	ND	0.19			
1,1,1-Trichloroethane	ND	0.11			
1,2-Dichloroethane	ND	0.16			
Benzene	ND	0.12			
Trichloroethene	ND	0.13			
Toluene	ND	0.14			
1,1,2-Trichloroethane	ND	0.20			
Tetrachloroethene	ND	0.17			
Chlorobenzene	ND	0.13			
Ethylbenzene	ND	0.13			
m,p-Xylene	ND	0.22			
o-Xylene	ND	0.17			
Surrogate: Dibromofluoromethane	9.888		10.00	0	98.9 88 124 0
Surrogate: 1,2-Dichloroethane-d4	9.870		10.00	0	98.7 79 115 0
Surrogate: Toluene-d8	9.850		10.00	0	98.5 80 114 0
Surrogate: Bromofluorobenzene	9.538		10.00	0	95.4 60 123 0

CLIENT: AECOM Technical Services, Inc.
Work Order: K1344
Project: NOW Corp. Site

ANALYTICAL QC SUMMARY REPORT
SW8260_25_W
SW846 8260C -- VOC by GC-MS (25 mL Purge)

Sample ID: LCS-60751	SampType: LCS	TestCode: SW8260_25_W	Prep Date: 08/02/11 12:27	Run ID: V5_110802A								
Client ID: LCS-60751	Batch ID: 60751	Units: µg/L	Analysis Date: 08/02/11 18:17	SeqNo: 1574234								
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	9.507	0.15	0.50	10.00	0	95.1	77	120	0			
Chloroethane	9.394	0.24	0.50	10.00	0	93.9	75	135	0			
1,1,1-Dichloroethene	9.404	0.19	0.50	10.00	0	94.0	81	125	0			
trans-1,2-Dichloroethene	9.536	0.14	0.50	10.00	0	95.4	60	137	0			
Methyl tert-butyl ether	9.561	0.13	0.50	10.00	0	95.6	61	134	0			
1,1,1-Dichloroethane	9.614	0.18	0.50	10.00	0	96.1	82	120	0			
cis-1,2-Dichloroethene	9.459	0.19	0.50	10.00	0	94.6	84	116	0			
1,1,1,1-Trichloroethane	9.592	0.11	0.50	10.00	0	95.9	80	124	0			
1,2-Dichloroethane	9.249	0.16	0.50	10.00	0	92.5	86	117	0			
Benzene	9.495	0.12	0.50	10.00	0	94.9	81	121	0			
Trichloroethene	9.755	0.13	0.50	10.00	0	97.6	74	123	0			
Toluene	9.807	0.14	0.50	10.00	0	98.1	88	117	0			
1,1,1,2-Trichloroethane	9.364	0.20	0.50	10.00	0	93.6	83	121	0			
Tetrachloroethene	9.713	0.17	0.50	10.00	0	97.1	74	115	0			
Chlorobenzene	9.816	0.13	0.50	10.00	0	98.2	83	112	0			
Ethylbenzene	9.847	0.13	0.50	10.00	0	98.5	87	110	0			
m,p-Xylene	19.44	0.22	0.50	20.00	0	97.2	87	114	0			
o-Xylene	9.711	0.17	0.50	10.00	0	97.1	84	114	0			
Surrogate:	9.632		0.50	10.00	0	96.3	88	124	0			
Dibromofluoromethane												
Surrogate: 1,2-Dichloroethane-d4	9.382		0.50	10.00	0	93.8	79	115	0			
Surrogate: Toluene-d8	10.12		0.50	10.00	0	101	80	114	0			
Surrogate:	10.07		0.50	10.00	0	101	60	123	0			
Bromofluorobenzene												

CLIENT: AECOM Technical Services, Inc.
Work Order: K1344
Project: NOW Corp. Site

ANALYTICAL QC SUMMARY REPORT
SW8260_25_W
SW846 8260C -- VOC by GC-MS (25 mL Purge)

Sample ID: LCS-60754	SampType: LCS	TestCode: SW8260_25_W	Prep Date: 08/02/11 16:01	Run ID: V5_110803A								
Client ID: LCS-60754	Batch ID: 60754	Units: µg/L	Analysis Date: 08/03/11 2:59	SeqNo: 1574213								
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	10.77	0.15	0.50	10.00	0	108	77	120	0			
Chloroethane	10.78	0.24	0.50	10.00	0	108	75	135	0			
1,1,1,1-Dichloroethene	10.01	0.19	0.50	10.00	0	100	81	125	0			
trans-1,2-Dichloroethene	9.887	0.14	0.50	10.00	0	98.9	60	137	0			
Methyl tert-butyl ether	9.033	0.13	0.50	10.00	0	90.3	61	134	0			
1,1,1,1-Dichloroethane	10.12	0.18	0.50	10.00	0	101	82	120	0			
cis-1,2-Dichloroethene	9.821	0.19	0.50	10.00	0	98.2	84	116	0			
1,1,1,1-Trichloroethane	10.09	0.11	0.50	10.00	0	101	80	124	0			
1,2-Dichloroethane	9.749	0.16	0.50	10.00	0	97.5	86	117	0			
Benzene	9.934	0.12	0.50	10.00	0	99.3	81	121	0			
Trichloroethene	9.978	0.13	0.50	10.00	0	99.8	74	123	0			
Toluene	9.990	0.14	0.50	10.00	0	99.9	88	117	0			
1,1,2-Trichloroethane	9.234	0.20	0.50	10.00	0	92.3	83	121	0			
Tetrachloroethene	11.09	0.17	0.50	10.00	0	111	74	115	0			
Chlorobenzene	10.05	0.13	0.50	10.00	0	100	83	112	0			
Ethylbenzene	10.19	0.13	0.50	10.00	0	102	87	110	0			
m,p-Xylene	20.58	0.22	0.50	20.00	0	103	87	114	0			
o-Xylene	10.35	0.17	0.50	10.00	0	104	84	114	0			
Surrogate:	9.735		0.50	10.00	0	97.4	88	124	0			
Dibromofluoromethane												
Surrogate: 1,2-	10.58		0.50	10.00	0	106	79	115	0			
Dichloroethane-d4												
Surrogate: Toluene-d8	10.40		0.50	10.00	0	104	80	114	0			
Surrogate:	10.29		0.50	10.00	0	103	60	123	0			
Bromofluorobenzene												

Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

11-Aug-

Client: AECOM Technical Services, Inc.

Client Sample ID: EFF072811

Lab ID: K1344-01

Project: NOW Corp. Site

Collection Date: 07/28/11 11:50

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 6010C -- Metals by ICP							SW6010_W
Aluminum	ND		200	µg/L		1 08/02/2011 9:09	60722
Arsenic	ND		20	µg/L		1 08/02/2011 9:09	60722
Barium	73	J	200	µg/L		1 08/02/2011 9:09	60722
Chromium	ND		20	µg/L		1 08/02/2011 9:09	60722
Copper	ND		25	µg/L		1 08/02/2011 9:09	60722
Iron	ND		200	µg/L		1 08/02/2011 9:09	60722
Manganese	37	J	50	µg/L		1 08/02/2011 9:09	60722
Nickel	ND		50	µg/L		1 08/02/2011 9:09	60722
Zinc	10	J	50	µg/L		1 08/02/2011 9:09	60722
SW846 7470A -- Mercury by FIA							SW7470
Mercury	ND		0.20	µg/L		1 08/03/2011 8:32	60735

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

11-Aug-

Client: AECOM Technical Services, Inc.

Client Sample ID: INF072811

Lab ID: K1344-02

Project: NOW Corp. Site

Collection Date: 07/28/11 12:00

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 6010C -- Metals by ICP							SW6010_W
Aluminum	ND		200	µg/L		1 08/02/2011 9:12	60722
Arsenic	ND		20	µg/L		1 08/02/2011 9:12	60722
Barium	53	J	200	µg/L		1 08/02/2011 9:12	60722
Chromium	0.83	J	20	µg/L		1 08/02/2011 9:12	60722
Copper	ND		25	µg/L		1 08/02/2011 9:12	60722
Iron	99	J	200	µg/L		1 08/02/2011 9:12	60722
Manganese	51		50	µg/L		1 08/02/2011 9:12	60722
Nickel	ND		50	µg/L		1 08/02/2011 9:12	60722
Zinc	14	J	50	µg/L		1 08/02/2011 9:12	60722
SW846 7470A -- Mercury by FIA							SW7470
Mercury	ND		0.20	µg/L		1 08/03/2011 8:33	60735

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

CLIENT: AECOM Technical Services, Inc.

Work Order: K1344

Project: NOW Corp. Site

ANALYTICAL QC SUMMARY REPORT

SW6010_W

SW846 6010C -- Metals by ICP

Sample ID: MB-60722	SampType: MBLK	TestCode: SW6010_W	Prep Date: 08/01/11 11:15	Run ID: OPTIMA3_110802A								
Client ID: MB-60722	Batch ID: 60722	Units: µg/L	Analysis Date: 08/02/11 8:44	SeqNo: 1573261								
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	66	200									
Arsenic	ND	4.3	20									
Barium	ND	1.1	200									
Chromium	ND	0.64	20									
Copper	ND	3.6	30									
Iron	ND	31	200									
Manganese	ND	10	50									
Nickel	ND	0.85	50									
Zinc	ND	4.9	50									

Sample ID: LCS-60722		SampType: LCS		TestCode: SW6010_W		Prep Date: 08/01/11 11:15		Run ID: OPTIMA3_110802A				
Client ID: LCS-60722		Batch ID: 60722		Units: µg/L		Analysis Date: 08/02/11 8:48		SeqNo: 1573262				
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	9001	66	200	9100	0	98.9	80	120	0			
Arsenic	453.6	4.3	20	455.0	0	99.7	80	120	0			
Barium	8968	1.1	200	9100	0	98.5	80	120	0			
Chromium	895.8	0.64	20	910.0	0	98.4	80	120	0			
Copper	1140	3.6	30	1130	0	101	80	120	0			
Iron	4636	31	200	4550	0	102	80	120	0			
Manganese	2282	10	50	2270	0	101	80	120	0			
Nickel	2272	0.85	50	2270	0	100	80	120	0			
Zinc	2285	4.9	50	2270	0	101	80	120	0			

CLIENT: AECOM Technical Services, Inc.
Work Order: K1344
Project: NOW Corp. Site

ANALYTICAL QC SUMMARY REPORT
SW6010_W
SW846 6010C -- Metals by ICP

Sample ID: LCSD-60722		SampType: LCSD		TestCode: SW6010_W		Prep Date: 08/01/11 11:15		Run ID: OPTIMA3_110802A				
Client ID: LCSD-60722		Batch ID: 60722		Units: µg/L		Analysis Date: 08/02/11 8:51		SeqNo: 1573263				
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	8939	66	200	9100	0	98.2	80	120	9001	0.692	20	
Arsenic	455.6	4.3	20	455.0	0	100	80	120	453.6	0.437	20	
Barium	9008	1.1	200	9100	0	99.0	80	120	8968	0.445	20	
Chromium	887.9	0.64	20	910.0	0	97.6	80	120	895.8	0.882	20	
Copper	1131	3.6	30	1130	0	100	80	120	1140	0.826	20	
Iron	4609	31	200	4550	0	101	80	120	4636	0.587	20	
Manganese	2280	10	50	2270	0	100	80	120	2282	0.0809	20	
Nickel	2252	0.85	50	2270	0	99.2	80	120	2272	0.902	20	
Zinc	2255	4.9	50	2270	0	99.4	80	120	2285	1.28	20	

CLIENT: AECOM Technical Services, Inc.

Work Order: K1344

Project: NOW Corp. Site

ANALYTICAL QC SUMMARY REPORT

SW7470

SW846 7470A -- Mercury by FIA

Sample ID: MB-60735	SampType: MBLK	TestCode: SW7470	Prep Date: 08/02/11 10:50	Run ID: FIMS2_110803A							
Client ID: MB-60735	Batch ID: 60735	Units: µg/L	Analysis Date: 08/03/11 8:22	SeqNo: 1573739							
Analyte	Result	MDL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.028	0.20								

Sample ID: LCS-60735	SampType: LCS	TestCode: SW7470	Prep Date: 08/02/11 10:50	Run ID: FIMS2_110803A								
Client ID: LCS-60735	Batch ID: 60735	Units: µg/L	Analysis Date: 08/03/11 8:23	SeqNo: 1573740								
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.859	0.028	0.20	4.550	0	107	80	120		0		

Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

15-Aug-

Client: AECOM Technical Services, Inc.

Client Sample ID: EFF072811

Lab ID: K1344-01

Project: NOW Corp. Site

Collection Date: 07/28/11 11:50

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 1664A -- Oil & Grease, HEM							E1664
Oil & Grease, Total Recoverable	ND		5.0	mg/L		108/09/2011 0:00	60844

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

15-Aug-

Client: AECOM Technical Services, Inc.

Client Sample ID: INF072811

Lab ID: K1344-02

Project: NOW Corp. Site

Collection Date: 07/28/11 12:00

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 1664A -- Oil & Grease, HEM							E1664
Oil & Grease, Total Recoverable	ND		5.0	mg/L		108/09/2011 0:00	60844

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

CLIENT: AECOM Technical Services, Inc.

Work Order: K1344

Project: NOW Corp. Site

ANALYTICAL QC SUMMARY REPORT

E1664

EPA 1664A -- Oil & Grease, HEM

Sample ID: MB-60844	SampType: MBLK	TestCode: E1664	Prep Date: 08/08/11 10:11	Run ID: MANUAL_110809A							
Client ID: MB-60844	Batch ID: 60844	Units: mg/L	Analysis Date: 08/09/11 0:00	SeqNo: 1576562							
Analyte	Result	MDL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: LCS-60844	SampType: LCS	TestCode: E1664	Prep Date: 08/08/11 10:11	Run ID: MANUAL_110809A							
Client ID: LCS-60844	Batch ID: 60844	Units: mg/L	Analysis Date: 08/09/11 0:00	SeqNo: 1576560							
Analyte	Result	MDL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: LCSD-60844	SampType: LCSD	TestCode: E1664	Prep Date: 08/08/11 10:11	Run ID: MANUAL_110809A							
Client ID: LCSD-60844	Batch ID: 60844	Units: mg/L	Analysis Date: 08/09/11 0:00	SeqNo: 1576561							
Analyte	Result	MDL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

11-Aug-

Client: AECOM Technical Services, Inc.

Client Sample ID: EFF072811

Lab ID: K1344-01

Project: NOW Corp. Site

Collection Date: 07/28/11 11:50

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SM 2540C -- TOTAL DISSOLVED SOLIDS							SM2540_TDS
Total Dissolved Solids	300		10	mg/L	1	08/02/2011 23:21	60769
SM 2540D -- TOTAL SUSPENDED SOLIDS							SM2540_TSS
Total Suspended Solids	ND		10	mg/L	1	08/03/2011 3:10	60770
SW846 9012B -- Total Cyanide							SW9012_W
Cyanide	ND		10	ug/L	1	08/01/2011 17:31	60729

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

11-Aug-

Client: AECOM Technical Services, Inc.

Client Sample ID: INF072811

Lab ID: K1344-02

Project: NOW Corp. Site

Collection Date: 07/28/11 12:00

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SM 2540C -- TOTAL DISSOLVED SOLIDS							SM2540_TDS
Total Dissolved Solids	260		10	mg/L		1 08/03/2011 1:38	60769
SM 2540D -- TOTAL SUSPENDED SOLIDS							SM2540_TSS
Total Suspended Solids	ND		10	mg/L		1 08/03/2011 5:50	60770
SW846 9012B -- Total Cyanide							SW9012_W
Cyanide	ND		10	ug/L		1 08/01/2011 17:33	60729

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

CLIENT: AECOM Technical Services, Inc.

Work Order: K1344

Project: NOW Corp. Site

ANALYTICAL QC SUMMARY REPORT

SM2540_TDS

SM 2540C -- TOTAL DISSOLVED SOLIDS

Sample ID: MB-60769	SampType: MBLK	TestCode: SM2540_TDS	Prep Date: 08/02/11 16:30	Run ID: MANUAL_110802B			
Client ID: MB-60769	Batch ID: 60769	Units: mg/L	Analysis Date: 08/02/11 16:30	SeqNo: 1578659			
Analyte	Result	MDL	SPK Ref Val	%REC LowLimit HighLimit	RPD Ref Val	%RPD RPDLimit	Qual

Total Dissolved Solids	ND	10	10	
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Sample ID: LCS-60769	SampType: LCS	TestCode: SM2540_TDS	Prep Date: 08/02/11 16:30	Run ID: MANUAL_110802B			
Client ID: LCS-60769	Batch ID: 60769	Units: mg/L	Analysis Date: 08/02/11 18:47	SeqNo: 1578661			
Analyte	Result	MDL	SPK Ref Val	%REC LowLimit HighLimit	RPD Ref Val	%RPD RPDLimit	Qual

Total Dissolved Solids	496.0	10	10	537.0	0	92.4	80	120	0
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Sample ID: LCSD-60769	SampType: LCSD	TestCode: SM2540_TDS	Prep Date: 08/02/11 16:30	Run ID: MANUAL_110802B							
Client ID: LCSD-60769	Batch ID: 60769	Units: mg/L	Analysis Date: 08/02/11 21:04	SeqNo: 1578664							
Analyte	Result	MDL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids	496.0	10	10	537.0	0	92.4	80	120	496.0	0	20
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CLIENT: AECOM Technical Services, Inc.
Work Order: K1344
Project: NOW Corp. Site

ANALYTICAL QC SUMMARY REPORT
SM2540_TSS
SM 2540D -- TOTAL SUSPENDED SOLIDS

Sample ID: MB-60770	SampType: MBLK	TestCode: SM2540_TSS	Prep Date: 08/02/11 16:30	Run ID: MANUAL_110802C
Client ID: MB-60770	Batch ID: 60770	Units: mg/L	Analysis Date: 08/02/11 16:30	SeqNo: 1578675
Analyte	Result	MDL	SPK value	SPK Ref Val
	ND	10	%REC	LowLimit HighLimit
			RPD Ref Val	%RPD RPDLimit

Total Suspended Solids 10 120 0

Sample ID: LCS-60770	SampType: LCS	TestCode: SM2540_TSS	Prep Date: 08/02/11 16:30	Run ID: MANUAL_110802C
Client ID: LCS-60770	Batch ID: 60770	Units: mg/L	Analysis Date: 08/02/11 19:10	SeqNo: 1578676
Analyte	Result	MDL	SPK value	SPK Ref Val
	55.00	10	54.90	0
			%REC	LowLimit HighLimit
			RPD Ref Val	%RPD RPDLimit

Total Suspended Solids 10 120 0

Sample ID: LCSD-60770	SampType: LCSD	TestCode: SM2540_TSS	Prep Date: 08/02/11 16:30	Run ID: MANUAL_110802C
Client ID: LCSD-60770	Batch ID: 60770	Units: mg/L	Analysis Date: 08/02/11 21:50	SeqNo: 1578677
Analyte	Result	MDL	SPK value	SPK Ref Val
	52.00	10	54.90	0
			%REC	LowLimit HighLimit
			RPD Ref Val	%RPD RPDLimit

Total Suspended Solids 10 120 55.00 5.61 20

Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

WorkOrder: K1344

Client ID: EARTH_NY

Project: NOW Corp. Site

WO Name: NOW Corp. Site

Location: NOW_CORP,

Comments: N/A

Case:

SDG:

PO: 94017.02

HC Due: 08/16/11

Fax Due:

Fax Report: ☐

Report Level: LEVEL 2

Special Program:

EDD:

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
K1344-01A	EFF072811	07/28/2011 11:50	07/29/2011	Aqueous	SW8260_25_W	/ use for VOCs,				Y	VOA
K1344-01B	EFF072811	07/28/2011 11:50	07/29/2011	Aqueous	SM2540_TDS	/					K3
K1344-01B	EFF072811	07/28/2011 11:50	07/29/2011	Aqueous	SM2540_TSS	/					K3
K1344-01C	EFF072811	07/28/2011 11:50	07/29/2011	Aqueous	SW6010_W	/ See SEL list				Y	M5
K1344-01C	EFF072811	07/28/2011 11:50	07/29/2011	Aqueous	SW7470	/ See SEL list					M5
K1344-01D	EFF072811	07/28/2011 11:50	07/29/2011	Aqueous	SW9012_W	/				Y	K3
K1344-01E	EFF072811	07/28/2011 11:50	07/29/2011	Aqueous	E1664	/					K3
K1344-02A	INF072811	07/28/2011 12:00	07/29/2011	Aqueous	SW8260_25_W	/ use for VOCs,				Y	VOA
K1344-02B	INF072811	07/28/2011 12:00	07/29/2011	Aqueous	SM2540_TDS	/					K3
K1344-02B	INF072811	07/28/2011 12:00	07/29/2011	Aqueous	SM2540_TSS	/					K3
K1344-02C	INF072811	07/28/2011 12:00	07/29/2011	Aqueous	SW6010_W	/ See SEL list				Y	M5
K1344-02C	INF072811	07/28/2011 12:00	07/29/2011	Aqueous	SW7470	/ See SEL list					M5
K1344-02D	INF072811	07/28/2011 12:00	07/29/2011	Aqueous	SW9012_W	/				Y	K3
K1344-02E	INF072811	07/28/2011 12:00	07/29/2011	Aqueous	E1664	/					K3
K1344-03A	TW-1 072811	07/28/2011 12:10	07/29/2011	Aqueous	SW8260_25_W	/ use for VOCs,				Y	VOA
K1344-04A	TW-2A 072811	07/28/2011 12:15	07/29/2011	Aqueous	SW8260_25_W	/ use for VOCs,				Y	VOA
K1344-05A	TW-3 072811	07/28/2011 12:20	07/29/2011	Aqueous	SW8260_25_W	/ use for VOCs,				Y	VOA
K1344-06A	TB 072811	07/28/2011 00:00	07/29/2011	Aqueous	SW8260_25_W	/ use for VOCs,				Y	VOA

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

Page 1 of 1

TAT- Indicate Date Needed: _____

- All TATs subject to laboratory approval.
Min. 24-hour notification needed for rushes.
- Samples disposed of after 30 days unless otherwise instructed.

P.O. No.: _____ RQN: _____

Notes:

☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☐ Other

State specific reporting standards:

7/28/11	15:25
7-29-9	9:20

SPECTRUM ANALYTICAL, INC. RI DIVISION
Sample Condition Form

Page 1 of 1

Received By: <u>Daniel Miller</u>		Reviewed By: <u>[Signature]</u>		Date: <u>7-29-11</u>		Spectrum RI Work Order #: <u>K1344</u>			
Client Project: <u>EARTH WY</u>				Client: <u>ALCON</u>				Soil Headspace or Air Bubble ≥ 1/4"	
		Lab Sample ID		Preservation (pH)					VOA Matrix
				HNO ₃	H ₂ SO ₄	HCl	NaOH	H ₃ PO ₄	
1) Cooler Sealed	<u>Yes</u> / No	<u>K1344</u>	<u>01</u>	<u><2</u>		<u><2</u>	<u>7/12</u>		<u>H</u>
			<u>02</u>	<u><2</u>		<u><2</u>	<u>>12</u>		<u>1</u>
2) Custody Seal(s)	<u>Present</u> / Absent		<u>03</u>						
	<u>Coil</u> ers / Bottles		<u>04</u>						
	<u>Intact</u> / Broken		<u>05</u>						<u>✓</u>
		<u>K1344</u>	<u>06</u>						<u>H</u>
3) Custody Seal Number(s)	<u>NA</u>	<u>7-29-11</u> <u>7-29-11</u> <u>7-29-11</u>							
4) Chain-of-Custody	<u>Present</u> / Absent								
5) Cooler Temperature	<u>4°C</u>								
IR Temp Gun ID	<u>M7-1</u>								
Coolant Condition	<u>Ice</u>								
6) Airbill(s)	<u>Present</u> / Absent								
Airbill Number(s)	<u>FedEx</u>								
	<u>8747554 7576</u>								
	<u>/</u>								
7) Samples Bottles	<u>Intact</u> / Broken / Leaking								
8) Date Received	<u>7-29-11</u>								
9) Time Received	<u>9:20</u>								
Preservative Name/Lot No.:									

VOA Matrix Key:

US = Unpreserved Soil	A = Air
UA = Unpreserved Aqueous	H = HCl
M = MeOH	E = Encore
N = NaHSO ₄	F = Freeze

See Sample Condition Notification/Corrective Action Form yes / no

Form ID: QAF.0006

Rad OK yes / no

Last Page of Data Report